ATTACHMENT B

SECTION 3.2
- Boring Reports
- Test Pit Logs
- Observation Well Reports

SECTION 3.3
- North Boring Reports
- Northwest Boring Reports
- South Boring Reports

SECTION 3.4
- Boring Reports
- Vibracore Reports

SECTION 3.5
- Northwest Area Vibracore Reports
- Nearshore Area Vibracore Reports
- Backwater Area Vibracore Reports

SECTION 3.6
- Vibracore Report

SECTION 3.7
- Boring Reports (River)
- Boring Reports (Land)
- Test Pit Logs

IDENTIFICATION AND DESCRIPTION OF SUBSURFACE MATERIALS

SOIL

Soil description on logs of subsurface explorations are based on Standard Penetration Test results, visual-manual examination of exposed soil and soil samples, and the results of laboratory tests on selected samples. The criteria, descriptive terms and definitions are as follows:

DENSITY OR CONSISTENCY

Density of Cohesionless Soils	Penetration Resistance (Blows per ft.)	Consistency of Cohesive Soils	Penetration Resistance (Blows per ft.)
Very Loose	0-4	Very Soft	0-2
Loose	5-10	Soft	3-4
Medium	11-30	Medium	5-8
Dense	31-50	Stiff	9-15
Very Dense	over 50	Very Stiff	16-30
		Hard	over 30

PENETRATION RESISTANCE

Standard Penetration Test (ASTM D-1586) - Number of blows required to drive a standard 2 in. O.D. split spoon sampler 1 ft. with a 140 lb. weight falling freely through 30 in.

COLOR: Basic colors and combinations: black, brown, gray, yellow-brown, etc.

SUPPLEMENTAL SOIL TERMINOLOGY:

Laminae	- 0 to 1/16 in. thick (cohesive)
Parting	- 0 to 1/16 in. thick (granular)
Seam	- 1/16 to 1/2 in. thick
Layer	- 1/2 to 12 in. thick
Stratum	- > 12 in. thick
Pocket	- Small, erratic deposit less than 12 in. size
Lens	- Lenticular deposit larger than a pocket
Occasional	- One or less per 12 in. of thickness
Frequent	- More than one per 12 in. of thickness
Interbedded	- Alternating soil layers of differing composition
Varved	- Alternating thin seams of silt and clay
Mottled	- Variation of color

GEOLOGIC INTERPRETATION

Deposit type - GLACIAL TILL, ALLUVIUM, FILL.....

The natural soils are identified by criteria of Unified Soil Classification System (USCS), with appropriate group symbol in parenthesis for each soil description. Fill materials may not be classified by USCS criteria.

U.S. Standard Series Seive — Clear Square Sieve Openings

12"	3"	3/4"	4	10	40	200
Boulders	Cobbles	Gravel: Coarse / Fine		Sand: Coarse / Medium / Fine		Silts and Clays
305 mm	76 mm	19 mm	4.75 mm	2.00 mm	0.43 mm	0.074 mm

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			Group Symbol	Graphic Symbol	TYPICAL NAMES
Coarse grained soils: more than half is larger than number 200 sieve	Gravels: More than half of coarse fraction is larger than number 4 sieve	Gravels with little or no fines	GW		Well graded gravels, gravel-sand mixtures
			GP		Poorly graded gravels, gravel-sand mixtures
		Gravels with over 12% fines	GM		Silty gravels, poorly graded gravel-sand-silt mixtures
			GC		Clayey gravels, poorly graded gravel-sand-clay mixtures
	Sands: More than half of coarse fraction is smaller than number 4 sieve	Sands with little or no fines	SW		Well graded sands, gravelly sands
			SP		Poorly graded sands, gravelly sands
		Sands with over 12% fines	SM		Silty sands, poorly graded sand-silt mixtures
			SC		Clayey sands, poorly graded sand-clay mixtures
Fined-grained soils: more than half smaller than number 200 sieve	Silts and Clays: Liquid limit 50% or less		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic clays and organic silty clays of low plasticity
	Silts and Clays: Liquid limit greater than 50%		MH		Inorganic silty, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity, organic silts
Highly organic soils			PT		Peat and other highly organic soils

GENERAL NOTES

1. Logs of subsurface explorations depict soil, rock and groundwater conditions only at the locations specified on the dates indicated. Subsurface conditions may vary at other locations and at other times.
2. Water levels noted on the logs were measured at the times and under the conditions indicated. During test borings, these water levels could have been affected by the introduction of water into the borehole, extraction of tools on other procedures and thus may not reflect actual groundwater level at the test boring location. Groundwater level fluctuations may also occur as a result of variations in precipitation, temperature, season, tides, adjacent construction activities and pumping of water supply wells and construction dewatering systems.

ROCK

Rock descriptions noted on logs of subsurface explorations are based on visual-manual examination of exposed rock outcrops and core samples. The criteria, descriptive terms and definitions used are as follows:

FIELD HARDNESS: A measure of resistance to scratching.

Very Hard	Cannot be scratched with a knife point or sharp pick.
Hard	Can be scratched with a knife point or sharp pick, only with difficulty.
Moderately Hard	Can be readily scratched with a knife point or pick.
Medium Hard	Can be grooved or gouged 1/16 in. deep with firm pressure on a knife point or sharp pick.
Soft	Can be grooved or gouged easily with a knife point or pick.
Very Soft	Can be carved with a knife and excavated with a pick point.

WEATHERING: The action of organic and inorganic and chemical and physical processes resulting in alteration of color, texture and composition.

Fresh-FR	No visible sign of alteration, except perhaps slight discoloration on major discontinuity surfaces.
Slight-SL	Discoloration of rock material and discontinuity surfaces. All rock may be discolored and/or somewhat weaker than in its fresh condition.
Moderate-MOD	Less than half the rock material is decomposed and/or disintegrated to a soil. Some fresh or discolored rock is present as either a continuous framework or as corestones.
High-HIGH	More than half the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present as either a discontinuous framework or as corestones.
Complete-COMP	All rock material is decomposed and/or disintegrated to soil. The original mass structure is largely intact.
Residual Soil	All rock material is converted to soil. The mass structure and material fabric are destroyed. There has been a large change of volume, but the material has not been significantly transported.

COLOR: Basic colors and combinations: gray, light gray, brown, red-brown.

TEXTURE: Size, shape and arrangements of constituents.

Term	Size: Igneous	Size: Sedimentary
Coarse-grained	> 5 mm	> 2 mm
Medium-grained	1 - 5 mm	0.625 - 2 mm
Fine-grained	< 1 mm	< 0.625 mm
Aphanitic	Individual grains invisible to the unaided eye.	

LITHOLOGY: Rock classification and modifiers; accepted formation names.

DISCONTINUITIES:

Type	Definition
Joint	A natural fracture along which no displacement has occurred. May occur in parallel groups called sets.
Shear	A natural fracture along which displacement has occurred. Surface may be slickensided or striated.
Fault	A natural fracture along which displacement has occurred. Usually lined with gouge and slickensides.
Shear or Fault Zone	Zone of fractured rock and gouge bordering the displacement plane.

ORIENTATION/ATTITUDE:

Term	Angle (degrees)
Horizontal	0-5
Low Angle	6-35
Moderately Dipping	36-55
High Angle	56-85
Vertical	86-100

SPACING:

Discontinuity Term	Bedding Term	Inches
Extremely Close	Extremely Thin	< 3/4
Very Close	Very Thin	3/4 - 2.5
Close	Thin	2.5 - 8
Moderate	Medium	8 - 24
Wide	Thick	24 - 80
Very Wide	Very Thick	80 - 240
Extremely Wide	Extremely Thick	> 240

PERSISTENCE/CONTINUITY:

Term	Feet
Very Low	0-3
Low	3-10
Medium	10-35
High	35-65
Very High	> 65

APERTURE/GAP:

Term	Distance
Very Tight	< 0.1mm
Tight	0.1mm-0.25mm
Partly Open	0.25mm-0.5mm
Open	0.5mm-2.5mm
Moderately Wide	2.5mm-1cm
Wide	> 1cm
Very Wide	1cm-10cm
Extremely Wide	10cm-1m
Cavernous	> 1m

POROSITY:

Type

Primary:
Pre-depositional and depositional inter- and intra- granular, particle, or crystalline pores.

Secondary:
Solution features including pits, vugs, caverns, molds, and channels.
Fracture features including joints, shears, faults, shrinkage and breccia fabrics.

Term	Size
Micro	< 0.0625 mm
Meso	0.0625-4.0 mm
Mega	4.0-256 mm

HALEY & ALDRICH

SUBSURFACE EXPLORATION KEY

J:\GRAPHICS\TEMP\MCELENEY-T\FIELD SERVICES\SUBSURFACE EXPLORATION LOG KEY\SUBSURFACE EXPLORATION KEY2008-1027.DWG

SECTION 3.2

Boring Reports

Test Pit Logs

Observation Well Reports

BORING REPORTS

TEST BORING REPORT

Boring No. FBT-1

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 11 July 2014
Finish 11 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location FBT-1

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type				Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		ASPHALT CONCRETE											
					3.0		VOID 2 in. layer of silty grayish-brown, no odor or staining, saturated, contains wire											
5				NO WELL INSTALLED		SP	Medium yellowish-brown poorly graded fine to coarse SAND (SP), no odor or staining, saturated, contains glass pieces 0387-071114-1008											
					5.2		BOTTOM OF EXPLORATION 5.2 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	5.2
Rock Cored (ft)	-
Samples	-

Boring No. FBT-1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. FBT-2

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 11 July 2014
Finish 11 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation
Datum
Location FBT-2

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type				Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 48	0.0 5.0	NO WELL INSTALLED			Surface area coarse gravels	0.0										
					1.0	SM	Black silty fine to coarse SAND with fine gravel (SM), non plastic, moist, contains brick, wood, concrete	0.0										
								0.0										
								0.0										
								0.0										
								0.0										
							Similar to above	0.0										
5		CR2 48	5.0 10.0					0.0										
					5.8	SM	Black silty fine to coarse SAND with fine to coarse gravel (SM), non-plastic, rounded to subrounded gravel, strong petroleum-like odor, soil has oily substance sheen on water, wet to saturated, contains wood, brick	4.7										
								13.2										
								3.2										
								4.1										
10		CR3 24	10.0 12.0				Similar to above, free product drops throughout sample											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	3CR

Boring No. FBT-2

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. FBT-2
File No. 28612-338
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	12.0		BOTTOM OF EXPLORATION 12.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. FBT-2

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TEST BORING REPORT

Boring No. FBT-3A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 11 July 2014
Finish 11 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location FBT-3A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 48	0.0 5.0	NO WELL INSTALLED			Surface brick	0.0										
								0.0										
								0.0										
								0.0										
								0.0										
					3.6		Red brick layer											
					4.0	GP	Grayish-brown poorly graded fine to coarse GRAVEL (GP), no odor or staining, moist											
					4.6	SM	Black silty fine to coarse SAND with fine gravel (SM), non plastic, moist, contains brick, wood, slag, glass, rags, wood debris											
5		CR2 25	5.0 7.5		5.0		Drilling on what appears to be a boulder pushing boulders	0.0										
								0.0										
								0.0										
						GP	Grayish-brown/black poorly graded fine GRAVEL with silt and fine to coarse sand (GP), non plastic, no odor or staining, moist, contains brick	0.0										
		CR3 12	7.5 10.0															
								0.0										
								0.0										
							Very poor recovery	0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	3CR

Boring No. FBT-3A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PDMW-22S-01

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 10 July 2014
Finish 10 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location 15 ft north of well

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED		SM	Surface area grass Grayish-brown to dark brown silty fine to coarse SAND with fine gravel (SP), non plastic, no odor, moist, contains brick, concrete, rubbler glass 0387-071014-0931	0.0 0.0 0.0 0.0 0.0										
		CR2 20	2.0 4.0		2.6		Black fill material - contains wood, gravel, tar-like substance, wood, rags, rubber, metal, brick Water at 4.0 to 4.5 ft, sheen on water, appears to have brown free product spots floating on water	0.0 0.0 0.0										
		CR3 14	4.0 6.0		4.5		Similar to above 0387-071014-0939	0.0										
5							CONCRETE 0387-071014-0947	0.0 0.0										
		CR4 12	6.0 8.0		5.5		Fill material - contains wood, gravel, rubber bands, brick, black oily-type odor, saturated, sheen on water, material very loose, poor recovery 0387-071014-0956	0.0 0.0 2.4										
		CR5 12	8.0 10.0				Similar to above, shoe strings, metal 0387-071014-1002	0.0 0.3										
10		CR6 24	10.0 12.0		10.0	GP	Black poorly graded fine GRAVEL with fine to coarse sand and silt (GP), non-plastic, slight oily-type odor, saturated, sheen on water, contains brick, glass, shells, rubber, metal 0387-0710141-1010	0.0 1.0 1.1 0.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. PDMW-22S-01

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. PDMW-22S-01
File No. 28612-338
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7 24	12.0 14.0	NO WELL INSTALLED	12.0	ML	Grayish-brown SILT (ML), non plastic, trace low plasticity clay, no odor or staining, moist 0387-071014-1017	0.0 0.0 0.0 0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
15																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PDMW-22S-01

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TEST BORING REPORT

Boring No. PDMW-22S-02

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 10 July 2014
Finish 10 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location 17 ft east of well

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0										
					1.0	SP-SM	Grayish-brown poorly graded fine to coarse SAND with silt and fine gravel (SP-SM), non plastic, no odor or staining, moist 0387-071014-1118	0.0										
		CR2 24	2.0 4.0					0.0										
					2.8	SM	Grayish-brown silty fine to coarse SAND with fine gravel (SM), non plastic, no odor or staining, moist, contains brick, wire, shells, concrete, slag 0387-071014-1127	0.0									
		CR3 24	4.0 6.0				Wet on top of concrete	0.0										
					4.5		CONCRETE 0387-071014-1127	0.0										
5								0.0										
		CR4 24	6.0 8.0				0387-071014-1133	0.0										
								0.0										
								0.0										
		CR5 24	8.0 10.0				0387-071014-1140											
					8.5	GP	Black poorly graded fine GRAVEL with silt and fine sand (GP), non plastic, rounded gravel, moderate oil-like odor, saturated,	7.5										
					9.0	SM	black staining at 8.7 ft	5.7										
							Grayish-brown silty fine to medium SAND with fine gravel, non plastic, rounded gravel, slight to moderate odor, wet, contains wood, wire, concrete	13.1										
10		CR6 12	10.0 12.0				At 10.0 ft, color change to black, sheen on water, oily substance, moderately oily-like odor 0387-071014-1149	7.8										
								6.7										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. PDMW-22S-02

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PDMW-22S-02

File No. 28612-338
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7 24	12.0 14.0	NO WELL INSTALLED	12.0	GP	Grayish-brown poorly graded fine GRAVEL with fine to coarse sand and silt (GP), non plastic, no odor, saturated, contains wire, tile 0387-071014-1155	6.0 3.0 0.0										
					13.5	ML	Soft grayish-brown SILT (ML), non plastic, trace low plasticity clays, no odor, wet	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
15							Note: PDI2-PDWW-02 had 4 ft of concrete. Moved 3 ft north (2A), still in concrete. Per Dave, move boring west of 02 location, per Dave move north of 2B.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PDMW-22S-02

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PDMW-22S-03

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 10 July 2014
Finish 10 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location 15 ft west of well

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 0	0.0 2.0	NO WELL INSTALLED			CONCRETE											
					1.0		No Recovery	0.0										
						SM	Grayish-brown silty fine to coarse SAND with fine gravel (SM), non plastic, trace low plasticity clay, slight petroleum-like odor, moist, contains brick, shells, bolts, tile 0387-071014-1511											
		CR2 24	2.0 4.0					0.0										
								0.0										
								0.0										
								0.0										
					4.0													
		CR3 24	4.0 6.0			CL	Bluish-gray lean CLAY with fine to coarse sand and fine gravel (CL), low to medium plasticity, slight petroleum-like odor, wet, contains shell, copper wire 0387-071014-1515	0.0											
5					5.0			0.3										
						SM	Black silty fine to medium SAND with fine gravel (SM), non plastic, strong petroleum-like odor, wet, contains copper wire, tile 0387-071014-1532	6.1										
								7.5										
		CR4 24	6.0 8.0					7.3										
								6.7										
								14.1										
							Strong odor, visible free product	45.3										
		CR5 24	8.0 10.0					30.7										
								28.1										
							Similar to above 0387-071014-1535	20										
								24.7										
10					9.9													
		CR6 24	10.0 12.0			GP	Black silty fine GRAVEL with fine to coarse sand (GP), non plastic, contains copper wire, tile, wood 0387-071014-1541	9.2											
								11.7										
								10.4										
								11.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. PDMW-22S-03

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PDMW-22S-03
File No. 28612-338
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7	12.0 14.0	NO WELL INSTALLED	12.2	ML	Grayish-brown SILT (ML), non plastic, trace low plasticity clay, no odor, wet, contains shells 0387-071014-1548											
					13.0 13.4	SM	Grayish-brown silty fine SAND (SM), non plastic, no odor, wet											
						ML	Grayish-brown SILT, non plastic, trace low plasticity clay, no odor or staining, wet											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
15																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PDMW-22S-03

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PDMW-22S-04

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 10 July 2014
Finish 10 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location 15 ft south of well

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			CONCRETE 0387-071014-1347	0.0										
					1.0	SM	Grayish-brown silty fine to coarse SAND with fine gravel (SM), non plastic, no odor or staining, moist, contains brick, concrete, wire 0387-071014-1350	0.0										
		CR2 24	2.0 4.0					0.0										
					3.0		CONCRETE 0387-071014-1354	0.0										
5		CR3 20	4.0 6.0															
		CR4 0	6.0 8.0		7.0		No sample from 6.0 to 8.0 ft, sample bag melted and sample lost in bucket											
		CR5 18	8.0 10.0			GP	Grayish-brown poorly graded fine GRAVEL with fine to coarse sand and silt (GP), non plastic, saturated, contains brick, wire, rubber bones 0387-071014-1409	7.0 4.5 6.1										
10		CR6 24	10.0 12.0		10.0	GP	Grayish-brown/black poorly graded fine GRAVEL, no odor or staining, saturated, contains shells, brass door lock, wire, glass 0387-071014-1419	0.0 0.0										
					11.2	GM	Grayish-brown silty fine GRAVEL with fine to medium sand (GM), non plastic, no odor or staining, saturated	0.0 0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. PDMW-22S-04

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PDMW-22S-04
File No. 28612-338
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7 24	12.0 14.0	NO WELL INSTALLED	12.4													
						ML	Grayish-brown SILT (ML), non plastic, trace low plasticity, no odor, wet, contains shells, wood 0387-071014-1424											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
15																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PDMW-22S-04

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No PDMW-22S-05

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 18 July 2014
Finish 18 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location south of PDMW-22S

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 44	0.0 4.0	NO WELL INSTALLED	0.5		CONCRETE											
						SM	NO VOID Grayish-brown silty fine to coarse SAND with fine gravel (SM), non plastic, no odor or staining, moist	0.0 0.0 0.0										
					2.8	SP	Brown/black poorly graded SAND with gravel (SP), contains foundry sand/slag	0.0										
					3.2	SM	Grayish-brown silty fine to medium SAND with fine gravel (SM), non plastic, very moist to saturated	0.0 0.0										
		CR2 44	4.0 8.0		4.0	GP	Grayish-brown poorly graded fine GRAVEL with fine to coarse sand and silt (GP), non plastic, strong petroleum-like odor, possible free product, saturated, contains rubber, metal, brick, shells	10.7 13.8 20.7 18.7 17.7 30.1										
5					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8.0
Rock Cored (ft) -
Samples 2CR

Boring No. PDMW-22S-05

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PDMW-22S-06

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 18 July 2014
Finish 18 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location west of PDMW-22S

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 4.0	NO WELL INSTALLED	0.6		CONCRETE											
						SP	NO VOID Brown/black poorly graded fine to coarse SAND with fine gravel, no odor, moist, contains foundry sand and slag	0.0 0.0 0.0 0.0 0.0 0.0										
					3.5	SM	Grayish-brown silty fine to medium SAND with fine gravel (SM), non plastic, no odor, moist to wet	0.0										
		CR2	4.0 8.0		4.4	GP	Black poorly graded GRAVEL with fine to coarse sand and silt (GP), non plastic, strong petroleum-like odor, free product on water, wet to saturated, contains brick, wood, metal, glass, shells	9.8 10.2 12.8 14.5										
5					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 8.0
Rock Cored (ft) -
Samples 2CR

Boring No. PDMW-22S-06

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PDMW-22S-07

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 18 July 2014
Finish 18 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location north of PDMW-22S

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 44	0.0 4.0	NO WELL INSTALLED			Surface area grass and brick	0.0										
							Red brick											
					1.8	SM	Grayish-brown silty fine to coarse SAND with fine gravel (SM), non plastic, no odor, very moist, contains brick, glass											
					3.0		Red brick layer											
					3.4	CL	Grayish-brown clayey fine to medium SAND with fine gravel (CL), low to medium plasticity, very moist to wet, contains wood, glass											
		CR2 8	4.0 5.0				Hit what appears to be concrete, stopped at concrete, moved north 10 ft											
5					5.0		BOTTOM OF EXPLORATION 5.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 5.0
Rock Cored (ft) -
Samples 2CR

Boring No. PDMW-22S-07

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PDMW-22S-08

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 18 July 2014
Finish 18 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location north of PDMW-22S

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6.0	4.0		Rig Make & Model: SONIC 1416
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 46	0.0 4.0	NO WELL INSTALLED		SP-SM	Surface area Brown poorly graded fine to medium SAND with silt and fine gravel (SP-SM), non plastic, moist, contains brick	0.0 0.0										
					1.6		Red brick layer											
					2.0	SM	Grayish-brown silty fine to medium SAND with fine gravel (SM), non plastic, no odor, moist, contains brick, plastic, wire	0.0 0.0										
					3.0		CONCRETE	0.2										
					3.7	SM	Black silty fine to coarse SAND with fine gravel, non plastic, saturated, contains wood debris	1.8										
		CR2 12	4.0 5.0					1.5 3.4										
5					5.0		BOTTOM OF EXPLORATION 5.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 5.0
Rock Cored (ft) -
Samples 2CR

Boring No. PDMW-22S-08

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PDMW-22S-10

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-338
Sheet No. 1 of 1
Start 07 November 2014
Finish 07 November 2014
Driller R. Rodke
H&A Rep. J. Miller
Elevation
Datum
Location PDMN-225-10

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type				Rig Make & Model:
Inside Diameter (in.)				Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 10% brick fragments, 5% wood fragments	0.0										
								0.0										
		CR2 23	2.0 4.0					0.3										
						SM	Similar, except with rubber-like fragments, not sticky											
					3.5	GP	Concrete fragments to 4.0 ft., mps 2.75 in	0.2										
		CR3 22	4.0 6.0		4.0	SM	Black silty SAND with gravel, mps 1.25 in., no structure, no odor, wet, 5% concrete fragments, 5% slag-like fragments	3.6										
					4.8	GP	Concrete fragments to 6.0 ft., mps 1.50 in											
5		CR4 19	6.0 8.0			GP	Olive-gray poorly-graded GRAVEL with sand (GP), mps 1.25 in., no structure, no odor, wet, 40% slag-like fragments, 10% concrete fragments, 5% wood fragments, oil-like droplets on water	0.0 6.2											
								5.4										
		CR5 16	8.0 10.0					14.2										
10		CR6 24	10.0 12.0			GP	Similar, except 5% glass fragments	19.3 21.0										
								13.9										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. PDMW-22S-10

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 7 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PDMW-22S-10
File No. 28612-338
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7 34	12.0 14.0	NO WELL INSTALLED	12.0	SP	Dark-gray poorly-graded SAND (SP), no structure, no odor, wet											
					12.5	OL/ OH	Dark-gray ORGANIC SOILS with sand (OL-OH), no structure, organic-like odor, wet	0.7										
					14.0		BOTTOM OF EXPLORATION 14.0 FT	0.0										

Notes:

Driller discovered PCBM-like material on gloves between the 6-8 to 8-10 sample interval material was "sticky" and "stringy" changed out gloves.

More material discovered on gloves at the 8-10 and 10-12 interval

The 4.0 in. core sample barrel was "coated" with PCBM-like material, stringy and sticky at the 10-12 ft. sample interval.

D. Morse notified and photo's where taken

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PDMW-22S-10

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-338TB_PDI_2.GPJ 7 Aug 15

TEST BORING REPORT

Boring No. PDI2-Pole-01

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-
Sheet No. 1 of 1
Start 08 July 2014
Finish 08 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location PDI2-Pole-01

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED		SM	Gravel on surface Fill Material (wood, bricks, concrete) Grayish-brown silty fine to medium SAND with fine gravel (SM), non plastic, no odor, moist, bricks 0387-070814-1522	0.0 0.0 0.0 0.0										
		CR2 12	2.0 4.0			SM	Similar to above 0387-070814-1525 At 2.5 ft, cored through 4 in. of concrete	0.0 0.0 0.0 0.0										
5		CR3 20	4.0 6.0			SM	Similar to above 0387-070814-1530	0.0 0.0 0.0 0.0										
		CR4 20	6.0 8.0		5.6 6.4	GP/SP GP-GM	Blackish-gray poorly graded fine GRAVEL/poorly graded medium to coarse SAND with non plastic silt (GP/SP), no odor, saturated, brick, wood 0387-070814-1536 Black poorly graded fine GRAVEL with non plastic silt and fine to coarse sand (GP-GM), slight odor, saturated, soil has oily appearance, sheen on water	0.0 0.0 0.0 0.0										
		CR5 24	8.0 10.0			GP-GM	0387-070814-1543 Similar to above, slag, brick, wood 0387-070814-1547	0.0 0.0 0.0 0.0										
10		CR6 24	10.0 12.0					0.0 0.0 0.0 0.0										
		CR7 7	12.0 14.0		11.5	SM	Grayish-brown silty fine to coarse SAND with fine gravel, non plastic, lots of wood debris, brick, slag	2.3 0.0 0.3										
						SM	Similar to above 0387-070814-1554	0.1 0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. PDI2-Pole-01

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-PDI2-R.GPJ 31 JUL 15

TEST PIT REPORTS
&
PHOTOGRAPHS

HALEY ALDRICH

TEST PIT LOG

Test Pit No. TP-6

Project	Former Anaconda Wire & Cable Company	**File No.**	28612-331
Location	Hastings-On-Hudson, New York	**H&A Rep**	S. Collinge
Client	ARCO	**Date**	1 Jul 14
Contractor	AEAC, R. Rivera	**Weather**	Sunny/Hot/Humid
Equipment Used	John Deere 200CL		

Ground El.:
El. Datum: NAVD 88
Location: See Plan
Groundwater depths/entry rates (in./min.):

Depth (ft)	Sample ID	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0				14-in. to 24-in. thick concrete on south end of excavation, 9-in. thick concrete on north end of excavation.										
	No Sample Taken 0 - 7.5	2.0	SP	Brownish-black poorly graded coarse to fine SAND with fine gravel. Metal, wood, brick, wire, copper, concrete debris, foundry sand and slag. (Fill)										
				Yellowish-red brick layer at 3.9 ft.										
5			SP	Black poorly graded coarse to fine SAND with gravel, slight odor, moist. Foundry sand, brick, metal, concrete debris, wire. (Fill)										
		6.0	GP	Grayish-black poorly graded GRAVEL with sand, moderate odor, wet to saturated, sheen.										
		7.5		BOTTOM OF EXPLORATION 7.5 FT										
10														

Obstructions:

Remarks: Brake 10.0 in. pipe on North end and 6.0 in. pipe on South-placed 250 gallons of water downdrain before backfilling 10.0 ft to see if it was active or not.

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) __ X 7.5
Pit Depth (ft) 14.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HA TESTPIT-07-1 28612_HASTINGS LIBRARY.GLB HA-TP07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-331_PDI2_TP.GPJ 6 Aug 15

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit TP-6



Test Pit TP-6

OBSERVATION WELL REPORTS

HALEY & ALDRICH

OBSERVATION WELL INSTALLATION REPORT

Well No. PDMW-20S
Boring No. PDMW-20D

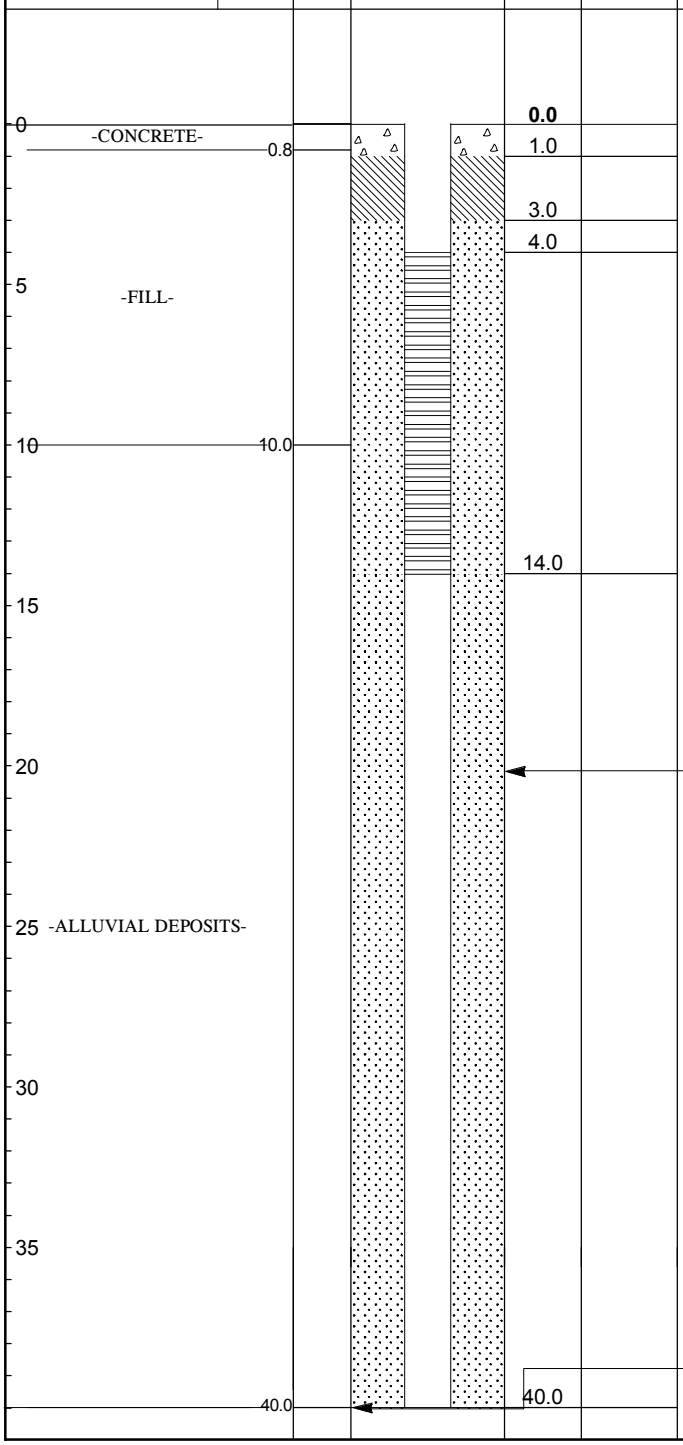
Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller J. Graglia

Initial Water Level (depth bgs) ± 6.43 ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed 19 Nov 2013
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum



WELL CONSTRUCTION DETAILS

Type of protective cover/lock: Locking Guard Pipe
Height of guard pipe above ground surface: 2.67 ft
Height of top of riser pipe above ground surface: 2.38 ft
Type of protective Casing: Locking Guard Pipe
Length: 5.0 ft
Inside diameter: 4.0 in.
Depth of bottom of guard pipe: 2.33 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	2.0
Bentonite	3.0	37.0

Type of riser pipe: Schedule 40 PVC
Inside diameter of riser pipe: 2.0 in
Type of backfill around riser: #0 Filter Sand

Diameter of borehole: 10.5 in. to 10.0 ft/6 in. to 14.0 ft in.

Type of screen: Machine slotted Sch 40 PVC
Screen gauge or size of openings: 0.010 in.
Diameter of screen: 2.0 in.

Type of backfill around screen: #0 Filter Sand

Depth to top of well screen: 4.0 ft
Depth to bottom of well screen: 14.0 ft
Bottom of silt trap: NA
Depth of bottom of borehole: 40.0 ft

COMMENTS:

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. PDMW-21S
Boring No. PDMW-21S

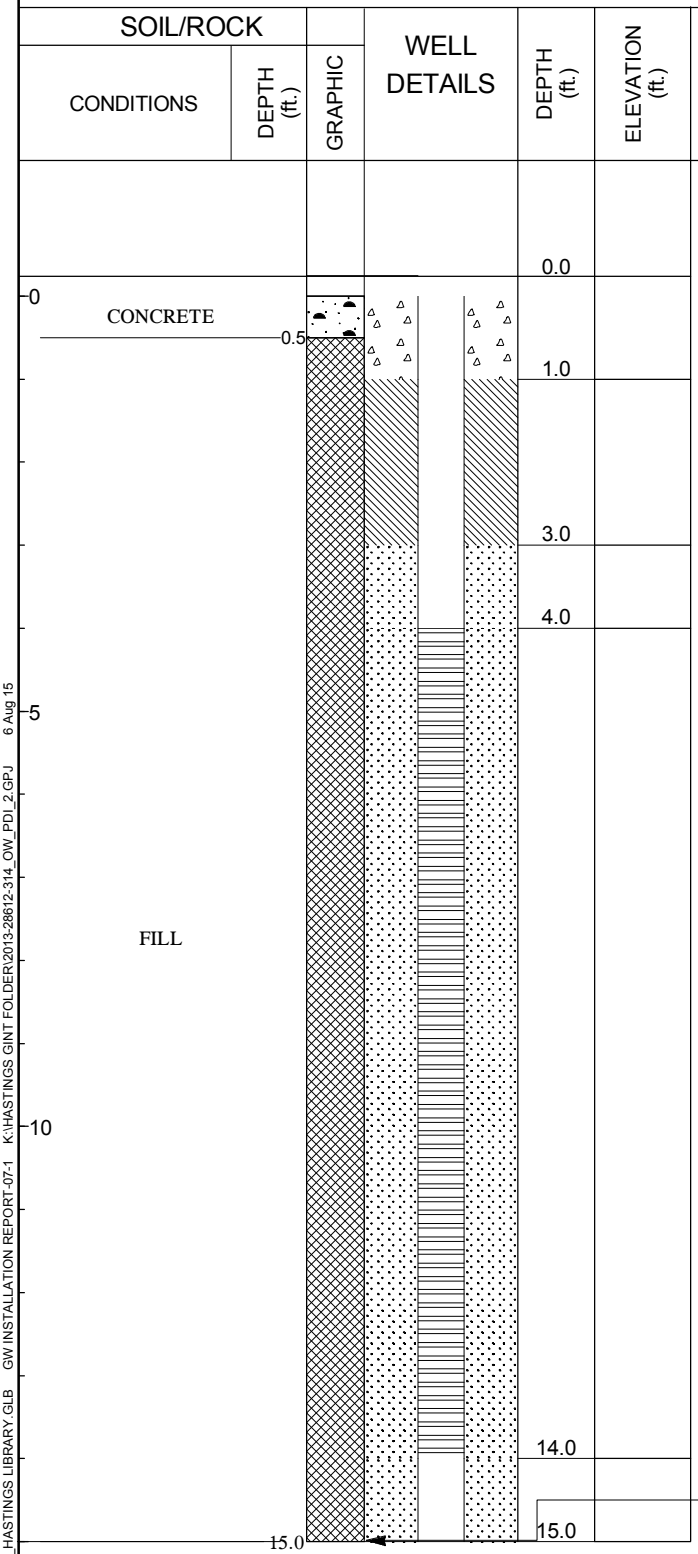
Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller J. Posterick

Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum



WELL CONSTRUCTION DETAILS

Type of protective cover: Locking Guard Pipe

Height of Locking Guard Pipe above ground surface: 2.7 ft

Height of top of riser above ground surface: 2.4 ft

Type of protective casing: Locking Guard Pipe

Length: 5.0 ft

Inside diameter: 4.0 in.

Depth of bottom of Locking Guard Pipe: 2.3 ft

Type of riser pipe: Schedule 40 PVC

Inside diameter of riser pipe: 2.0 in.

Depth of bottom of riser pipe: 4.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	2.0
Bentonite	3.0	12.0
	-	-

Diameter of borehole: 6.0 in.

Depth to top of well screen: 4.0 ft

Type of screen: Machine slotted Sch 40 PVC

Screen gauge or size of openings: 0.010 in.

Diameter of screen: 2.0 in.

Type of Backfill around Screen: #0 Filter Sand

Depth to bottom of well screen:

Bottom of silt trap: NA

Depth of bottom of borehole: 15.0 ft

COMMENTS:

28612_HASTINGS LIBRARY.GLB GW INSTALLATION REPORT-07-1 K:\HASTINGS GINT FOLDER\2013-28612-314_OW_PDI_2.GPJ 6 Aug 15

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. PDMW-22S
Boring No. PDMW-22S

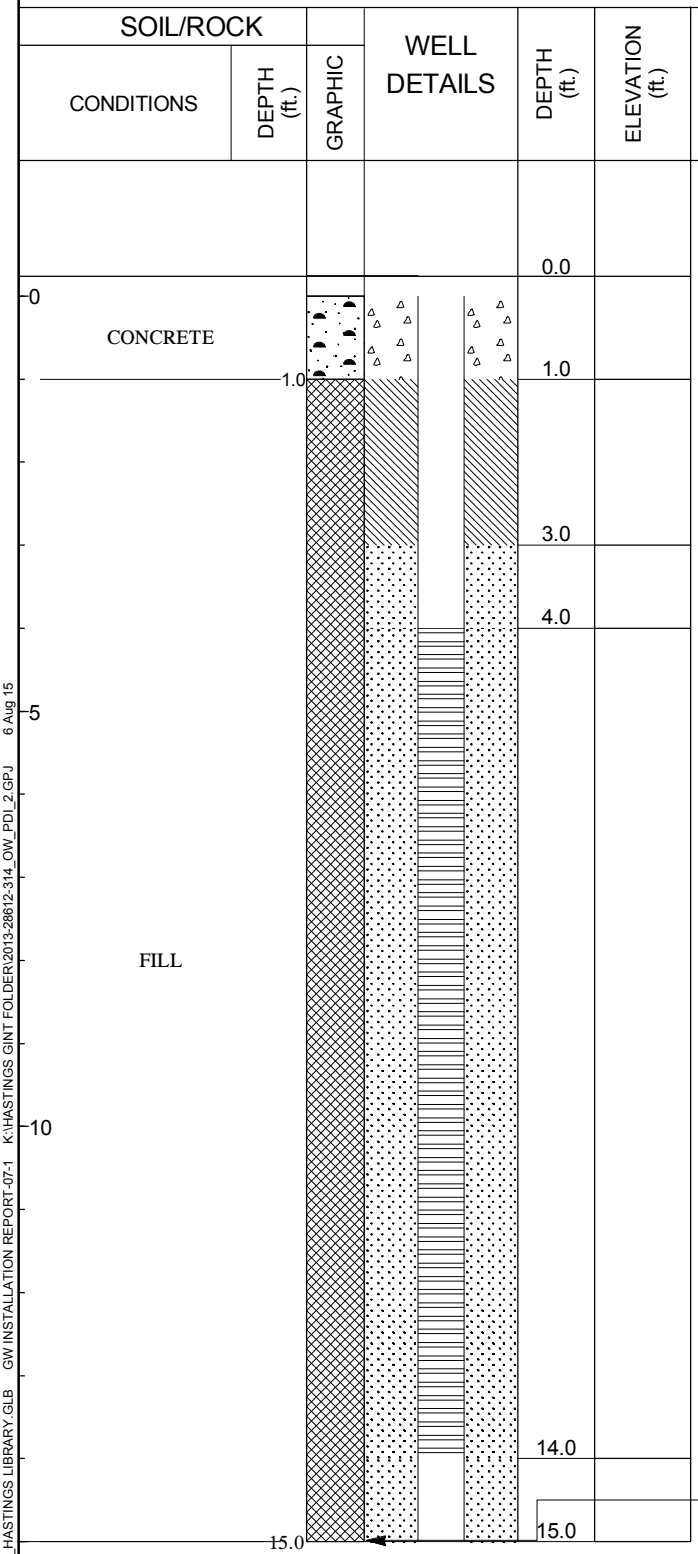
Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller J. Posterick

Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum



WELL CONSTRUCTION DETAILS

Type of protective cover: Locking Guard Pipe
Height of Locking Guard Pipe above ground surface: 3.0 ft
Height of top of riser above ground surface: 2.7 ft
Type of protective casing: Locking Guard Pipe
Length: 5.0 ft
Inside diameter: 4.0 in.
Depth of bottom of Locking Guard Pipe: 2.0 ft
Type of riser pipe: Schedule 40 PVC
Inside diameter of riser pipe: 2.0 in.
Depth of bottom of riser pipe: 4.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	2.0
Bentonite	56.0	4.0
	-	-

Diameter of borehole: 6.0 in.
Depth to top of well screen: 4.0 ft
Type of screen: Machine slotted Sch 40 PVC
Screen gauge or size of openings: 0.010 in.
Diameter of screen: 2.0 in.
Type of Backfill around Screen: #0 Filter Sand
Depth to bottom of well screen:
Bottom of silt trap: NA
Depth of bottom of borehole: 15.0 ft

COMMENTS:

28612_HASTINGS LIBRARY.GLB GW INSTALLATION REPORT-07-1 K:\HASTINGS GINT FOLDER\2013-28612-314_OW_PDI_2.GPJ 6 Aug 15

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. PDMW-23S
Boring No. PDMW-23S

Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller D. Duscher

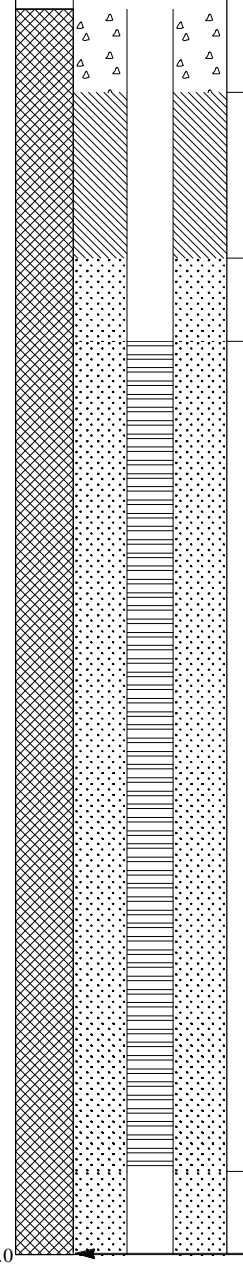
Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum

SOIL/ROCK CONDITIONS	DEPTH (ft.)	GRAPHIC	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)
				0.0	
				1.0	
				3.0	
				4.0	
FILL				14.0	
				15.0	



WELL CONSTRUCTION DETAILS

Type of protective cover: Locking Guard Pipe
Height of Locking Guard Pipe above ground surface: 2.5 ft
Height of top of riser above ground surface: 2.3 ft
Type of protective casing: Locking Guard Pipe
Length: 5.0 ft
Inside diameter: 4.0 in.
Depth of bottom of Locking Guard Pipe: 2.5 ft
Type of riser pipe: Schedule 40 PVC
Inside diameter of riser pipe: 2.0 in.
Depth of bottom of riser pipe: 4.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	2.0
Bentonite	56.0	4.0
	-	-

Diameter of borehole: 6.0 in.
Depth to top of well screen: 4.0 ft
Type of screen: Machine slotted Sch 40 PVC
Screen gauge or size of openings: 0.010 in.
Diameter of screen: 2.0 in.
Type of Backfill around Screen: #0 Filter Sand
Depth to bottom of well screen:
Bottom of silt trap: NA
Depth of bottom of borehole: 15.0 ft

COMMENTS:

28612_HASTINGS LIBRARY.GLB GW INSTALLATION REPORT-07-1 K:\HASTINGS GINT FOLDER\2013-28612-314_OW_PDI_2.GPJ 6 Aug 15

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. PDMW-24S
Boring No. PDMW-24S

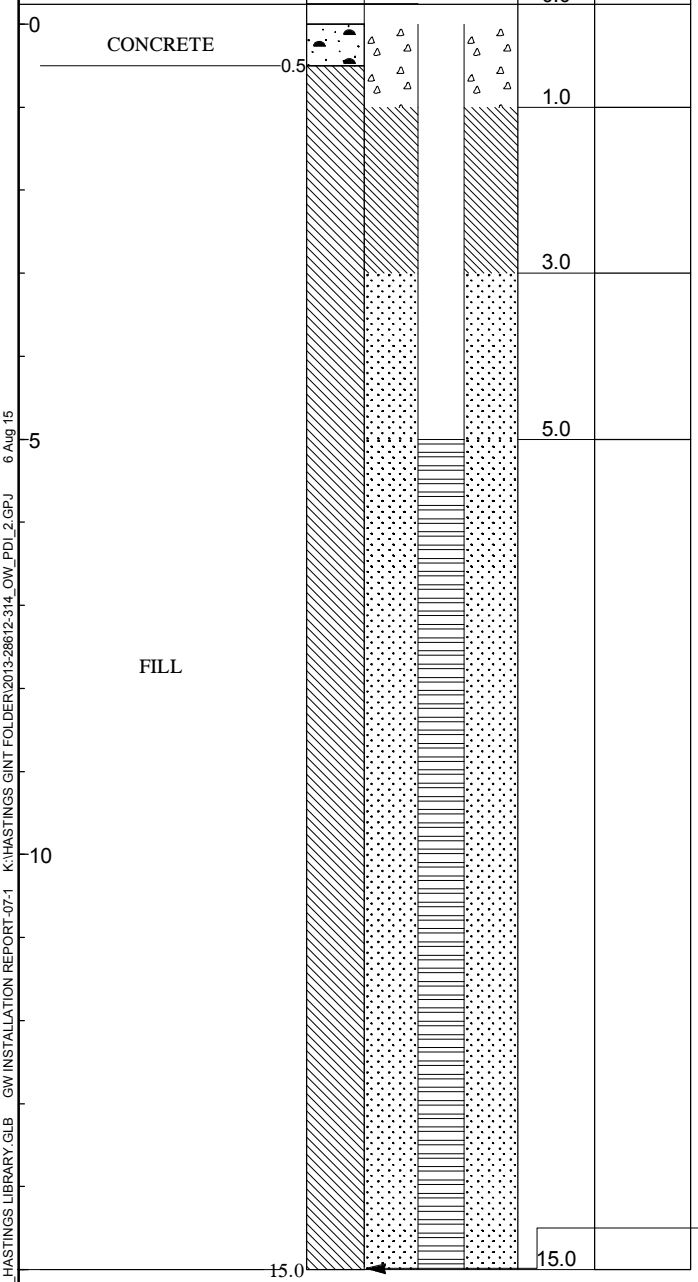
Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller J. Posterick

Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum



WELL CONSTRUCTION DETAILS

Type of protective cover: Locking Guard Pipe
Height of Locking Guard Pipe above ground surface: 2.9 ft
Height of top of riser above ground surface: 2.4 ft
Type of protective casing: Locking Guard Pipe
Length: 5.0 ft
Inside diameter: 4.0 in.
Depth of bottom of Locking Guard Pipe: 2.1 ft
Type of riser pipe: Schedule 40 PVC
Inside diameter of riser pipe: 2.0 in.
Depth of bottom of riser pipe: 5.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	2.0
Bentonite	56.0	4.0
	-	-

Diameter of borehole: 6.0 in.
Depth to top of well screen: 5.0 ft
Type of screen: Machine slotted Sch 40 PVC
Screen gauge or size of openings: 0.010 in.
Diameter of screen: 2.0 in.
Type of Backfill around Screen: #0 Filter Sand
Depth to bottom of well screen:
Bottom of silt trap: NA
Depth of bottom of borehole: 15.0 ft

COMMENTS:

28612_HASTINGS LIBRARY.GLB GW INSTALLATION REPORT-07-1 K:\HASTINGS GINT FOLDER\2013-28612-314_OW_PDI_2.GPJ 6 Aug 15

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. PDMW-25D
Boring No. PDMW-25D

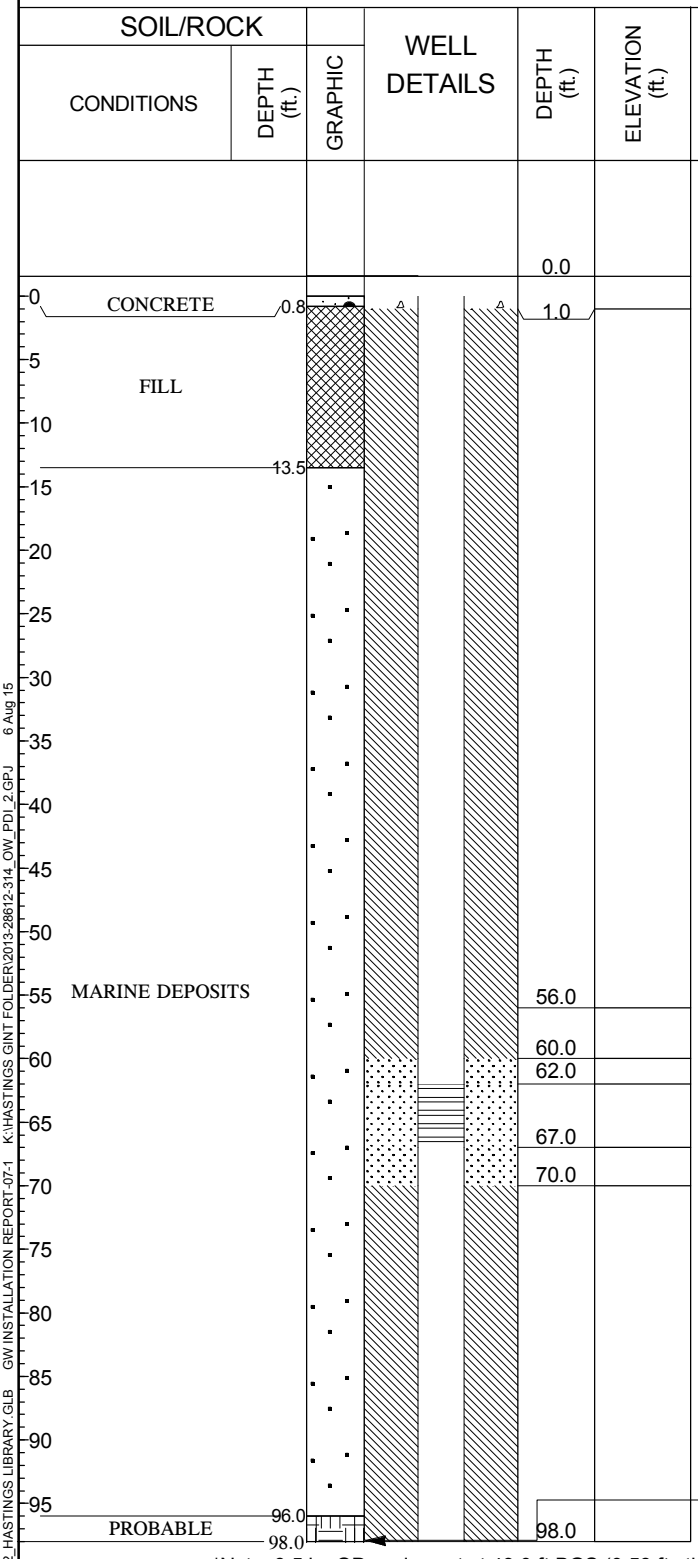
Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller J. Graglia to 55 ft D. Duscher to 98.0 ft

Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum



WELL CONSTRUCTION DETAILS

Type of protective cover: Locking Guard Pipe
Height of Locking Guard Pipe above ground surface: 2.7 ft
Height of top of riser above ground surface: 2.5 ft
Type of protective casing: Locking Guard Pipe
Length: 5.0 ft
Inside diameter: 4.0 in.
Depth of bottom of Locking Guard Pipe: 2.3 ft
Type of riser pipe: Schedule 40 PVC
Inside diameter of riser pipe: 2.0 in.
Depth of bottom of riser pipe: 62.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	55.0
Bentonite Chips	56.0	4.0
	-	-

Diameter of borehole: 10.5in.-49ft/5.5in.-67ft
Depth to top of well screen: 62.0 ft
Type of screen: Machine slotted Sch 40 PVC
Screen gauge or size of openings: 0.010 in.
Diameter of screen: 2.0 in.
Type of Backfill around Screen: #0 Filter Sand
Depth to bottom of well screen:
Bottom of silt trap: NA
Depth of bottom of borehole: 98.0 ft

COMMENTS: *Note: 6.5 in. OD casing set at 49.0 ft BGS (0.58 ft stickup)

28612_HASTINGS LIBRARY.GLB GW INSTALLATION REPORT-07-1 K:\HASTINGS GINT FOLDER\2013-28612-314_OW_PDI_2.GPJ 6 Aug 15

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. PDMW-26S
Boring No. PDMW-26S

Project FORMER ANACONDA WIRE AND CABLE
Location HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA
Driller J. Posterick

Initial Water Level (depth bgs) ft

Well Diagram
- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

File No. 28612-314
Date Installed
H&A Rep. S. Brousseau
Location See Plan

Ground El.
Datum

SOIL/ROCK CONDITIONS	DEPTH (ft.)	GRAPHIC	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)
				0.0	
FILL	0			1.0	
				3.0	
				4.0	
	5				
	10				
	14.0			14.0	

WELL CONSTRUCTION DETAILS

Type of protective cover: Locking Guard Pipe
Height of Locking Guard Pipe above ground surface: 3.0 ft
Height of top of riser above ground surface: 2.4 ft
Type of protective casing: Locking Guard Pipe
Length: 5.0 ft
Inside diameter: 4.0 in.
Depth of bottom of Locking Guard Pipe: 2.0 ft
Type of riser pipe: Schedule 40 PVC
Inside diameter of riser pipe: 2.0 in.
Depth of bottom of riser pipe: 4.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite	1.0	2.0
Bentonite	56.0	4.0
	-	-

Diameter of borehole: 6.0 in.
Depth to top of well screen: 4.0 ft
Type of screen: Machine slotted Sch 40 PVC
Screen gauge or size of openings: 0.010 in.
Diameter of screen: 2.0 in.
Type of Backfill around Screen: #0 Filter Sand
Depth to bottom of well screen:
Bottom of silt trap: NA
Depth of bottom of borehole: 14.0 ft

COMMENTS:

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SECTION 3.3

Boring Reports

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Boring logs are not available for the following explorations:

NC 101,103,104,105,114,115,116
SA-103
SG-102
SH-104
NA-302
NH-001 (SB-079)
NN-102

NORTH BORING REPORTS

TEST BORING REPORT

Boring No. NA-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 28 October 2013
Finish 28 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NA-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Mini Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 10	0.0 2.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown, silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, dry -FILL- 22302-102813-1543	0.0 0.1	10	15	15	20	20	20				
		CR2 12	2.0 4.0		2.0		CONCRETE	0.1										
					2.8	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, wood fragments, slag-like fragments, no structure, no odor, dry -FILL- 2302-102813-1605	0.2 0.1 0.3	10	20	20	10	20	20				
5		CR3 16	4.0 6.0					0.3 0.2 0.1 9.3										
		CR4 21	6.0 8.0			SM	Similar to above except dark gray in color 2302-102813-1558	4.6 6.6 6.8 5.4										
		CR5 6	8.0 10.0		8.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 0.5 in., cinder,slag, and brick fragments, no structure, petroleum-like odor, wet 2302-102813-1605 -FILL-	6.9 38.1 62.4		30	40	10	10	10				
10		CR6 21	10.0 12.0		10.4	SM	Dark gray silty SAND with gravel (SM), mps 0.75 in., brick fragments, no structure, no odor, wet -FILL- 2302-102813-1615	6.3 7.2 4.1 3.8	5	10	10	20	25	30				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. NA-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NA-101
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7 24	12.0 14.0	NO WELL INSTALLED			Dark gray silty SAND with gravel (SM), mps 1.0 in., no structure, slight hydrocarbon odor, wet 2302-102813-1639	4.3 0.7 1.1 0.3	5	10	10	15	30	30				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion	0.1										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NA-101

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NA-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 28 October 2013
Finish 28 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NA-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	4	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 10	0.0 4.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., 20% brick fragments, no structure, no odor, dry	0.2	10	20	10	20	20	20				
								0.0										
								0.1										
								0.0										
						SM	Similar to above except dark gray, 25% slag, glass, and brick	0.3										
							2-6 ft poor recovery, brick	0.2										
		CR2 12	4.0 6.0					0.1										
5								0.4										
								0.6										
		CR3 11	6.0 8.0			SM	Similar to above except, petroleum-like odor, wet	0.2	10	20	10	20	20	20				
								0.3										
							2302-102813-1502	20.2										
								54.7										
								62.4										
		CR4 24	8.0 10.0					58.3										
								26.2										
							2302-102813-1510	37.1										
								41.3										
10		CR5 14	10.0 12.0			SM	Similar to above except olive-brown in color, no petroleum-like odor	13.7										
							-FILL-	16.7										
							2302-102813-1522	18.1										
								13.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NA-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NA-102
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR6 17	12.0 14.0	NO WELL INSTALLED		SM	Dark gray silty SAND with gravel (SM), mps 3.0 in., brick fragments, wood fragments, no structure, no odor, wet -FILL- 2302-102813-1529	13.2 10.1 11.3 9.7	10	15	15	20	20	20				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion	8.2										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NA-102

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NA-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NA-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	H	CR1 24	0.0 2.0	NO WELL INSTALLED			8 in. CONCRETE 0387-053114-1057	0.0										
					0.8		RED BRICK	0.0										
					1.0	SP	Brown red poorly graded SAND with gravel (SP), sand fine to coarse grained, fine grained, moist, slag, glass	0.0										
								0.0										
	H	CR2 24	2.0 4.0					0.0										
								0.0										
						SP	Similar to above 0387-053014-1103	0.0										
								0.0										
	H	CR3 24	4.0 6.0		4.0	SM	Brown gray silty SAND with gravel (SM), sand fine to coarse, silt non plastic, gravels fine, slight odor, moist CONCRETE from 4.8 ft to 5.3 ft	0.8										
					4.8	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), sand fine to medium, gravels fine, strong odors, moist to wet, sheen on water and soil, metal, rubber, and glass	0.6										
5								0.6										
								10.7										
	H	CR4 24	6.0 8.0					11.8										
								10.5										
						SP-SM	Similar to above 0387-053014-1122	10.7										
					7.8			14.5										
	H	CR5 24	8.0 10.0			SP-GP	Gray brown poorly graded SAND with gravel (SP-GP), sand fine to coarse, fine gravel, strong odors-sewer odor, wet, sheen, bricks 0387-053014-1129	4.0										
								5.7										
					9.3			7.2										
						SM	Black silty SAND (SM), sand fine to medium, silt non plastic, strong odors, saturated, sheen 0387-053014-1130	4.8										
10	H	CR6 24	10.0 12.0		10.2	GP	Black GRAVEL (GP), fine to coarse	7.2										
					10.8			5.7										
						SP	Black poorly graded SAND with gravel (SP), gravels fine, sand fine to coarse, strong odors, saturated 0387-053014-1140	3.1										
								3.6										
	H	CR7 24	12.0 14.0			SP	Similar to above except, with wood debris 0387-053014-1149	0.7										
								1.9										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NA-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NA-201
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								1.9										
								1.4										
					14.0		-BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											
				NO WELL INSTALLED														

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NA-201

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NA-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NA-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	no sample concrete	CR1 24	0.0 2.0	NO WELL INSTALLED			2.5 ft CONCRETE											
	H	CR2 24	2.0 4.0		2.0	SP	Brown red yellow poorly graded SAND with gravel (SP), sand fine to coarse grained, fine grained, no odor, moist, slag 0387-053014-1311	0.0 0.0										
	H	CR3 24	4.0 6.0		4.0	SM	Black silty SAND (SM), sand fine grained, slight odor, moist, piece of fiber-like material 0387-0530141319	1.7 5.8										
5	H	CR4 24	6.0 8.0		4.8	GP-SP	Black brown poorly graded GRAVEL with sand (GP-SP), gravel fine, sand fine to coarse, strong hydrocarbon-like odor, pieces of brick, sheen on water, appears to be product on water, trace of coarse gravel	31.8 44.7 6.7 10.1										
	H	CR5 24	8.0 10.0			GP-SP	Similar to above except, glass 0387-053014-1328	15.7 12.8										
							Similar to above 0387-053014-1335	0.4 0.4 0.5										
10	H	CR6 24	10.0 12.0		9.6	SM	Black silty SAND (SM), sand fine to medium, trace fine gravel, no odor, saturated, pieces of concrete and bricks 0387-053014-1342	0.5										
	H	CR7 24	12.0 14.0		11.6	SP-GP	Black poorly graded SAND/GRAVEL (SP-GP), sand fine to coarse, gravels fine, slight odor, saturated, pieces of brick and conrete 0387-053014-1351											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. NA-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NA-202
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	14.0		-BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NA-202

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NA-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NA-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	H	CR1 24	0.0 2.0	NO WELL INSTALLED	0.8		8.0 in. CONCRETE											
						SP	Black red poorly graded SAND with gravel (SP), sand fine to coarse grained, fine grained, no odor, moist, slag, brick 0387-053014-1500	0.0										
								0.2										
	H	CR2 24	2.0 4.0					0.2										
								0.1										
						SP	Similar to above except, rubber leather debris 0387-053014-1510	0.4										
						SM	Medium brown silty SAND (SM), sand fine to medium grained, silty non plastic, no odor, moist, trace fine gravels	0.0										
	H	CR3 24	4.0 6.0			SM	White gray, silty SAND (SM), sand fine grained, silt non plastic, odor, moist	0.0										
								0.7										
5						SP	Black red poorly graded SAND with gravel (SM), sand fine to coarse, gravel fine, no odor, moist, brick, slag 0387-053014-1521	0.5										
						SM		4.5										
	H	CR4 24	6.0 8.0			GP	Black silty SAND (SM), sand fine to medium grained, silty non plastic, strong odors, wet, trace fine gravels	14.7										
							Brown black poorly graded GRAVEL with sand (GP), gravels fine, sands fine to coarse, strong odors, saturated, free product on water, pieces of slag material	22.7										
								15.2										
								17.8										
	H	CR5 24	8.0 10.0				Dark gray black silty SAND (SM), sand fine to medium grained, silt non plastic, wood, concrete, organics 0387-053014-1548	14.1										
								10.2										
								5.6										
								3.7										
								7.2										
10	H	CR6 24	10.0 12.0				Similar to above	6.1										
	H	CR7 24	12.0 14.0				Similar to above 0387-053014-1600											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NA-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NA-203
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Similar to above 0387-053014-1605 -BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NA-203

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NA-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NA-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	no sample concrete	CR1 24	0.0 2.0	NO WELL INSTALLED			5.0 ft CONCRETE											
	no sample concrete	CR2 24	2.0 4.0															
	H	CR3 24	4.0 6.0					0.7										
5					5.0	SP-GP	Brown red black poorly graded SAND/GRAVEL (SP-GP), sand fine to coarse grained, fine gravels, no odor, moist, slag material 0387-053014-1413	0.8										
	H	CR4 24	6.0 8.0					0.6										
					6.5	SP	Black gray poorly graded SAND with silt (SP), sand fine to coarse grained, fine gravels, pieces of slag, string odor, moist to wet 0387-053014-1415	0.6										
								0.5										
								14.5										
								17.8										
	H	CR5 24	8.0 10.0		8.0	SM	Black gray silty SAND (SM), sand fine to medium grained, wet, silt non plastic 0387-053014-1428	15.5										
					9.0	SP-GP	Black poorly graded SAND with gravel (SP-GP), sand fine to coarse, gravels fine, saturated, piece of brick and concrete	10.7										
								9.8										
10	H	CR6 24	10.0 12.0			SP-GP	Similar to above	0.7										
								0.7										
								0.9										
								0.6										
								0.1										
	H	CR7 24	12.0 14.0			SP-GP	Similar to above 0387-053014-1450	0.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NA-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NA-204
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: In bottom 1/2 ft, wood and brick debris											
					14.0		-BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NA-204

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NA-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 09 June 2014
Finish 09 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NA-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: AIR KNIFE
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR	CR1	0.0 2.0	NO WELL INSTALLED	0.5		Concrete at surface NO VOID											
						SM	Boring pre-excavated using vacuum truk and hand tools. Soil descriptions based on hand auger suttings.		10	15	20	20	20	15				
						SM	Black silty SAND with GRAVEL (SM), mps 0.25 in., 5% slag-like fragments, no odor, moist Similar to above except 50% gray, slight petroleum-like odor 0710-060914-1140 0710-060914-0002											
		CR2	2.0 4.0				0710-060914-1205											
	KNIFE	CR3	4.0 6.0															
5						SM	Similar to above except black 0710-060914-1150											
					5.5	GP	Dark brown poorly graded GRAVEL (GP), mps 1.0 in., 25% slag-like fragments, sewage-like odor, wet											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Pre-cleared to 6.5 ft											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	3CR

Boring No. NA-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NB-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 28 October 2013
Finish 28 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location SB-082

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 12	0.0 2.0	NO WELL INSTALLED	0.9		10.0 in. CONCRETE SLAB (NO VOID)											
						SM	Brown to dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, slag-like fragments, no structure, no odor, dry -FILL-	0.1 0.0 0.0 0.1	10	15	15	20	20	20				
		CR2 24	2.0 4.0					0.2 0.1 0.0 0.2										
5		CR3 23	4.0 6.0					13.2 16.7 12.1 24.2										
		CR4 16	6.0 8.0			SM	Similar to above except dark gray, cinder-like fragments, petroleum-like odor 2302-102813-1386	41.3 30.3 107.6 137.6	10	20	20	10	20	20				
		CR5 24	8.0 10.0			SM	Similar to above except, petroleum-like odor, wet 2302-102813-1406	157.3 26.7 32.1 37.6	5	10	5	20	30	30				
10		CR6 21	10.0 12.0			SM	Similar to above except olive-brown, no petroleum-like odor -FILL- 2302-102813-1522	29.3 28.6 24.3	5	5	5	25	30	30				
						SM	Similar to above except, medium sand at 11.5 ft to 12.0 ft 2302-102813-1414	22.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NB-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NB-001
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR7 19	12.0 14.0	NO WELL INSTALLED		SM	Dark gray silty SAND with gravel (SM), mps 3/4 in., wood fragments, no structure, no odor, wet	27.4		10	10	30	30	20				
							-FILL-	21.3										
							2302-102813-1424	27.4										
								20.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT	16.7										
							Note: backfilled borehole with clean sand upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NB-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 14 October 2013
Finish 11 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location SB-076

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - CORED (NO VOIDS) Collect sample 2351-101413-1330 (0 to 2 ft)	0.0										
	AIR KNIFE		1.0		0.8	SM	Black silty SAND (SM), mps 2 in., no structure, no odor, moist, brick, glass, and concrete fragments, wire and steel mesh		5	5	25	25	20	20				
			2.0				-FILL-	0.0										
			2.5		2.0		Obstruction at 2.0 ft BUILDING DEBRIS, bricks, concrete blocks, cinder fragments, slag, coal fragments, wire mesh and rebar, chemical odor	0.1										
				NO WELL INSTALLED				0.0										
							-RUBBLE- -FILL-	0.0										
5					5.0	SM	Brown silty SAND (SM), mps 2.0 in., no structure, petroleum odor, wet at 5.5 ft (sheen observed on water) , trace brick fragments,			10	25	25	20	20				
							-FILL-	0.0										
		CR 14	6.5 8.0			SM	Clearedto 6.5 ft - no voids Note: backfilled borehole with clean sand upon completion. Dark gray silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, brick fragments, glass fragments, no structure, slight petroleum-like odor, moist	37.6 41.3 46.7	15	25	5	15	20	20				
		CR 24	8.0 10.0			SM	-FILL- 2302-111113-1503 Similar to above except, more slag-like fragments, more glass fragments, wood fragments, stronger petroleum-like odor 2302-111113-1510	13.6 14.7 19.2 17.6	10	30	10	15	15	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	2.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/14/13	-	-	NA	6.5	± 5.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 1H, 2CR

Boring No. NC-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 14 October 2013
Finish 11 November 2013
Driller J. Graglia/S. Plist
H&A Rep. D. Mukherjee/J. Miller
Elevation Datum
Location TB-14-Moved 2.5 ft West of plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.5		GRAVEL/CRUSHED ASPHALT											
						SM	Black gravel, cement pieces, rebar, mps 6.0 in., no structure, no odor, moist	0.0										
	AIR KNIFE	C1 3	1.0 7.5		1.5		-FILL-	36.2										
							Hit 0.75 in. rebar at 20-in. depth	0.2										
								14.1										
					3.0		Hit another obstruction at 3.0 ft	3.2										
							Moved location Northeast	9.7										
							Hit another obstruction at 4.0 ft											
							Moved location Northeast	2.8										
								10.2										
								0.0										
5							Cleared up to 6.0 ft	44.6										
							Sheen observed on water											
							At 6.0 ft, brick and concrete debris	0.0										
							-RUBBLE FILL-											
							Cleared to 6.5 ft											
		C2 11	6.5 8.0		6.5		2302-111113-1314	50.3										
		C3 9	8.0 10.0			GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1.5 in., glass fragments, slag-like fragments, no structure, no odor, wet, sheen	62.7	15	50	5	15	15				
							-SLAG-LIKE FRAGMENTS-											
							2302-111113-1320	10.3										
10		C4 10	10.0 12.0			GP	Similar to above except, mps 3/4 in., sheen on water			50	10	25	15					
							2303-111113-1331											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/7/13	1050	0	NA	6.5	± 6.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	4CR

Boring No. NC-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-002
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	12.0	SM	Dark gray silty SAND with gravel (SM),mps 1/4 in., no structure, no odor, wet	17.6		10	5	20	35	30				
					13.0	ML	Dark gray sandy SILT (ML), fine gravel fragments, mps 1/4 in, no structure, no odor, wet 2302-11113-1338			5	5	15	35	40				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NC-002

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-003

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 11 November 2013
Finish 11 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location SB-075

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Cleared to 1.0 ft											
							Brick fragments, mps 2.0 in.											
						SM	-FILL-	1.2	10	10	10	20	30	20				
		CR-1 36	1.5 6.5				Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, slag-like fragments, no structure, no odor, dry -FILL-										
								2.1										
5								3.4										
								6.7										
		CR-2 16	6.5 8.5				2302-111113-1250	68.2										
						SM	Similar to above except, black from 9.0 ft to 9.5 ft, brick pieces, mps 3.5 in., wet, sheen on water	94.2										
							2302-11113-1253	101.7										
		CR-3 9	8.5 9.5					117										
					9.5			114.7										
							BOTTOM OF EXPLORATION 9.5 FT											
							Note: Hit something hard at 9.5 ft-near utilities.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	9.5
Rock Cored (ft)	-
Samples	3CR

Boring No. NC-003

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY & ALDRICH — TEST BORING REPORT

Boring No NC-004

Project FORMER ANACONDA WIRE AND CABLE HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 15 October 2013
Finish 15 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation (est.)
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb.)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	PID Readings	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			8.0 in. CORE CONCRETE	0.0 ppm										
					0.7	SM	Black silty SAND (SM), mps 3.0 in., presence of brick and wood chips, no structure, no odor, moist	0.0 ppm	5	10	15	25	30	15				
	HAND	HA1	2.0 4.0				*Sample collected at 2-4 ft	0.0 ppm										
								0.0 ppm										
						SM	Brown silty SAND (SM), mps 1.5 in., presence of crushed brick and more wood chips, no structure, no odor, moist		5	10	10	20	35	20				
	AUGER	HA2	4.0 6.0				Hit obstruction, piece of wood at 4.0 ft, removed *Sample collected at 4.6 ft *Sample collected at 4-6 ft	0.0 ppm										
5						SM	Black silty SAND (SM), mps 1.0 in., pieces of charcoal, no structure, no odor, moist	0.0 ppm	5	10	15	25	30	15				
							Hit/observed water at ~6.0 ft Pre-cleared up to 6.9 ft with air-knife and vac											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled hole with clean sand											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
10/15/13	1100	0	NA	6.5	± 6.0

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 6.5
Rock Cored (lin. ft.) -
Samples 2HA

Boring No. NC-004

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

USCS_TB4 28612_PDI-3_PID COLUMN.GLB USCSTB+CORE4.GDT M:\SHORTCUTS\28612-311TB_PDI_3 - COPY.GPJ 21 Jan 14

HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 07 November 2013
Finish 26 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)/ M. McDonald
Elevation Datum
Location NC-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 6.0	NO WELL INSTALLED		SM	Black silty SAND with gravel (SM), mps 3.0 in., brick pieces and fragments, no structure, no odor, moist			30	15	15	20	15	15			
5		CR-1 14	6.0 8.0		6.0	SM	Black silty SAND with gravel (SM), strong petroleum-like odor, wet 0710-062614-0921 Pre-cleared to 6.5 ft	21.0 42.0										
		CR-2 14	8.0 10.0		8.0	SP	Black poorly graded SAND with gravel (SP)	42.0 47.0										
					9.0	SP-SM	Medium dense black poorly graded SAND with silt and gravel (SP-SM), strong odor, oil-like droplets, wet 0710-062614-1002	35.0 42.0										
10		CR-3 20	10.0 12.0		10.0	SM	Black silty SAND with gravel (SM)	19.0										
					10.7	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	26.0 22.0										
					11.6	SM	Black silty SAND with gravel (SM) 0710-062614-1015	28.0										
		CR-4 24	12.0 14.0		12.2		0710-062614-0002 White clay pipe at ~12.2 ft	1.0 1.5										
					13.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	2.0										
					13.6	SM	Black silty SAND with gravel (SM) 0710-062614-1030	2.5										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NC-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 5 Aug 15

TEST BORING REPORT

Boring No. NC-108

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 07 November 2013
Finish 21 November 2013
Driller J. Graglia
H&A Rep. J. Miller/M. McDonald
Elevation
Datum
Location NC-108

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 6.0	NO WELL INSTALLED		SM	Dark brown silty SAND (SM), mps 1.0 in., brick fragments, crushed brick, brick fragments, no structure, no odor, moist		15	15	20	20	15	15				
5		CR1 24	6.0 8.0				Pre-cleared to 6.5 ft											
					6.5	GP	Dark gray to olive-brown poorly-graded GRAVEL with sand (GP), slag-like fragments, cinder-like fragments, brick fragments, wood fragments, no structure, no odor, wet 2302-112113-1442	1.7 134 32.7	10	50	15	15	10					
		CR2 24	8.0 10.0			GP	Similar to above except, oil-like droplets on water	103 95										
					9.5	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, wood fragments, no structure, petroleum-like odor, wet, oil-like droplets on water 2302-112113-1453	71.0	5	20	10	20	25	20				
10		CR3 24	10.0 12.0		10.5	SP	Dark gray poorly-graded SAND with gravel (SP), mps 1.0 in.,wood fragments, glass fragments, brick fragments, slag-like fragments, no structure, petroleum-like odor, wet, oil-like droplets on water 2302-112113-1507	57.0 38.0 32.0 16.2 13.4	10	20	10	50	10					
		CR4 22	12.0 14.0					14.1										
					14.0		2302-112113-1518 BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 4CR

Boring No. NC-108

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NC-117

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 18 November 2013
Finish 18 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NC-117

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 33	0.0 4.0	NO WELL INSTALLED			2.0 ft CONCRETE SLAB											
					2.0	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., brick fragments, slag-like fragments, metal fragments, no structure, no odor, dry	0.4	10	15	15	10	30	20				
							-FILL-	0.7										
								1.2										
		CR2 21	4.0 6.0			SM	Similar to above except, with glass fragments, petroleum-like odor, moist	59										
5							2302-111813-1249	92										
								173										
								194										
		CR3 23	6.0 8.0				2302-111813-1258 (6.0 ft to 8.0 ft)	136										
								22.1										
								43.7										
								97.2										
		CR4 16	8.0 10.0			SM	Similar to above except, petroleum-like odor, wet, sheen, oil-like droplets to water	106.4										
							2302-111813-1307 (8.0 ft to 10.0 ft)	58.3										
								74.2										
10								68.9										
		CR5 14	10.0 12.0			SM	Similar to above except, with glass fragments, cinder-like fragments		10	20	15	15	20	20				
							2302-111813-1316 (10.0 ft to 12.0 ft)	193.2										
								206.2										
		CR6 19	12.0 14.0			SM	Similar to above except, petroleum-like oder, lessened as depth increased	191.3										
								175										
							2302-111813-1324 (12.0 ft to 14.0 ft)	43										
								32										
					14.0		BOTTOM OF EXPLORATION 14.0 FT	37										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NC-117

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NC-118

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 18 November 2013
Finish 18 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NC-118

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 4.0	NO WELL INSTALLED			2.0 ft CONCRETE SLAB (NO VOID)											
					2.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, wood fragments, metal fragments, glass-like fragments, no structure, no odor, dry -FILL-	0.3 1.4	10	15	15	20	20	20				
5		CR2 24	4.0 6.0					43.7 172.6 214.3										
		CR3 13	6.0 8.0		6.0	SM GP	Similar to above except, petroleum-like odor, wet at 5.5 ft 2302-111813-1423 Dark gray poorly-graded GRAVEL with sand (GP), mps 3.5 in., wood pieces, slag-like fragments, cinder-like fragments, petroleum-like odor, wet, sheen, oil-like drops to water 2302-111813-1440	119.3 161.2	50	10	15	15	10					
		CR4 9	8.0 10.0				Wood fragments with sand 2302-111813-1453	148.7										
10		CR5 22	10.0 12.0		10.0	SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., glass fragments, bone fragments, wood fragments, no structure, slight septic-like odor, wet	13.7 19.8	20	20	10	10	20	20				
					11.5	GP	2302-111813-1453 2302-111813-1506	37.2 19.4	10	60	10	10	10					
		CR6 23	12.0 14.0		13.0	SM	Slag-like fragments, petroleum-like odor, wet, sheen	43.2 23.2	10	30	10	15	15	20				
					14.0		Olive-brown silty SAND with gravel (SM), mps 1.0 in., wood fragments, bone fragments, glass fragments, slag-like fragments, no structure, petroleum-like odor, wet, sheen 2302-111813-1513	31.4										
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NC-118

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

HALEY & ALDRICH — TEST BORING REPORT

Boring No. NC-119

Project FORMER ANACONDA WIRE AND CABLE HASTINGS-ON-HUDSON, NEW YORK
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 2
Start 18 November 2013
Finish 18 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation (est.)
Datum
Location NC-105A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	4	4	-	Bit Type:
Hammer Weight (lb.)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	PID Readings	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 33	0.0 4.0				2.0 ft CONCRETE SLAB											
					2.0	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., brick fragments, slag-like fragments, metal fragments, no structure, no odor, dry	0.4 ppm	10	15	15	10	30	20				
							-FILL-	0.7 ppm										
								1.2 ppm										
		CR2 21	4.0 6.0					59 ppm										
5								92 ppm										
								173 ppm										
						SM	Similar to above except, with glass fragments, petroleum-like odor, moist at 5.5 ft to 6.0 ft	194 ppm										
		CR3 23	6.0 8.0				2302-111813-1249	136 ppm										
								22.1 ppm										
								43.7 ppm										
							Dry to 7.5 ft, moisture at 7.5 ft to 8.0 ft	97.2 ppm										
		CR4 16	8.0 10.0			SM		106.4 ppm										
							2302-111813-1258	58.3 ppm										
							Similar to above except, petroleum-like odor, wet-sheen-oil-like droplets to water	74.2 ppm										
10							2302-111813-1307	68.9 ppm										
		CR5 14	10.0 12.0	NO WELL INSTALLED		SM	Similar to above except, with glass fragments, cinder-like fragments		10	20	15	15	20	20				
								193.2 ppm										
								206.2 ppm										
		CR6 19	12.0 14.0			SM	2302-111813-1316	191.3 ppm										
							2302-111913-0951	175 ppm										
							Similar to above except, petroleum-like oder, lessened as depth increased	43 ppm										
								32 ppm										
					14.0		2302-111813-1324	37 ppm										
							BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 14
Rock Cored (lin. ft.) -
Samples 6CR

Boring No. NC-119

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

USCS_TB4 28612_PDI-3_PID COLUMN.GLB USCSTB+CORE4.GDT M:\SHORTCUTS\28612-314TB_PDI_3.GPJ 31 Mar 14

TEST BORING REPORT

Boring No. NC-120

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 21 November 2013
Finish 21 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NC-120

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 4.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark gray silty SAND with gravel (SM), mps 3.0 in., concrete pieces, brick fragments, wood fragments, slag-like fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.3	10	10	10	20	30	20				
								0.6										
								0.2										
		CR2 24	4.0 6.0					0.1										
5								0.3										
								0.4										
		CR3 23	6.0 8.0				2302-112113-1352	1.6										
								22.6										
								31.7										
					7.0	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1.0 in, slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet	97.3	10	50	10	20	10					
		CR4 22	8.0 10.0					74.1										
10							2302-112113-1421	152										
		CR5 24	10.0 12.0															
					11.0	SM	Olive-brown silty SAND with gravel (SM), mps 2.0 in.,wood fragments, glass fragments, bone fragments, slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet, oil-like droplets on water	78.4	10	20	20	10	20	20				
		CR6 24	12.0 14.0					26.7										
					13.0	SP-SM	2302-112113-1425			20	10	20	40	10				
					14.0		Brown to dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 1/2 in., brick fragments, glass fragments, no structure, no odor, moist to wet	1.6										
							2302-112113-1433											
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NC-109

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 03 June 2014
Finish 03 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NC-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0										
					0.7	SP	Black, brown and red poorly graded fine to coarse SAND with fine gravel (SP), moist, brick, glass, slag material (brick in tip, low recovery) 0387-060314-0842	0.0										
		CR2 20	2.0 4.0		2.0	SM	Grayish-brown silty fine to coarse SAND with fine gravel (SM), non-plastic, moist, piece of glass, brick, shells	0.0										
					3.0	SP	Black poorly graded fine to coarse SAND with fine gravel (SP), moist to wet, glass, slag											
		CR3 20	4.0 6.0		4.0	SP	Medium brown poorly graded fine to medium SAND with fine gravel (SP), wet	0.0										
5					4.4	SP-SM	Black poorly-graded fine to coarse SAND with fine gravel (SP-SM), non plastic, wet 0387-060314-0850											
		CR4 24	6.0 8.0		6.4	SP-SM	Black poorly graded fine to coarse SAND with fine gravel (SP-SM), non plastic, strong odors, saturated, glass, brick, concrete, shell 0387-060314-0856											
					7.5	SM	Grayish-brown silty fine to medium SAND (SM), trace fine gravel, non plastic, slight odor, wet, glass, brick, concrete											
		CR5 24	8.0 10.0		8.2	SP	Black poorly graded fine to coarse SAND with silt and fine gravel (SP), non plastic, slight odor, wet 0387-060314-08__											
					9.4	SM	Black silty fine to coarse silty SAND with fine gravel (SM), non-plastic, wet, wood debris, glass, brick 0387-060314-0918											
10		CR6 24	10.0 12.0															
		CR7 24	12.0 14.0			SM	Black silty fine to coarse SAND with fine gravel (SM), non plastic, saturated, brick, glass, wood debris 0387-060314-0932												

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NC-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-201
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: No PID readings between 2 to 14 ft.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NC-201

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 02 June 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NC-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0										
					0.7	SP	Black poorly graded fine to coarse SAND with fine gravel (SP), slag material, brick, concrete	0.0		20	35	25	20					
								0.0										
							0887-060214-1351	0.0										
		CR2 10	2.0 4.0				Concrete piece from 2.0 ft, very poor recovery 0887-060214-1361	0.0										
								0.0										
								0.0										
								0.0										
		CR3 15	4.0 6.0			SP	Similar to above, lots of concrete 0387-060214-1357	0.0										
								0.0										
5							At 5 ft, hit something hard, appears to be concrete piece	0.0										
		CR4 15	6.0 8.0			SP	Similar to above, wet 0387-060214-1408	0.0										
								0.0										
					7.0	SM	Grayish-black silty fine to coarse SAND with fine gravel (SM), non plastic, slight odor, saturated, pieces of brick, concrete, leather, slag	0.0										
						SM	0387-060214-145 Similar to above, water has sheen 0387-060214-0003	0.0										
		CR5 22	8.0 10.0					0.1										
							0387-060214-1426	0.1										
								0.1										
10		CR6 18	10.0 12.0				Very hard drilling from 10 to 12 ft, drilling on rock, pushing down as coring. Pulling out of boring moved 2 ft to the west, drilled down to 10 ft to start sampling 0387-060214-1625	0.0										
								0.0										
					11.5	SM	Grayish-brown silty fine to medium SAND (SM), non-plastic, saturated, rocks, brick											
		CR7 20	12.0 14.0			SM	Similar to above, wood debris 0387-060214-1437	0.0										
								0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NC-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-202

File No. 28612-326

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
								0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NC-202

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 29 May 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NC-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3	SM	CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.		10	10	15	15	25	15				
							Black silty SAND with gravel (SM), mps 0.5 in., no odor, dry, 5% slag-like fragments 0710-052914-440											
	AIR		2.0			SM	Similar to above, except mps 2 in., 5% brick-like fragments 0710-052914-1150	0.0	15	10	15	15	20	15				
								0.0										
	KNIFE		4.0			SM	Similar to above, except black, petroleum-like odor, 5% glass-like fragments 0710-052914-1200	0.5										
5																		
		CR1 24	6.0 8.0			SP-SM	Black poorly graded fine to coarse SAND with silt and fine gravel (SP-SM), non-plastic, strong odors, wet, pieces of slag, brick 0387-060214-1137 Pre-cleared to 6.5 ft	6.3										
								6.2										
								8.2										
								10.5										
		CR2 24	8.0 10.0			SP-SM	Similar to above, except fine to coarse gravel, brick, glass, wood debris, strong odor 0387-060214-1148	13.3										
								18.7										
								15.5										
								16.2										
10		CR3 24	10.0 12.0			SP-SM	Similar to above 0387-060214-1155	11.3										
								17.4										
								16.7										
					11.8			13.1										
		CR4 24	12.0 14.0			ML	Grayish-brown SILT (ML), non plastic, slight odor, wet, pieces of wood, brick	11.7										
					12.4	SM	0367-060214-1207	1.8										

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	16.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NC-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-203
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.0	SP	Black silty fine to coarse SAND (SM), non plastic, strong odor, traces fine gravel, glass, brick	1.7										
					13.9		Grayish-black poorly graded fine to coarse SAND with fine gravel (SP), slight odor, wet, glass, wood	0.0										
		CR5 24	14.0 16.0		14.2	ML		0.0										
15						SP	Gray SILT (ML), trace fine sand, no odor, moist, wood, glass 0367-060214-1230	0.0										
							Grayish-brown poorly graded fine to coarse SAND (SP), mostly coarse, wet, fine sand from 14.5 to 14.8 ft	0.0										
					16.0		BOTTOM OF EXPLORATION 16.0 FT	0.0										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NC-203

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NC-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							8.25 in. CONCRETE NO VOID											
					0.8	SM	Black silty SAND with gravel (SM), mps 4 in., no odor, moist, 5% slag-like fragments 0710-053014-0955 0710-053014-0002		5	10	15	15	30	15				
					2.0		PRE-CLEARED to 2.0 FT											
				NO WELL INSTALLED	3.0	SM	Black silty SAND with gravel (SM), mps 0.75 in., no odor, moist, 10% slag-like fragments 0710-061014-1515	0.0	10	10	10	25	30	15				
					4.0		BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	--

Boring No. NC-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NC-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NC-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0	NO WELL INSTALLED	0.8		CONCRETE AT SURFACE 8.25 in. Note: Boring pre-excavated using vacuum truck and hand tools, soil descriptions based on hand auger cuttings.											
					2.0		Black silty SAND with gravel (SM), mps 1.0 in., slag-like fragments-51, no odor, moist, sample 0.0 ft to 2.0 ft 0710-053014-0955 FD 0710-053014-0002											
							-BOTTOM OF EXPLORATION 2.0 FT Pre-cleared to 2.0 ft											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. NC-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NC-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 29 May 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NC-205A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.2	SM	CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.		10	15	15	15	20	15				
					1.3		Black silty SAND with gravel (SM), 5% slab-like fragments,											
					1.5	SM	5% brick-like fragments, no odor, dry 0710-052914-1544											
							Concrete layer											
							Similar to above 0710-052914-1550											
					3.8		~12 in. PVC pipe running each and west											
					4.0	SM	Similar to above, except mps 2.0 in., petroleum-like odor, wet 0710-052914-1520 0710-052914-0002											
5							Note: Between 5 and 5.5 ft, hit cast iron pipe. 0710-05219-1535											
		CR1 ?	8.0 10.0		8.0	SP-GP	Black poorly graded fine to coarse SAND with fine gravel (SP-GP), strong odors, saturated, pieces of slag material 0387-060214-1018	2.6 3.7 5.1											
					9.4	ML	Black SILT with fine grained sand (ML), non-plastic, strong	3.2										
					9.8	SM	odor, wet, pieces of fiber material Black silty fine to coarse SAND (SM), non-plastic, strong odor,	1.7										
10		CR2 ?	10.0 12.0		10.4	SP-SM	saturated Black poorly graded fine to coarse SAND with silt and fine grave (SP-SM)l, non-plastic, slight odor, saturated, pieces of brick, slag material 0387-060214-1032	4.3 3.7 4.0											
		CR3 24	12.0 14.0		12.0	ML	Soft grayish-black SILT with fine sand (ML), non-plastic, trace low-plastic fines, no odor, wet, pieces of brick 0387-060214-1041	0.0 0.0											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	3CR

Boring No. NC-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NC-205
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
								0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NC-205

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. ND-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location ND-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Mini Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 30	0.0 2.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, no structure, no odor, dry -FILL-		10	10	20	20	20	20				
		CR2 23	2.0 4.0					0.0 0.7 1.3 2.1										
		CR3 24	4.0 6.0				Roof-like asphalt shingles at 4.0 ft	7.6 8.3										
5						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, metal fragments, no structure, no odor, dry -FILL-	4.2 3.7	20	10	20	10	20	20				
						SM	Similar to above except, a slight petroleum-like odor at 7.3 ft 2302-102413-1042	0.9 1.6 9.4 63.2 10.1										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 3CR

Boring No. ND-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. ND-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location ND-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 31	0.0 2.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB											
					0.9	SM	Gray-brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, concrete fragments, no structure, no odor, dry -FILL-		20	10	10	20	20	20				
		CR2 24	2.0 4.0					0.3 0.8 0.1 0.2										
5		CR3 24	4.0 6.0			SM	Similar to above except, concrete pieces, mps 2.5 in., metal fragments Light brown 5.5 ft to 6.0 ft- 2302-102413-1116	0.0 0.6 0.2 0.0	25	5	10	20	20	20				
					6.0	SP-SM	Dark brown poorly-graded SAND with silt and gravel (SM), mps 1.0 in., cinder-like fragments, slag-like fragments, brick fragments, no structure, slight petroleum-like odor at 7.5ft, dry -FILL- 2302-102413-1123	0.3 0.7 18.2 97.6	20	10	40	10	10	10				
					8.0		BOTTOM OF EXPLORATION 8.0 FT	63.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 3CR

Boring No. ND-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. ND-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location ND-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 28	0.0 2.0	NO WELL INSTALLED			11.0 ft CONCRETE SLAB NO ODOR											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, slag-like fragments, cinder-like fragments, metal strands, no structure, no odor, dry		10	10	20	20	20	20				
		CR2 24	2.0 4.0															
		CR3 23	4.0 6.0					8.6 24.3										
5								76.2										
							3.0 in. layer of round shingle-like material, (peel layers apart not sticky)	71.4										
						SM	-FILL- Dark gray silty SAND with gravel (SM), mps 2.5 in., glass fragments, metal fragments, cinder-like material, no structure, smoky odor, moist	84.2 72.1	25	5	10	20	20	20				
						SM	2302-102413-0943 Similar to above except, slight petroleum-like odor at 6.5 ft -FILL-	63.2 52.1										
					7.5		2302-102413-0952											
					8.0	SP-SM	Dark gray poorly-graded SAND with gravel (SP-SM), mps 1.0 in., slag-like fragments, cinder-like fragments, no structure, no odor, moist	22.4 13.2	10	20	40	20	10					
							BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	3CR

Boring No. ND-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. ND-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location ND-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 31	0.0 2.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, metal fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.0	10	20	10	20	20	20				
		CR2 24	2.0 4.0					0.6										
								3.25										
								5.4										
5		CR3 24	4.0 6.0			SM	Similar to above except, with wood fragments 2302-102413-1013	14.2 16.6 17.3 10.2 4.7	10	20	10	20	20	20				
		CR4 24	6.0 8.0		6.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., wood fragments, brick fragments, metal fragments, slag-like fragments, no structure, no odor, moist to wet at 7.5 ft 2302-102413-1018	2.3 1.7 0.8 0.4	20	20	40	10	10					
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: backfilled borehole with clean sand upon completion	1.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 4CR

Boring No. ND-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. ND-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 25 June 2014
Finish 25 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location ND-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: MINISONIC 1415
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE 6 IN.											
					0.5	SM	Black silty SAND with gravel (SM)											
						SM	Similar to above except gray											
						SM	Brown silty SAND with gravel (SM)											
						SM	Similar to above except black 0710-062514-1317											
		CR2	2.0 4.0		2.0	SP	Brown poorly graded SAND with concrete (SP)	0.0										
							Layer of white CONCRETE	0.0										
						SP	Brown poorly graded SAND with gravel (SP) Note:	0.0										
								0.0										
		CR3	4.0 6.0		4.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	5.7										
								4.5										
5					5.1		Layer of wood	3.3										
					5.2		Note: Layer of tar-like substance 0710-062514-1343	6.3										
		CR4	6.0 8.0		6.0	GP-GM	Black poorly graded GRAVEL with sand and silt (GP-GM)	0.0										
								0.0										
					7.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	0.0										
					7.8	SP	Black poorly graded SAND with gravel (SP)	0.0										
		CR5	8.0 10.0		8.2	SP-SM	0710-062514-1354 Dark gray poorly graded SAND with gravel (SP-SM)	0.0										
								0.0										
						SP-SM	Similar to above except medium gray 0710-062514-1400	0.0										
10		CR6	10.0 12.0					0.0										
								0.0										
					11.2	GP	Dark gray poorly graded GRAVEL with sand (GP), no odor, oil-like droplets 0710-062514-1411	1.5 1.0										
		CR7	12.0 14.0		12.4	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.5										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. ND-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 4 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. ND-201
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
					13.6	GP	Drak gray poorly graded SAND with silt and gravel (SP-SM) 0710-062514-1421	0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. ND-201

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 4 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. ND-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 2
Start 25 June 2014
Finish 25 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location ND-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.6		CONCRETE AT SURFACE NO VOID											
					0.9	SM	Brown silty SAND with gravel (SM)											
					1.8	SM	Brown and tan silty SAND with gravel (SM)											
		CR-2 24	2.0 4.0		2.0	SM	Black silty SAND with gravel (SM) 0710-062514-1508											
					2.4	SP-SM	Brown silty SAND with gravel (SM)											
					2.5		Layer of Wood											
		CR-3 24	4.0 6.0		4.2	ML	Medium brown poorly graded SAND with silt and gravel (SP-SM) 0710-062514-1507 Light brown sandy SILT (ML)											
					4.5	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)											
5					4.9	ML	Black sandy SILT (ML)											
					5.2	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0710-062514-1513											
		CR-4 16	6.0 8.0		6.0	SP-SM	Similar to above, except wet											
		CR-5 16	8.0 10.0		7.8	GP	Dark gray poorly graded GRAVEL with sand (GP) 0710-062514-1520	0.0 4.0 6.0										
					9.8	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)	7.5										
10		CR-6 22	10.0 12.0		10.3	SP	0710-062514-1531 Poorly graded SAND with gravel (SP)	4.7										
					10.8	ML	Black sandy SILT (ML)	11.0 27.0										
					11.8	SP	Black poorly graded SAND with gravel (SP)	36.5										
					12.2	SP-SM	0710-062514-1536	43.0										
					12.6	ML	Dark gray poorly graded SAND with silt and gravel (SP-SM) Black sandy SILT (ML)	26.5 1.5										
					13.5	SM	Medium gray silty SAND with gravel (SM)	2.3										
					14.0		0710-062514-1543 BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	6CR

Boring No. ND-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. ND-202

File No. 28612-328
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Backfill with clean sand upon completion. Fill Material (red brick, slag, metal, nails, glass, tile)											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. ND-202

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NE-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NE-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 4	0.0 2.0	NO WELL INSTALLED			16.0 in. CONCRETE SLAB (NO VOID)											
					1.3	SM	Dark brown silty SAND with gravel (SM), mps 1/2 in., brick fragments, no structure, no odor, dry -FILL-			20	10	20	25	25				
		CR2 24	2.0 4.0				2302-102413-1405	0.0										
								0.3										
						SM	Similar to above except, wood fragments, concrete pieces, metal fragments, no structure, no odor, dry 2302-102413-1416	0.2	15	15	10	20	20	20				
								0.0										
					4.0		BOTTOM OF EXPLORATION 4.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 4
Rock Cored (ft) -
Samples 2CR

Boring No. NE-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NE-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NE-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 3	0.0 2.0	NO WELL INSTALLED			15.0 in. CONCRETE SLAB (NO VOID)											
					1.3	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, no structure, no odor, DRY -FILL-			20	10	20	25	25				
		CR2 23	2.0 4.0				2302-102413-1347	0.0 0.6 0.9										
						SM	Similar to above except, dark gray, mps 3.5 in., concrete pieces 2302-102413-1354	1.2 0.0	10	20	10	20	20	20				
					4.0		BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4
Rock Cored (ft)	-
Samples	2CR

Boring No. NE-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NE-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NE-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 4	0.0 2.0	NO WELL INSTALLED			23.0 in. CONCRETE SLAB (NO VOID)											
		C2 24	2.0 4.0		1.9	SM	Dark brown silty SAND (SM), mps 2.5 in., no structure, no odor, dry	0.0			10	30	30	30				
							-FILL-	0.3										
							2302-102413-1325	0.0										
						SM	Similar to above except, brick pieces, slag-like pieces, wood pieces, mps 3.5 in.	1.2	10	10	20	20	20	20				
							2302-102413-1331	0.0										
					4.0		BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 4
Rock Cored (ft) -
Samples 2CR

Boring No. NE-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NE-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 October 2013
Finish 25 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)/ J. Miller
Elevation Datum
Location NE-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 0	0.0 2.0	NO WELL INSTALLED			1.5 in. CONCRETE NO VOID Fill Material (red brick, wood, concrete, bottles, glass, fabric)											
		CR2 18.4	2.0 4.0		2.0		Brick pieces	0.0										
					2.5	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, wood fragments, metal fragments, no structure, no odor, dry -FILL-	0.3	10	15	15	20	20	20				
		CR3 24	4.0 6.0		4.0	SP-SM	2302-102413-1415											
					4.6	SP-SM	Black and tan poorly graded SAND with silt and gravel (SP-SM)											
5					5.2		Similar to above, except black											
					5.5	SP	Red brick layer											
					5.8	SP-SM	Black poorly graded SAND with gravel (SP)											
		CR4 24	6.0 8.0		6.0	GP	Black poorly graded SAND with silt and gravel (SP-SM) 0210-062514-0830											
					6.7	ML	Black poorly graded GRAVEL with sand (GP), wet											
					7.3	SP	Black sandy SILT (ML) Concrete layer											
		CR5 24	8.0 10.0		7.4	SP-SM	Black poorly graded SAND with gravel (SP) 0710-062514-0836; 0710-062514-0002											
					8.0		Dark gray poorly graded SAND with silt and gravel (SP-SM)											
					9.0	SM	Dark gray silty SAND with gravel (SM)											
10					9.9	SP-SM	Medium gray poorly graded SAND with silt and gravel (SP-SM) 0710-062514-0845											
		CR6 24	10.0 12.0		11.0	SM	Black silty sAND with gravel (SM)											
					11.4	SP	Black poorly graded SAND with gravel (SP), sheen											
					11.7	SM	Dark gray silty SAND with gravel (SM) 0710-062514-0855											
		CR7 24	12.0 14.0		13.6	SP-SM	Medium gray poorly graded SAND with silt and gravel (SP-SM) 0710-062514-0101											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NE-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. NE-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NE-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE											15
						SM	Dark brown silty SAND with gravel (SM), 10% slag-like fragments, no odor, moist 0710-061014-1155		15	15	15	20	20	15				
					2.0	SM	Similar to above 0710-070814-1015											
				NO WELL INSTALLED	4.0		BOTTOM OF EXPLORATION 4.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	-

Boring No. NE-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NE-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NE-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE											
						SM	Dark brown silty SAND with gravel (SM), mps 0.75 in., 10% slag-like fragments, no odor, moist 0710-061014-1140 0710-061014-0002		15	15	20	15	20	15				
					2.0	SM	Similar to above, except mps 3 in., no structure, 25% brick fragments, 3 in. pocket of white paste-like material 0710-070814-1000		15	15	20	15	20	15				
				NO WELL INSTALLED	4.0		BOTTOM OF EXPLORATION 4.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	-

Boring No. NE-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NE-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 25 June 2014
Finish 25 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NE-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID Fill Material (red brick, wood)	0.0 0.0 0.0										
					1.8	SM	Black silty SAND with gravel (SM), red brick fragments	0.0										
		CR-2 24	2.0 4.0		2.0	SP	0710-062514-1048	0.0										
					2.3	SP	Red and tan poorly graded SAND with gravel (SP)	0.0										
					2.6	SM	Similar to above, except only tan	0.0										
					2.9	SM	Medium brown silty SAND with gravel (SM) Concrete layer	0.0										
		CR-3 18	4.0 6.0		3.4	SP	Black silty SAND with gravel (SM)	0.0										
					4.0		0710-062514-1054 Black poorly graded SAND with gravel (SP) 0710-062514-1100	0.0 0.0 0.0										
5																		
		CR-4 18	6.0 8.0		6.2	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), wet	0.0										
					6.8	GP-GM	Dark gray poorly graded GRAVEL with sand and silt (GP-GM)	2.3										
					7.6	SP	Dark gray poorly graded SAND with gravel (SP), slight odor,	7.0										
		CR-5 12	8.0 10.0		8.0	SP-SM	oil-like droplets 0710-062514-1107 Dark gray poorly graded SAND with silt and gravel (SP-SM), petroleum-like odor, oil-like droplets	10.5 7.5 12.0										
					9.7	SM	Black silty SAND with gravel (SM), odor, sheen	7.5										
10		CR-6 ?	10.0 12.0		10.0	SP	0710-062514-1114	7.5										
					10.3	GP	Dark gray poorly graded SAND with gravel (SP)	1.0										
					10.8	SM	Dark gray poorly graded GRAVEL with sand (GP) Black silty SAND with gravel (SM)	1.3										
					11.4	SM	Similar to above, except medium gray, and wood-like fragments	0.3										
					12.0		0710-062514-1122	0.0										
							BOTTOM OF EXPLORATION 12.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 12.0
Rock Cored (ft) -
Samples 6CR

Boring No. NE-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NE-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 June 2014
Finish 24 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NE-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE Fill Material (red brick, wire, glass, slag, copper wire, wood)	0.0 0.0 0.0										
					1.5	SM	Black silty SAND with gravel (SM)	0.0										
		CR-2 24	2.0 4.0		1.7 2.0	SP SP	Red and tan poorly graded SAND with gravel (SP) 0710-062514-0925	0.0 0.0										
					3.0	SP	Similar to above, except mostly tan Similar to above, except black 0710-062514-0930	0.0 0.0										
		CR-3 20	4.0 6.0		4.0	SP	Similar to above, except wet 0710-062514-0939	0.0 0.0 0.0 0.0										
5		CR-4 20	6.0 8.0		6.2	GP	Black poorly graded GRAVEL with sand (GP)	0.0 0.0										
					7.0 7.5	SM SP-SM	Dark gray sandy silt (SM) Black poorly graded SAND with silt and gravel (SP-SM), slight petroleum-like odor, oil-like droplets 0710-062514-0947	0.0 0.0 6.0											
		CR-5 18	8.0 10.0		8.4	SP-SM	Similar to above, except more silt 0710-062514-0955	6.5 13.0 11.0										
10		CR-6 24	10.0 12.0		10.4 10.6 11.2	SM GP SM	Dark gray silty SAND (SM) Black poorly graded GRAVEL (GP) Medium gray silty SAND with gravel (SM) 0710-062514-1000	8.5 2.5 3.0 5.0											
					12.0		BOTTOM OF EXPLORATION 12.0 FT Note: Backfill with clean sand upon completion.	8.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NE-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NE-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 09 July 2014
Finish 09 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NE-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE Fill Material (brick, wood, glass, copper wire, slag, foundry sand)	0.0										
					0.8	SP-SM	Dark brown poorly graded SAND with silt and gravel, moist 0387-070914-1125	0.0										
								0.0										
		CR-2 24	2.0 4.0				From 2.0 to 2.4 ft, wood, brick debris From 2.4 to 2.6 ft, yellow brick material	0.0										
					2.6	SP-SM	Dark brown/black poorly graded SAND with silt and gravel (SP-SM), foundry sand and slag 0387-070914-1129	0.0										
								0.0										
					4.0	SP	Black poorly graded SAND with gravel (SP), foundry sand/slag 0387-070914-1135	0.0										
		CR-3 24	4.0 6.0					0.0										
5								0.0										
					5.6	ML	Medium brown SILT (ML), very moist	0.0										
					5.8	GP	Black poorly graded GRAVEL with sand (GP), moderate petroleum-like odor, oily substance, black at top of water 0387-070914-1195	10.0										
		CR-4 24	6.0 8.0					6.0										
								16.0										
					7.5	SM	Grayish-brown silty SAND (SM), slight odor	17.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NE-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NF-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 22 November 2013
Finish 22 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NF-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 31	0.0 4.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, dry	0.1	10	20	10	20	20	20				
								0.3										
								0.2										
		CR2 20	4.0 6.0					0.2										
5							2302-112213-0855	0.3										
								0.4										
		CR3 24	6.0 8.0					0.2										
					6.5	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1.0 in, slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, wet	1.3	10	50	15	15	10					
					7.5	SP		4.6										
		CR4 16	8.0 10.0					11.3	10	20	50	10	10					
							2302-112213-0903											
10							Dark gray poorly-graded SAND with gravel (SP), mps 3.0 in., concrete pieces, slag-like fragments, brick fragments, glass fragments, no structure, slight petroleum-like odor, moist	38.2										
								46.7										
		CR5 24	10.0 12.0				2302-112213-0910	52.3										
								106.4										
					11.0	ML	Dark gray silty with gravel (ML), mps 1/2 in., glass fragments, wood fragments, no structure, petroleum-like odor, moist	0.7		20	10	10	10	50				
					11.5	GP	Dark gray poorly-graded GRAVEL with sand (GP)	13.2										
		CR6 20	12.0 14.0					42.1										
					12.5	SM	Olive-brown silty SAND with gravel (SM), mps 2.0 in., wood fragments, brick fragments, glass fragments, slag-like fragments, no structure, petroleum-like odor, wet	32.4	15	20	5	20	20	20				
								38.2										
					14.0		2302-112213-0920	29.4										
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. NF-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NF-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 22 November 2013
Finish 22 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NF-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 4.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., concrete pieces, brick fragments, wire fragments, no structure, no odor, dry	0.0 0.3 0.0 0.6	10	20	10	20	20	20				
		CR2	4.0 6.0		4.4	SP	Dark gray poorly-graded SAND with gravel (SP), mps 1.0 in, slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, dry 2302-112213-0935	1.4 0.9	10	20	15	40	15					
5		CR3	6.0 8.0					28.6 49.3										
					7.0	GP	Olive-brown poorly-graded GRAVEL with sand (GP), mps 1.0 in, slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet	52.7 62.4	10	50	15	15	10					
		CR4	8.0 10.0		8.5	ML	2302-112213-0940	97.3		30		10	10	50				
					9.0	SM	Dark gray SILT with gravel (ML), mps 1/2 in., glass fragments, no structure, petroleum-like odor, wet	102.4	10	20	10	20	20	20				
10		CR5	10.0 12.0				Dark gray silty SAND with gravel (SM), mps 2.0 in., wood fragments, slag-like fragments, no structure, petroleum-like odor, wet 2302-112213-0950	91.3											
		CR6	12.0 14.0				Wood pieces and fragments, some sand, wet-sheen -FILL- 2312-112213-0955 2302-112213-1000	13.6 22.4										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. NF-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NF-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 02 June 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NF-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE											
					0.7	SP	Medium brown poorly graded fine to coarse SAND with fine gravel, trace non-plastic silt, moist 00387-060214-0855	0.0		35	30	20	15					
					1.6	SP	Similar to above, except black slab material	0.0										
		CR2 24	2.0 4.0			SP	At 2 ft, 3-in. concrete layer Black poorly graded fine to coarse SAND with fine gravel (SP), moist, slag material, brick 00387-060214-0910	0.0		35	30	20	15					
		CR3 20	4.0 6.0			SP	Similar to above, except wet/saturated at 5.5 ft 00387-060214-0915	0.7										
5		CR4 24	6.0 8.0			SP	Similar to above, strong odor	16.7										
					7.0	SM	Medium brown silty fine to medium SAND (SM), non--plastic, strong odor, wet	18.1				30	40	30				
					7.4	SM	Black silty fine to coarse SAND with fine gravel (SM), non-plastic, strong odor, saturated, sheen on water and soil 00387-060214-0921	17.2		20	30	20	10	20					
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NF-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 25 October 2013
Finish 08 November 2013
Driller J. Graglia
H&A Rep. J. Miller/M. McDonald
Elevation
Datum
Location NG-001

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 6x4
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 4.8	NO WELL INSTALLED	0.7													
							Black silty SAND with gravel (SM), mps 5.0 in., rock fragments, brick pieces and fragments, yellow brick observed in side walls, no structure, no odor, moist		20	10	20	20	15	15				
5							Note: backfilled borehole with clean sand upon completion											
		CR1 18	6.0 8.0		6.5	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, wet -FILL-	40.3 57.1 69.2	10	15	15	20	20	20				
		CR2 16	8.0 10.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 3.5 in., brick pieces, wood pieces, slag-like fragments, no structure, slight petroleum-like odor, wet -FILL-	73.2 86.2 97.3 98.4	30	10	10	20	20	10				
10		CR3 12	10.0 14.0		10.0	SM	Dark gray silty SAND with gravel (SM), mps 1.0 in., metal fragments, glass fragments, no structure, no odor, wet -FILL- 2302-110813-1221	4.2 33.1 22.4	5	10	10	15	30	30				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 4CR

Boring No. NG-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NG-001
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR49	12.0 14.0	NO WELL INSTALLED	12.0	SP	Dark gray poorly-graded SAND with gravel (SP), mps 1/4 in., slag-like fragments, no structure, no odor, wet 2302-110813-1232			20	10	25	40	5				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NG-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 15 November 2013
Finish 15 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NG-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 29	0.0 5.0	NO WELL INSTALLED	1.0		12.0 CONCRETE SLAB (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, no structure, no odor, dry -FILL-	1.6	10	15	15	20	20	20				
								2.3										
								6.2										
5		CR2 26	5.0 10.0			SM	Similar to above except, with slag-like fragments, cinder-liked fragments, slight petroleum-like odor, wet	1.7										
								4.6										
								32.7										
								47.2										
		CR3 10	8.0 10.0		8.0	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 2.5 in., concrete fragments, cinder-like fragments, no structure, petroleum-like odor, wet, sheen 2302-111513-1406	106.7	10	50	15	15	10					
10		CR4 11	10.0 12.0			GP	Similar to above except, with glass fragments 2302-111513-1414		5	50	15	20	10					
								42.7										
		CR5 13	12.0 14.0					26.2										
							2302-111513-1425											
					13.5	ML	Dark gray SILT with sand (ML), mps 2 mm, no structure, organic odor, wet	14.7					20	80				
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	5CR

Boring No. NG-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NG-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 28 October 2013
Finish 15 November 2013
Driller J. Graglia
H&A Rep. J. Miller/M. McDonald
Elevation Datum
Location NG-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 5.0	NO WELL INSTALLED	0.7		8.0 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND (SM), mps 5.0 in., brick pieces and fragments, rock pieces and fragments, no structure, no odor, moist		10	20	20	15	15					
							Wire mesh at ~3.0 ft											
					4.5		Air-knife cleared at 4.5 ft											
5		CR1 16	5.0 8.0			SP	Dark brown poorly-graded SAND with gravel (SP), mps 1.0 in., brick fragments, cinder-like fragments, no structure, no odor, moisture -FILL-	4.3	10	20	50	10	10					
		CR2 11	8.0 10.0		8.0	SM	Dark gray to black silty SAND with gravel (SM), mps 1/2 in., cinder-like fragments, no structure, petroleum-like odor, wet, black sheen on water 2302-111513-1124	6.2 137.6	10	10	20	20	20	20				
10		CR3 10	10.0 12.0			SM	Similar to above except, with slag-like fragments 2302-111513-1133	126.2										
		CR4 24	12.0 14.0		13.0	ML	Dark gray SILT with sand (ML), shell-like fragments, no structure, organic odor, wet						20	80				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	4CR

Boring No. NG-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NG-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 25 October 2013
Finish 25 October 2013
Driller B. Beeman/J. Graglia
H&A Rep. M. McDonald/J. Miller
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	HA	-	Rig Make & Model: Geoprobe 7822/BL100C Mini Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 6.5	NO WELL INSTALLED	0.7		8.0 in. CORE CONCRETE											
						SM	Black silty SAND (SM), mps 0.0 in., rusty steel fragments, rock pieces and fragments,		15	20	20	15	15	15				
					2.8		Obstruction at 34.0 in. Hole widened to the Wast ~1.0 ft											
5		CR2 27	5.0 10.0			SM	Brown silty SAND with gravel, mps 1.0 in., no structure, no odor, dry, slag-like fragments and glass fragments	0.7	10	20	15	15	20	20				
					6.5		Pre-cleared to 6.5 ft Note: backfilled borehole with clean sand upon completion 10/25/13 drill with mini-sonic											
						SM	Similar to above, except brick pieces, mps 3.5 in., petroleum-like odor, wet, oil droplets to water Collect sample 2302-111413-1513	133.6 141.3										
10		CR3 12	10.0 12.0		10.0	GP	Dark gray poorly graded GRAVEL with sand (GP), mps 2.5 in., wet, sheen-like droplets, slag-like fragments	182.6	15	45	20	10	10					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NG-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NG-103
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4 17	12.0 14.0	NO WELL INSTALLED			Similar to above, except slag-like fragments Collect sample 2302-111413-1610											
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NG-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 25 October 2013
Finish 15 November 2013
Driller B. Beeman/J. Graglia
H&A Rep. M. McDonald/J. Miller
Elevation Datum
Location Moved 2.0 ft W of original location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	HA	-	Rig Make & Model: Geoprobe 7822/BL100C Mini Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 5.0	NO WELL INSTALLED			10.0 in. CORE CONCRETE											
					0.8	SM	Black silty SAND with gravel (SM), mps 4.0 in, brick pieces and fragments, rock pieces and fragments, no structure, no odor, moist		20	10	20	20	15	15				
					2.0		2 pipes discovered at ~2.0 ft bgs											
					2.5		1.0 in. steel pipe and 2 "steel pipe *Pipes are offset from center of hole towards NW corner of hole VOID located at ~2.5 ft bgs to 3.5 ft water											
5		CR1 14	5.0 8.0			SP	Dark gray poorly-graded SAND with gravel (SP), mps 1/2 in., brick fragments, slag-like fragments, no structure, no odor, wet -FILL- Air-knife cleared to 6.5 ft				15	20	50	10	5			
					6.5			4.3										
		CR2 11	8.0 10.0			SP	Similar to above	6.2										
							2302-111513-1004	4.2										
10		CR3 23	10.0 12.0				Concrete pieces from 10.5 ft to 11.5 ft	3.6										
								13.2										
						SP	Dark gray poorly-graded SAND with gravel (SP), mps 1/2 in., brick fragments, slag-like fragments, no structure no odor, wet	16.1			35	10	40	10	5			

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/25/13	-	0	NA	2.5	± 2.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	4CR

Boring No. NG-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NG-104
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4 22	12.0 14.0	NO WELL INSTALLED			2302-111513-1021	4.6										
							Concrete pieces, mps 3.0 in.	3.2										
					13.4	SM	-FILL-	2.1			15	15	20	30	20			
					14.0		Dark gray silty SAND with gravel (SM), mps 1/2 in., slag-like fragments, no structure, no odor, wet 2302-111513-1036											
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NG-104

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 09 July 2014
Finish 09 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NG-201A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	no sample	CR1 8	0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CONCRETE											
						SM	Brownish-black silty SAND with gravel, no odor, moist Fill Material (brick, wire) BOTTOM OF EXPLORATION 12.0 FT											
		CR2 24	2.0 4.0			SM	Similar to above 0387-070914-1400	0.0 0.0										
							From 3.5 to 3.8 ft concrete	0.0										
		CR3 18	4.0 6.0				0387-070914-1405	0.0 0.0 0.0										
5					5.6	GP	Brown poorly graded GRAVEL with sand and silt (GP), no odors, no staining, saturated 0387-070914-1409	0.0 7.9										
		CR4 18	6.0 8.0				Similar to above At 7.0 ft, material has petroleum-like odor, sheen, oily substance	15.2 27										
		CR5 20	8.0 10.0				Similar to above 0387-070914-1415	5.2 55 4.8										
10								6.5										
		CR6 24	10.0 12.0				Similar to above 0387-070914-1419 Wood debris on top of concrete	6.3 7.5 5.7										
					11.5		CONCRETE											
		CR7 24	12.0 14.0		12.0	SM	Grayish-black silty SAND with gravel (SM), saturated 0387-070914-1425	0.0 0.0 0.0 0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NG-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 09 July 2014
Finish 09 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NG-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 20	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0										
					0.8		Fill material (brick, wire, concrete, glass, wire)											
						SM	Grayish-brown silty SAND with gravel (SM), no odor, moist 0387-070914-1504	0.0										
								0.0										
		CR-2 18	2.0 4.0			SM	Similar to above 0387-070914-1508	0.0										
								0.0										
								0.0										
		CR-3 18	4.0 6.0		4.0	SP-SM	Grayish-brown poorly graded SAND with gravel, no odor, no staining, moist 0387-070914-1513	0.0										
								0.0										
5								0.0										
								0.0										
		CR-4 18	6.0 8.0			SP-SM	Similar to above 0387-070914-1517	4.5										
								7.8										
								10.2										
					7.5	GP	Black poorly graded GRAVEL with sand and silt (GP)_, slight petroleum-like odor, black oily substance 0387-070914-1524	4.2										
		CR-5 20	8.0 10.0		8.5	SM	Very dense grayish-brown silty SAND (SM), moist, trace rounded gravel	2.8										
								3.1										
					9.5	GP	Brownish-gray poorly graded GRAVEL with sand, slight petroleum-like odor, gravel rounded 0387-070914-1532	2.7										
10		CR-6 ?	10.0 12.0					0.0										
					10.5	SM	Very dense medium grayish-brown silty SAND with gravel, wet	0.0										
								0.0										
								0.0										
		CR-7 20	12.0 14.0		11.9	SM	Grayish-brown silty SAND, no odor, no staining, saturated, trace fine gravel 0387-070914-1536											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NG-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 19 November 2014
Finish 19 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NG-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED			CONCRETE SLAB	0.0										
					1.0	SM	Black silty SAND with gravel (SM), mps 1.5 in., 15% brick fragments, 10% concrete fragments, 5% cinder-like fragments, 5% slag-like fragments, no structure, no odor, moist											
		CR2 23	2.0 4.0					0.0										
								0.0										
		CR3 22	4.0 6.0					0.0										
5								0.0										
		CR4 23	6.0 8.0			SM	Similar to above, except brown in color	0.0										
								0.0										
		CR5 22	8.0 10.0		8.0	GP	Black slag-like metal (GP), mps 0.75 in., 5% glass, 5% wood, 5% metal, no structure, strong petroleum odor, wet from 9.5 ft	2.7										
								8.6										
10		CR6 23	10.0 12.0					1.9										
					11.0	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., 10% slag-like fragments, 10% cinder-like fragments, 5% brick, 5% glass, 5% wood, no structure, no odor, wet	3.7										
		CR7 22	12.0 14.0					0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NG-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NG-203
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.	0.0										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NG-203

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NG-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 03 November 2014
Finish 03 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NG-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED			CONCRETE SLAB	0.0										
					1.0	SM	Black silty SAND with gravel (SM), mps 2.0 in., 20% brick fragments, 5% cinder-like fragments, 5% slag-like fragments, 5% concrete fragments, no structure, no odor, moist	0.0										
		CR2 19	2.0 4.0					0.0										
		CR3 21	4.0 6.0					0.0										
5		CR4 23	6.0 8.0					0.0										
		CR5 19	8.0 10.0			SM	Similar to above, except slight petroleum-like odor	0.0										
					9.0	SM	Brown silty SAND with gravel (SM), mps 1.5 in., 10% brick fragments, 10% cinder-like fragments, 5% wood, 5% glass, 5% metla, no structure, strong petroleum-like odor, wet	0.0										
10		CR6 21	10.0 12.0		10.5	GP	Black slag-like fragments (GP), mps 1.0 in., 5% glass, 5% wood, 5% brick fragments, petroleum-like odor, wet	0.0										
		CR7 19	12.0 14.0		12.0	GP	Black to gray poorly graded GRAVEL with SAND (GP), mps 1.25 in., 30% slag-like fragments, 10% cinder-like fragments, 10% wood, no structure, no odor, block of wood from 13.5 to	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NG-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NG-204
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
							14.0 ft	0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NG-204

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 08 November 2013
Finish 19 November 2013
Driller J. Graglia
H&A Rep. J. Miller/S. Brousseau
Elevation
Datum
Location NH-002

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 9	0.0 2.0	NO WELL INSTALLED			13.0 in. CONCRETE SLAB (NO VOID)											
					1.1	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, concrete fragments, slag-like fragments, no structure, no odor, dry	0.6	10	10	10	20	30	20				
								0.4										
		CR2 18	2.0 4.0				2302-111913-1437	11.3										
								12.6										
								16.2										
								19.4										
5		CR3 20	4.0 6.0			SM	Similar to above except with more course SAND, sweet odor 2302-111913-1446		5	20	20	15	20	20				
								24.2										
								78.4										
								103.6										
		CR4 24	6.0 8.0		6.0	SM	Dark gray silty SAND with gravel (SM), mps 1.5 in, brick fragments, slag-like fragments, cinder-like fragments, no structure, strong petroleum-like odor, moist -FILL- 2302-110813-1134	79.3	10	15	15	20	20	20				
								86.4										
								137.3										
		CR5 24	8.0 10.0					206.4										
								113.6										
						SM	Similar to above except, no petroleum-like odor from 9.0 ft to 10.0 ft 2302-110813-1142	142.1										
								110.2										
								46.7										
10					10.0			42.1										
							BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. NH-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 8 Aug 15

TEST BORING REPORT

Boring No. NH-003

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 11 November 2013
Finish 11 November 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							7.0 in. CORE CONCRETE											
					0.6		Dark brown to black silty SAND with gravel (SM), mps 6.0 in., whole bricks, rod pieces, crushed brick, metal, nails, copper wire, and broken glass fragments, no structure, no odor, moist		10	5	20	20	20	25				
	AIR KNIFE	HA1	2.0 4.0	NO WELL INSTALLED			6.0 in. boulder removed at ~32.0 in. *Sample collected at 2-4 ft 0710-11113-1415 Wire mesh removal at ~4.0 ft											
5	AND VAC	HA2	4.0 6.0				*Sample collected at 4-6 ft 0710-11113-1520											
							Pre-cleared to 6.5 ft											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	2HA

Boring No. NH-003

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 22 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 11	0.0 2.0	NO WELL INSTALLED														
					1.0	SM	Dark brown silty SAND will gravel (SM), mps 2.0 in, brick fragments, wood fragments, cinder-like fragments, no structure, no odor, moist	0.6	15	15	15	15	20	20				
							-FILL-	0.9										
		CR2 23	2.0 4.0				2302-102213-1103	0.3										
								0.7										
								0.1										
								0.0										
					4.0	SM	Similar to above except brown, metal fragments 2302-102213-1109	0.6										
							BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 4
Rock Cored (ft) -
Samples 2CR

Boring No. NH-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 18 October 2013
Finish 18 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override 6 in.	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1 10	0.0 2.0	NO WELL INSTALLED			12.0 in. concrete slab (NO VOID)	0.0										
					1.0	SM	Brown silty SAND with gravel (SM), mps 0.25 in., no structure, no odor, dry, brick fragments	0.1		20	20	20	20	20				
							Brick pieces, metal fragments	0.0										
		CR2 23	2.0 4.0				-FILL-	0.2										
							Collect sample 2302-102813-1008	0.0										
								0.3										
								0.6										
								0.3										
		CR3 23	4.0 6.0			SM	Similar to above, except dark gray in color, wood fragments, slag-like fragments	0.1 16.1										
5							Collect sample 2302-102813-1021	25.3										
								38.7										
						SM	Similar to above, except petroleum-like odor	42.9										
		CR4	6.0 8.0					27.4										
								64.6										
							Collect sample 2302-102813-1027	69.3										
					7.5	GW	Dark gray well graded GRAVEL with sand (GW), no structure, petroleum-like odor, wet, cinder-like fragments	82.1										
		CR5 22	8.0 10.0				-FILL-	87.6										
					8.5	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., wood fragments, brick fragments, no structure, petroleum-like odor, wet	72.1 68.3										
								92.1										
							-FILL-											
							Collect sample 2302-102813-1034	74.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	66.7										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10.0
Rock Cored (ft) -
Samples 5CR, 4H

Boring No. NH-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 14 November 2013
Finish 14 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 46	0.0 5.0	NO WELL INSTALLED	1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, wood fragments, metal fragments, wire strands, glass fragments, no structure, no odor, dry -FILL-	0.6		5	15	10	20	30	20			
								0.3										
								1.2										
								1.7										
5		CR2 52	5.0 10.0		5.0	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 3/4 in., no structure, petroleum-like odor, moisture -CINDER-LIKE FRAGMENTS-				60	15	15	10				
								19.5										
					6.5	SP	Dark gray poorly-graded SAND with gravel (SP), mps 3/4 in., no structure, petroleum-like odor, moist				10	10	20	55	5			
								17.3										
					7.5	SM	Dark gray silty SAND with gravel (SM), mps 1/2 in., slag-like fragments, cinder-like fragments, glass fragments, metal fragments, no structure, petroleum-like odor, wet 2302-111413-1223	17.6		10	15	5	20	30	20			
								14.2										
10		CR3 14	10.0 12.0					50.3										
								46.7										
								21.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 4CR

Boring No. NH-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-105
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4 13	12.0 14.0	NO WELL INSTALLED		SM	Similar to above except olive-green, slight petroleum-like odor 2302-111413-1232	16.2 14.2 16.3 9.7										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-105

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TEST BORING REPORT

Boring No. NH-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 26 October 2013
Finish 26 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-106

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model:
				Bit Type:
Inside Diameter (in.)	6	4	-	Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
				Hoist/Hammer:
Hammer Fall (in.)	-	-	-	PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Air knife to 6.5 ft											
					2.0													
	AIR KNIFE	CR1 23	2.0 4.0			SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, brick fragments, wood fragments, metal fragments and slag-like fragments	0.0	10	20	10	20	20	20				
								0.2										
							-FILL-	0.6										
								0.1										
		CR2 24	4.0 6.0				Collect sample 2302-102813-0942	0.8										
								0.3										
					4.8			0.9										
5					4.9	SP	Red brick pieces and fragments -FILL-	13.7		30	45	10	10	5				
							Dark gray poorly graded SAND with gravel (SP), mps 1/2 in., no structure, no odor, dry, slag-like fragments, cinder-like fragments, and brick fragments	16.2										
		CR3 23	6.0 8.0					1.7										
								0.4										
					6.5	SM	Dark gray silty SAND with gravel (SM), mps 1.0 in., no structure, petroleum-like odor at 7.0 ft, moist, brick fragments, slag-like fragments and cinder-like fragments	13.6										
								41.9										
							-FILL-	38.2										
							Collect sample 2302-102813-0951	24.1										
		CR4 24	8.0 10.0					36.4										
								48.7										
							Similar to above, except visible oil-like drops on water, wet Collect sample 2302-102813-0957	25.3										
								18.7										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	15.2										
							Note: backfilled borehole with clean sand upon completion.											

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10.0
Rock Cored (ft) -
Samples 4CR, 3H

Boring No. NH-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-106A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 06 June 2014
Finish 06 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-106A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																		
	Air Knife	CR1 24	2.0 4.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, brick fragments, wood fragments, metal fragments and slag-like fragments 0387-060614-1310	0.0	10	20	10	20	20	20				
							-FILL-	0.2										
								0.6										
								0.1										
								0.8										
								0.3										
					4.8			0.9										
5						SP	Red brick pieces and fragments	0.9		30	45	10	10	5				
					4.9		Dark gray poorly graded SAND with gravel (SP), ps 2 in., no structure, no odor, dry, slag-like fragments, cinder-like fragments, and brick fragments	13.7										
								16.2										
		CR2 24	6.0 8.0					0.4										
					6.5			1.7										
						SM	Dark gray silty SAND with gravel (SM), mps 1.0 in., no structure, petroleum-like odor at 7.0 ft, moist, brick fragments, slag-like fragments and cinder-like fragments 0387-060614-1316	13.6										
								1.7										
								41.9										
							-FILL-	38.2										
						SM	Similar to above, except visible oil-like drops on water, wet	24.1										
								36.4										
								36.4										
								48.7										
								25.3										
								18.7										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	15.2										
							Note: Backfill borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NH-106A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-107

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 20 November 2013
Finish 20 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-107

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model:
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1 12	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. concrete slab (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, dry, slag-like fragments and copper strands		5	10	15	20	30	20				
							-FILL-	0.0										
								0.2										
		CR2 20	2.0 4.0					0.0										
								1.3										
							Collect sample 2302-112013-1520	1.6										
								0.9										
		CR3 24	4.0 6.0					1.7										
					4.5		Concrete pieces, mps 3.0 in.	3.3										
					4.9													
5						SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, dry, brick fragments, metal strands and glass fragments	4.1	10	15	15	20	20	20				
		CR4 24	6.0 8.0				Collect sample 2302-112013-1524	9.7										
								4.2										
						SM	Similar to above, except dark gray, moist Collect sample 2302-112013-1528	3.6										
					7.8													
					8.0	GP	Dark gray poorly graded GRAVEL with sand (GP), mps 0.5 in., no structure, no odor, wet, cinder-like fragments			50	15	15	20					
							BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8.0
Rock Cored (ft) -
Samples 4CR, 2H

Boring No. NH-107

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-108

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 20 November 2013
Finish 20 November 2013
Driller J. Posterick
H&A Rep. J. Miller
Elevation Datum
Location NH-108

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							6.0 in. CONCRETE SLAB											
		CR1 14	0.0 2.0		0.6	SM	Dark brown, silty SAND with gravel (SM), mps 1.5 in., brick fragments, metal fragments, wire strands, no structure, no odor, dry	0.6	5	20	10	15	30	20				
								0.3										
								0.4										
							-FILL-											
		CR2 16	2.0 4.0					0.7										
								1.3										
								1.2										
		CR3 20	4.0 6.0				2302-112013-1421											
5								1.4										
							2302-112013-1424	1.7										
								3.4										
		CR4 24	6.0 8.0					6.1										
								0.4										
							2302-112013-1431	17.2										
				NO WELL INSTALLED	7.5	GP	Dark gray, poorly-graded GRAVEL with sand (GP), mps 3/4 in., cinder-like fragments, no structure, petroleum-like odor, moisture	21.2		55	15	15	15					
					8.0			36.7										
							-FILL-											
							BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 4CR

Boring No. NH-108

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-109

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 20 November 2013
Finish 20 November 2013
Driller J. Posterick
H&A Rep. J. Miller
Elevation Datum
Location NH-109

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							6.0 in. CONCRETE SLAB											
		CR1 13	0.0 2.0	NO WELL INSTALLED	0.6	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, metal fragments, no structure, no odor, dry	0.3 0.6 1.2	10	15	10	15	30	20				
		CR2 16	2.0 4.0				2302-112013-1121	1.0 0.7 0.4 1.6										
5		CR3 23	4.0 6.0			SM	Similar to above except, wood fragments, copper-wire strands, glass fragments 2302-112013-1126	1.9 2.1 2.6 3.1	10	20	10	20	20	20				
		CR4 24	6.0 8.0			SM	Similar to above except dark gray, moist to wet, sheen 7 ft to 7.7 ft 2302-112013-1139	2.1 4.2 3.7 2.2										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: backfilled borehole with clean sand upon completion.	4.8										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-109

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-110

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 20 November 2013
Finish 20 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-110

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 11	0.0 2.0	NO WELL INSTALLED	0.6		6.0 in. CONCRETE SLAB (NO VOID)											
						SM	Brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, metal fragments, no structure, no odor, dry	0.0 0.4	10	10	10	20	30	20				
		CR2 17	2.0 4.0			SM	Similar to above except dark brown at 2.5 ft 2302-112013-1054	0.6 0.7 1.0										
		CR3 20	4.0 6.0				2302-112013-1059	0.7 2.4 3.6										
5						SM	Similar to above except, moisture at 5.5 ft											
		CR4 23	6.0 8.0					3.1 4.2										
						SM	Similar to above except dark gray, wet at 7 ft 2302-112013-1106	6.1										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 4CR

Boring No. NH-110

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-111

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 20 November 2013
Finish 20 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-111

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 2.0	NO WELL INSTALLED	0.6		6.0 in. CONCRETE SLAB (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, glass fragments, rope-like strands-milky-like-not sticky, no structure, no odor, wet	0.9 3.2 4.1	5	15	10	20	30	20				
		CR2 20	2.0 4.0					6.3 9.2										
						SM	Similar to above except brown from 2.5 ft to 3.5 ft, more rope-like strands	13.1										
		CR3 24	4.0 6.0			SM	2302-112013-1449 Similar to above except, metal fragments and metal strands-nails, no structure, slight sweet odor, dry 2302-112013-1459	16.2 36.7 103.6 51.2										
5		CR4 24	6.0 8.0		6.5			1.8										
					7.0	SM	Brick pieces, mps 3.5 in. Dark gray silty SAND with gravel (SM), mps 2.5 in., concrete fragments, slag-like fragments, cinder-like fragments, no structure, no odor, moisture 2302-112013-1502	3.2 4.1	10	10	25	15	20	20				
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-111

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-112

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 20 November 2013
Finish 20 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-112

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 2.0	NO WELL INSTALLED	0.6	SM	6.0 in. CONCRETE SLAB (NO VOID)											
							Dark brown silty SAND with gravel (SM), mps 2.5 in., metal fragments, wire strands, bick fragments, no structure, no odor, dry	0.0 0.7	10	20	15	15	20	20				
		CR2 20	2.0 4.0				-FILL-	0.4										
							2302-112013-1545	1.3 1.2										
		CR3 22	4.0 6.0					1.1										
5					5.0		Brick pieces and fragments, mps 3.5 in., 5.0 ft to 5.5 ft	1.6										
					5.5	SM	Brown, silty SAND with gravel (SM), mps 1.5 in., brick fragments, no structure, no odor, dry	1.5	5	5	10	30	30	20				
		CR4 18	6.0 8.0				2302-112013-1551	4.6										
						SM	Similar to above except, wood fragments, glass fragments, moist	11.3										
					8.0		2302-112013-1554	1.7										
							BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-112

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-113

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 25 October 2013
Finish 25 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-113

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	4	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Air knife/vac'd to 4.0 ft											
		C1 19	4.0 6.0			SP-SM	Dark gray poorly-graded SAND with gravel (SP-SM), mps 1.2 in., brick pieces, wood fragments, cinder-like fragments, no structure, no odor, dry	13.1	10	10	40	20	10	10				
							-FILL-	12.6										
5							2302-102513-1315	8.4										
								7.2										
		C2 24	6.0 8.0			SP-SM	Similar to above except, slag-like fragments, cinder-like fragment, petroleum-like odor at 7.5 ft, wet	9.1 0.8 21.3 26.1										
							2302-102513-1322	74.2										
								116.8										
		C3	8.0 10.0			SP-SM	Similar to above except, sheen to water (brown droplets)	131.7 142.3										
							2302-102513-1329	116.6 119.7										
10					10.0			68.2										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. NH-113

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-114

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 25 October 2013
Finish 25 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-114

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model:
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1 16	0.0 2.0	NO WELL INSTALLED			10.0 in. CONCRETE SLAB (NO VOID)											
					0.8	SM	Dark brown silty SAND with gravel, mps 1.5 in., no structure, no odor, dry, brick fragments, wood fragments and metal fragments	0.0	10	10	20	20	20	20				
								3.4										
								13.1										
							-FILL-	4.6										
		CR2 24	2.0 4.0				Collect sample 102513-1236	4.2										
								3.7										
						SM	Similar to above except, slag-like fragments, cinder-like fragments	7.9										
								4.1										
								0.9										
		CR3 13	4.0 6.0					338										
								414										
5						SM	Similar to above except dark gray, petroleum-like odor	446										
							Collect sample 2302-102513-1246	282										
					6.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., no structure, petroleum-like odor, moist, slag-like fragments and cinder-like fragments	92.3										
		CR4 19	6.0 8.0					74.1										
							-FILL-	51.3										
							Collect sample 2302-112513-1250	47.2										
								168										
		CR5 20	8.0 10.0					82.1										
					8.5	SM	Dark gray to olive-brown silty SAND with gravel (SM), mps 3.0 in., no structure, petroleum-like odor, wet	864										
							Collect sample 2302-102513-1254	51.3										
								41.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	19.7										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10.0
Rock Cored (ft) -
Samples 5CR, 4H

Boring No. NH-114

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-115

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 25 October 2013
Finish 25 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-115

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 37	0.0 4.0	NO WELL INSTALLED			Borehole hand augered to 2.5 ft											
					2.5													
					2.8		4.0 in. layer of brick pieces	16.2										
						SM	Dark brown silty SAND with gravel (SM), mps 1/2 in., brick fragments, no structure, no odor, dry -FILL- 2302-102513-1153	19.3		20	20	20	20	20				
5		CR2 24	4.0 6.0															
						SM	Similar to above except darker brown											
		CR3 24	6.0 8.0					96.2										
								142.1										
					7.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.0 in., wood fragments, slag-like fragments, no structure, petroleum-like odor, moist -FILL-	219.3	10	20	40	10	10	10				
								131.7										
		CR4 23	8.0 10.0		8.0	ML	2302-102513-1203	87.3	5	25			20	50				
					8.5	SM	Red-brown SILT with sand and gravel (ML), mps 1.0 in., no structure, slight odor, moist	26.2	10	10	10	20	25	25				
							Dark brown silty SAND with gravel (SM), mps 1.0 in., no structure, petroleum-like odor, wet	23.1										
					9.5	GP-GM	2302-102513-1209	74.2	15	45	10	10	10	10				
10					10.0		Olive-brown poorly-graded GRAVEL with silt and sand (GP-GM), mps 3.0 in., slag-like fragments, cinder-like fragments, no structure, slight odor, wet	31.2										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 4CR

Boring No. NH-115

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-116

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 18 October 2013
Finish 18 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC	HA1	0.0 2.0	NO WELL INSTALLED			CONCRETE											
					0.8	SM	Black silty SAND (SM), mps 1.0 in., brick fragments, rusty metal fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101813-1157		5	5	15	25	25	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. NH-116

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-116

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 19 November 2013
Finish 19 November 2013
Driller J. Posterick
H&A Rep. J. Miller
Elevation Datum
Location NH-116

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							12.0 in. CONCRETE SLAB											
		CR1 34	0.0 4.0	NO WELL INSTALLED	1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, metal fragments, slag-like fragments, no structure, no odor, dry -FILL-	0.7 0.3	10	15	15	20	20	20				
								0.6 0.9 1.4										
		CR2 24	4.0 6.0					1.7 6.2 12.7										
5							2302-111913-1030	32.1										
		CR3 18	6.0 8.0					43.2 76.2										
					7.5	SP		83.2										
		CR4 16	8.0 10.0		9.0	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 3/4 in., slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet, oil droplets on water 2302-111913-1044	146.2 173.1	10	20	15	40	15					
10		CR5 13	10.0 12.0			GP	2302-111913-1046	201.3 192.3										
		CR6 17	12.0 14.0			GP	Similar to above except gray-brown in color, glass fragments, wood fragments present at 12.8 ft to 13.0 ft, no structure, septic-like odor, wet	202.4		50	15	20	15				
								128 140										
					14.0		2302-111913-1056	149										
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. NH-116

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-117

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 18 October 2013
Finish 18 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC	HA1	0.0 2.0	NO WELL INSTALLED	0.8		CONCRETE SLAB *Wire mesh throughout (NO VOID)											
						SM	Black to dark brown silty SAND (SM), mps 1.5 in., glass fragments, charcoal-like fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101813-1136		5	5	15	25	25	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. NH-117

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-117

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 19 November 2013
Finish 19 November 2013
Driller J. Posterick
H&A Rep. J. Miller
Elevation Datum
Location NH-117

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 29	0.0 2.0	NO WELL INSTALLED	1.0		13.0 in. CONCRETE SLAB (NO VOID)											
		CR2 21	2.0 4.0			SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, cinder-like fragments, no structure, no odor, dry -FILL- 2302-111913-1323 Brick pieces ~3.5 ft to 3.75 ft Metal wire 1/2 in. in diameter	0.3 0.6 0.4 0.3 1.2 0.9	10	10	10	20	30	20				
5		CR3 12	4.0 6.0			SM	Dark brown to dark gray silty SAND with gravel (SM), mps 1.5 in., brick fragments, slag-like fragments, no structure, no odor, wet -FILL- 2302-111913-1338	1.4 6.7 14.2	5	25	15	15	20	20				
		CR4 16	6.0 8.0			SM	Similar to above except, petroleum-like odor present 2302-111913-1341	19.4 53.2										
		CR5 20	8.0 10.0				2302-111913-1352	48.3 41.3 46.9										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. NH-117

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-118

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 18 October 2013
Finish 18 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE											
						SM	Black silty SAND with gravel (SM), mps 0.5 in., rusty metal fragments, rock fragments, brick fragments, cement and concrete fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101813-1110		5	10	15	20	25	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. NH-118

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-118

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 19 November 2013
Finish 19 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NH-118

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED			13.0 in. CONCRETE SLAB											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.3	10	15	15	20	20	20				
		CR2 16	2.0 4.0				2302-111913-1403	0.6 0.2 0.4 0.9 1.1										
		CR3 20	4.0 6.0					1.0 11.4										
5						SM	Similar to above except brown 2302-111913-1410	13.1 9.7										
		CR4 18	6.0 8.0				2302-111913-1413	13.2 19.3 36.2										
						SM	Similar to above except, petroleum-like odor from 7.5 ft to 8.0 ft											
		CR5 11	8.0 10.0				2302-111913-1419	31.4 34.6 82.1										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. NH-118

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-119

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-119

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 11	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., concrete pieces, brick fragments, no structure, no odor, dry -FILL-	1.3	10	25	15	10	20	20				
								97.2										
		CR2 16	2.0 4.0				2302-110513-1451	113.6										
								92.1										
								37.4										
								16.3										
5		CR3 24	4.0 6.0			SM	Similar to above except, no concrete pieces, slag-like pieces, mps 3.0 in., slight petroleum-like odor 5.5 ft to 6.0 ft, moist 2302-110513-1458	21.3										
								17.6										
								42.3										
								37.1										
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion	32.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6
Rock Cored (ft)	-
Samples	3CR

Boring No. NH-119

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-119

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 19 November 2013
Finish 19 November 2013
Driller J. Posterick
H&A Rep. J. Miller
Elevation
Datum
Location NH-119

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 31	0.0 4.0	NO WELL INSTALLED			13.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, dry -FILL-	0.6	5	15	15	15	30	20				
								0.1										
								0.2										
		CR2 23	4.0 6.0					0.4										
5								7.3										
								11.4										
						SM	Similar to above except, slight petroleum-like odor at 5.5 ft 2302-111913-1341	21.3										
		CR3 17	6.0 8.0					41.6										
					6.5	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1/2 in, cinder-like fragments, metal fragments, slag-like fragments, no structure, petroleum-like odor, wet, oil-like droplets on water 2302-111913-0934	53.6		20	15	40	15	10				
		CR4 21	8.0 10.0					24.2										
							2302-111913-0942	82.1										
								26.4										
10								101.3										
								116.2										
		CR5 23	10.0 12.0			SP-SM	Similar to above except gray-brown in color, petroleum-like odor 2302-111913-0951	103										
								90.2										
		CR6 20	12.0 14.0		12.0	GP	Gray-brown poorly-graded GRAVEL with sand (GP), mps 1.0 in., no structure, petroleum-like odor, wet 2302-111913-1003	68.4	10	50	15	15	10					
								62.7										
								103.2										
								97.6										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. NH-119

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-120

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NM-120

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 7	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 2.5 in., brick fragments, concrete fragments, cinder-like fragments, no structure, no odor, dry	0.7	10	20	40	10	10	10				
								4.9										
		CR2 23	2.0 4.0				Similar to above except, more concrete fragments, mps 2.0 in.	19.7										
								13.6										
								21.4										
								17.6										
		CR3 24	4.0 6.0				2302-110513-1431	11.7										
5								20.1										
							Brick pieces, mps 3.5 in.	23.4										
								16.2										
					5.9	SM	Dark gray silty SAND with gravel (SM), mps 1/2 in., brick fragments, cinder-like fragments, no structure, no odor, dry -FILL-	19.4										
					6.0		2302-110513-1439											
							BOTTOM OF EXPLORATION 6.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6
Rock Cored (ft)	-
Samples	3CR

Boring No. NH-120

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-121

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NM-121

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 8	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, wood fragments, no structure, no odor, dry -FILL-	0.3	10	20	10	20	20	20				
								0.7										
		CR2 24	2.0 4.0			SM	Similar to above except, metal fragments, concrete fragments, slag-like fragments 2302-110513-1407	1.0	20	20	10	10	20	20				
								16.3										
								17.6										
								19.4										
								11.0										
								17.3										
		CR3 24	4.0 6.0					21.3										
								19.2										
					4.9			16.4										
5					5.2		Red, brick pieces, mps 3.0 in.											
						SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., slag-like fragments, wood fragments, tape-like strands, not sticky, no structure, no odor, dry -FILL- 2302-110513-1416	20.3	10	20	20	10	20	20				
					6.0			17.6										
							BOTTOM OF EXPLORATION 6.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6
Rock Cored (ft)	-
Samples	3CR

Boring No. NH-121

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 23 May 2014
Finish 23 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NH-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Track Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 46	0.0 4.0	NO WELL INSTALLED	0.5		6.0 IN CONCRETE SLAB											
						SM	Brown silty SAND with gravel (SM), mps 2.5 in., brick fragments 5%, concrete pieces 15%, no structure, no odor, dry											
	A	CR2 24	4.0 6.0			SM	Similar to above except dark brown, metal fragments 5%, slag-like fragments 5%											
5	H	CR3 24	6.0 8.0			SM	Similar to above except, brick pieces 5%, metal fragments 10%, moisture	3.8 4.2 5.1										
							Slight petroleum-like odor 7.5 ft to 8.0 ft	2.6										
	H	CR4 24	8.0 10.0		8.0	GP	Black poorly graded GRAVEL with sand (GP), mps 1.0 in., slag-like fragments 10%, brick fragments 10%, cinder-like fragments 30%, metal fragments 5%, glass fragments 5%, no structure, strong petroleum-like odor, wet, sheen to water 2302-052314-0910	3.2 6.2 8.3 13.1										
						SM		17.4										
						GP	Brown silty SAND (SM), no structure, slight petrolum-like odor, wet	21.2										
10	H	CR5 24	10.0 12.0				Black poorly graded GRAVEL with sand (GP), mps 1.0 in., slag-like fragments, 15%, cinder-like fragments 35%, slight odor, wet-sheen 2302-052314-0918	17.4 16.2 13.1 12.7										
					12.0		-BOTTOM OF EXPLORATION 10.0 FT	4.9										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NH-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 23 May 2014
Finish 23 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NH-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Track Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 46	0.0 4.0	NO WELL INSTALLED		SM	Note: Elevation difference of 23.0 in. to grade-drills to total depth of 14.0 ft to account for difference Brown silty SAND with gravel (SM), mps 1.0 in., brick fragments 5%, concrete fragments 5%, no structure, no odor, dry		5	10	15	25	25	20				
5	A	CR2 24	4.0 6.0			SM	Similar to above except dark brown in color, metal fragments 5%, glass fragments, 5%, slag-like fragments 10% 2302-052314-0954 2302-052314-0002		10	15	20	20	20	15				
	H	CR3 24	6.0 8.0				Brick fragments, mps 15.0 in.											
					7.0	GP	Gray poorly graded GRAVEL with sand (GP), mps 25.0 in., concrete fragments 60% 2302-052314-1010		50	10	10	15	15					
	H	CR4 24	8.0 10.0			GP	Similar to above except black in color, cinder-like fragments 40%, brick fragments 10%, slag-like fragments 10%, no structure, slight petroleum-like odor, wet, slight sheen 2302-052314-1014		15	45	15	15	10					
					9.0	SM	Dark brown silty SAND (SM), no structure, no odor, wet			5	20	20	55					
10	H	CR5 24	10.0 12.0			GP	Black to dark gray poorly graded GRAVEL with sand (GP), mps 1.5 in., cinder-like fragments 35%, slag-like fragments 15%, brick fragments 10%, no structure, petroleum-like odor, wet, sheen to water 2302-052314-1024		15	45	15	15	10					
					12.0		-BOTTOM OF EXPLORATION 12.0 FT-											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NH-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 21 May 2014
Finish 22 May 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NH-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Track Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	A	CR1 24	0.0 4.0	NO WELL INSTALLED		SM												
						SM												
	A	CR2 24	4.0 6.0		4.0	SP-SM												
5	H	CR3 24	6.0 8.0		6.5	SP												
					7.0	GP	Gray to dark gray poorly graded GRAVEL with sand (GP), mps											
	H	CR4 24	8.0 10.0			GP	Similar to above except, bone fragments 5%, glass fragments 5%, petroleum-like odor, sheen on water 2302-052214-1427											
10					10.0		-BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NH-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 20 May 2014
Finish 20 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 8.0	NO WELL INSTALLED	0.3		3.5 in. ASPHALT NO VOID											
						SM	Dark brown silty SAND with gravel (SM), mps 1 in., moist, 5% slag-like fragments	0.0	15	15	10	15	30	15				
						SM	Similar to above, except 5% wire-like fragments, 5% red brick-like fragments, 5% wood-like fragments, 5% metal-like fragments Note: Encountered extremely hard asphalt-like material.	0.0 0.0										
					4.0	GP	Black poorly graded GRAVEL with sand (GP), mps 2 in., no odor, moist, 40% slag-like fragments, 5% wire fragments 0710-052014-1600 (dup)		40	10	15	10	15	10				
5					5.0	SM	Black silty SAND with gravel (SM), mps 0.5 in., strong petroleum-like odor, wet, 5% glass-like fragments, 10% slag-like fragments 0710-052014-1630 Note: Cave in at 5.0 ft, water at 5.0 ft.		15	15	20	20	15	15				
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfilled with clean crushed stone on 5-20-14.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	--

Boring No. NH-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 03 June 2014
Finish 03 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CONCRETE NO VOID											
						SP	Black, brown and red poorly graded fine to coarse SAND with fine gravel (SP), pieces of brick, concrete, 25% asphalt, fill slag material 0387-060314-1132	0.0 0.0 0.0		20	40	20	20					
		CR2 24	2.0 4.0			SP	Similar to above, red brick layer from 2.4 to 2.7 ft, slag, glass, 30-35% fill 0387-060314-1137	0.0 0.0 0.0 0.0										
		CR3 24	4.0 6.0				Black color, slag material, moist 0387-060314-1143 Strong odor in bottom 1 ft	5.7 5.3										
5					5.0	SP	Grayish-black poorly graded fine to medium SAND (SP), trace fine gravel, strong odor, wet, sheen on soil and water	11.7 12.6				70	30					
		CR4 24	6.0 8.0		6.4	SP	Grayish-black poorly graded fine to coarse SAND with fine to coarse gravel, pieces of brick, leather, glass, metal, strong odor, saturated, 20% debris 0387-060314-1151	47.8 33.1 27.5 29.3		10	20	30	25	15					
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8.0
Rock Cored (ft) -
Samples 4CR

Boring No. NH-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-206

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 23 May 2014
Finish 23 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NH-206

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Track Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	A	CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE PAD											
						SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments 25%, no structure, no odor, dry 2302-052314-1014		30	10	15	15	20	20				
	H	CR2 24	2.0 4.0				Brick fragments, mps 2.0 in.											
						SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments 10%, slag-like fragments, no structure, no odor, dry 2302-052314-1014		10	15	10	25	20	20				
	H	CR3 24	4.0 6.0				Yellow brown, slag-like fragments, cinder-like fragments, moist											
5						SM	Black silty SAND with gravel (SM), mps 1.5 in., slag-like fragmetns 10%, cinder-like fragments 15%, metal fragments 5%, no structure, slight petroleum-like odor, wet 2302-052314-1054		20	40	15	15	10					
	H	CR4 24	6.0 8.0		7.0	GP	Black poorly graded GRAVEL with sand (GP), mps 1.0 in., cinder-like fragments 35%, slag-like fragments 20%, brick fragments 5%, no structure, slight petroleum-like odor, wet, sheen to water 2302-052314-1057			5	20	25	25	25				
	H	CR5 24	8.0 10.0		9.0	SM	Dark brown silty SAND (SM), no structure, slight petroleum-like odor, wet, sheen to water											
10					10.0		Similar to above except with gravel, mps 1.5 in., brick fragments, slag-like fragments, petroleum-like odor, wet 2302-052314-1106											
							-BOTTOM OF EXPLORATION 10.0 FT-											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NH-206

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-207

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 05 June 2014
Finish 05 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-207

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID	10.4 23.5										
					1.0		Fill Material (copper wire, brick, concrete)	78										
						SM	Black silty SAND (SM), trace fine gravel 0387-060514-1502	147										
		CR2 24	2.0 4.0			SM	0387-060514-0003 Similar to above, except 30% concrete piece up to 3 in. 0387-060514-1511	25.6 24.0 10.7 17										
		CR3 24	4.0 6.0			SM	Similar to above 0387-060514-1520	0 0.0 0.0										
5							From 5.5 to 5.8 ft, red brick layer	0.0										
		CR4 24	6.0 8.0		6.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0387-060514-1525	0.0 0.0 0.0 0.0										
		CR5 24	8.0 10.0		8.0	SM	Black silty SAND with gravel (SM), slight odor 0387-060514-1532	20.5 12.5 32 41										
10		CR6 24	10.0 12.0		10.0	SP-SM	Poorly graded SAND with gravel and silt (SP-SM), strong odor Note: Bag broke while filling.	508 371										
					11.2	SM	Grayish-brown silty SAND with gravel (SM), strong odor	498 520										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NH-207

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-208

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 05 June 2014
Finish 05 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-208

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID Fill Material (copper wire, bricks, glass, wood, nails, slab, pieces of angle iron)	0.0 0.0										
						SM	Black silty SAND (SM), trace gravel 0387-060514-1625	0.0										
					1.6		Yellow brick	0.0										
		CR2 24	2.0 4.0		2.0	SM	Black silty SAND (SM), lots of wood debris 0387-060514-1630	0.0 0.0										
					3.2	SP	Gray poorly graded SAND (SP)	0.0										
					3.5		Concrete 2 to 4 in.	0.0										
		CR3 24	4.0 6.0		3.8	SP	Black poorly graded SAND with fine gravel (foundry sand) (SP)	0.0										
					4.6		Red brick layer	0.0										
5					5.0	SM	Black silty SAND (SM) 0387-060514-1637	0.0 0.0										
		CR4 24	6.0 8.0		6.0	SP	Black silty SAND with gravel (SP), strong petroleum-like odor, saturated 0387-060514-1642	24 27 98										
					7.4	ML	Grayish-black SILT with sand (ML)	291										
		CR5 ?	8.0 10.0		7.7	GP	Black poorly graded GRAVEL with sand (GP), pieces of angle iron 0387-060514-1649	205 168										
					8.8	SP	Grayish-brown poorly graded fine to medium SAND (SP)	398										
					9.2	GP	Black poorly graded GRAVEL with sand (GP)	405										
10					9.8	SM	Black silty SAND (SM)	237										
		CR6 ?	10.0 12.0		10.4	GP	Black poorly graded GRAVEL with sand (GP) 0387-060514-1656	251 391										
					11.5	SM	Grayish-brown silty SAND with gravel (SM)	503										
		CR7 24	12.0 14.0			SM	Similar to above 0387-060514-1703	97 68										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-208

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-208
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								34										
								29										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-208

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-209

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 06 June 2014
Finish 06 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-209

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID Fill Material (brick, wood, metal, glass, slag)	0.0										
					1.0	SP	Medium brown silty fine SAND (SP), no odor 0387-060614-0942	0.0										
					1.8	SM	Black silty SAND (SM), trace gravel	0.0										
		CR2 24	2.0 4.0		2.5		Yellow/red brick layer	0.0										
					2.8	SM	Black silty SAND with gravel (SM), thin layer of black wet material with strong odor at 2.8 ft 0387-060614-0950	0.0										
								0.0										
		CR3 24	4.0 6.0			SM	Similar to above 0387-060614-0955	0.0										
5								0.0										
								0.0										
		CR4 24	6.0 8.0			SM	Similar to above	40										
					6.8			32										
						GP	Black poorly graded GRAVEL with sand and silt (GP), moderate petroleum-like odor 0387-060614-1001	79										
								109										
		CR5 24	8.0 10.0					70										
					8.5	SP	Medium brown poorly graded fine to medium SAND (SP)	35										
					8.9	GP	Black poorly graded GRAVEL with sand and silt (GP), strong petroleum-like odor 0387-060614-1006	89										
10								170										
		CR6 24	10.0 12.0					110										
								243										
					11.3			241										
						SM	Grayish-brown silty SAND with gravel (SM), strong petroleum-like odor 0387-060614-1046	510										
		CR7 24	12.0 14.0			SM	Grayish-brown silty SAND with gravel (SM) 0387-060614-1021	38										
								8										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-209

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-209
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								3										
				NO WELL INSTALLED			Lots of wood debris in last 6 in. of sample	10										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-209

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-210

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 06 June 2014
Finish 06 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-209

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			CONCRETE Fill Material (wood, metal, brick, glass, bones, tile)	0.0										
					1.0	SM	Black silty SAND (SM)	0.0										
					1.5	SM	Medium brown silty SAND with gravel (SM) 0387-060614-0002	0.0										
						SM	0387-060614-0839 Similar to above, large piece of concrete	0.0 0.0										
					3.2		Yellow brick	45										
					3.6	SM	Black stick material, strong odor, thin layer grayish-brown silty SAND with gravel (SM)	119										
					4.0	SP-SM	Black poorly graded SAND with gravel and silt (SP-SM) 0387-060614-0851	103 98 81										
5								213										
						SP-SM	Similar to above, strong petroleum-like odor, sheen on water and soil 0387-060614-0859	69 89 139 187										
						SP-SM	Similar to above	206										
					8.6	GP	Black poorly graded GRAVEL with sand (GP), strong odor, sheen on water and soil	91 108										
					9.4	SM	Grayish-brown silty SAND with gravel (SM), strong odor, lots of wood debris	149										
10						SM	Similar to above, increase of gravel 0387-060614-0915	206 187 143 151										
						SP	Black poorly graded SAND with gravel (SP), slight odor	41										
					12.5	SM/GM	Grayish-brown poorly graded SAND with gravel and silt to poorly graded GRAVEL with sand and silt (SM/GM), lots of	35										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	0CR

Boring No. NH-210

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-210
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			wood debris 0387-060614-0922	19 12										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-210

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-211

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 06 June 2014
Finish 06 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-209

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0										
							Fill Material (brick, metal, wire, slag, tile, wood)	0.0										
					1.0	SM	Medium brown silty SAND (SM)	0.0										
					1.3	SM	Black silty SAND with gravel (SM) 0387-060614-1052	0.0										
		CR2 24	2.0 4.0			SM	Similar to above	0.0										
					2.5		Red brick layer	0.0										
					3.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0387-060614-1058	3										
								4.7										
		CR3 24	4.0 6.0				From 4 to 5 ft large amount red brick	7										
								8										
5								11										
					5.6	SP	Grayish-brown poorly graded SAND with gravel and silt (SP), strong petroleum-like odor 0387-060614-1110	62										
		CR4 24	6.0 8.0					203										
								173										
					7.2	GP	Black poorly graded GRAVEL with sand and silt (GP), strong petroleum-like odor, sheen on water/appears to be free product 0387-060614-1115	165										
								187										
		CR5 24	8.0 10.0			GP	Similar to above	270										
								167										
								174										
					9.4	SM	Grayish-brown silty SAND with gravel (SM), strong odor	213										
10																		
		CR6 24	10.0 12.0			SM	Similar to above 0387-060614-1121	173										
								70										
								31										
								34										
		CR7 24	12.0 14.0			SM	Grayish-brown silty SAND with gravel (SM) 0387-060614-1130	167										
								70										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-211

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-211
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								13										
				NO WELL INSTALLED			Lots of wood debris last 6 in. of sample	13										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-211

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-212

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 04 June 2014
Finish 04 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-212

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID Fill Material (whole brick and pieces, metal, nails, glass, concrete, slag)	0.0 0.0
					1.0	SP	Black poorly graded SAND with gravels (SP) 0387-060414-1537 0387-060414-0003	0.0 0.0
		CR2 24	2.0 4.0				Greenish-silver (possible vermic white) from 2 to 2.5 ft, gravel pieces at 2 ft 0387-060414-1549 From 2.5 to 5 ft, layers of red brick, foundry sand	0.0 0.0 0.0
		CR3 24	4.0 6.0				At ~3.7 ft, some kind of CD 0387-060414-1552 Material wet in tip	0.7 0.2 0.1
5					5.0	SM	Yellowish-brown silty SAND with gravel (SM)	0.0
					5.5	SP	Black poorly graded SAND with gravel (SP)	0.6
		CR4 24	6.0 8.0				Saturated from 6.5 to 7 ft Gravel layer from 6.i8 to 7.8 ft Strong petroleum-like odor, sheen on water and soil 0387-060414-1558	22.7 40.5 36.1 31.2
		CR5 24	8.0 10.0			SP	Similar to above 0387-060414-1604	65.3 58.9 20.2 40.8
10		CR6 24	10.0 12.0			SP	Similar to above, moderate odor 0387-060414-1616	17.7 10.3 18.2
							At 11.6 ft, color change to grayish-black	15.7
		CR7 ?	12.0 14.0				Black, red and yellow foundry sand 0387-060414-1626	0.2 3.7

Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NH-212

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-212
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED				5.7										
					13.5	SM	Grayish-brown silty SAND with gravel (SM)	4.3										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-212

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-213

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 05 June 2014
Finish 05 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-213

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID Fill Material (brick, wire, slag, porcelain, tile, wood debris)											
					1.0	SP	Black poorly graded SAND with fine to coarse gravel (SP) 0387-060514-0958											
		CR2 24	2.0 4.0			SP	Similar to above At 3 ft, red brick layer 0387-060514-1005											
		CR3 24	4.0 6.0			SP	Similar to above 0387-060514-1012											
5					5.6	SM	At 5.5 ft, yellow brick layer, slight to moderate petroleum-like odor											
		CR4 24	6.0 8.0			SM	Medium brown silty SAND with gravel (SM) 0387-060514-002 Similar to above, except strong odor, sheen on water and soil, saturated 0387-060514-1018											
		CR5 24	8.0 10.0			SM	Similar to above At 9.0 ft, color change to grayish-brown 0387-060514-1025											
10		CR6 24	10.0 12.0		10.0	GP	Poorly graded GRAVEL with sand (GP), moderate odor 0387-060514-1032											
						SM	Grayish-brown silty SAND with gravel (SM) 0387-060514-1039											
					11.6	CL	Grayish-brown lean CLAY (CL)											
		CR7 24	12.0 14.0		12.0		BOTTOM OF EXPLORATION 12.0 FT Note: No PID readings were taken due to rain.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-213

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-214

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 22 May 2014
Finish 05 June 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location NH-214

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE	0.75										
							NO VOID											
					0.8	SM	Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.		15	10	5	25	30	15				
					1.5		Black silty SAND with gravel (SM), mps 1.0 in., 5% metal-like fragments, 5% wire-like fragments, 5% brick-like fragments, no odor, moist											
	AIR		2.0		2.0	SM	Note: 1.0-in. thick rebar at 1.5 ft.	0.0	20	10	10	20	25	15				
							Layer of bricks and concrete fill											
					2.8		Similar to above, except tan, no wire fragments, dry											
					3.0	SM	Encountered extremely hard material	0.0	10	15	20	25	20	15				
					3.3		Similar to above, except 50% tan/50% black 0710-052214-1430											
	KNIFE		4.0				Layer of bricks and concrete											
5					5.0	SM	Similar to above	0.0	15	10	5	15	30	15				
					6.0	SM	Similar to above, except black, 5% wood-like fragments, petroleum-like odor	6.0	10	10	25	20	20	15				
		CR1 24	6.0 8.0		6.5		Pre-cleared to 8.0 ft											
					7.2	SM	Similar to above, saturated, fill material (glass, slag, wood, porcelain)											
						SM												
					7.8	SP-SM	Medium brown silty SAND with gravel (SM) 0387-060514-1131											
		CR2 24	8.0 10.0				Brown poorly graded SAND with silt and gravel (SP-SM), saturated At 8 ft, color black, strong petroleum-like odor 0387-060514-1142											
							Note: Boring moved 2 ft to the southwest by Dave.											
10		CR3 24	10.0 12.0		10.0	GP	Black poorly graded GRAVEL with sand (GP) 0387-060514-1149											
					10.6	SM	Grayish-brown silty SAND with gravels (SM) 0387-060514-1158											
		CR4 24	12.0 14.0		12.0		BOTTOM OF EXPLORATION 12.0 FT											

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-214

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-215

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 22 May 2014
Finish 05 June 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location NH-215

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
					0.9	SM	Black silty SAND with gravel (SM), mps 1.5 in., 5% slag-like fragments, 10% wood-like fragments, 5% metal-like fragments, no odor, moist	0.0	15	15	15	10	30	15				
	AIR		2.0			SM	Similar to above, except 35% malable white pasty substance present, 5% wire-like fragments 0710-052214-0940 (FD)	0.0	15	15	10	15	20	15				
						SM	Similar to above, except brown, no wire-like fragments, no pastry-white substance	0.0	15	20	10	10	30	15				
	KNIFE		4.0			SM	Similar to above, except 20% slag-like fragments 0710-052214-1005	0.0	20	10	15	20	30	15				
5						SM	Similar to above, except petroleum-like odor	0.0	20	10	15	20	30	15				
				NO WELL INSTALLED		SM	Similar to above, except wet 0710-052214-1015	0.5	20	10	15	20	30	15				
		CR1 24	6.0 8.0		6.5		Pre-cleared to 6.5 ft Fill Material (glass, wire, tile, wood, slag)	68										
					7.4	SP	Black poorly graded SAND with gravel (SP), strong petroleum-like odor	87										
					8.0	SM	Grayish-brown silty SAND with gravel (SM), strong petroleum-like odor	160										
		CR2 24	8.0 10.0			SP	0387-060514-1346	209										
					9.0		Black poorly graded SAND with gravel (SP), strong petroleum-like odor	240										
10						SM	Grayish-brown silty SAND with gravel (SM), strong petroleum-like odor 0387-060514-1351	116 78 120 80										
		CR3 24	10.0 12.0			SM	Similar to above, strong odor 0387-060514-1406	50 10.1										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	3CR

Boring No. NH-215

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand Auger		0.0 2.0	NO WELL INSTALLED	0.8		9.0 in. CONCRETE NO VOID											
						SM	Black silty SAND with gravel (SM), mps 0.5 in., no odor, moist, 10% slag-like fragments, 5% metal-like fragments, 5% glass-like fragments 0710-061014-1315		15	15	20	20	15	5				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	--

Boring No. NH-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand Auger		0.0 2.0	NO WELL INSTALLED	0.6		6.5 in. CONCRETE NO VOID											
						SM	Dark brown silty SAND with gravel (SM), mp 1.25 in., no odor, moist, 5% brick-like fragments, 5% slag-like fragments 0710-061014-1400		5	10	15	25	30	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	--

Boring No. NH-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 June 2014
Finish 24 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID Fill Material (red brick, wire, steel, wood, slag)	0.0 0.0 0.0 0.0 0.0										
		CR-2 24	2.0 4.0		2.4	SP	Red poorly graded SAND with gravel (SP)	0.0										
					2.8	SM	Black silty SAND (SM)	0.0										
					3.0	SP	Black poorly graded SAND with gravel (SP) 0710-062414-1459	0.0 0.0 0.0 0.0 0.0										
		CR-3 16	4.0 6.0															
5					5.8	SM	Black silty SAND with gravel (SM)	0.0										
					6.0	GP	0710-062414-1505	3.5										
		CR-4 16	6.0 8.0				Black poorly graded GRAVEL with sand (GP), slight petroleum-like odor	4.5										
					7.0		Wood layer	5.5										
					7.9	ML	Brown sandy SILT (ML) 0710-062414-1509	5.5										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand Auger		0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE NO VOID											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2 in., no odor, moist, 10% slag-like fragments 0710-061014-1050	0.0 0.0	10	10	25	30	30	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 2.0
Rock Cored (ft) -
Samples --

Boring No. NH-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-305

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 03 June 2014
Finish 03 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-305

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			7.0 in. CONCRETE NO VOID Fill Material (slag, wire, red brick, glass, wood)	0.0										
					0.6	SM	Black silty SAND with gravel (SM)	0.0										
					1.0	SM	Similar to above, except 50% brown, large metal fragments 0710-062414-1356	0.0										
								0.0										
		CR2 24	2.0 4.0			SP	Tan and red poorly graded SAND with gravel	0.0										
								0.0										
					3.0	SP	Black poorly graded SAND with gravel (SP)	0.0										
					3.5	SP	Similar to above, with light gray sand 0710-062414-1405	0.5										
		CR3 20	4.0 6.0					1.0										
					4.9	SM	Black silty SAND with gravel (SM) 0710-062414-1411	5.0										
5								7.5										
								10.0										
								19.0										
		CR4 22	6.0 8.0					24.0										
								25.5										
					7.0	GP	Gray poorly graded GRAVEL with sand (GP), petroleum-like odor, sheen	24.0										
					7.5	SM	Black silty SAND with gravel (SM) 0710-062414-1416	34.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-305

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-306

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 June 2014
Finish 24 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-306

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE	0.0										
							NO VOID											
					0.7		Fill Material (wire, copper wire, red brick, slag, wood)	0.0										
					0.8	SM	Brown silty SAND with gravel (SM)											
					1.3	SM	Similar to above, except black	0.0										
					1.6		Red brick layer											
					1.9	SP	Tan and black poorly graded SAND with gravel (SP)	0.0										
		CR-2 24	2.0 4.0		2.0	ML	Red sandy SILT with gravel (ML)											
						SM	0710-062414-1329	0.0										
					2.5	ML	Dark gray silty SAND with gravel (SM)											
					3.0	SP	Black sandy SILT (ML)	0.0										
							Black poorly graded SAND with silt and gravel (SP)	0.0										
							0710-062414-1536	0.0										
		CR-3 24	4.0 6.0					0.5										
5								0.5										
					5.2		Red brick layer	1.0										
					5.9			1.5										
		CR-4 24	6.0 8.0			SM	Black poorly graded SAND with silt and gravel (SM)											
							0710-062414-1541	6.7										
								5.5										
					7.0	GP	Black poorly graded GRAVEL with sand (GP)											
							0710-062414-1546	10.0										
								17.5										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-306

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-307

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 June 2014
Finish 24 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-307

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID Fill Material (red brick, wire, steel, wood, concrete, slag)	0.0										
					0.7	SM	Brown silty SAND with gravel (SM)	0.0										
					0.8	SP	Asphalt layer											
					0.9		Black and tan poorly graded SAND with gravel (SP)	0.0										
					1.3	ML	Black sandy SILT (ML)											
					1.6	SM	Black silty SAND with gravel (SM) 0710-062414-0002	0.0										
		CR-2 24	2.0 4.0		2.2		0710-062414-1118	0.0										
					2.3	SM	Black fabric-like material layer											
							Brown silty SAND with gravel (SM) 0710-062414-1128	0.0										
								0.0										
								0.0										
		CR-3 22	4.0 6.0		4.2	SP	Yellow and black poorly graded SAND with gravel (SP)	0.0										
					4.7	SP	Gray poorly graded SAND with gravel (SP)	0.0										
5					5.2	SP	Black poorly graded SAND with gravel (SP)	0.0										
								0.0										
					5.9		Red brick layer											
		CR-4 22	6.0 8.0		6.0	SM	0710-062414-1131	0.0										
					6.3	SP	Black silty SAND with gravel (SM) Black poorly graded SAND with gravel (SP)	0.0										
						SM	Black silty SAND with gravel (SM)	0.0										
						SP	Black poorly graded SAND with gravel (SP) 0710-062414-1143	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-307

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-308

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 June 2014
Finish 24 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-308

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.5	SM	CONCRETE AT SURFACE NO VOID Fill Material (red brick, wire, copper wire, concrete, steel)	0.0 0.0										
					1.2	SP	Grayish-brown silty SAND with gravel (SM) Black poorly graded SAND with gravel (SP0, odor	0.0										
		CR-2 24	2.0 4.0		1.9 2.3	SM	Brown silty SAND with gravel (SM) 0710-062414-1004	0.0 0.0										
					2.7	SM	Red and yellow brick layer Brown silty SAND with gravel (SM) 0710-062414-1008	0.0 0.0 0.0										
		CR-3 24	4.0 6.0		4.4 4.6	SP SP	Black poorly graded SAND with gravel (SP) Yellow poorly graded SAND with gravel (SP)	0.0 0.0										
5					5.1	SM	Black silty SAND with gravel (SM) 0710-062414-1011	0.0 0.0 0.0 0.0										
		CR-4 18	6.0 8.0		7.6			0.0										
		CR-5 24	8.0 10.0		7.8 8.0	SM GP	Red brick layer Black silty SAND with gravel (SM) 0710-062414-1016 Black poorly graded GRAVEL with sand (GP) 0710-062414-1018	0.0 0.0 0.0 0.0 0.0										
10		CR-6 24	10.0 12.0		10.2	SM	Black silty SAND (SM)	0.0 0.0										
					11.0 11.6	GP-GM ML	Black poorly graded GRAVEL with sand and silt (GP-GM) Red sandy SILT (ML)	0.0 0.0										
		CR-7 24	12.0 14.0		12.0	SM	0710-062414-1020 Black silty SAND with gravel (SM), strong odor, sheen 0710-062414-1031	0.02 1.0 4.1 3.6										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-308

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-309

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 24 June 2014
Finish 24 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-309

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0
							Fill Material (wood, cobbles, brick, concrete, wire, fabric, foundry sand, slag, copper wire)	0.0
					0.8	SM	Medium brown silty SAND (SM), moist 0710-062414-0859	0.0
					2.0			0.0
		CR-2 24	2.0 4.0			SP	Black poorly graded SAND (SP), foundry sand	0.0
					2.5	SM	Medium brown silty SAND (SM)	0.0
					3.0		Red brick layer	0.0
					3.5	SM	Medium brown silty SAND (SM) 0710-062414-0902	0.0
		CR-3 24	4.0 6.0		4.5	SP	Black poorly graded SAND (foundry sand) 0710-062414-0910	0.0
5								0.0
								0.0
		CR-4 24	6.0 8.0			SP	Similar to above 0710-062414-0915	0.0
								0.0
								0.0
								0.0
		CR-5 24	8.0 10.0			SP	Similar to above, moderate petroleum-like odor, saturated 0710-062414-0924 **Note: PID not working	0.1 **
					9.6	SM	Grayish-brown silty SAND with gravel 0710-062414-0931	0.3
10		CR-6 24	10.0 12.0					0.0
								0.0
					11.5	SP	Black poorly graded SAND (SP), saturated	0.3
		CR-7 24	12.0 14.0					7.0
					12.5	GP	Black poorly graded GRAVEL (GP) 0710-062414-0942	7.0
					13.0	SM	Grayish-brown silty SAND with gravel (SM)	9.0
								12.0
					14.0		BOTTOM OF EXPLORATION 14.0 FT	
							Note: Backfill with clean sand upon completion.	

Gravel		Sand				Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-309

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-310

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 23 June 2014
Finish 23 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-310

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 22	0.0 2.0	NO WELL INSTALLED	0.8		CONCRETE AT SURFACE NO VOID	0.0										
						SM	Fill Material (red brick, slag, tile, wood)	0.0										
					0.9	SP-SM	Brown silty SAND with gravel (SM)	0.0										
							Black poorly graded SAND with silt and gravel (SP-SM) 0710-062314-1515	0.0										
		CR-2 24	2.0 4.0					0.0										
					3.1	SP	Tan and black poorly graded SAND with gravel (SP) 0710-062314-1520	0.0										
		CR-3 24	4.0 6.0		4.0	SP-SM	Black and tan poorly graded SAND with silt and gravel (SP-SM)	0.0										
					4.6	SP-SM	Similar to above, except gray	0.0										
5					5.3	SP	Brown and red poorly graded SAND with gravel (SP)	0.0										
					5.7	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0710-062314-1526	0.0										
		CR-4 20	6.0 8.0		6.3	SP-SM	Wood layer	0.0										
					6.4		Black poorly graded SAND with silt and gravel (SP-SM) 0710-062314-1533	0.0										
					8.0	SP-SM	Similar to above, except wet	0.0										
		CR-5 24	8.0 10.0					0.0										
					9.7	ML	Brown SILT (ML)	9.5										
10					10.0	SP	0710-062314-1538	13.0										
		CR-6 24	10.0 12.0		10.7	GP	Black poorly graded SAND with gravel (SP) Dark gray poorly graded GRAVEL with sand (GP)	25.0										
					11.3	SM	Gray silty SAND with gravel (SM), sheen, petroleum-like odor 0710-062314-1549	37.0 47.0										
		CR-7 20	12.0 14.0		12.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	20.0										
					12.8	GP	Dark gray poorly graded GRAVEL with sand (GP)	64.0										
					13.0	SM	Medium gray silty SAND with gravel (SM) 0710-062314-1556	24.0 18.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-310

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-311

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 2
Start 23 June 2014
Finish 23 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-311

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID	0.0										
					0.8	SM	Fill Material (slag, red brick, metal, leather, glass)	0.0										
					1.3	SP-SM	Brown silty SAND with gravel (SM)	0.0										
							Black poorly graded SAND with silt and gravel (SP-SM), red brick fragments 0710-062314-1406	0.0										
		CR-2 24	2.0 4.0		2.6	SP	Red and tan poorly graded SAND with gravel (SP)	0.0										
								0.0										
					3.9	SM	Black silty SAND with gravel (SM) 0710-062314-1411	0.0										
5		CR-3 22	4.0 6.0					0.0										
					5.8	GP	Dark gray poorly graded GRAVEL with sand (GP)	0.5										
		CR-4 21	6.0 8.0		6.3	SP-SM	0710-062314-1418 Dark gray poorly graded SAND with silt and gravel (SP-SM), slight odor	2.0										
								2.5										
					7.4	GP	Dark gray poorly graded GRAVEL with sand (GP), petroleum-like odor 0710-062314-1425	6.5										
								20.0										
								24.0										
								32.0										
					9.1	ML	Dark gray SILT (ML)	34.0										
10					9.7	GP	Dark gray GRAVEL with sand (GP)_, strong odor, oil-like droplets 0710-062314-1433	26.0										
								19.0										
					11.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM) 0710-062314-1439	17.0										
								21.5										
								32.0										
					12.2	SP-SM	Similar to above, except more silt	17.0										
								9.3										
								5.0										
					13.6													
					14.0	GP-GM	Dark brown poorly graded GRAVEL with silt and sand (GP-GM) 0710-062314-1447	9.2										
							BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-311

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-311
File No. 28612-328
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-311

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-312

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 08 July 2014
Finish 08 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-312

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE	0.0										
							Fill Material (brick, wood, brass wire, brick wood, concrete, glass)	0.0										
					1.0	SP	Yellowish-brown poorly graded SAND (SP)	0.0										
					1.2	SM	Dark grayish-brown silty SAND with gravel (SM), moist 0387-070814-1102	0.0										
		CR-2 20	2.0 4.0					0.0										
					2.6	SP-SM	Grayish-brown poorly graded SAND with silt and gravel (SP-SM) 0387-070814-1105	0.0										
								0.0										
		CR-3 24	4.0 6.0			SP-SM	Similar to above	0.0										
					4.8		Yellow/red brick layer 0387-070814-1109	0.0										
5								0.0										
		CR-4 24	6.0 8.0		6.0	GP	Grayish-brown poorly graded GRAVEL with sand and silt, strong petroleum-like odor, sheen on soil, saturated	26.2										
								15.7										
								11.8										
							At 7.4 ft, dark (black) stain area	15.4										
		CR-5 24	8.0 10.0			GP	Similar to above 0387-070814-1116	16.5										
								15.7										
							0387-070814-1123	14.2										
					9.6	ML	Black/grayish-black sandy SILT (ML), strong petroleum-like odor, sheen on water and soil, saturated	12.0										
10		CR-6 24	10.0 12.0		10.2	GP	Black poorly graded GRAVEL with sand and silt (GP), slight odor, saturated	6.0										
								5.7										
					11.4	GP-GM	Grayish-brown silty GRAVEL with sand (GP-GM), saturated 0387-070814-1128	6.1										
					12.0			4.8										
		CR-7 24	12.0 14.0			SM	Grayish-brown silty SAND with gravel (SM), saturated 0387-070814-1134	0.5										
								0.7										
								3.0										
								4.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfilled with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-312

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-313

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 July 2014
Finish 15 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-313

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 20	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE Fill Material (concrete, metal fill, slag, wood debris)	0.0										
					0.8			0.0										
					1.0	SP	Yellowish-brown poorly graded SAND (SP)											
						SP	Black poorly graded SAND with gravel (SP) 0387-071514-1032	0.0										
								0.0										
					2.0													
		CR-2 20	2.0 4.0			SP-SM	Medium brown poorly graded SAND with silt and gravel (SP-SM) 0387-071514-1037	0.0										
								0.0										
								0.0										
								0.0										
								0.0										
		CR-3 24	4.0 6.0		4.5													
					4.8		Yellow brick layer	0.0										
5						SM	Black fine to medium grained SAND (SM)	0.0										
					5.4													
						SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0387-071514-1039	0.0										
					6.0													
		CR-4 20	6.0 8.0			GP-GM	Black poorly graded GRAVEL with silt and sand 0387-071514-1042	0.0										
▽								0.0										
								0.0										
								0.0										
					8.0													
							BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-313

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NH-314

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 July 2014
Finish 15 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NH-314

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 22	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID	0.0										
					0.8		Fill Material (copper wire, copper metal, wood, wire, bricks, glass, slag)	0.0										
						SP	Yellowish-brown poorly graded SAND with gravel (SP) 0387-071514-1043	0.0										
					2.0			0.0										
		CR-2 22	2.0 4.0			SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), lots of fill material	0.0										
								0.0										
								0.0										
					3.6			0.0										
		CR-3 22	4.0 6.0			SM	Medium brown silty SAND with gravel (SM) 0387-071514-1045											
5																		
					5.5													
						SM	Black silty SAND with gravel (SM) 0387-071514-1050											
		CR-4 ?	6.0 8.0		6.5													
						GP-GM	Black poorly graded GRAVEL with silt and sand (GP-GM)											
					7.5													
						SM	Black silty SAND with gravel (SM) 0387-071514-1053											
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-314

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-315

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 03 November 2014
Finish 03 November 2014
Driller K. Smith
H&A Rep. J. Miller
Elevation
Datum
Location NH-315

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1	0.0 2.0	NO WELL INSTALLED			AIR KNIFE											
		CR2 18	2.0 4.0		2.0	SM	Dark brown to black silty SAND with gravel (SM), mps 1.75 in., 10% copper strands, 10% slag-like fragments, 10% concrete fragments, 5% glass fragments, no structure, no odor, dry	0.3 1.2										
					3.8		Tan clay-like substance, plastic-like odor, dry											
		CR3 23	4.0 6.0		4.0	SM	Brown silty SAND with gravel (SM), mps 1.75 in., 10% wire strands, 10% slag-like fragments, no structure, no odor, dry	0.1										
5					5.3	ML	Gray SILT (ML), no structure, no odor, dry	0.7										
		CR4 24	6.0 8.0		5.5	SM SM	Brown silty SAND with gravel (SM), mps 1.25 in., 10% wire strands, 10% slag-like fragments, no structure, no odor, moist Similar to above, except black, 15% brick fragments	0.0 0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-315

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-316

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 21 October 2014
Finish 21 October 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NH-316

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			CONCRETE AT SURFACE 2.0 IN. VOID											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 0.25 in., no structure, no odor, moist		10	15	20	20	20	15				
					2.0	SP	Brown poorly graded SAND with gravel (SP), mps 4.0 in., 10% slag-like fragments, 10% red brick no odor, dry 0710-102114-1330		15	20	30	20	15					
						SM	Similar to above (SP), except reddish-brown, 20% red brick moist		15	20	35	15	10	5				
5					5.0	SM	Reddish-black sandy SILT with gravel (SM), mps 0.25 in., 10% red brick, trace slag, no odor, moist 0710-102114-1355		10	10	30	25	20	15				
						SM	0710-102114-0002 Similar to above, except black, no brick		10	10	15	20	30	15				
					6.5	GP-GM	Gray poorly graded GRAVEL with silt (GP-GM), mps 0.5 in., 10% yellow brick-like fragments, strong petrolium-like odor 0710-102114-1400	30.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	-

Boring No. NH-316

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-318

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 10 November 2014
Finish 10 November 2014
Driller K. Smith
H&A Rep. J. Miller
Elevation
Datum
Location NH-316

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.3										
						SM	Dark brown silty SAND with gravel (SM), mps 1.25 in., 5% brick fragments, 5% concrete fragments, 5% wood fragments, no structure, no odor, dry	0.2										
		CR2 24	2.0 4.0			SM	Similar to above, except with rubber-like fragments, not sticky, sweet odor, not petroleum-like	0.3										
								1.2										
		CR3 22	4.0 6.0					1.6										
5								0.9										
		CR4 24	6.0 8.0			SM	Similar to above, except black, 10% slag-like fragments, moist to wet	19.4										
								42.3										
					7.5	SP	Black poorly graded SAND with gravel (SP), mps 0.75 in., 10% slag-like fragments, no structure, petroleum-like odor, wet											
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Note: Backfill with clean sand upon completion.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-318

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-319

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 10 November 2014
Finish 10 November 2014
Driller K. Smith
H&A Rep. J. Miller
Elevation
Datum
Location NH-316

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 22	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., 15% brick fragments, 5% metal fragments, no tructure, no odor, dry	0.0											
					1.5	SM	Similar to above, except 5% wood fragments											
		CR2 21	2.0 4.0			SM	Similar to above, except 10% concrete fragments, 5% brick fragments, 5% wood fragments	0.0										
								0.0										
		CR3 24	4.0 6.0					0.3										
5								0.2										
		CR4 24	6.0 8.0			SM	Similar to above, except black, more coarse sand, 10% slag-like fragments, petroleum-like odor, moist to wet	16.2										
								37.4										
					7.5	GP	Slag-like fragments with sand (GP), mps 0.5 in., petroleum-like odor, wet											
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-319

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-320

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 24 October 2014
Finish 10 November 2014
Driller K. Smith
H&A Rep. J. Miller
Elevation
Datum
Location NH-320

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE NO VOID											
					0.6	SM	Brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, moist		10	15	15	20	25	15				
						SM	Similar to above, except black, mps 0.25 in., trace steel, trace slag-like fragments		10	15	20	20	20	15				
		CR1 18	2.0 4.0		2.0	SM	0710-102414-0945	0.0										
					2.8	GP	Black silty SAND with gravel (SM), mps 1.25 in., 10% slag-like fragments, 5% metal frgments, no structure, no odor, dry											
							Concrete fragments, mps 2.0 in.	0.0										
		CR2 24	4.0 6.0		4.0	SM	Black silty SAND with gravel (SM), mps 1.0 in., 10% ash-like fragments, 5% slag-like fragments, no structure, no odor, dry	0.0										
5					5.3	SP	Olive-gray poorly graded SAND with gravel (SP), mps 0.75 in., 10% slag-like fragments, no structure, no odor, moist to wet	0.0										
		CR3 24	6.0 8.0			SP	Similar to above, except petroleum-like odor, wet, more copper wire strands	29.4										
								68.2										
					7.8	GP	Slag-like fragments (GP), mps 0.5 in.											
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

NO WELL INSTALLED

Water Level Data					
Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. NH-320

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-321

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 November 2014
Finish 06 November 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NH-321

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0	NO WELL INSTALLED	0.6	SM	CONCRETE ON SURFACE 0.25 IN. VOID Brown silty SAND with gravel (SM), mps 4.25 in., no structure, no odor, moist		10	15	15	20	25	15				
						SM	Similar to above, except black, 10% slag-like fragments, 10% red brick-like fragments, trace steel-like fragments, trace copper fragments		10	15	20	20	20	15				
		CR2 17	2.0 4.0		2.0	SM	0710-102414-0900 0710-102414-0002 Refusal at 2.05 ft Brown silty SAND with gravel, mps 1.75 in., 10% brick fragments, 10% concrete fragments, no structure, no odor, dry	0.0 0.0										
		CR3 24	4.0 6.0			SM	Similar to above, except yellow-brown	0.0										
5					4.8	SM	Similar to above, except black, 10% cinder-like fragments, 5% slag-like fragments, no structure, no odor, wet	0.2										
		CR4 21	6.0 8.0		6.3	SM	Similar to above, except slight petroleum-lke odor, wet	0.9 21.3										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-321

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-322

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 November 2014
Finish 10 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NH-322

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Brown silty SAND with gravel (SM), mps 1.75 in., 15% brick fragments, 5% cinder-like fragments, no structure, no odor, dry	0.0											
		CR2 23	2.0 4.0			SM	Similar to above, except dark brown to black, 15% slag-like fragments, 10% brick fragments, 5% concrete fragments, 5% metal fragments	0.2										
								0.0										
		CR3 21	4.0 6.0			SM	Similar to above, except no brick fragments, 10% slag-like fragments, 5% concrete fragments, 5% coppier wire strands	0.4										
5								0.1										
					5.8	SM	Similar to above, except moist to wet											
		CR4 24	6.0 8.0		6.0	SP	Black poorly graded SAND with gravel (SP), mps 1.25 in., 10% slag-like fragments, 5% cinder-like fragments, no structure, petroleum-like odor, wet	13.6										
								34.2										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-322

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-323

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 November 2014
Finish 10 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NH-323

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Brown silty SAND with gravel (SM), mps 1.25 in., 10% cinder-like fragments, 5% metal fragments, no structure, no odor, dry	0.0											
		CR2 18	2.0 4.0		2.3	SM	Similar to above, except black	0.4										
					2.8	SM	Similar to above, except dark brown, 10% wood fragments, 5% brick fragments	0.1										
		CR3 19	4.0 6.0					0.6										
5								0.3										
					5.8	SM	Similar to above, except black, moist to wet											
		CR4 23	6.0 8.0			SM	Similar to above, except slight petroleum-like odor	13.2										
					6.8	GP	Black poorly graded GRAVEL with sand (GP), mps 0.75 in., 50% slag-like fragments, 15% cinder-like fragments, no structure, slight petroleum-like odor, wet	31.4										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-323

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-324

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 November 2014
Finish 10 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NH-324

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 1.25 in., no structure, no odor, dry	0.0										
								0.0										
		CR2 19	2.0 4.0			SM	Similar to above, except black, 10% slag-like fragments, 10% cinder-like fragments, 5% concrete fragments, 5% wire strands	0.0										
								0.2										
		CR3 24	4.0 6.0					0.0										
5								0.0										
		CR4 24	6.0 8.0		6.3			0.2										
					6.8	GP	Brick fragments (GP), mps 0.5 in.											
						SM	Black silty SAND with gravel (SM), mps 1.25 in., 20% slag-like fragments, 15% cinder-like fragments, no structure, no odor, dry	0.6										
						SM	Similar to above, except wet											
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NH-324

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-325

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 18 November 2014
Finish 18 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NH-325

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Brown silty SAND with gravel (SM), mps 1.25 in., 20% cinder-like fragments, 10% brick fragments, 5% metal pieces, no structure, no odor, dry to moist	0.0										
		CR2 8	2.0 4.0					0.0										
								0.0										
		CR3 24	4.0 6.0					0.0										
5								0.2										
					5.5	SM	Black silty SAND with gravel (SM), mps 1.5 in., 15% cinder-like fragments, 5% brick fragments, 5% glass fragments, 5% wood, 5% metal, no structure, petroleum-like odor from 8.0 ft, wet	0.0										
		CR4 19	6.0 8.0					0.0										
								0.8										
		CR5 23	8.0 10.0					1.5										
10					10.0													
		CR6 21	10.0 12.0			SM	Similar to above, except brown	0.0										
								0.0										
		CR7 23	12.0 14.0					0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-325

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-325

File No. 28612-326

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.0	SM	Similar to above, except 5% marine shells	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-325

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NH-326

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 18 November 2014
Finish 18 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NH-325

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., 15% cinder-like fragments, 5% brick fragments, 5 % metal pieces, no structure, no odor, moist	0.0										
		CR2 21	2.0 4.0					0.0										
								0.0										
		CR3 24	4.0 6.0				5% glass fragments, trace wood	0.2										
5								0.0										
		CR4 20	6.0 8.0		6.0	SM	Black silty SAND with gravel (SM), mps 1.25 in., 10% cinder-like fragments, 5% wood fragments, no structure, no odor, wet	0.0										
					7.0	GP	Black to gray poorly graded GRAVEL with sand (GP), mps 1.0 in., 35% slag-like fragments, 15% cinder-like fragments, 5 % brick fragments, no structure, no odor, wet	0.1										
		CR5 22	8.0 10.0		8.0	SM	Black silty SAND with gravel (SM), mps 1.25 in., 30% slag-like fragments, 10% cinder-like fragments, no structure, no odor, moist to wet	0.0										
								0.0										
10		CR6 23	10.0 12.0					0.0										
								0.0										
		CR7 24	12.0 14.0					0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NH-326

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NH-326
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.0	SM	Similar to above, except gray-brown, 5% wood fragments, 50% glass, 5% marine shells	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NH-326

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 14 November 2013
Finish 14 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NI-001

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 5.0	NO WELL INSTALLED			Cleared to 2.0 ft											
					2.0	SM	Dark brown silty SAND with gravel (SM) mps 2.5 in., no structure, no odor, dry, brick fragments, wood fragments -FILL-		5	10	10	25	30	20				
5		CR2	5.0 10.0		6.0	GP	Light brown to brown poorly graded GRAVEL with sand (GP), no structure, mps 1/2 in., no odor, moist -SLAG-LIKE FRAGMENTS-											
					8.0	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, wet, brick fragments, glass fragments, wood fragments -FILL-		10	10	10	30	20	20				
10		CR3	10.0 12.0			SM	Similar to above except slag-like fragments, slight odor, wet 2702-111413-1051											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NI-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 7 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-001
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4	12.0 14.0	NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 7 Aug 15

TEST BORING REPORT

Boring No. NI-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 12 November 2013
Finish 12 November 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location SB-151

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			8.0 in. CORE CONCRETE (NO VOID)	0.0										
					0.7	SM	Tan to light brown silty SAND with gravel (SM), mps 1.0 in, crushed brick, no structure, no odor, dry 12.0 in. boulder located at ~18 in.	0.0	10	5	35	25	15	10				
	AIR KNIFE	HA1	2.0 4.0			SM	*Sample collected at 2-4 ft 0710-111213-1025											
5	AND VAC	HA2	4.0 6.0			SM	Dark brown to black silty SAND with gravel (SM), mps 1.0 in, crushed brick, no structure, slight chemical odor *Sample collected at 4-6 ft 0710-111213-1050 Pre-cleared to 6.5 ft	0.0	10	15	25	20	15	15				
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6.5
Rock Cored (ft) -
Samples 2HA

Boring No. NI-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 28 May 2014
Finish 28 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NI-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Track Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							7.0 in. CONCRETE PAD											
					0.6	SM	Brown silty SAND with gravel (SM), mps 1.5 in., brick fragments 25%, no structure, no odor, dry	0.0	10	10	10	30	20	20				
								0.3										
								0.4										
								0.1										
	A	CR1 24	2.0 4.0			SM	Similar to above	0.2										
							2302-052814-0925	0.0										
							2302-052814-0002	0.7										
								1.3										
								0.9										
	A	CR2 24	4.0 6.0			SM	Similar to above except dark gray in color, brick fragments 10%	0.6										
								1.3										
5					5.0	GP	4.0 in. layer of ash-like material, mps 1/2 in.	2.1	5	95								
					5.5	SM	Red brown silty SAND with gravel (SM), no structure, no odor, moist	2.6		5	15	30	25	25				
					6.0	GP	2302-052314-0936	0.9	10	85		5						
	A	CR3 24	6.0 8.0		6.5	SM	Brown poorly graded GRAVEL (GP), mps 3/4 in., slag-like fragments 60%, cinder-like fragments 25%, no structure, no odor, wet,	0.9	5	10	15	15	25	30				
						SM		0.0										
					7.5	GP	Red brown silty SAND with gravel (SM), mps 1/2 in., slag-like fragments 10%, no structure, no odor, wet	0.6	50	20	15	10	5					
							Similar to above except gray in color	0.3										
	H	CR4 24	8.0 10.0				Light brown poorly graded GRAVEL with sand (GP), mps 3/4 in., wood fragments 10%, slag-like fragments 45%, glass fragments 10%, no structure, no odor, wet	1.1									
							2302-052814-0951	0.0										
					9.0	GP-GM	Dark gray poorly graded GRAVEL with silt (GP-GM), mps 1.5 in., glass fragments 15%, slag-like fragments 35%, cinder-like fragments 15%, brick fragments 10%, no structure, no odor, wet	0.7	20	45	5	10	10	10				
							2302-052814-1002	1.3										
10	H	CR5 24	10.0 12.0					1.0										
								0.4										
								0.1										
					11.0	SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., glass fragments 15%, slag-like fragments 15%, wood fragments 10%, no structure, no odor, wet	0.3	20	20	20	10	15	15				
							2302-052814-1015	0.0										
	H	CR6 24	12.0 14.0			SM	Similar to above except, rubber-like fragments-not sticky, shell-like fragments, clay-like fragments	0.2										
							2302-052814-1021	0.0										
								0.3										

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-101
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED		SM	Similar to above except, rubber-like fragments-not sticky, shell-like fragments, clay-like fragments 2302-052814-1021	0.0 0.0 0.0										
					14.0		-BOTTOM OF EXPLORATION 14.0 FT-											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-101

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 2
Start 14 May 2014
Finish 14 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.8		9.5 in. CONCRETE NO VOID Fill Material (slag, glass, wire, tile, red brick, metal, wood, bones)											
						SM	Brown silty SAND with gravel (SM), mps 7 in., no odor, dry Red brick fragment 2 in.	0.0	5	10	5	35	30					
						SM	Similar to above	0.0	5	10	5	35	30					
						SM	Dark brown silty SAND (SM), mps 1.5 in., no odor, dry, brick and glass fragments present 0710-051414-1316	0.0	5	10	10	30	30					
						SM	Dark brown silty SAND with gravel (SM), mps 2 in., no odor, dry, gravel consists of concrete, shell-like fragments, slag-like material (1.5 in.)	0.0	25	10	10	25	20					
5					5.0	GP	Dark brown poorly graded GRAVEL (GP), mps 2.5 in., , petroleum-like odor, wet, oil-like droplets, sheen, slag-like material (0.5 in.), metal fragments (1 in.), wood fragments (2.5 in.)	0.0	40	30	10	10	5					
						GP			40	30	10	10	5					
						GP	Note: High tide, hitting water at 5.0 ft. Discussed situation and will try to air knife the remaining 1.0 ft when low tide is in and roll off are on site.	2.0										
					6.9		Similar to above, except mps 3 in., petroleum-like odor, moist, 15% brick-like fragments	1.0										
						SP-SM	0710-051614-0923 Dark gray poorly graded GRAVEL with sand (GP), strong petroleum-like odor, sheen, large slag-like fragments	16.0										
					7.8	SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), petroleum-like odor, sheen	26.0										
							Black silty SAND with gravel (SM), odor 0710-062014-1018	33.5										
					8.8	SM	Dark gray silty SAND with gravel (SM) 0710-062014-1025	22.0										
								11.0										
								6.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	--

Boring No. NI-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-102
File No. 28612-328
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	10.4	SP	Dark gray poorly graded SAND with gravel (SP), slight odor, sheen	3.5										
								3.0										
					11.3	SM	Black silty SAND with gravel (SM), sheen 0710-062014-1032	2.5										
					12.0	SP	Dark gray poorly graded SAND with gravel (SP)	1.0										
					12.6	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.5										
								1.0										
								1.0										
					13.8	SM	Black silty SAND with gravel (SM) 0710-062014-1045	0.5										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-102

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 28 May 2014
Finish 28 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NI-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Track Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			7.0 in. CONCRETE PAD											
					0.7	SM	Brown silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, dry		10	5	15	30	20	20				
	H	CR1 24	2.0 4.0			SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM),											
	H	CR2 24	4.0 6.0			SM	Similar to above except dark gray in color, brick fragments 10%											
5						GP	4.0 in. layer of ash-like material, mps 1/2 in.											
	H	CR3 24	6.0 8.0			SM	Red brown silty SAND with gravel (SM), no structure, no odor, moist 2302-052314-0936											
						GP	Brown poorly graded GRAVEL (GP), mps 3/4 in., slag-like fragments 60%, cinder-like fragments 25%, no structure, no odor, wet,											
						SM	Red brown silty SAND with gravel (SM), mps 1/2 in., slag-like fragments 10%, no structure, no odor, wet											
	H	CR4 24	8.0 10.0			GP	Similar to above except gray in color Light brown poorly graded GRAVEL with sand (GP), mps 3/4 in., wood fragments 10%, slag-like fragments 45%, glass fragments 10%, no structure, no odor, wet 2302-052814-0951											
						GP-GM	Dark gray poorly graded GRAVEL with silt (GP-GM), mps 1.5 in., glass fragments 15%, slag-like fragments 35%, cinder-like fragments 15%, brick fragments 10%, no structure, no odor, wet 2302-052814-1002											
10	H	CR5 24	10.0 12.0			SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., glass fragments 15%, slag-like fragments 15%, wood fragments 10%, no structure, no odor, wet 2302-052814-1015											
	H	CR6 24	12.0 14.0			SM	Similar to above except, rubber-like fragments-not sticky, shell-like fragments, clay-like fragments 2302-052814-1021											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-103
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED		SM	Similar to above except, rubber-like fragments-not sticky, shell-like fragments, clay-like fragments 2302-052814-1021 -BOTTOM OF EXPLORATION 14.0 FT-											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of
Start 19 June 2014
Finish 19 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE NO VOID Fill Material (brick, slag, wood, metal)											
		CR-1 24	2.0 4.0		2.0	SM	Brown silty SAND with gravel (SM)	0.2										
					2.9	SP	Black poorly graded SAND with gravel (SP)	0.3 0.7										
					3.8	SP-SM	Tan and red poorly graded SAND with silt and gravel (SP-SM)	2.2										
		CR-2 24	4.0 6.0	NO WELL INSTALLED	4.2	SM	Note: Black mealable material. 0710-061914-1556	1.5										
5							Black silty SAND with gravel (SM)	3.0 9.0										
					5.6	SM	Similar to above, except dark brown with sheen, slight sweet odor 0710-061914-1608	19.5 22.5										
		CR-3 24	6.0 8.0		6.8	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), oil-like droplets on soil and water	31.0										
					7.0	GP	Black poorly graded GRAVEL with sand (GP) 0710-061914-1618	18.3 41.5										
		CR-4 24	8.0 10.0					20.0 7.5										
					9.0	SM	Dark brown silty SAND with gravel (SM) 0710-061914-1624	5.0 3.5										
10		CR-5 24	10.0 12.0		10.4	GP	Brown poorly graded GRAVEL with sand (GP), oil-like sheen	2.5 1.0										
					11.2	SM	Dark brown silty SAND with gravel (SM) 0710-061914-1631	0.0 0.0										
		CR-6 ?	12.0 14.0					0.2 0.1										
					13.5	GP	Dark brown poorly graded GRAVEL with sand (GP) 0710-061914-1645	0.0 0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-104
File No. 28612-328
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Backfill with clean sand upon completion. Note: Moved 4 ft south.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-104

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 14 May 2014
Finish 14 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.5	NO WELL INSTALLED			9.0 in. CONCRETE (cored with Geoprobe) 1 in. VOID											
					0.8		1.0 in. void filled with water											
					0.9	SM	Brown silty SAND with gravel (SM), mps 2 in., no odor, moist		15	5	5	25	35	15				
						SM	Similar to above, except dry		15	5	15	20	30	15				
					2.3		Terra cotta pipe at 29 in. - pipe is 6 to 8 in. in diameter 0710-051614-0925 (below pipe)											
					3.0	SM	Brown silty SAND with gravel (SM), ps 2 in., no odor, moist, 10% brick-like fragments		15	5	5	30	30	15				
						SM	Similar to above, except black, mps 0.5 in. 0710-051614-0941 (2-4)		10	5	5	30	30	15				
					3.9													
					4.0	SM	Contact with an extremely solid soil/asphalt-like material at 46 in. Black silty SAND with gravel (SM), mps 1 in., no odor, moist, 15% asphalt-like fragments		10	5	5	30	35	15				
5																		
					6.0	GP	Black poorly graded GRAVEL (GP), mps 1.5 in., petroleum-like odor, wet, 20% slag-like fragments, 10% brick-like fragments 0710-051614-1050 (4-6)		30	10	20	20	10	10				
					6.5		BOTTOM OF EXPLORATION 6.5 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	--

Boring No. NI-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 May 2014
Finish 15 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI106

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.5	NO WELL INSTALLED	0.8		CONCRETE NO VOID											
						SM	Brown silty SAND with gravel (SM), mps 0.25 in., no structure, no odor, dry	0.0	10	10	5	20	35	15				
						SM	Similar to above	0.0	10	10	5	25	30	15				
						SM	Black silty SAND with gravel (SM), mps 1.5 in., 10% brick-like fragments, 10% slag-like fragments, 10% cinder-like fragments 0710-051514-1330	0.0	20	15	20	20	10	15				
					4.0	GP	Poorly graded GRAVEL with sand (GP), mps 2 in., no odor, dry, 10% slag-like fragments	0.0	30	15	10	20	20	5				
5					5.0	SM	Black silty SAND with gravel (SM), mps 2 in., no odor, moist, 15% slag-like fragments	0.0	15	15	15	20	20	15				
						SM	Similar to above, except petroleum-like odor, oil-like sheen, 10% slag-like fragments, metal fragments present	5.4	15	15	15	20	20	15				
					6.5		BOTTOM OF EXPLORATION 6.5 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	--

Boring No. NI-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-107

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 May 2014
Finish 15 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-107

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.5	NO WELL INSTALLED			CONCRETE (cored) - NO VOID Boring pre-excavated using vac truck, hand auger. Soil descriptions based on cuttings.											
					0.8	SM	Brown silty SAND with gravel (SM), mps 1.5 in., no odor, moist	0.0	10	15	15	10	35	15				
					2.0	SP-SM	Yellow-brown poorly graded SAND (SP-SM), mps 1.25 in., no odor, dry, 10% brick-like fragments Note: Brick-like pieces taken out of boring.	0.0	10	10	20	30	20	10				
					3.0	SM	Dark brown silty SAND with gravel (SM), mps 1 in., no odor, moist, 5% gravel, 5% slag-like fragments, 5% glass like fragments 0710-051514-1055	0.0	10	10	20	25		35				
						SM	Dark brown silty SAND with gravel (SM), mps 1 in., 10% brick-like fragments, 10% slag-like fragments, 5% wood fragments, 5% glass-like fragments	0.0	20	15	20	15	15	15				
5					5.0	GP	Dark brown poorly graded GRAVEL with sand (GP), mps 2 in., slight petroleum-like odor, moist, 10% slag-like fragments, 10% glass-like fragments	0.0	45	20	15	10	10					
					6.0	GP	Similar to above, except black, petroleum-like odor, wet	4.7	45	20	15	10	5	5				
					6.5		BOTTOM OF EXPLORATION 6.5 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6.5
Rock Cored (ft) -
Samples --

Boring No. NI-107

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-108

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 2
Start 14 May 2014
Finish 14 May 2014
Driller R. Radke
H&A Rep. M.Pomponio
Elevation Datum (Antea)/S.Collinge
Location NI-108A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE 6-IN. VOID											
					0.8		Boring pre-excavated with vac truck and hand auger, soil descriptions based on hand auger cuttings	0.0										
					1.8	SM	Brown silty SAND with gravel (SM), mps 0.25 in., no odor											
						SM	Note: Full size brick taken out of boring at 2.0 ft.											
					3.0		Similar to above, except gravel is more coarse and increased brick fragments.											
							Refusal at 3.0 ft Note: Moved approximately 6 in. east.											
5				NO WELL INSTALLED														
					6.0	SP-SM	Black gravelly silty medium to coarse SAND (SP-SM), silt non plastic, fine gravel, strong odor, wet, piece of brick, tile, glass	4.1										
		CR-1 24	6.0 8.0					4.3										
								4.0										
								3.8										
		CR-2 24	8.0 10.0			SP-SM	Similar to above, brick up to 3 in., piece of wood debris, sheen on water 0387-052814-1346	5.6										
								5.0										
								9.8										
10								5.7										
		CR-3 24	10.0 12.0			SP-SM	Similar to above 2302-052814-1354	5.2										
								2.1										
								2.0										
								9.7										
		CR-4 24	12.0 14.0					0.5										
								0.7										
					13.0	SM	Black silty fine to medium SAND (SM), silt non plastic, slight odor, sheen on water, saturated	0.5				20	50	30				
					13.6	SM	02302-052814-1410	0.5	35		30	20	5	10				
					14.0		Black gravelly fine to coarse SAND, fine gravel, saturated, brick, glass, wood											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NI-108

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-108
File No. 28612-328
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-108

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 20 June 2014
Finish 20 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0	NO WELL INSTALLED			10.0 in. CONCRETE	0.0										
							NO VOID	0.0										
					0.8		Fill Material											
						SM	Brown silty SAND with gravel (SM)	0.0										
								0.0										
					1.9													
		CR2	2.0 4.0			SM	Similar to above, except black 0710-062014-0900	0.0										
								0.0										
								0.0										
					3.6													
						SM	Similar to above, except more gravel, 20% brown 0710-062014-0911; 0710-062014-0002	0.0										
		CR3	4.0 6.0		4.2	SM	Similar to above, except with bricks, red	0.0										
					4.8													
5					5.2	SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM), concrete fragments	0.0										
						SP-SM	Similar to above, except black and red, more silt 0710-062014-0918	0.0										
		CR3	6.0 8.0					4.0										
								5.5										
					7.0													
						GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM), petroleum-like odor, oil-like droplets 0710-062014-0925	5.0										
								7.5										
		CR4	8.0 10.0					0.0										
					8.8			4.5										
						SM	Dark gray silty SAND with gravel (SM) 0710-062014-0930	5.0										
								5.5										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NI-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 23 June 2014
Finish 23 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			9.0 in. CONCRETE	0.0										
							NO VOID	0.0										
					0.8	SM	Fill Material (metal fabric, slag, wood, tile, glass)											
							Brown silty SAND with gravel (SM)	0.0										
							0710-062314-1035	0.0										
		CR2 24	2.0 4.0															
						SP-SM	Black and poorly graded SAND with silt and gravel (SP-SM)											
					3.5	SP-SM	Similar to above, except fabric-like fragments and more silt											
					4.0	SP	0710-062314-1039; 0710-062314-0002											
		CR3 24	4.0 6.0				Dark gray poorly graded SAND with gravel (SP)	0.0										
5								0.0										
					5.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	0.0										
							0710-062314-1046	0.5										
		CR4 16	6.0 8.0		6.0	SP-SM	Similar to above, except petroleum-like odor, wet, sheen	62.5										
							0710-062314-1051	21.0										
								11.0										
								13.0										
		CR5 21	8.0 10.0					43.0										
					8.8	SM	Black silty SAND with gravel (SM)	11.0										
							0710-062314-1100	11.0										
10								12.0										
					12.0		BOTTOM OF EXPLORATION 12.0											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NI-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 03 June 2014
Finish 19 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED	0.6		7.25 in. CONCRETE 0.25 in. VOID											
						SM	Brown silty SAND with gravel (SM), mps 0.5 in., no structure, no odor, moist 0710-060314-1500	0.0 0.0	5	10	15	25	25	15				
						SM	Similar to above, except 25% brown, 75% black, 5% slag-like fragments	0.0										
5						SM	Similar to above, except black, mps 0.25 in. 0710-060314-1535											
					5.5	SM	Similar to above, except mps 1 in., petroleum-like odor, wet 0710-060314-1555	3.4	20	20	10	10	25	15				
		CR1 22	6.0 8.0			SP	Dark gray poorly graded SAND with gravel (SP), petroleum-like odor, wet, Fill Material (wood)	13.5 13.5										
					7.1	SM	Dark gray silty SAND with gravel (SM), with wood, petroleum-like odor, moist	17.0										
		CR2 24	8.0 10.0		7.8	SP	Dark gray poorly graded SAND with gravel (SP), oil-like droplets 0710-061914-1130	30.0 7.0 9.0										
					9.0	SM	Black silty SAND with gravel (SM), petroleum-like odor	13.5										
10					9.8 10.0	GP	Dark brown poorly graded GRAVEL with sand (GP) 0710-061914-1145	7.0										
							BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NI-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 03 June 2014
Finish 19 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			9.0 in. CONCRETE 2.0 in. VOID											
					0.8	SM	Fill Material (brick, glass, slag, metal) Brown silty SAND with gravel (SM), mps 0.25 in., no structure, no odor, moist 0710-060314-1340	0.0	5	10	10	20	40	15				
							Note: Full-sized bricks taken out of boring. Similar to above, except mps 1 in., 50% brown, 50% black, 10% slag-like fragments	0.0	10	15	25	20	15	15				
								0.0										
					4.0	GP	Black poorly graded GRAVEL with sand (GP), mps 2 in., no odor, dry, 50% slag-like fragments 0710-060314-1400	0.0	60	20	5	5	5	5				
5					5.0	GP-GM	Black poorly graded GRAVEL with silt and sand (GP-GM), mps 2 in., 30% ash-like fragments, 20% slag-like fragments, no odor, moist	0.0	15	30	30	10	5	10				
		CR1 20	6.0 8.0					11.5										
					6.5	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	18.0										
					7.0	GP-GM	Black poorly graded GRAVEL with silt and sand (GP-GM), petroleum-like odor, wet, sheen 0710-062014-1136	21.0										
		CR2	8.0 10.0					17.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NI-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 19 June 2014
Finish 19 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED	0.7	SM	8.0 in. CONCRETE NO VOICE Fill Material (wood, slag, asphalt, brick)											
							Black silty SAND with gravel (SM) 0710-061914-1402	0.0 0.0										
		CR2 24	2.0 4.0		2.0	SP	Light brown and black poorly graded SAND with gravel (SP)	0.0 0.0 0.0										
					3.6	SP	Similar to above, except more slag 0710-061914-1412	0.0 3.0										
		CR3 20	4.0 6.0		4.5	SM	Black silty SAND with gravel (SM)	3.5										
5					5.0	ML	Dark red and black SILT with and (ML), oil-like sheen	5.5										
					5.8	GP	Black poorly graded GRAVEL (GP), strong petroleum-like odor	13.0										
		CR4 22	6.0 8.0		6.2	SP	0710-061914-1418; 0710-061914-0002	45.0										
					6.8	SP-SM	Dark gray poorly graded SAND with gravel (SP), strong petroleum-like odor, oil-like droplets	36.0										
							Gray poorly graded SAND with silt and gravel (SP-SM), strong odor, oil-like droplets 0710-061914-1426	42.0 34.0 21.5 21.5										
		CR5 24	8.0 10.0		9.0	SM	Dark gray silty SAND with gravel (SM), slight odor, oil-like droplets	8.0										
					9.4	SM	Similar to above, except black and lots of wood-like fragments 0710-061914-1431	9.0 5.5										
10		CR6	10.0 12.0		10.3	SP	Dark gray poorly graded SAND with gravel (SP), oil-like sheen	7.5										
					11.2	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), oil-like sheen	5.5										
					12.0		0710-061914-1439 BOTTOM OF EXPLORATION 12.0 FT	4.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-206

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 18 June 2014
Finish 18 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NI-206

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CONCRETE Fill Material (foundry sand, glass, slag)											
						SP	Black poorly graded SAND with gravel (foundry sand) 0387-061814-1528	0.0										
								0.0										
		CR2 24	2.0 4.0			SP	Similar to above 0387-061814-1531	0.0										
								0.0										
								0.0										
								0.0										
		CR3 24	4.0 6.0			SP	Similar to above, except slight petroleum-like odor 0387-061814-1535	0.6										
5 ▽								0.0										
								0.8										
					5.6	SM	Grayish-brown silty SAND with gravel (SM), saturated, sheen on sample and water	0.5										
		CR4 24	6.0 8.0		6.6			2.7										
						GP	Grayish-black poorly graded GRAVEL with sand, strong petroleum-like odor, sheen on water and soil 0387-061814-1546	3.1										
								4.1										
								5.7										
		CR5 24	8.0 10.0			GP	Similar to above, free product on water 0387-061814-1544	5.1										
								3.7										
								4.3										
10								5.5										
		CR6 24	10.0 12.0			GP	Similar to above 0387-061814-1554	3.1										
								1.5										
								1.2										
					12.0		BOTTOM OF EXPLORATION 12.0 FT	1.7										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-206

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NI-207

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 11 June 2014
Finish 11 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-207

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR	1CR	0.0 2.0	NO WELL INSTALLED	0.3	SM	3.0 in. ASPHALT at surface Boring pre-excavated using vacuum truck and hand tools, soil descriptions based on hand auger cuttings. Black silty SAND with gravel (SM), mps 0.5 in., 10% slag-like fragments, no odor, moist 0710-061114-1110	0.0	10	10	10	25	30	15				
		2CR	2.0 4.0					0.0										
						SM	Similar to above 0710-061114-1120	0.0										
	KNIFE	3CR	4.0 6.0			SM	Similar to above except dark brown, 5% glass-like fragments, wet 0710-061114-1120	0.0										
5								0.0										
								0.0										
					6.5		BOTTOM OF EXPLORATION 6.5 FT Pre-cleared to 6.5 ft											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6.5
Rock Cored (ft) -
Samples 3CR

Boring No. NI-207

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NI-210

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 08 July 2014
Finish 08 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NI-210

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE Fill Material (brick, wire, foundry sand, slag, concrete, wood debris, copperwire)											
					1.0	SP	Yellowish-brown poorly graded SAND 0387-070814-0949	0.0										
					2.0			0.0										
		CR2 24	2.0 4.0			SP-SM	Black poorly graded SAND with silt and gravel (foundry sand) 0387-070814-0955	0.0										
								0.0										
								0.0										
							At 3.8 ft, color change to yellowish-brown	0.0										
		CR3 24	4.0 6.0		4.4	SM	Dark brown silty SAND with gravel, slight odor, moist 0387-070814-1000	0.0										
5								0.6										
								0.5										
		CR4 20	6.0 8.0				At 6.5 ft, burn material, slight odor 0387-070814-0003	0.2										
								0.0										
								0.0										
								0.0										
		CR5 20	8.0 10.0					0.0										
					8.6	SP	Black/grayish-black poorly graded GRAVEL with sand and silt, saturated 0387-070814-1005 0387-070814-1009	0.0										
								0.0										
10		CR6 24	10.0 12.0				Similar to above 0387-070814-1015	0.0										
								0.0										
								0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-210

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 23 June 2014
Finish 23 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NI-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			8.0 in. CONCRETE NO VOID	0.0										
					0.8	SM	Fill Material (red brick, slag, metal, glass, wire) Brown silty SAND with gravel (SM)	0.0										
					1.6	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0710-062314-0917	0.0										
		CR2 24	2.0 4.0					0.0										
					3.3	SM	Black silty SAND with gravel (SM) 0710-062314-0928	0.0										
		CR3 24	4.0 6.0		4.2	SP	Red poorly graded SAND with gravel (SP)	0.0										
					4.3	GP	Black poorly graded GRAVEL with silt and sand (GP)	0.0										
5					5.0	SM	Black silty SAND with gravel (SM)	0.5										
					5.5	GP-GM	Gray poorly graded GRAVEL with sand and silt (GP-GM)	1.5										
		CR4 16	6.0 8.0		5.8	SM	Dark gray silty SAND with gravel (SM) 0710-062314-0936	156.0										
					6.0	GP	Dark gray poorly graded GRAVEL with sand and sand (GP), strong odor, oil-like droplets 0710-062314-0945	64.0										
		CR5 16	8.0 10.0					53.0										
								57.0										
								57.0										
								53.0										
					9.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM) 0710-062314-0950	21.0										
10								13.0										
		CR6 22	10.0 12.0					32.0										
							0710-062314-1000	23.0										
								14.0										
								10.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NI-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location NI-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			CONCRETE											
					0.7	SM	Black silty SAND with gravel (SM)											
		CR1 18	2.0 4.0				Fill Material (bricks, slag, shells, concrete, metal, wood, glass) 0387-071614-0946	1.7 2.6 1.4										
		CR2 24	4.0 6.0		4.0	SP-SM	Grayish-brown/black poorly graded SAND with gravel (SP-SM) 0387-071614-0948	0.0 0.0 0.0 0.0 0.0 0.0										
5		CR3 24	6.0 8.0				0387-071614-0951	0.0										
					7.2	GP	Black poorly graded GRAVEL with and and silt (GP), saturated 0387-071614-0957	2.1										
		CR4 20	8.0 10.0			GP	At 7.5 ft, slight petroleum-like odor Similar to above, no odor	0.0 0.0 0.0										
					9.5	SM	Grayish-brown silty SAND with gravel (SM) 0387-071614-1007	0.0										
10		CR5 20	10.0 12.0			SM	Similar to above	0.0 0.0 0.0 0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NI-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NI-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			8.0 in. CONCRETE											
					0.7		Fill Material (slag, foundry sand, bricks, concrete, wood)											
						SM	Black/brown silty SAND with gravel, no odor, moist											
		CR1 24	2.0 4.0			SM	Similar to above 0387-071614-1017	0.0 0.0 0.0										
					3.6													
		CR2 24	4.0 6.0			SM	Grayish-brown poorly graded SAND with gravel, no odor, moist 0387-071614-1025 Similar to above, except at 3.4 ft and 3.7 ft concrete	0.0 2.6 2.7 2.3										
5					5.8	GP	Water at 5.7 ft, slight petroleum-like odor	8.0										
		CR3 24	6.0 8.0				Black poorly graded GRAVEL with sand and silt (GP), medium petroleum-like odor, saturated 0387-071614-1030	3.7 7.1 6.6										
					7.8	SM	Grayish-brown silty SAND (SM), saturated	6.6										
		CR4 24	8.0 10.0		8.2	GP	Black poorly graded GRAVEL with sand and silt (GP), saturated, water has sheen and black droplets (possible free product) 0387-071614-1037	1.4 2.2 1.1										
10					9.8	SM	Gray-brown silty SAND with gravel (SM), no odor, saturated 0387-071614-1041	0.9 0.7 0.4										
		CR5 20	10.0 12.0		11.0	GP	Grayish-brown silty GRAVEL with sand (GP), no odor, saturated	0.6 0.7										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NI-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NI-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							____ in. CONCRETE ??											
					0.8		Fill Material (brick wood, concrete)											
						SP-SM	Grayish-brown poorly graded SAND with gravel and silt (SP-SM) 0387-0716114-1120											
		CR1 24	2.0 4.0					0.0										
								0.0										
								0.0										
								0.0										
		CR2 24	4.0 6.0	NO WELL INSTALLED		SP-SM	Similar to above 0387-071614-1125	0.0										
5								0.0										
								0.0										
					5.8	SM	Yellowish-brown silty SAND (SM), no odor, saturated 0387-071614-1130	0.0										
		CR3	6.0 8.0		6.4	GP	Black poorly graded GRAVEL with sand and silt (GP), strong petroleum-like odor, saturated, sheen on soil and water	17.8										
								27.2										
								33.7										
		CR4	8.0 10.0			GP	Similar to above, free product on water in bag 0387-071614-1136	23.1										
								13.2										
								17.5										
					9.5	SM	Yellowish-brown silty SAND, strong odor, saturated, sheen on soil and water	11.1										
10					10.0	GP		12.7										
		CR5	10.0 12.0				Grayish-brown poorly graded GRAVEL with sand and silt, slight odor, saturated 0387-071614-1145	2.7										
								3.1										
								20.2										
					12.0		BOTTOM OF EXPLORATION 12.0 FT	16.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NI-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-305

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 October 2014
Finish 30 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NI-305

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SP-SM	Brown poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., 5% concrete fragments, no structure, no odor, dry	0.2											
		CR2 22	2.0 4.0					0.2										
						SP-SM	Similar to above, except black, 10% cinder-like fragments, 10% brick fragments	0.3										
		CR3 24	4.0 6.0		4.5	SP-SM	Similar to above, except yellow-brown to brown	0.1										
5						SM	Dark brown silty SAND with gravel (SM), mps 1.25 in., 10% brick fragments, 10% cinder-like fragments, no structure, no odor, dry	0.4										
		CR4 22	6.0 8.0					11.3										
					6.8	GP	Cement fragments (GP), mps 2.5 in.	0.9										
					7.5	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), mps 2.25 in., 10% wood fragments, 10% cinder-like fragments, no structures, no odor, dry											
		CR5 24	8.0 10.0			SP-SM	Similar to above, except wet, 15% slag-like, petroleum-like odor, oil droplets on water, sheen on water	16.2										
								48.2										
10		CR6 24	10.0 12.0					31.7										
					11.3	SP	Black poorly graded SAND with gravel (SP), mps 1.75 in., 15% slag-like fragments, 10% brick fragments, no structure, petroleum-like odor, sheen on water, wet	62.3										
		CR7 16	12.0 14.0					11.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NI-305

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-305
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								9.1										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-305

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-306

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 October 2014
Finish 30 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NI-306

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SP-SM	Brown poorly graded SAND with silt and gravel (SP-SM), mps 1.25 in., 10% concrete fragments, no structure, no odor, dry	0.3											
		CR2 22	2.0 4.0			SP-SM	Similar to above, except black, 10% brick fragments	0.6										
					2.8	SM	Black silty SAND with gravel (SM), mps 2.25 in., 20% brick fragments, 10% wire strands, no structure, no odor, dry	1.4										
		CR3 24	4.0 6.0					0.0										
5								0.2										
		CR4 21	6.0 8.0		6.0	SP-SM	Brown poorly graded SAND with silt and gravel (SP-SM), mps 1.0 in., no structure, no odor, dry	0.1										
						SP-SM	Similar to above, except dark brown to black, 10% ash-like fragments, 5% slag-like fragments	0.3										
		CR5 23	8.0 10.0					48.3										
						SP-SM	Similar to above, except dark brown, petroleum-like odor, olive-green sheen on water, "sweeter" odor, wet	36.2										
10		CR6 24	10.0 12.0		10.0	SP	Dark gray poorly graded SAND with gravel (SP), mps 0.75 in., 20% slag-like fragments, 10% cinder-like fragments, no structure, petroleum-like odor, wet	21.2										
								19.7										
		CR7 24	12.0 14.0			SP	Similar to above, except 25% slag-like fragments, 5% glass fragments, 5% metal fragments, 5% rubber-like fragments	11.9										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NI-306

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-306
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								6.2										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-306

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-307

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 October 2014
Finish 30 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NI-307

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED			CONCRETE SLAB	0.1										
					0.7	SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., 10% concrete fragments, no structure, no odor, dry	0.2										
		CR2 21	2.0 4.0			SM	Similar to above, except 10% brick fragments	0.0										
					3.5			0.3										
		CR3 9	4.0 6.0			SM	Similar to above, except with 15% cinder-like fragments	0.7										
5								1.2										
		CR4 24	6.0 8.0					13.4										
					6.8	GP	Yellow-brown poorly graded GRAVEL (GP), slag-like fragments with some sand	56.0										
					7.5	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), mps 1.25 in., 15% wood fragments, 10% cinder-like fragments, 10% slag-like fragments, no structure, petroleum-like odor, moist	19.2										
		CR5 16	8.0 10.0					43.7										
10		CR6 24	10.0 12.0		10.0	GP	Black poorly graded GRAVEL with sand, mps 0.5 in., petroleum-like odor, sheen to water, oil droplets on water, wet	55.3										
					10.8	SP-SM	Olive-brown poorly graded SAND with silt and gravel (SP-SM), mps 1.25 in., 10% slag-like fragments, 10% cinder-like fragments, no structure, petroleum-like odor, oil droplets on water, wet	31.6										
		CR7 24	12.0 14.0					14.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NI-307

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-307
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								3.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-307

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-308

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 22 October 2014
Finish 30 October 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NI-308

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			CONCRETE ON SURFACE 1.0 IN. VOID											
					0.7	SM	Medium gray silty SAND with gravel (SM), mps 1.0 in., trace red brick, trace concrete, no odor, moist		15	20	15	20	15	15				
					2.0	SM	Similar to abov,e exept orange-brown 0710-102214-0950		10	15	20	20	25	10				
						SM	Similar to above, except dark brown, 10% slag-like fragments, trace metal-like fragments		10	10	20	25	20	15				
						SM	Similar to above, except gravel, no caulk-like substance, no metal-like fragments		10	25	25	15	10	15				
5		CR1 14	6.0 8.0		6.0	GP	Dark gray poorly graded GRAVEL with sand (GP), 15% slag-like fragments, no odor, wet 0710-102214-1020 Pre-cleared to 7.0 ft	0.0	40	30	10	10	10					
					7.0	SM	Black silty SAND with gravel (SM), mps 1.75 in., 10% brick fragments, 10% concrete fragments, 10% slag-like fragments, no structure, no odor, dry	0.6										
		CR2 21	8.0 10.0					32.7										
					8.8	GP	Dark gray poorly graded GRAVEL with sand (GP), 60% slag-like fragment, 10% wood fragments, 5% glass fragments, no structure, no odor, small amount of oil droplets on water, wet	25.4										
10		CR3 20	10.0 12.0		10.0	SP	Black poorly graded SAND with gravel (SP), mps 1.0 in., 10% slag-like fragments, 5% brick fragments, no structure, petroleum-like odor, oil droplets to water, sheen, wet	21.6										
								31.5										
		CR4 24	12.0 14.0			SP	Similar to above, except mps 1.75 in., 25% slag-like fragments, 15% brick fragments, petroleum-like odor, oil droplets to water	18.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NI-308

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-308
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								12.1										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-308

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-309

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 22 October 2014
Finish 30 October 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NI-309

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.5		CONCRETE AT SURFACE 1.0 IN. VOID											
						SM	Dark brown silty SAND with gravel (SM), mps 0.75 in., trace slag-like fragments, no odor, moist		10	15	15	20	20	20				
						SM	Similar to above, except dark brown 0710-102114-1504		10	15	20	20	20	25				
					2.5		Layer of wood											
					2.8	SM	Layer of red brick Note: Minimal recovery at 3.0 ft.		20	15	15	15	20	15				
					3.0	SM	Black silty SAND with grasvel (SM), mps 5.0 in., 75% red brick, no odor, dry		10	15	15	25	20	15				
						SM	Similar to above (SM), except dark gray, 5% concrete-like fragments, no fabric		10	15	15	25	20	15				
5						SM	Similar to above (SM), except trace wood-like fragments 0710-102114-1635		10	15	15	20	25	15				
		CR1 19	6.0 8.0		6.0	SM	Note: Pre-cleared to 6.0 ft. Dark brown silty SAND with gravel (SM), mps 1.75 in., 15% concrete fragments, 15% slag-like fragments, 5% metal fragments, no structure, slight petroleum-like odor, moist	13.2 27.4										
		CR2 23	8.0 10.0			SM	Similar to above, except olive-gray, has a "sweeter" petroleum-like odor, oil droplets to water	76.4 30.2										
10		CR3 18	10.0 12.0		10.0	GP	Dark gray to olive-gray poorly graded GRAVEL with sand, mps 1.75 in., 50% slag-like fragments, 10% wood fragments, 5% glass fragments, 5% rubber-like fragments, petroleum-like odor, wet	16.2 14.1										
		CR4 21	12.0 14.0					10.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NI-309

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-309
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.3		Wood fragments	13.7										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-309

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NI-310

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 30 October 2014
Finish 30 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NI-310

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.3										
						SM	Brown silty SAND with gravel (SM), mps 2.0 in., 10% cement fragments, no structure, no odor, dry	0.4										
		CR2 24	2.0 4.0		2.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., 5% metal fragments, 15% cinder-like fragments, 5% slag-like fragments, 5% concrete fragments, no structure, no odor, dry	1.3										
								13.6										
		CR3 19	4.0 6.0					7.0										
5								7.6										
					5.8		Brick pieces, mps 4.0 in.											
		CR4 23	6.0 8.0		6.0	SM	Black silty SAND with gravel (SM), mps 2.5 in., 5% concrete fragments, 15% ash-like fragments, no structure, no odor, dry	8.1										
						SM	Similar to above, except brown in color, 15% concrete fragments	7.4										
					7.8	GP	Concrete fragments, mps 1.0 in.											
		CR5	8.0 10.0		8.0	SM	Dark brown to olive-gray silty SAND with gravel (SM), mps 0.75 in., slag-like fragments, no structure, petroleum-like odor, wet	13.7										
					8.8	SP	Dark brown to olive-gray poorly graded SAND with gravel (SP), mps 1.0 in., 10% cinder-like fragments, 5% slag-like fragments, no structure, petroleum-like odor, oil drops to water, wet	48.2										
10		CR6 19	10.0 12.0		10.0	GP	Black poorly graded GRAVEL with sand (GP), mps 0.5 in., 60% slag-like fragments, 10% cinder-like fragments	36.0										
								41.0										
					11.8	SM	Olive-brown silty SAND with gravel (SM), mps 0.5 in., 25% slag-like frgments, 10% cinder-like fragments, 5% wood frgments, no structure, petroleum-like odor, oily residue on ____, wet	18.0										
		CR7 14	12.0 14.0															

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NI-310

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NI-310
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								18.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NI-310

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 October 2013
Finish 21 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location SB-098

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 6	0.0 2.0	NO WELL INSTALLED			15.0 in. CONCRETE SLAB (NO VOID)											
					1.3	SM	Brown silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, dry -FILL-	0.0	10	10	20	20	20	20				
		C2 19	2.0 4.0					0.0										
								0.4										
						SM	Similar to above except dark gray in color, mps 1.0 in., brick, and metal fragments -FILL-	0.3	5	10	5	30	30	20				
								0.0										
		C3 2	4.0 6.0				2302-102113-1144	0.1										
								0.2										
5					5.0	SP-SM	Gray-brown to dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 2.0 in., metal fragments, brick fragments, glass fragments, no structure, slight petroleum odor, dry -FILL-	1.4	10	10	20	40	10	10				
					6.0		230-102113-1150	0.3										
							BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. NJ-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 22 October 2013
Finish 22 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NJ-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 4.0	NO WELL INSTALLED			14.0 ft CONCRETE SLAB (NO VOID)											
					1.2	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 3.0 in., brick fragments, cinder-like fragments, rope-like strands (not sticky), no structure, no odor, dry -FILL-	0.2	10	20	10	40	10	10				
								0.0										
								0.7										
								0.6										
		CR2 22	4.0 6.0		4.0	SM	Dark brown to dark gray silty SAND with gravel (SM), mps 3.5 in., concrete pieces, brick fragments, no structure, no odor, dry -FILL- 2302-102213-1218	0.3	10	10	20	20	20	20				
5								0.9										
								1.1										
								1.3										
		CR3 24	6.0 8.0		6.0			0.0										
						SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 3.5 in., brick pieces, concrete pieces, no structure, no odor, dry -FILL- 2032-102213-1225	1.2	20	10	40	10	10	10				
								7.3										
								10.2										
		CR4 22	8.0 10.0			SP-SM	Similar to above except, petroleum-like odor, wet 2302-1022131234	14.2										
								18.3										
								1.3										
								1.9										
								2.1										
10		CR5 24	10.0 12.0			SP-SM	Strong petroleum-like odor, sheen to water, wet 2302-102213-1243	0.3	20	10	40	10	10	10				
								0.1										
								0.6										
								4.2										
								13.8										
								42.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. NJ-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NJ-101
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR6 24	12.0 14.0	NO WELL INSTALLED		SP-SM	Similar to above except, very strong petroleum-like odor, sheen to water 2302-102213-1254	26.2 145.6 162.3 207.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion	42.3										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NJ-101

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 22 October 2013
Finish 22 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NJ-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 31	0.0 4.0	NO WELL INSTALLED			12.0 ft CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SP-SM), mps 1.5 in., brick fragments, metal fragments, no structure, no odor, dry -FILL-	0.0	20	10	10	20	20	20				
								0.0										
								0.3										
		CR2 16	4.0 6.0					2.9										
5								0.+										
							2302-102213-1017 (DUP, MS/MSD)	6.2										
								10.1										
		CR3 24	6.0 8.0		6.0	SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 3.0 in., brick pieces, slag-like fragments, cinder-like fragments, no structure, no odor, dry -FILL-	19.3	20	10	40	10	10	10				
							2032-102213-12022 (wait)	0.2										
								0.0										
								0.1										
		CR4 23	8.0 10.0		8.0	GP	Cinder-like fragments, slag-like fragments, mps 3/4 in., moist -FILL-	0.3		100								
								0.0										
								0.0										
					9.5			0.1										
						ML	Red-brown red-gray sandy SILT (ML), no structure, no odor, moist	0.2					30	70				
10					10.0	SM	-FILL-	0.0										
		CR5 17	10.0 12.0				2302-102213-1040 (wait)	0.1										
						SM	Cinder-like fragments, slag-like fragments, mps 1/2 in., moist -fILL-	0.9										
								10.7		20	20	20	20	20				
							Olive-brown to olive silty SAND with gravel (SM), mps 1/2 in., cinder-like fragments, slag-like fragments, glass fragments, no structure, petroleum-like odor, wet	21.0										
								36.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. NJ-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NJ-102
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR6 22	12.0 14.0	NO WELL INSTALLED			2302-102213-1129 (wait) 2302-102213-1150 (wait)	37.6 104.9 91.2 62.3 54.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion	31.3										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NJ-102

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 22 October 2013
Finish 22 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NJ-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 4.0	NO WELL INSTALLED			26.0 ft CONCRETE SLAB (NO VOID)											
					2.2	SM	Brown silty SAND with gravel (SM),mps 2.0 in., cinder-like fragments, brick fragments, no structure, no odor, dry -FILL-	0.0	10	10	20	20	20	20				
								0.0										
								0.0										
		CR2 24	4.0 6.0			SM	Similar to above except dark brown, no brick or cinder-like fragments 2302-102213-0908	0.2	10	10	10	20	20	20				
5								0.0										
								0.1										
								0.3										
		CR3 23	6.0 8.0		6.0	SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 3.0 in., brick pieces, no structure, no odor, moist -FILL- 2302-102213-0914	0.0	30	5	10	35	10	10				
								0.3										
								0.6										
								0.1										
		CR4 23	8.0 10.0			SP-SM	Similar to above except, brick fragments, mps 2.0 in., slag-like fragments, cinder-like fragments -FILL- 2302-102213-0927	0.0	20	10	40	10	10	10				
								0.2										
								0.1										
								0.0										
10		CR5 22	10.0 12.0			SP-SM	Similar to above except olive-brown at 11.0 ft, wood fragments, slag fragments 2302-102213-0939	0.0	20	10	40	10	10	10				
								0.0										
								0.0										
								0.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NJ-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NJ-103
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR6 22	12.0 14.0	NO WELL INSTALLED				0.0 0.1										
							2302-102213-0942	0.0 0.0	20	10	40	10	10	10				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NJ-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 21 October 2013
Finish 21 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NJ-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 13	0.0 4.0	NO WELL INSTALLED			17.0 ft CONCRETE SLAB (NO VOID)											
					1.5	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, no structure, no odor, dry -FILL-	0.0	10	20	10	20	20	20				
								0.0										
								0.0										
								0.3										
								1.6										
		CR2 18	4.0 6.0			SM	Similar to above except dark brown in color, metal fragments, wood fragments, slight sweet odor -FILL- 2302-102113-1522	4.8	5	5	20	20	25	25				
5								26.2										
								16.1										
		CR3 19	6.0 8.0					0.0										
					6.5	GP	Dark gray and red poorly-graded GRAVEL with sand (GP), mps 3.0 in., slag-like fragments, brick-like fragments, no structure, no odor, moist -FILL-	0.0	40	20	20	10	10					
								0.4										
							Dark gray silty SAND with gravel (SM), mps 1.0 in., cinder-like fragments, no structure, slight petroleum-like odor, wet (asphalt-like patch material and odor) -FILL-	0.3	5	20	25	20	10	20				
					8.0													
		CR4 22	8.0 10.0			SM	2302-102113-1549	0.6										
								0.3										
							Similar to above except, mps 2.0 in, similar odors and moist, wood fragments -FILL-	0.9										
								1.4										
							2302-102113-1608	1.1										
10		CR5 22	10.0 12.0			SM	Similar to above except, mps 1.0 in, sinder-like fragments, slag-like fragments, glass fragments, no structure, petroleum-like odor (benzene-like), wet -FILL-	3.7	10	20	20	20	10	20				
								14.6										
								21.0										
							2302-102113-1620	23.1										
								19.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. NJ-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NJ-104
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR6 21	12.0 14.0	NO WELL INSTALLED		SM	Similar to above except olive-brown in color, very strong petroleum-like odor (benzene-like) 2302-102113-1627	27.4 31.0 21.0 20.8	10	20	20	20	10	20				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: backfilled borehole with clean sand upon completion	21.6										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NJ-104

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 October 2013
Finish 21 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NJ-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			20.0 in. CONCRETE SLAB (NO VOID)											
					1.8	SP-SM	Light brown poorly-graded SAND with gravel (SP-SM), mps 2.5 ft., no structure, no door, dry -FILL-	0.6	20	10	10	40	10	10				
		CR1 19	2.0 4.0					7.2										
					3.0	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., slag fragments, brick fragments, wood fragments, no structure, no odor, moist -FILL-	26.4	10	10	10	20	30	20				
		CR2 21	4.0 6.0					9.4										
5								0.3										
								0.7										
							2302-102113-1208	0.9										
								1.4										
		CR3 22	6.0 8.0					0.0										
					6.5	SP-SM	Dark brown poorly-graded SAND with gravel (SP-SM), mps 2.0 in., cinder-like fragments, slag fragments, asphalt-like material (not sticky), no structure, slight petroleum-like odor, moist	0.2	10	10	40	20	10	10				
								6.7										
						SP-SM	-FILL-	8.3	10	30	30	10	10	10				
					8.0		Similar to above except, no asphalt-like material, cinder-like fragments, mps 1/2 in. 2302-102113-1219	1.4										
							BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	3CR

Boring No. NJ-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 October 2013
Finish 21 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NJ-106

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 7	0.0 2.0	NO WELL INSTALLED			14.0 in. CONCRETE SLAB											
					1.2	SM	Brown silty SAND with gravel (SM), mps 1/2 in., no structure, no odor, dry	0.0		20	20	20	20	20				
							-FILL-											
		CR2 19	2.0 4.0			SM	Similar to above except dark gray in color, metal fragments, brick fragments	0.0		20	20	20	20	20				
							-FILL-	0.0										
							2302-102113-1110	0.2										
								0.0										
5		CR3 15	4.0 6.0			SM	Similar to above except, wood fragments		10	10	20	20	20	20				
							2302-102113-1116	0.0										
								0.3										
								1.4										
		CR4 18	6.0 8.0		6.0	SP-SM	Dark gray poorly-graded SAND with gravel (SP-SM), mps 1.5 in., cinder-like fragments, slag-like fragments, brick fragments, no structure, slight petroleum odor, wet	0.0	15	15	10	40	10	10				
							-FILL-	0.7										
							2302-102113-1121	1.6										
								3.4										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4CR

Boring No. NJ-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 23 June 2014
Finish 23 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NJ-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.8	SM	9 in. CONCRETE NO VOID Fill Material Brown silty SAND with gravel (SM)	0.0										
							Black poorly graded SAND with silt and gravel (SP-SM)	0.0										
								0.0										
		CR2 24	2.0 4.0		2.2	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	0.0										
					2.7	SM	Dark brown silty SAND with gravel (SM)	0.0										
					3.6	SM	Black silty SAND with gravel (SM) 0710-062314-1123	0.0										
		CR3 20	4.0 6.0		4.3	SM	Black and medium brown silty SAND with gravel (SM) 0710-062314-1138	0.0										
5								0.0										
					6.0	SP	Gray poorly graded gravel (SP)	0.0										
		CR4 24	6.0 8.0					0.0										
					7.2	SM	Black silty SAND with gravel (SM) 0710-062314-1143	0.0										
					8.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM) 0710-062314-1157	0.0										
		CR5 24	8.0 10.0					0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NJ-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 July 2014
Finish 15 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NJ-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 22	0.0 2.0	NO WELL INSTALLED	0.7	SP	8.0 in. CONCRETE NO VOID Fill Material (glass, slag, red brick, metal, copperwire) Medium brown poorly graded SAND (SP)	0.0 0.0 0.0 0.0										
		CR2 22	2.0 4.0		2.5	SP	Black poorly graded SAND with gravel (SP) 0387-071514-1135	0.0 0.0 0.0										
		CR3 20	4.0 6.0		4.0		Red brick layer	0.0 0.0 0.0										
5					5.5		Yellow brick layer 0387-071514-1137	0.0										
		CR4 20	6.0 8.0		6.0 6.5	SP GP	Black poorly graded silty SAND (SP) Black poorly graded GRAVEL with sand (GP) 0387-071514-1141	0.0 0.0 0.0 0.0										
		CR5 18	8.0 10.0			GP	Similar to above 0387-071514-1144	0.0 0.0 0.0 0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NJ-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 July 2014
Finish 15 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NJ-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED	0.7	SM	8.0 in. CONCRETE NO VOID Fill Material (metal, red brick, slag, glass) Black silty SAND with gravel (SM)	0.0										
		CR2 22	2.0 4.0		3.5		Red brick layer 0387-071514-1323	0.0										
		CR3 18	4.0 6.0		4.0	SM	Black silty SAND with gravel (SM), mixed slag material 0387-071514-1326	0.0										
5		CR4 18	6.0 8.0		6.0	SM	Similar to above, except moist 0387-071514-1331	0.0										
		CR5 15	8.0 10.0		8.0	GP	Black poorly graded GRAVEL with sand (GP) 0387-071514-1334	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NJ-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NJ-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NJ-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			___ in. CONCRETE NO VOID Fill Material (foundry sand, slag, metal, wire, glass)											
					0.7	SM	Yellowish-brown silty SAND with gravel (SM)											
		CR2 24	2.0 4.0				Similar to above 0387-071614-0002; 0387-071614-0918	0.0 0.0 0.0 0.0										
					3.8	SP-SM	Black poorly graded SAND with gravel and silt (SP-SM)											
		CR3 20	4.0 6.0				Similar to above 0387-071614-0923	0.0 0.0 0.0 0.0										
5		CR4 24	6.0 8.0				Saturated at 6.0 ft 0387-071614-0927	0.0 0.0 0.3										
					7.4	GP	Black poorly graded GRAVEL with sand and silt (GP), no odor, saturated 0387-071614-0930	0.2 0.4 0.0 0.0 0.0										
		CR5 24	8.0 10.0															
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NJ-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NJ-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 22 October 2014
Finish 06 November 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NJ-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1	0.0 2.0	NO WELL INSTALLED	0.2	SM	ASPHALT NO VOID Black silty SAND with gravel (SM), mps 3.0 in., 10% red brick-like fragments, 10% slag-like fragments, no odor, dry		10	10	20	20	25	15				
					1.3	GP	Layer of red brick		100									
					1.4	SM	Black silty SAND with gravel (SM), mps 0.25 in., 15% slag-like fragments, no odor, dry		10	10	15	25	25	15				
		CR2 24	2.0 4.0		2.0	SM	0710-102214-1505	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., 15% slag-like fragments, 5% cinder-like fragments, no structure, no odor, dry Similar to above, except olive-b rown, 10% brick fragments, mps 2.0 in.	0.0										
		CR3 24	4.0 6.0			SM	Similar to above, except black	0.0										
5								0.3										
						SM	Similar to above, except moist											
		CR4 19	6.0 8.0			SM	Similar to above, except more coarse sand, no odor, wet	0.2										
								0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NJ-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NJ-305

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 22 October 2014
Finish 06 November 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NJ-305

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1	0.0 2.0	NO WELL INSTALLED		SP	Tan and brown poorly graded SAND with gravel (SP), mps 0.5 in., trace slag-like fragments, trace glass-like fragments, no odor, moist	0.0	5	5	20	35	35					
						SP	Same as above, with trace organics 0710-102214-1510	0.2										
		CR2 19	2.0 4.0		2.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 2.5 in., 15% slag-like fragments, 5% brick fragments, 5% cinder-like fragments, no structure, no odor, dry	0.3										
								0.0										
		CR3 22	4.0 6.0		4.0	SM	Dark gray silty SAND with gravel (SM), mps 1.25 in., 20% slag-like fragments, 5% cinder-like fragments, no structure, no odor, dry	0.0										
5						SM	Similar, except moist to wet	0.0										
		CR4 14	6.0 8.0			SM	Similar, except no odor, wet	0.4										
								0.3										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NJ-305

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NJ-306

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 November 2014
Finish 06 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NJ-306

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., 10% concrete fragments, 10% slag-like fragments, 5% cinder-like fragments, no structure, no odor, dry	0.0										
								0.0										
		CR2 19	2.0 4.0			SM	Similar to above, except 5% brick fragments	0.0										
								0.0										
		CR3 24	4.0 6.0					0.0										
5					5.0	GP	Dark gray to black poorly graded GRAVEL with sand (GP), mps 0.75 in., 60% slag-like fragments, 10% cinder-like fragments, no structure, no odor, moist to wet	0.0										
		CR4 16	6.0 8.0					0.0										
					7.0	SM	Dark gray silty SAND with gravel (SM), mps 1.25 in., 15% slag-like fragments, 15% wood fragments, no structure, no odor, slight sheen, wet	0.0										
		CR5 24	8.0 10.0		8.0	GP	Dark gray to black poorly graded GRAVEL with sand (GP), mps 1.0 in., 60% slag-like fragments, 10% cinder-like fragments, no structure, no odor, wet	0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. NJ-306

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NJ-307

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 November 2014
Finish 06 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NJ-307

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., 15% brick fragments, 10% slag-like fragments, 5% cinder-like fragments, no structure, no odor, dry	0.0										
								0.0										
		CR2 24	2.0 4.0					0.6										
					2.8	GP	Brick fragments, mps 1.75 in.											
					3.0	SM	Dark brown silty SAND with gravel, mps 0.75 in., 15% slag-like fragments, 10% cinder-like fragments, 5% brick fragments, no structure, no odor, dry	0.2										
		CR3 24	4.0 6.0			SM	Similar to above, except olive-gray, no brick fragments, moist	0.1										
5								0.3										
					5.5	GP	Black to dary gray poorly graded GRAVEL with sand (GP), mps 0.5 in., 60% slag-like fragments, 10% cinder-like fragments, no odor, wet	0.0										
		CR4 24	6.0 8.0					0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NJ-307

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NJ-308

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 17 November 2014
Finish 17 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location NJ-308

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 2.25 in., 10% brick fragments, 10% slag-like fragments, 10% cinder-like fragments, no structure, no odor, moist	0.0										
								0.0										
		CR2 21	2.0 4.0					0.3										
								0.0										
		CR3 23	4.0 6.0		4.0	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., 15% cinder-like fragments, 10% brick fragments, no structure, no odor, wet from 4.5 ft	0.0										
5								0.0										
		CR4 24	6.0 8.0		6.0	GP	Dark gray poorly graded GRAVEL with coarse to medium sand (GP), mps 0.75 in., 30% slag-like fragments, 10% brick fragments, 5% glass fragments, 5% cinder-like fragments, no odor, wet	0.0										
								0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NJ-308

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller P. Gaynor
H&A Rep. D. Morse
Elevation Datum
Location Moved 2.5 ft West of plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Augr
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - (JACK HAMMER) (NO VOID)											
					0.6	GP	GRAVEL SUBBASE	0.0										
	AIR KNIFE		1.0		1.0	SM	Black silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, 40 to 50% bricks, steel, wire, glass, ceramic pieces and concrete	0.0	10	15	15	20	20	20				
			2.0				-FILL-											
			2.5				Collect sample 2351-102413-0945 (2.0 to 4.0 ft)	0.0										
				NO WELL INSTALLED				0.0										
							Collect sample 2351-102413-1000 (4.0 to 6.0 ft)	0.0										
5								0.0										
					6.0	GP	Black gravel layer, oily sheen, no structure, strong oily/petroleum odor, broken glass, shell fragments	0.0										
							-FILL-											
							Collect sample 2351-102413-1040 (6.0 to 8.0 ft)											
							Cleared up to 8.0 ft - no voids	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/24/13	-	-	-	8.0	± 7.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3H

Boring No. NK-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NK-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation Datum
Location Moved 5 ft West

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Augr
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - JACK HAMMER											
					0.7													
					1.0	GP	GRAVEL SUBBASE	0.0										
	AIR KNIFE		1.0			SM	Black silty SAND with gravel (SM), mps 3.5 in., no structure, no odor, 30 to 40% brick, steel, wire mesh, glass pieces, concrete, ceramic, wood and concrete	0.0	10	10	10	20	30	20				
			2.0				-FILL-											
			2.5				Collect sample 2351-102413-115 (2.0 to 4.0 ft)	0.0										
				NO WELL INSTALLED			Layer of cinder blocks at 3.0 ft											
								0.0										
5							Collect 2351-102413-1200 (4.0 to 6.0 ft)	0.0										
								0.0										
					6.0	GP	Black gravel layer, oily sheen, no structure, strong petroleum odor, presence of glass, ceramic tiles											
								0.0										
							-FILL-											
							Collect sample 2351-102413-1210 (6.0 to 8.0 ft)											
							Cleared up to 8.0 ft - no voids	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/24/13	-	-	-	8.0	± 7.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3H

Boring No. NK-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Augr
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - (JACK HAMMER) (NO VOID)											
					0.8	GP	GRAVEL SUBBASE	0.0										
	AIR KNIFE		1.0		1.2	SM	Black silty SAND with gravel (SM), mps 3.8 in., no structure, no odor, 40 to 50% bricks, rebar, glass, concrete, cinder and ceramic tile pieces	0.0	10	10	15	15	20	30				
			2.0				-FILL-											
			2.5				Collect sample 2351-102413-1330 (2.0 to 4.0 ft)	0.0										
				NO WELL INSTALLED				0.0										
5							Collect 2351-102413-1335 (4.0 to 6.0 ft)	0.0										
								0.0										
					6.0	GP	Black gravel layer, oily sheen, no structure, strong petroleum odor, wet at 6.5 ft, broken glass											
								0.0										
							-FILL-											
							Collect sample 2351-102413-1345 (6.0 to 8.0 ft)											
							Cleared up to 8.0 ft - no voids	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/24/13	-	-	-	8.0	± 6.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3H

Boring No. NK-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation Datum
Location Moved 5 ft West

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Augr
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - (JACK HAMMER) (NO VOID)											
					0.8	GP	GRAVEL SUBBASE	0.0										
	AIR KNIFE		1.0	NO WELL INSTALLED	1.0	SM	Black-brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, 40 to 50% brick, steel wire, glass, concrete, cinder and wood	0.0	10	10	10	15	30	25				
			2.0				-FILL-											
			2.5				Collect sample 2351-102413-1415 (2.0 to 4.0 ft)	0.0										
								0.0										
5							Collect sample 2351-102413-1435 (4.0 to 6.0 ft)	0.0										
								0.0										
					6.0	GP	Black gravel layer, oily sheen, no structure, strong petroleum odor, wet at 7.0 ft, broken glass											
								0.0										
							-FILL- Collect sample 2351-102413-1445 (6.0 to 8.0 ft)											
							Cleared up to 8.0 ft - no voids	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/24/13	-	-	-	8.0	± 7.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3H

Boring No. NK-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 20 June 2014
Finish 20 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.7	SM	8.0 in. CONCRETE NO VOID Fill Material (wood, slag, glass, tile, bottles) Black sandy SILT (SM)											
		CR1 22	2.0 4.0		2.7		Light gray concrete and wood layer	1.5										
					3.1	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	3.5										
					3.8	SP-SM	Similar to above, except more silt, wood	5.0										
		CR2 24	4.0 6.0		4.2	SM	0710-063014-1431 Brown silty SAND with gravel (SM)	5.5										
					4.7	SM	Similar to above, except light gray	5.5										
5					5.0	SM	Similar to above, except black, sheen 0710-062014-1435	8.0										
								17.0										
								21.5										
		CR3 20	6.0 8.0		6.0	SP	Black poorly graded SAND with gravel (SP), petroleum-like odor, wet 0710-062014-1442	20.5										
								34.0										
								19.5										
								46.0										
		CR4	8.0 10.0		8.0													
					8.3	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM),	14.0										
						GP	petroleum-like odor, oil-like droplets Dark gray poorly graded GRAVEL with sand (GP), petroleum-like odor	25.0										
					9.0	SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), petroleum-like odor, sheen 0710-062014-1450	21.0										
								19.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NK-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 21 May 2014
Finish 20 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 2.0	NO WELL INSTALLED	0.5		6 in. CONCRETE NO VOID											
						SM	Fill Material (brick, slag, glass, wood, metal)		15	10	10	20	30	15				
							Black silty SAND with gravel (SM), mps 0.5 in., no odor, moist, 5% slag-like fragments	0.0										
								0.0										
		CR1 24	2.0 4.0			SM	Similar to above, except mps 2 in., 5% glass-like fragments	1.0	20	15	10	20	20	15				
								1.0										
					3.3	SM	Similar to above, except 40% gray, dry	0.5										
					3.4	SM	Similar to above, except red and light gray											
						SM	Note: Pipe at 40 in. - pipe sample 0710-052114-1525.											
						SP-SM	Similar to above, except black											
		CR2 21	4.0 6.0				Black poorly graded SAND with silt and gravel (SP-SM) 0710-062014-1534	1.0										
					4.8			2.0										
5						SP	Brown poorly graded SAND with gravel (SP)	2.0										
					5.7			3.0										
					5.8	ML	Light gray SILT (ML)											
		CR3	6.0 8.0			SM	Black silty SAND with gravel (SM)	16.5										
					6.0	SP-SM	0710-062014-1344											
							Dark gray poorly graded SAND with silt and gravel (SP-SM), petroleum-like odor, oil-like droplets	18.0										
								21.0										
								37.0										
		CR4	8.0 10.0					21.0										
								2.5										
								35.0										
					9.6	SP-SM	Similar to above, except more silt	16.5										
10					10.0		0710-062014-1401											
							BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NK-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NK-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 28 May 2014
Finish 28 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NK-203A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			CONCRETE	0.6										
					0.8	SP	Grayish-brown poorly graded fine to coarse SAND with fine gravel (SP)	1.7	20	-	35	30	15	-				
					1.5	SP-GP	Blackish-brown poorly graded fine to coarse SAND with fine gravel (SP-GP), pieces of slag, red brick 2302-052814-1446, 2302-052184-003	1.5	25	-	40	30	5					
		CR1 24	2.0 4.0					3.6										
								3.7										
								4.1										
		CR2 24	4.0 6.0				At 4 ft, wood debris	5.2										
						SP-GP	Similar to above	0.0										
5					4.9	ML	Reddish-brown SILT (ML), trace very fine sand, non-plastic, moist	0.0						100				
					5.3	SM	Grayish-brown silty fine to coarse SAND with fine gravel (SM), non-plastic, wet 2302-052814-1456	0.0	20	-	35	20	10	30				
		CR3 24	6.0 8.0					0.0										
					6.5	SP	Black poorly graded fine to coarse SAND with fine gravel (SP), moist, bricks, pieces of wood, strong odor in last 6 in. of sample 2302-052814-1509	1.0										
								2.0										
		CR4 ?	8.0 10.0					2.6										
					9.2	SP SP-SM	Similar to above, sheen on water, oily material, pieces of glass, tile, jars											
10					10.0		Grayish-brown poorly graded fine to coarse SAND with silt and fine gravel (SP-SM), non-plastic, wet, glass jars, piece of slag 2302-052814-1515											
							BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NK-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 16 May 2014
Finish 16 May 2014
Driller R. Rodke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		AIR KNIFE	0.0	NO WELL INSTALLED			9.0-IN. CONCRETE AT SURFACE - DRILLED 10-IN. CORE WITH GEOPROBE - NO VOID Boring pre-excavated using vacuum truck and hand auger. Soil descriptions based on hand auger cuttings.											
					0.8	SM	Brown silty SAND (SM), mps 1.0 in., slag-like fragments, no odor, moist		10	15	10	20	30	15				
						SM	Similar to above, except dark brown, 10% brick-like fragments, dry		15	20	10	10	30	15				
						SM	Similar to above, except 15% slag-like fragments, and 15% brick-like fragments 0710-051614-1145		20	15	15	15	20	15				
						SM	Similar to above, except 5% slag-like fragments, 6% glass-like fragments, and 5% wood-like fragments		15	10	15	20	25	15				
5						SM	Similar to above, except mps 2.5 in., 10% slag-like fragments, petroleum-like odor		15	15	15	20	20	15				
					6.0													
					6.5	GP	Gray poorly graded GRAVEL with sand (GP), mps 3.0 in., 5% glass-like fragments, 45% slag-like fragments, and 5% cinder-like fragments, petroleum-like odor, moist 0710-051614-1230		55	5	5	15	15	15				
							BOTTOM OF EXPLORATION 6.5 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	-

Boring No. NK-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NK-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 04 June 2014
Finish 17 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED			11.25 in. CONCRETE NO VOID Fill Material (wood, glass, fabric, slag)											
					0.9	SM	Brown silty SAND with gravel (SW), mps 1 in., no structure, no odor, moist	0.0	5	5	10	30	35	15				
						SM	Similar to above, except dark brown, mps 0.25 in., 5% slag-like fragments	0.0 0.0										
						SM	Similar to above, except black, 5% wood-like fragments 0710-060414-0930; 0710-060414-002	0.0										
5						SM	Similar to above, except petroleum-like odor, oil-like sheen, 10% slag-like fragments 0710-060414-0955	0.3										
		CR1 24	6.0 8.0		6.5		Pre-cleared to 6.5 ft	24.5 21.0										
					7.5	SM	Dark gray poorly graded SAND with gravel (SP), strong petroleum-like odor, oil-like droplets 0710-061914-0940	19.5 34.0 24.0										
		CR2 24	8.0 10.0					17.5 10.0										
							0710-061914-0947	16.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NK-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NK-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 04 June 2014
Finish 17 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED			11.25 in. CONCRETE 0.5 in. VOID Fill Material (glass, bottles, wood, slag, tile)											
					1.0	SM	Brown silty SAND with silt (SM), mps 0.5 in., no structure, no odor, moist 0710-060414-1020	0.0	5	5	15	25	35	15				
							Note: Wood panel at 3.0 ft.	0.0										
					3.0	SM	Similar to above, except black, mps 1 in., 5% slag-like fragments, 5% wood-like fragments	0.0										
						SM	Similar to above, except dark gray, dry, 15% slag-like fragments 0710-060414-1100	0.0	15	20	15	15	20	15				
5						SM	Similar to above, except petroleum-like odor, moist 0710-060414-1130	0.0	20	25	10	10	20	15				
		CR1 20	6.0 8.0		6.5	SP	Black poorly graded SAND with gravel (SP), strong petroleum-like odor, wet											
					7.6	SM	Dark gray silty SAND with gravel (SM) 0710-061914-1036 0710-061914-1045											
		CR2 24	8.0 10.0															
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NK-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NK-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 04 June 2014
Finish 17 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-303A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED	0.5	SM	6.0 in. CONCRETE NO VOID Fill Material (glass, slag, leather, tile)		5	5	15	30	30	15				
					1.5		Dark brown silty SAND with gravel (SM), mps 1.0 in., no odor, moist, 10% slag-like fragments, 5% brick-like fragments											
					1.8	SM	Note: Pipe at 18.0 in. Pipe sample 0710-060514-1345 Similar to above 0710-060914-1530											
5							0710-060914-1545											
		CR1 22	6.0 8.0		6.0	SM	Similar to above, except petroleum-like odor, wet 0710-060914-1555	16.5										
					6.5	SP	Black poorly graded SAND with gravel (SP), strong petroleum-like odor	17.0										
					7.0		Note* Oil-like droplets at 7.0 ft. 0710-061914-0858	20.0 16.5										
		CR2 24	8.0 10.0					9.0										
					8.5	SP	Similar to above, except gray 0710-061914-0905	13.5 13.5										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	7.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NK-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 13 November 2013
Finish 13 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location Moved 1.5 ft N of PDSS-02

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 2.0	NO WELL INSTALLED	0.8		CONCRETE (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 2 in., no structure, musty odor, dry, ~25% concrete, cinders, slag, cans, and glass	0.2	15	10	15	15	20	25				
		CR2 20	2.0 4.0			SM	Dark brown silty SAND (SM), mps 3 in., no structure, musty odor, moist, ~50% cinders/slag and coal, trace concrete	0.1	5	5	15	35	20	20				
					4.0		BOTTOM OF EXPLORATION 4.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
not		encountered			

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 13 November 2013
Finish 13 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 13	0.0 2.0	NO WELL INSTALLED	0.8		CONCRETE (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 3 in., no structure, musty odor, dry, ~25% concrete, slag and cinders	0.6	5	5	15	35	20	20				
		CR2 22	2.0 4.0			SM	Similar to CR1	1.2										
							-FILL-											
					4.0		BOTTOM OF EXPLORATION 4.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
not		encountered			

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 13 November 2013
Finish 13 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	N	CR1 14	0.0 2.0	NO WELL INSTALLED	0.8		CONCRETE NO VOID											
						SM	Dark brown silty SAND (SM), mps 3 in., no structure, musty odor, dry, ~60% cinders, slag and coal, trace concrete	0.0	5	5	25	40	5	15				
	H	CR2 18	2.0 4.0			SM	Brown silty SAND (SM), mps 3 in., no structure, no odor, moist to wet, 25% concrete, cinders, coal and slag	0.0	5	5	20	30	20	20				
5	H	CR3 13	4.0 6.0			SM	Dark brown silty SAND (SM), mps 1 in., no structure, hydrocarbon-like odor, wet, 30% wood, porcelain, cinders, slag and coal, trace semi solid PCBM	2.9	5	5	20	30	20	20				
	H	CR4 12	6.0 8.0			SM	Dark gray brown silty SAND (SM), mps 3 in., no structure, hydrocarbon-like odor, wet, ~75% concrete, slag, coal, trace procelain and glass, sheen and oil droplets on water	6.8	5	5	15	25	30	20				
	H	CR5 20	8.0 10.0			SM	Similar to CR4 -FILL-	15.6										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
not		encountered			

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. NL-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 13 November 2013
Finish 13 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location Moved 1.5 ft N of marked location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	H	CR1	0.0 2.0	NO WELL INSTALLED			CONCRETE (NO VOID)											
					1.0	SM	Dark brown silty SAND (SM), mps 3.5 in., no structure, musty odor, dry, ~30% cinders, slag and coal, ~5% concrete	0.3	5	5	30	15	15	30				
	H	CR2 18	2.0 4.0			SM	Dark brown silty SAND (SM), mps 1.5 in., no structure, musty odor, dry, ~20% cinders, slag and coal, trace firebrick and concrete -FILL-	0.2		5	25	30	20	20				
					4.0		BOTTOM OF EXPLORATION 4.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 19 May 2014
Finish 18 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand Auger		0.0 4.0	NO WELL INSTALLED			8.75 in. CONCRETE NO VOID Fill Material (slag)											
					0.7	SM	Black silty SAND with gravel (SM), mps 0.75 in., no odor, dry, 10% slag-like fragments		15	20	10	20	20	15				
					2.5	SM	Similar to above, except mps 2.5 in. 0710-051914-1523		15	15	15	20	20	15				
					3.5	SM	Similar to above, except mps 1.5 in. 0710-060414-1515		10	15	15	20	25	15				
					4.2	SM	Hand auger to 4.0 ft											
		CR1 24	4.0 6.0		5.0	SM	Medium brown silty SAND (SM), strong odor, sheen on sample and water 0387-061814-1041	4.0 5.0										
5						GP	Grayish-black poorly graded GRAVEL with sand, strong petroleum-like odor, product on water 0387-061814-1050	8.5 10.5										
		CR2 24	6.0 8.0			GP	Similar to above	10.5 7.0 3.0 4.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 19 May 2014
Finish 17 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand Auger		0.0 4.0	NO WELL INSTALLED			8.25 in. CONCRETE NO VOID FIll Material (slag, glass, brick, wood)											
					0.7	SM	Black silty SAND with gravel (SM), mps 0.75 in., no odor,		10	25	10	20	20	10				
						SM	dry, 5% slag-like fragments Similar to above, except 5% ash-like fragments 0710-051914-1530		10	15	15	25	25	15				
						SM	Similar to above, 0710-060414-1615		10	15	15	20	25	15				
					4.0													
		CR1 24	4.0 6.0		4.4	GP	Black poorly graded GRAVEL with sand (GP)	23.0										
5						ML	Black sandy SILT (ML)	19.5 17.7										
					5.8			16.7										
		CR2 24	6.0 8.0			GP	Black poorly graded GRAVEL with sand (GP) 0387-061714-1557	19.0 14.3										
						GP	Similar to above, with oil-like droplets in water table 0387-061714-1604	11.0 9.6										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 27 May 2014
Finish 27 May 2014
Driller R. Rodke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		AIR KNIFE	0.0	NO WELL INSTALLED			CONCRETE NO VOID Boring pre-excavated using vacuum truck and hand auger. Soil descriptions based on hand auger cuttings.											
					0.8	SM	Dark brown silty SAND with gravel (SM), mps 0.75 in., 15% slag-like fragments, no odor, moist		15	15	20	15	20	15				
					2.0	SM	Similar to above, except 5% slag-like fragments, dry 0710-052714-1515		10	5	10	30	30	15				
							BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	-

Boring No. NL-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 19 May 2014
Finish 19 May 2014
Driller R. Rodke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		AIR KNIFE	0.0	NO WELL INSTALLED			CONCRETE NO VOID Boring pre-excavated using vacuum truck and hand auger. Soil descriptions based on hand auger cuttings.											
					0.8	SM	Black silty SAND with gravel (SM), mps 0.5 in., 5% brick-like fragments, 5% slag-like fragments, no odor, moist		10	15	15	20	25	15				
					2.0	SM	Similar to above, except dark gray, 10% slag-like fragments, dry 0710-051914-1511 BOTTOM OF EXPLORATION 2.0 FT		10	15	15	25	20	15				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	-

Boring No. NL-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 05 June 2014
Finish 18 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand Auger		0.0 2.0				7.5 in. CONCRETE NO VOID											
					0.6	SM	Dark brown silty SAND with gravel (SM), mps 0.25 in., no odor, wet, 10% slag-like fragments 0710-060514-1130		10	15	20	20	20	15				
		CR1 24	2.0 4.0			SP	Black poorly graded SAND with gravel 0387-061814-1136	0.0 0.0 0.0										
					3.6	SM	Medium yellowish-brown silty SAND (SM), wet	0.0										
		CR2 24	4.0 6.0	NO WELL INSTALLED	4.0	GP	Grayish-black poorly graded GRAVEL with sand (GP), petroleum-like odor, saturated, sheen on soil and water, water appears to have free product on surface 0387-061814-1142	2.5 3.0 3.5										
5								2.5										
		CR3 20	6.0 8.0			GP	Similar to above, except color change to black-brown 0387-061814-1150	9.0 4.5 5.0 3.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. NL-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 June 2014
Finish 06 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand		0.0 2.0	NO WELL INSTALLED	0.9		CONCRETE AT SURFACE 2.0-IN. VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
						SM	Black silty SAND with gravel (SM), mps 0.25 in., 10% slag-like fragments, no odor, moist 0710-0650614-1415		10	15	20	20	20	15				
	Auger		1.5		2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. NL-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NL-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 06 June 2014
Finish 06 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Hand		0.0 2.0	NO WELL INSTALLED	0.9		CONCRETE AT SURFACE 2.0-IN. VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
	Auger		1.5		2.0	SM	Dark gray silty SAND with gravel (SM), mps 0.5 in., 10% slag-like fragments, no odor, moist 0710-060614-1330 0710-060614-0002		10	15	5	15	20	15				
							BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. NL-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NL-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 18 June 2014
Finish 18 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NL-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE Fill Material (slag, foundry sand, concrete, glass, wood)											
					1.0	SM	Dark brown poorly graded SAND with gravel and silt (SM) (foundry sand) 0387-061814-1347; 0387-061814-0002	0.0 0.0										
		CR2 24	2.0 4.0			SM	Similar to above 0387-061814-1351	0.0 0.0 0.0 0.0										
		CR3	4.0 6.0		4.3		Similar to above	0.7										
5						SP	Yellowish-brown poorly graded SAND with gravel (SP), saturated 0387-061814-1350	0.8 1.2										
					5.5	ML	Grayish-black sandy SILT (ML), slight petroleum-like odor, saturated, sheen on sample and water (possible free product)	2.5 4.6										
		CR4 24	6.0 8.0		6.5	GP	Black/brown poorly graded GRAVEL with sand (GP), moderate petroleum-like odor 0387-061814-1401	5.1 2.8 3.5										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NL-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-305

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 July 2014
Finish 15 July 2014
Driller R. Radke
H&A Rep. M.Pomponio
Elevation Datum (Antea)/S.Collinge
Location NL-305

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			8.0 in. CONCRETE NO VOID Fill Material (slag)	0.0										
					0.7	SP	Black poorly graded SAND with gravel (SP) 0387-071514-0939 0387-071514-0002	0.0 0.0 0.0										
		CR2 24	2.0 4.0					0.0 0.0 0.0 0.0										
					3.7			0.0										
					4.0	SM	Medium brown silty SAND (SM), trace gravel 0387-071514-0944											
							BOTTOM OF EXPLORATION 4.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-305

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-306

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 15 July 2014
Finish 15 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NL-306

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED			8.0 in. CONCRETE NO VOID Fill Material (slag, concrete, red brick)	0.0										
					0.7	SP	Black poorly graded SAND with gravel (SP) 0387-071514-0949	0.0										
		CR2 24	2.0 4.0					0.0										
					3.8			0.0										
					4.0	SM	Medium brown silty SAND (SM), trace gravel 0387-071514-0952											
5							BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NL-306

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-307

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 22 October 2014
Finish 22 October 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-307

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							14.0 in. CONCRETE 0.75 in. REBAR at 4.25 in. - NO VOID											
					1.2	SM	Brown silty SAND with gravel (SM), mps 0.25 in., no odor, dry, 10% slag-like fragments, 5% red-brick fragments 0710-102214-1400		10	15	20	20	20	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5				NO WELL INSTALLED														

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 2.0
Rock Cored (ft) -
Samples --

Boring No. NL-307

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NL-308

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 22 October 2014
Finish 22 October 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NL-308

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			22.0 in. CONCRETE NO VOID											
					1.8	GP	Black poorly graded GRAVEL with sand (GP), mps 3 in., no odor, dry, 50% slag-like fragments 0710-102214-1415		30	40	15	10	5					
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	--

Boring No. NL-308

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 11	0.0 2.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, slag-like fragments, no structure, no odor, dry -FILL-	0.0										
		C2	2.0 4.0				2302-102313-1543	0.1										
							2302-102313-1550											
					4.0		BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 4
Rock Cored (ft) -
Samples 2CR

Boring No. NM-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 4	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in., CONCRETE SLAB, 2.0 in. void and followed by 8.9 in. of stone fill-roughly 16.0 in.											
					0.7	SW	Dark brown well-graded SAND with gravel (SW), mps 1.5 in., no structure, no odor, dry -FILL- 2302-102313-1430		10	10		40	40					
		C2 2	2.0 4.0				Very "loose" material -Low Recovery- 2302-102313-1436	0.0 0.0 0.0										
					4.0		BOTTOM OF EXPLORATION 4.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4
Rock Cored (ft)	-
Samples	2CR

Boring No. NM-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 7	0.0 2.0	NO WELL INSTALLED			11.0 in., CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, no structure, no odor, dry -FILL- 2302-102313-1450	0.0	10	20	20	20	20	10				
		C2 19	2.0 4.0					0.0										
								0.0										
								0.1										
						SM	Similar to above except, brick pieces, mps 3.0 in., cinder-like fragments, slag-like fragments, wood fragments, metal fragments -FILL- 2302-102313-1457	0.2	20	15	25	20	10	10				
								0.0										
					4.0		BOTTOM OF EXPLORATION 4.0 FT Note: backfilled borehole with clean sand upon completion	0.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 4
Rock Cored (ft) -
Samples 2CR

Boring No. NM-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location NM-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 12	0.0 2.0				11.0 in., CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 3.5 in., concrete pieces, brick fragments, no structure, no odor, dry, bottom 3.0 in., slag-like fragments -FILL- 2302-102313-1507	0.0 0.1 0.2	10	20	10	20	20	20				
		C2 22	2.0 4.0	NO WELL INSTALLED				0.0 0.1										
						SM	Similar to above except, with wood, and cinder-like fragments -FILL- 2302-102313-1518	0.0 0.3	10	20	10	20	20	20				
					4.0		BOTTOM OF EXPLORATION 4.0 FT Note: backfilled borehole with clean sand upon completion	0.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 4
Rock Cored (ft) -
Samples 2CR

Boring No. NM-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 23 May 2014
Finish 16 June 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location NM-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE AT SURFACE 2.5-IN. VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
					1.2	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., 5% slag-like fragments, no odor, moist		5	10	10	30	30	15				
	AIR		2.0			SM	Similar to above, except 10% slag-like fragments 0710-052314-1045		10	10	10	30	25	15				
	KNIFE		4.0	NO WELL INSTALLED			Fill Material (slag, brick, glass, wood) 0710-05234-1105											
5						SM	Similar to above, except petroleum-like odor, wet 0710-052314-1115	3.0										
					6.5	SM	Pre-cleared to 6.5 ft	4.0										
					6.7	SP	Similar to above	4.5										
					7.5	SM	Dark gray poorly graded SAND with gravel (SP) 0387-061614-1134	5.5										
							Dark gray silty SAND with gravel (SM) 0387-061614-1145	3.0										
								1.5										
								0.5										
							Fabric-like fragments, organic-like odor, brown sand at 10 ft	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	0CR

Boring No. NM-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NM-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 27 May 2014
Finish 16 June 2014
Driller R. Radke
H&A Rep. M.Pomponio
Elevation Datum (Antea)/S.Collinge
Location NM-202B

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED			9.0 in. CONCRETE 1.5 in. VOID											
					0.9	SM	Fill Material (brick, copper, wire, glass, slag) Dark brown silty SAND with gravel (SM), mps 2 in., no odor, moist, 5% slag-like fragments, 5% brick-like fragments 0710-052714-1530		10	15	10	20	30	15				
						SM	Similar to above, except mps 3 in., 15% brick-like fragments 0710-052714-1540		15	15	10	15	30	15				
5						SM	Similar to above, except petroleum-like odor, oil-like sheen present, 5% brick-like fragments											
					6.5	SM	Similar to above	7.5 6.0	15	15	10	15	30	15				
					6.8	GP	Dark gray poorly graded GRAVEL with sand (GP)	5.5										
					7.5	SM	Dark gray silty SAND with gravel (SM), strong petroleum-like odor 0387-061614-1210 0387-061614-1215	5.5 4.0 5.0										
		CR1 24	8.0 10.0					3.0 0.5										
10		CR2 24	10.0 12.0			SM	Similar to above, with oil-like sheen	4.5 5.0 5.5 3.5										
		CR3	12.0 14.0			GP	Dark gray poorly graded gravel with SAND (GP) 0387-061614-1224 Note: Leather-like fragments, rubber, wood, brick asphalt.	0.0 0.5										
					13.0	SM	Dark gray silty SAND with gravel (SM) 0387-061614-1233	0.4 0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT 0387-061614-1233											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	3CR

Boring No. NM-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 05 June 2014
Finish 16 June 2014
Driller R. Radke
H&A Rep. M.Pomponio
Elevation Datum (Antea)/S.Collinge
Location NM-203A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED			11.0 in. CONCRETE NO VOID Fill Material (brick, glass, rubber, slag, wire, tile)											
					0.9	SM	Black silty SAND with gravel (SM), mps 0.75 in., no odor, moist, 10% slag-like fragments	0.0	5	10	25	20	20	15				
						SM	Similar to above (SM), except mps 1.5 in.	0.0										
						SM	0710-060514-1600 Similar to above (SM), except 5% glass-like fragments 0710-060514-1610	0.0 0.0										
					3.3		Note: 4-in. metal pipe at 3.33 ft.	0.0										
5						SM	Similar to above, except 15% slag-like fragments 0710-060514-1640 0710-060514-0002		10	15	25	20	15	15				
		CR1 18	6.0 8.0					2.0										
					6.5	SM	Gray silty SAND with gravel (SM), slight petroleum-like odor	1.5										
					7.0	GP	0387-061614-1021 Dark grayish-brown poorly graded GRAVEL with sand (GP), slight to moderate petroleum-like odor, sheen on water and soil	5.0										
		CR2 20	8.0 10.0				0387-061614-1029	5.0 4.5 4.5 5.0										
10		CR3 20	10.0 12.0			GP	Similar to above 0387-061614-1037	3.0 2.0 4.5 5.0										
		CR4	12.0 14.0			SM	Silty SAND with gravel (SM) 0387-061614-1047	2.0 1.7 0.9 0.4										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 4CR

Boring No. NM-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NM-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 27 May 2014
Finish 27 May 2014
Driller R. Rodke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NK-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		AIR KNIFE	0.0	NO WELL INSTALLED			CONCRETE 2-IN. VOID Boring pre-excavated using vacuum truck and hand auger. Soil descriptions based on hand auger cuttings.											
					1.3	SM	Black silty SAND with gravel (SM), mps 1.0 in., 5% slag-like fragments, no odor, moist	0.0	10	10	10	25	30	15				
						SM	Similar to above, except 5% brick-like fragments, and 5% glass-like fragments 0710-052714-1010	0.0	15	10	10	20	30	15				
						SM	Similar to above, except dark brown, 15% slag-like fragments, and 10% brick-like fragments	0.0	20	15	15	15	20	15				
						SM	Similar to above, except 50% gray and 50% brown 0710-052714-1020	0.0										
5								0										
						SM	Similar to above, except petroleum-like odor, wet 0710-052714-1032	10.6	20	15	15	15	20	15				
					6.5		BOTTOM OF EXPLORATION 6.5 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	-

Boring No. NM-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 17 June 2014
Finish 17 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NM-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.1	SM	CRUSHED GRAVEL Fill Material (bricks, organic matter, glass, concrete, bottles, wire)	0.0										
							Brown silty SAND with gravel (SM)	0.0										
					1.5		Red brick layer 0387-061714-1349	0.0										
		CR2 24	2.0 4.0					0.0										
					3.0	SP	Medium brown poorly graded SAND with gravel (SP) 03870-061714-1353	0.0										
		CR3 24	4.0 6.0		4.0		Black slag layer with slight odor	0.0										
5					5.0	SP-SM	Medium brown poorly graded SAND with gravel and silt (SP-SM)	0.0										
		CR4 24	6.0 8.0			SP	Similar to above, except black with sheen	0.0										
								2.5										
								3.5										
					7.9			4.0										
		CR5 24	8.0 10.0		8.0	SM SP-SM	Silty SAND intermixed with twine 0387-061714-1405 Black poorly graded SAND with gravel and silt (SP-SM)	1.5										
								4.1										
								3.5										
								0.4										
10		CR6 24	10.0 12.0			GP-GM	Black poorly graded GRAVEL with sand and silt (GP-GM) 0387-061714-1419	0.2										
								0.0										
								0.0										
								0.0										
		CR7 24	12.0 14.0			GP-GM	Similar to above 0387-061714-1425	0.0										
								0.0										
								0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NM-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 18 June 2014
Finish 18 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NM-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 12	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE Fill Material (1 in. gallon pipe under concrete, slag, foundry sand, brick, glass, wood, leather, brass)											
					1.0	SM	Black silty SAND with gravel (SM) 0387-061814-0845	0.0										
		CR2 24	2.0 4.0		2.0	SP	Black poorly graded SAND with gravel (SP) 0387-061814-0850	0.0										
								0.0										
								0.0										
		CR3 24	4.0 6.0		4.2	SM	Medium brown silty SAND (SM)	0.0										
					4.6	SP	Black poorly graded SAND (SP) (foundry sand)	0.0										
5					5.0	GP	Black poorly graded GRAVEL with sand (GP), slight petroleum-like odor 0387-061814-0854	0.0										
								0.0										
		CR4 24	6.0 8.0		6.4	GP-GM	Grayish-black poorly graded GRAVEL with silt and sand (GP-GM), slight petroleum-like odor, saturated 0387-061814-0906	2.8										
					7.4	SM	Grayish-black silty SAND with gravel (SM), saturated	2.0										
								0.7										
		CR5 24	8.0 10.0		8.0	GP	Grayish-black poorly graded GRAVEL with sand and silt (GP) 0387-061814-0912	0.0										
					9.0			0.2										
								0.0										
10		CR6 24	10.0 12.0			SM	Similar to above 0387-061814-0922	0.0										
								0.0										
								0.0										
					12.0			0.0										
		CR7 24	12.0 14.0			SM	Grayish-black silty SAND with gravel (SM) (organics) 0387-061814-0927	0.0										
								0.0										
								0.0										
							BOTTOM OF EXPLORATION 14.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NM-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NM-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 02 July 2014
Finish 02 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location NM-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			8.0 in. CONCRETE NO VOID	0.0										
					0.7	SM	Fill Material (glass, tile, slag, concrete)	0.0										
							Brown silty SAND with gravel (SM) 0710-070214-1344	0.0										
								0.0										
		CR2 24	2.0 4.0		2.4	SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM)	0.0										
					2.9	SM	Black silty SAND with gravel (SM)	0.0										
					3.3	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM) 0710-070214-1350	0.0										
		CR3 19	4.0 6.0					0.0										
5					5.1	SP	Black and tan poorly graded SAND with gravel (SP) 0710-070214-1355	0.0										
								0.0										
		CR4 16	6.0 8.0		6.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	0.0										
								0.0										
					7.0	GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM) 0710-070214-1403	0.0										
								1.5										
		CR5 12	8.0 10.0					6.5										
								6.5										
					9.3	GP	Dark gray poorly graded GRAVEL with sand (GP), petroleum-like odor, oil-like droplets 0710-070214-1411	8.5										
10								28.5										
		CR6 22	10.0 12.0					3.5										
								8.7										
					11.2	GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM) 0710-070214-1424	1.7										
								1.2										
		CR7 22	12.0 14.0					0.7										
								0.2										
								0.1										
					13.4	GP-GM	Similar to above, except medium gray 0710-070214-1432	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NM-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NN-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 25 October 2013
Finish 25 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location PDSB-34

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 44	0.0 6.0	NO WELL INSTALLED	0.7		7.0 in. CONCRETE SLAB (NO VOID)											
						SM	Black silty SAND with gravel (SM), mps 2.0 in., brick fragments, no structure, no odor, moist -FILL-	0.0	10	10	10	20	20	20				
								0.3										
								0.6										
5								0.2										
		CR2 20	6.0 8.0			SM	Similar to above except dark brown in color, slight petroleum-like odor, wet	16.2	10	10	20	20	20	20				
								37.6										
								32.1										
							2302-102513-0920	68.3										
		CR3 16	8.0 10.0		8.0	SP-SM	Dark gray poorly-graded SAND with silt and sand (SP-SM), mps 1.5 in., cinder-like fragments, slag-like fragments, no structure, light petroleum-like odor -FILL-	27.6	15	15	40	10	10	10				
							2302-102513-0929	33.7										
10					10.0			42.1										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. NN-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location SB-154

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0				12 in. CONCRETE SLAB (NO VOID)											
					1.0	SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 2.5 in., brick pieces, concrete fragments, no structure, no odor, dry -FILL-	0.0 0.1 0.0	20	10	40	10	10	10				
		CR2 24	2.0 4.0				2302-102313-1407	0.2 0.0										
				NO WELL INSTALLED		SP-SM	Similar to above except red-brown to tan, brick pieces, mps 3.5 in	0.1	35	5	30	10	10	10				
		CR3 23	4.0 6.0					0.0 0.3										
5						SP-SM	Similar to above except dark brown in color, no brick pieces, cinder-like fragments, wet 2302-102313-1417	0.2 0.3 0.2	20	10	40	10	10	10				
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. NN-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 08 November 2013
Finish 08 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NN-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 7	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, no structure, no door, dry -FILL-	4.3	10	10	10	30	20	20				
								6.2										
		CR2 18	2.0 4.0			SM	Similar to above except red to red-brown in color, brick pieces 2302-110813-0940	1.4	30	5	5	30	20	10				
								3.6										
								7.2										
		CR3 16	4.0 6.0			SM	Similar to above except, brick and concrete fragments, mps 2.5 in	1.9										
								4.2										
5						SM	Red-brown silty SAND with gravel (SM), mps 3/4 in., slag-like fragments, no structure, no odor, moist -FILL-	6.7		15	15	20	25	25				
							2302-110813-0946	3.1										
		CR4 11	6.0 8.0		6.0	SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 1/2 in., slag-like fragments, no structure, no odor, wet -FILL-	7.2		20	15	40	15	10				
							2302-110813-0953	7.4										
					7.5	GP	Slag-like fragments	15.6		80	5	5	10					
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 4CR

Boring No. NN-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NN-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 October 2013
Finish 21 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location 3.0 ft S of original proposed location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 4.0	NO WELL INSTALLED		SM	Black silty SAND (SM), mps 4.0 in, rock pieces, brick pieces, concrete pieces, moistly demolition fill material, no structure, no odor, moist		20	15	20	20	10	15				
							Refusal at 4.0 ft											
					4.0		Massive concrete boulders location abandoned BOTTOM OF EXPLORATION 4.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	4
Rock Cored (ft)	-
Samples	0

Boring No. NN-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 October 2013
Finish 21 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location 2.0 ft N of orginal proposed location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Utilivac and Air-knife
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			10.0 CORE CONCRETE (NO VOID)											
					0.8	SM	Black silty SAND (SM), mps 4.0 in, brick pieces and fragments, glass fragments, concrete pieces and fragments, no structure, no odor, moist		20	15	20	10	15	20				
5	AIR KNIFE AND VAC	HA1	4.0 6.0				*Sample collected at 4-6 ft 0710-102113-1545 Pre-cleared to 6.5 ft											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	1HA

Boring No. NN-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 21 October 2013
Finish 17 June 2014
Driller R. Radke
H&A Rep. S. Collinge/M. McDonald
Elevation Datum
Location NN-104A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 5.5	NO WELL INSTALLED	0.8		10.0 CORE CONCRETE (NO VOID)											
						SM	Black silty SAND (SM), mps 4.0 in, brick pieces, concrete pieces, moistly demolition fill material, no structure, no odor, moist		20	15	20	20	10	15				
5							Refusal at 5.5 ft, concrete blocks											
10		CR1 20	10.0 12.0			SM	Dark gray silty SAND with gravel (SM) 0387-061714-1014	6.5										
						SM	Similar to above (SM) 0387-061714-1023	5.5 3.5										
		CR2 20	12.0 14.0					3.0 0.0 0.0 0.0 0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NN-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 08 November 2013
Finish 08 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location NN-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 11	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, no structure, no odor, dry -FILL-	5.8 4.2	10	10	10	20	30	20				
		C2 17	2.0 4.0			SM	Similar to above except, with brick pieces, mps 3.5 in 2302-110813-1009	4.6 6.2 3.8 4.1 3.2										
		C3 22	4.0 6.0		4.5	GP	Concrete pieces with some SAND 2302-110713-1013	4.2 6.3 8.2	60	20	10	10						
5					5.5	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., slag-like fragments, no structure, no odor, moist -FILL-	7.1 13.2 16.2	10	10	10	30	20	20				
		C4 19	6.0 8.0				Petroleum-like odor, slight sheen, wet 2302-110713-1016	38.6										
					7.5	GP	Slag-like fragments with some fine to medium sand, wet	49.3	60	10	10	20						
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: backfilled borehole with clean sand upon completion.	31.6										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NN-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 June 2014
Finish 16 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NN-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE NO VOID	0.0										
						SM	FIll Material (slag, brick, glass, slag, tile, wood)	0.0										
							Medium brown silty SAND with gravel (SM)	0.5										
					1.4		Red brick layer 0387-061614-1424	0.0										
		CR2 24	2.0 4.0		2.0	SC	Brown poorly graded SAND with gravel (SC)	1.0										
								0.5										
					3.0		Red brick layer 0387-061614-1427	0.0										
								0.0										
		CR3 24	4.0 6.0		4.0		Concrete layer	0.0										
					4.5	SM	Dark brown silty SAND with gravel (SM), sweet-like odor	2.5										
5					5.0	GP	Dark gray poorly graded GRAVEL with sand (GP) 0387-061614-1433	3.0										
								7.2										
		CR4 24	6.0 8.0					9.7										
					6.8			6.4										
						SC	Black poorly graded SAND with gravel (SC) 0387-061614-1435	3.1										
								9.2										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NN-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 29 May 2014
Finish 17 June 2014
Driller R. Radke
H&A Rep. M.Pomponio/S.Collinge
Elevation Datum
Location NN-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.0	NO WELL INSTALLED		SM	NO ASPHALT NO VOID Fill Material (brick, wood, leather, rubber, slag, glass) Dark brown silty SAND with gravel (SM), mps 1.5 in., no odor, moist, 5% slag-like fragments, 5% brick-like fragments, 5% glass-like fragments	0.0	10	15	15	15	30	15				
		CR1 18	6.0 8.0		6.5	SM	Dark gray silty SAND with gravel (SM)	0.5										
					6.8	SM	Note: Went through pylon at 6.5 ft. Similar to above, except black 0387-061714-1138	4.5 4.0 3.5										
		CR2 20	8.0 10.0		8.0 8.2	ML SM	Gray SILT (ML) Black silty SAND with gravel (SM), oil-like sheen 0387-061714-1140 0387-061714-002	4.5 4.0 3.5 1.5										
10		CR3 20	10.0 12.0		10.0 10.5	ML GP-GM	Dark gray SILT (ML) Black poorly graded GRAVEL with sand and silt (GP-GM) 0387-061714-1147	0.0 0.0 0.0 0.2										
		CR4 24	12.0 14.0		12.0 13.0	SP GP	Black poorly graded SAND with gravel (SP) Dark gray poorly graded GRAVEL with sand (GP) 0387-061714-1159	0.0 0.0 0.0 0.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 07 July 2014
Finish 12 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NN-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 22	0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CONCRETE Fill Material (brick, wood, slag, foundry sand, orange rubber, glass)											
						SM	Medium dark brown silty SAND with gravel 0387-070714-0910	0.0 0.0										
		CR2 20	2.0 4.0		2.0 2.5		Red brick layer	0.0										
						SP	Dark brown/black poorly graded SAND with gravel (slag material) 0387-070714-0916	0.0 0.0 0.0										
					3.8		Red brock layer											
		CR3 24	4.0 6.0		4.2	SP	Grayish-brown silty SAND with gravel (SP) (black material)	0.0										
					4.6 5.0		Concrete 0387-070714-0926	0.0										
5						SP	Yellowish-brown poorly graded SAND with gravel (SP)	0.0										
					5.5	SP	Black poorly graded SAND (SM), wet to saturated at 6.0 ft (foundry sand)	0.0										
		CR4 24	6.0 8.0		6.0	SM	Grayish-brown silty SAND with gravel (SM), saturated	0.0										
					6.5	GP	Grayish-brown poorly graded GRAVEL with sand and silt (GP), saturated 0387-070714-0931	0.0 0.5 4.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 08 July 2014
Finish 08 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NN-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			8.0 in. CONCRETE Fill Material (brick, wire, concrete)											
					0.7	SM	Grayish-brown silty SAND with gravel (SM), no odor, moist 0387-070814-0910 0387-070814-0002	0.0 0.0										
					1.4		Red brick layer	0.0										
		CR2 20	2.0 4.0			SM		0.0 0.0										
					2.8	SM	Grayish-brown silty SAND with gravel (SM), no odor, moist 0387-070814-0915	0.0 0.0										
		CR3 18	4.0 6.0			SM	Similar to above, except saturated at 5.5 ft. 0387-070814-0920	0.0 0.0 0.0 0.0										
5						SM	Similar to above 0387-070814-0925	0.6 0.0										
							Color change to black at 6.8 ft, slight petroleum-like odor	1.5 1.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. NN-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NN-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.2	SP	2.0 in. ASPHALT Fill Material (brick, concrete, wood, wire, glass) Grayish-brown to black poorly graded SAND with gravel (SP), no odor, moist 0387-071614-1417	0.0 0.0 0.0 0.0										
		CR2 20	2.0 4.0		2.5	GP	Grayish-brown poorly graded GRAVEL with sand and silt (GP), no odor, wet to saturated 0387-071614-1421	0.0 0.0 0.0 0.0										
		CR3 24	4.0 6.0		4.0 4.2	SP-SM	Yellow brick layer Grayish-brown/black silty SAND with gravel (SP-SM), slight odor, saturated 0387-071614-1427	0.0 1.9 3.6 6.7										
5		CR4 18	6.0 8.0				0387-071614-1433	6.2 1.2 0.9 1.5										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: NN-303 and NN-304 are approximately 12 to 18 in. below other NN borings in this area.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. NN-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NN-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED	0.2		2.0 in. ASPHALT	0.0										
						SP-SM	Fill Material (brick, concrete fabric) Black to grayish-brown poorly graded SAND with silt and gravel (SP-SM), no odor, moist 0387-071614-1446	0.0										
								0.0										
								0.0										
		CR2 24	2.0 4.0					0.0										
					3.0			0.0										
						GP	Gray poorly graded GRAVEL, moist to wet, tar-like material on concrete pieces 0387-071614-1451	0.0										
								0.0										
		CR3 24	4.0 6.0		4.6			0.0										
5						SM	Dark brown silty SANd with gravel (SM), no odor, saturated 0387-071614-1455	0.0										
								0.0										
					5.8			0.0										
		CR4 20	6.0 8.0			GP	Dark brown poorly graded GRAVEL with sand and silt (GP), no odor, saturated 0387-071614-1500	0.0										
								0.0										
								0.0										
								0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: NN-303 and NN-304 are approximately 12 to 18 in. below other NN borings in this area.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-305

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 16 July 2014
Finish 16 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location NN-305

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE Fill material (brick, concrete, leather, glass) 0387-071614-1342											
					1.0	SM	Grayish-brown silty SAND with gravel (SM), no odor, moist	0.0										
								1.7										
		CR2 24	2.0 4.0		2.0		Red brick layer	0.0										
					2.4	SP-SM	Grayish-brown poorly graded SAND with silt (SP-SM), no odor, moist	0.0										
					2.6	SP	Dark brown poorly graded SAND with gravel (SP), moist 0387-071614-1347	0.0										
								0.0										
		CR3 24	4.0 6.0					0.0										
					4.3		Concrete (intermixed with concrete at top is tar-like material) 0387-071614-1353	0.0										
5								0.0										
					5.5	GP-GM	Dark brown/yellow/black poorly graded GRAVEL with sand and silt (GP-GM), no odor, wet	0.0										
		CR4 24	6.0 8.0			GP-GM	Similar to above, except color change to grayish-brown, no odor, saturated 0387-071614-1357	0.0										
								0.0										
								0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. NN-305

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. NN-306

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 29 October 2014
Finish 29 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NN-306

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	19	CR1 19	0.0 2.0	NO WELL INSTALLED			CONCRETE PAD	0.0										
					0.8	SM	Dark brown to gray silty SAND with gravel (SM), mps 2.5 in., 20% brick fragments, 10% concrete fragments, 10% cinder-like fragments, 5% metal fragments, no structure, no odor, dry	0.3										
					2.0													
	21	CR2 21	2.0 4.0			SP	Red-brown poorly graded fine to medium SAND with gravel (SP), mps 1.5 in., 15% brick fragments, 10% cinder-like fragments, 10% slag-like fragments, no structure, no odor, dry	0.4										
								0.2										
	20	CR3 20	4.0 6.0					0.7										
5						SP	Similar to above, except dark gray, 20% slag-like fragments, moist	13.2										
	18	CR4 18	6.0 8.0			SP	Similar to above, except 35% slag-like fragments, droplets on water, sheen to water, wet	16.2										
								31.7										
	24	CR5 24	8.0 10.0			SP	Similar, except 40% slag-like fragments, no brick fragments, sheen on water, wet	28.6										
								21.4										
10	23	CR6 23	10.0 12.0					13.9										
						SP	Similar to above, except hydrogen-sulfide odor to 12.0 ft	21.2										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NN-306

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NN-307

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 27 October 2014
Finish 11 November 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NN-307

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1	0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE 0.5 IN. VOID											
					0.7	SM	Brownish-gray silty SAND with gravel (SM), mps 0.25 in., no structure, no odor, moist		10	15	15	15	30	15				
						SM	Similar to above, except mps 3.5 in., 20% red brick, trace tile-like fragments		15	15	15	20	20	15				
					2.0		0710-102214-1150											
		CR2 19	2.0 4.0			SP	Brown to red-brown poorly graded SAND with gravel (SP), mps 2.75 in., 25% brick fragments, 10% cinder-like fragments, no structure, no odor, dry	0.0 0.4										
5		CR3 22	4.0 6.0			SP	Similar to above, except dark brown to dark gray, 10% brick fragments, 10% slag-like fragments, 5% ash-like fragments, moist	0.5 0.1										
		CR4 19	6.0 8.0		6.0	SM	Dark brown, silty SAND with gravel (SM), mps 1.75 in., 15% slag-like fragments, 5% brick fragments, 5% wood frgments, no structure, no odor, wet	0.0 3.7										
		CR5 16	8.0 10.0		8.0	GP-GM	Dark brown to black poorly graded GRAVEL with silt and sand (GP-GM), 60% slag-like fragments, 10% glass fragments, no odor, wet	0.3 0.7										
10		CR6 14	10.0 12.0			GP-GM	Similar to above, except 5% wood fragments, 5% glass fragments, no odor, wet	0.4 0.9										
		CR7 23	12.0 14.0		12.8			0.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NN-307

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NN-307
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED		OL/OH	Dark gray ORGANIC SOIL with sand (OL/OH), no odor, organic-like odor, wet	4.7										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NN-307

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NN-308

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 22 October 2014
Finish 29 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location NN-308

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE		0.0 2.0	NO WELL INSTALLED			CONCRETE AT SURFACE 0.5 IN. VOID											
					0.8	SM	Gray silty SAND with gravel (SM), mps 0.25 in., 10% slag-like fragments, no odor, moist		10	15	20	30	30	15				
						SM	Similar to above, except mps 0.75 in., 15% slag-like fragments, trace tile-like fragments		15	20	20	15	15	15				
		CR1 18	2.0 4.0		2.0	SM	0710-102214-1130 0710-102214-0002	0.0										
							Similar to above, except mps 2.0 in., 15% slag-like fragment, 10% cinder-like fragments, 5% brick fragments	0.3										
		CR2 16	4.0 6.0					0.2										
5								0.4										
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.0
Rock Cored (ft)	-
Samples	2CR

Boring No. NN-308

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NN-309

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 28 October 2014
Finish 11 November 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NN-309

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1	0.0 2.0	NO WELL INSTALLED	0.3		ASPHALT ON SURFACE NO VOID											
						SM	Brown silty SAND with gravel (SM), mps 0.5 in., 10% slag-like fragments, no odor, moist											
		CR2 19	2.0 4.0		2.4	SM	Similar to above, except mps 2.0 in., trace glass-like fragments, 15% slag-like fragments	0.0										
						SM	0710-102814-1000 Refusal at 2.4 ft - large pieces of gravel and hard material Dark brown silty SAND with gravel, mps 1.5 in., 10% brick fragments, 5% slag-like fragments, 5% glass fragments, no structure, no odor, dry	0.0										
		CR3 14	4.0 6.0			SM	Similar to above, except 5% cinder-like fragments	0.0										
5								0.0										
		CR4 17	6.0 8.0			SM	Similar to above, except 20% slag-like fragments, 5% brick fragments, 5% glass fragments, wet	0.0										
								0.2										
		CR5 24	8.0 10.0					0.0										
					9.5			0.0										
10						GP	Black slag-like fragments to 10.0 ft, some sand											
		CR6 16	10.0 12.0			GP	Similar to above, except dark brown, no odor, wet	0.0										
								0.0										
		CR7 19	12.0 14.0					0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NN-309

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NN-309
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NN-309

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NN-310

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 28 October 2014
Finish 11 November 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/J. Miller
Location NN-310

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	CR1	0.0 2.0	NO WELL INSTALLED	0.1	SP	GRAVEL ON SURFACE NO VOID		30	25	25	20						
						SP	Light reddish-tan poorly graded SAND with gravel (SP), mps 4 in., 65% red brick-like fragments and pieces, no odor, dry Similar to above, except medium reddish-brown 0710-102814-1045 0710-102814-1045											
		CR2 19	2.0 4.0		2.0	SP	Brown poorly graded SAND with gravel (SP), mps 1.75 in., 20% brick fragments, 5% concrete fragments, no structure, no odor, dry	0.0										
					3.0		Concrete fragments	0.6										
		CR3 24	4.0 6.0		3.5	SP	Brown poorly graded SAND with gravel (SP), 5% concrete fragments, 5% brick fragments, 5% glass fragments, no structure, no odor, dry	0.3										
5								0.3										
		CR4 24	6.0 8.0			SP	Similar to above, except moist to wet	0.0										
					6.8	GP	Black slag-like fragments, brick fragments, no odor, moist	0.3										
		CR5 12	8.0 10.0		8.0	SP	Brown poorly graded SAND, 25% brick fragments, no structure, no odor, wet	0.0										
								0.6										
10		CR6 17	10.0 12.0		10.0	GP-GM	Black to olive-brown poorly graded GRAVEL with silt and sand (GP-GM), 30% slag-like fragments, 20% brick fragments, 10% glass fragments, no odor, wet	0.7										
								1.2										
		CR7 23	12.0 14.0					6.2										
					12.5	SP	Dark brown poorly graded SAND with gravel (SP), mps 1.25 in., 15% slag-like fragments, 15% brick fragments, 10% glass											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NN-310

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NN-310
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
							fragments, no structure, hydrogen-sulfide-like odor, wet	19.5										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NN-310

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NS-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 18 November 2014
Finish 18 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NS-001

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., 20% brick fragments, 5% cinder-like fragments, 5% wood, no structures, no odor, dry	0.0										
		CR2 20	2.0 4.0					0.0										
								0.0										
		CR3 22	4.0 6.0			SM	Similar to above, except strong phenyl-like smell	2.6										
5							Note: Wood block from 5.8 to 6.0 ft.	1.9										
		CR4 20	6.0 8.0		6.0	SM	Black silty SAND with gravel (SM), mps 1.5 in., 20% wood, 10% concrete, 5% brick fragments, 5% slag-like material, phenyl-like odor, moist	0.0										
								0.0										
		CR5 21	8.0 10.0					0.0										
								0.0										
10		CR6 24	10.0 12.0		10.0	GP	Black poorly graded GRAVEL (GP), 40% slag-like material, 10% wood, 10% metal, 5% glass, strong petroleum-like odor, oily sheen on water surface, wet	0.0										
								0.0										
		CR7 23	12.0 14.0					0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. NS-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. NS-001
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfill with clean sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. NS-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NS-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 18 November 2014
Finish 18 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NS-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Brown silty SAND with gravel (SM), mps 1.75 in., 15% brick fragments, 5% metal, 5% wood, 5% cinder-like fragments, no structure, no odor, dry	0.0										
		CR2 24	2.0 4.0					0.0										
		CR3 23	4.0 6.0					0.0										
5								0.0										
					5.5	SM	Black silty SAND with gravel (SM), mps 1.25 in., 15% wood, 5% concrete, 5% brick fragments, 5% slag-like material, light petroleum-like odor, moist	0.0										
		CR4 19	6.0 8.0					0.0										
		CR5 21	8.0 10.0					0.2										
					9.0	GP	Black slag-like fragments with sand and gravel, mps 1.0 in., strong petroleum-like odor, wet	1.3										
10		CR6 24	10.0 12.0					0.0										
								0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NS-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NS-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 19 November 2014
Finish 19 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NS-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., 15% brick fragments, 5% metal, 5% wood, 5% glass, 5% cinder-like fragments, no structure, no odor, dry	0.0										
		CR2 22	2.0 4.0					0.0										
		CR3 21	4.0 6.0					0.0										
5								0.0										
					5.5	SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., 20% wood, 10% concrete, 10% brick fragments, 5% slag-like meterial, no odor, moist	0.0										
		CR4 23	6.0 8.0					0.0										
		CR5 18	8.0 10.0		8.0		WOOD (potentially decoposed), very strong phenyl-like odor	898										
								562										
10		CR6 20	10.0 12.0		10.0	GP	Black slag-like fragments with sand and gravel, mps 1.25 in., light petroleum-like odor, light sheen on water, wet	26.9										
								18.2										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NS-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NS-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 19 November 2014
Finish 19 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NS-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 13	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.2										
						SM	Brown silty SAND with gravel (SM), mps 1.5 in., 20% brick fragments, 5% metal, 5% wood, 5% cinder-like fragments, no structure, no odor, moist	0.1										
		CR2 19	2.0 4.0					0.0										
								0.0										
		CR3 21	4.0 6.0					0.0										
5								0.0										
		CR4 24	6.0 8.0		6.0	SM	Black to dark gray silty SAND with gravel (SM), mps 2.0 in., 20% wood, 10% concrete, 5% brick fragments, 5% slag-like material, 5% cinder-like fragments, light petroleum-like odor, moist	0.0										
								0.0										
		CR5 9	8.0 10.0					1.7										
								2.9										
10		CR6 8	10.0 12.0		10.0	GP	Black slag-like fragments with sand and gravel, mps 1.25 in., 5% glass, 5% metal, light petroleum-like odor, wet	1.7										
								0.9										
					12.0		BOTTOM OF EXPLORATION 12.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 12.0
Rock Cored (ft) -
Samples 6CR

Boring No. NS-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. NS-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 18 November 2014
Finish 18 November 2014
Driller R. Radke
H&A Rep. D. Mukherjee
Elevation
Datum
Location NS-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1635
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0										
						SM	Black silty SAND with gravel (SM), mps 3.0 in., 25% brick fragments, 20% cinder-like fragments, 5% metal, 5% glass, no structure, no odor, moist, piece of solid rubber at 3.5 ft	0.0										
		CR2 13	2.0 4.0					0.0										
								0.0										
		CR3 22	4.0 6.0					0.0										
5						SM	Similar to above, except petroleum-like odor	0.0										
		CR4 23	6.0 8.0			SM	Similar to above, except brown, 10% wood, no odor	0.0										
								0.0										
		CR5 21	8.0 10.0		8.0	GP	Black slag-like fragments with gravel, mps 1.25 in., 10% glass, 5% metal, 5% ceramic fragments, strong petroleum-like odor, wet	0.0										
								0.0										
10		CR6 9	10.0 12.0					0.0										
								0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. NS-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

NORTHWEST BORING REPORTS

HALEY ALDRICH

TEST BORING REPORT

Boring No. WA-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 09 November 2013
Finish 09 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location SB-059

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 45	0.0 6.0	NO WELL INSTALLED	0.2	SM	BITUMINOUS CONCRETE Dark gray silty SAND with gravel (SM), mps 3.9 in., no structure, hydrocarbon odor, moist to wet at 5.0 ft, ~30% wood, brick, concrete, coal, slag, and cinders, trace organics, and glass, sheen on water	0.7	10	10	15	25	20	20				
								5.2										
5								43.9										
		CR2 16	6.0 8.0			SM	Dark gray silty SAND with gravel (SM), mps 2.5 in., no structure, hydrocarbon odor, wet, ~30% wood, brick, concrete, coal, slag, and cinders, trace organics, and glass, sheen on water	24.2	5	10	15	35	20	15				
		CR3 21	8.0 10.0			SM	Dark gray ~95% wood with creosote odor, ~5% silty sand, slight sheen on water											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/9/13	1400	0	4.0	6.0	± 5.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-314
Sheet No. 1 of 1
Start 11 November 2013
Finish 11 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	over ride	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.3	SM	CONCRETE											
						SM	Dark brown to black silty SAND (SM), mps <3.5 in., no structure, kersate odor, dry ~ 70% slag, coal, and cinders, trace asphalt and concrete	25.8	5	5	20	35	20	15				
	N 24 HR	CR1 21	2.0 4.0			SM	Dark brown silty SAND (SM), mps 0.8 in., no structure, hydro carbon odor, wet ~ 80% cinders, slag and coal, track wood, sheen on soils	28.4	5	5	35	25	15	15				
	H	CR2 16	4.0 6.0			SM	Dark brown silty SAND (SM), mps 3.25 in., no structure, hydro carbon odor, wet, ~ 40% cinders, slag and coal, trace wood, sheen on soil		5	5	15	25	25	25				
5																		
	H	CR3 21	6.0 8.0			SM	Dark brown silty SAND (SM), mps 1.5 in., no structure, hydro carbon odor, wet, ~ 20% cinders, slag and coal, trace wood, sheen on soil	32.7	0	5	15	25	30	25				
	H	CR4 24	8.0 10.0			SM	Gray to dark brown silty SAND (SM), mps 1.5 in., no structure, hydro carbon odor, wet ~60% cinders, slag and coal, trace wood and organics, sheen on soil	82.4	0	5	35	20	20	30				
10					10.0		BOTTOM OF EXPLORATION AT 10.0 FT											
							Note: Borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/14/13	1245	0	2.0	4.0	± 2.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-314TB_PDI_2.GPJ 7 Aug 15

TEST BORING REPORT

Boring No. WA-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 November 2013
Finish 21 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 5.0	NO WELL INSTALLED			Cleared to 5.0 ft See Air Knife Log											
5		CR2 30	5.0 8.0		5.0	GM	Dark gray silty GRAVEL with sand (GM), mps 1.0 in., cinder-like fragments, no structure, strong hydrogen sulfite odor, wet -FILL-	0.7 1.6		50	5	10	10	15				
		CR3 20	8.0 10.0			GP	Wood pieces, mps 3.8 in., from 7.5 ft to 8.0 ft Dark gray to dark brown poorly-graded GRAVEL with silt and sand (GP), mps 1/2 in., no structure, no odor, wet 2302-112113-1112	10.3 1.7 11.4		60	20	10	10					
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	10.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 33	0.0 6.0	NO WELL INSTALLED			Air knife to 5.5 ft											
5		CR2 23	6.0 8.0		5.5	GP	Poorly graded GRAVEL (GP), mps 4.0 in., no structure, no odor, wood piece at 5.5 ft concrete pieces and fragments -FILL-	0.0	80	10	10							
		CR3 10	8.0 10.0		8.0	SP	Dark gray poorly-graded SAND with gravel (SW), mps 1.5 in., brick fragments, wood fragments, no structure, no odor, wet 2302-102913-1218	0.0	10	10	10	55	10	5				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	1.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Cleared to 6.0 ft											
		CR1 8	6.0 8.0		6.0	GP	8.0 in. of cinder-like fragments with some sand, brick fragments, no structure, slight petroleum-like odor, wet -FILL-	0.7 13.4	20	80								
		CR2 14	8.0 10.0		8.0	SM	Dark gray silty SAND with gravel (SM), mps 3.0 in, brick pieces, no structure, septic-like odor, wet 2302-101913-1123	0.7 13.6 12.9	20	10	10	10	30	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 6.0	NO WELL INSTALLED			Cleared to 6.0 ft											
					6.0													
		CR2 24	6.0 8.0			SM	Dark gray silty SAND with gravel (SM), mps 2.5 in., brick fragments, cinder-like fragments, wood fragments, no structure, septic/musty-like odor	93.1 96.2 108.3 68.2	20	10	10	20	20	20				
		CR3 24	8.0 10.0			SM	Similar to above except, petroleum-like odor, sheen, wet	47.2 103.2										
						SM	Similar to above except, slight petroleum-like odor 2302-102913-1242	79.6 52.1										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Cleared to 6.0 ft											
		CR1 24	6.0 8.0		6.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., slag-like fragments, cinder-like fragments, no structure, petroleum-like odor at 7.9 ft, dry -FILL-	76.4 26.8 129.7	10	20	10	20	20	20				
		CR2	8.0 10.0			SM	Similar to above except dark gray, oil droplets/sheen to water, wet 23002-102913-0950	116.4 64.8 62.9 68.7 96.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	232.7										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-106

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 6.0	NO WELL INSTALLED			Air knived to 5.0 ft											
					5.0	SM	Dark gray silty SAND with gravel (SM), mps 1.0 in., cinder-like fragments, wood fragments, no structure, petroleum-like odor	262.7	10	20	20	10	20	20				
					6.0		-FILL-											
		CR2 13	6.0 8.0			SP	Dark gray poorly-graded SAND with gravel (SP), mps 3.5 in., wood fragments, brick fragments, cinder-like fragments, no structure, strong petroleum-like odor, wet-sheen to water	116.3	5	30	40	10	10	5				
							-FILL-											
						SP	Similar to above except, low recovery-cinder-like fragments	148.2										
							2302-102913-1552	210.3										
		CR3 3	8.0 10.0															
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-106A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-106A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED														
		CR1 12	4.0 6.0			SM	Brown silty SAND with gravel (SM),mps 1.0 in., brick fragments, no structure, no odor, dry	0.2	10	10	20	20	20	20				
5								0.7										
		CR2 24	6.0 8.0			SM	Similar to above except dark gray, cinder-like fragments, strong petroleum-like odor, wet, sheen	96.3 113.2 117.8 192.3	5	30	15	15	15	20				
		CR3 12	8.0 10.0		8.0	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1/2 in., slag-like fragments, cinder-like fragments, no structure, strong petroleum-like odor, wet, sheen 2302-102913-1646	142.7		60	20	10	10					
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-106A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. WA-107

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 22 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-107

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Location air knife/vac'd to 6.0 ft -FILL-											
5							Note: Core barrel had brown to black petroleum-like residue/droplets, petroleum-like odor, wet											
					6.0													
		CR1 19	6.0 8.0			SM	Dark gray to olive-brown silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, cinder-like fragments, glass fragments, wood fragments, no structure, strong petroleum-like odor, wet, sheen -FILL-	193.4 362.7 326.4 198.7	10	10	20	20	20	20				
		CR2 3	8.0 10.0			SM	Similar to above except, more slag-like fragments, wet, strong petroleum-like odor, staining with sheen -Poor Recovery- 2302-102213-1520	147.2	10	20	30	10	15	15				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-107

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-108

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 22 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-108

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Location air knived/vac'd to -FILL-											
5					6.0													
		C1 23	6.0 8.0			SM	Black to olive-brown silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, cinder-like fragments, glass fragments, wood fragments, no structure, very strong petroleum-like odor, wet -FILL-	248.2 297.4 361.2 386.2 162.7	5	10	20	25	20	20				
		C2 24	8.0 10.0			SM	Similar to above 2302-102213-1601	67.3 66.2 71.2 70.3	5	10	25	20	20	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	71.6										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-108

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-110

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-110

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 42	0.0 6.0	NO WELL INSTALLED	0.6		7.0 in. CONCRETE SLAB (NO VOID)											
						SW-SM	Dark gray well-graded SAND with silt and gravel (SW-SM), mps 1/2 in, cinder-like fragments, slag-like fragments, no structure, no odor, dry -FILL-	1.3		20	20	20	30	10				
						SW-SM	Similar to above except brown	0.7										
								0.6										
5								1.3										
						SW-SM	Similar to above except dark brown	0.7										
		CR2 23	6.0 8.0		6.0	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, cinder-like fragments, slag-like fragments, slag fragments, glass fragments, no structure, no odor, dry	0.6	10	10	20	20	20	20				
								0.3										
								0.8										
								0.4										
		CR3 24	8.0 10.0			SM	Dark gray silty SAND with gravel (SM), mps 3.0 in., brick fragments, no structure, slight petroleum-like odor at 8.3 ft, wet 2302-102913-1028	89.4	10	20	10	20	20	20				
								97.3										
								96.3										
								107.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	89.3										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-110

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-112

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 11 November 2013
Finish 11 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-112

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Cleared to 6.5 ft											
		CR1 24	6.5 8.0			SM	Dark gray silty SAND with gravel (SM), mps 2.5 in., brick fragments, glass fragments, cinder-like fragments, no structure, petroleum-like odor, wet	153.6 176.1 198.2	10	20	20	15	15	20				
		CR2 16	8.0 10.0			SM	Similar to above except, wood fragments, slag-like fragments, heavy petroleum-like odor, sheen 2302-111113-1600	223.4 246.1 273.2 307.6	15	20	10	20	15	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	284.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-112

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-113

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller J. Graglia
H&A Rep. M. MacDonald/J. Miller
Elevation Datum
Location WA-113

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC	CR1	0.0 6.0	NO WELL INSTALLED	0.7		8.0 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND (SM), mps 0.5 in, concrete fragments, crushed brick, demolition fill, no structure, slight chemical odor, moist			10	25	25	20	20				
								96.3										
								116.7										
5							Obstruction at 5.0 ft	129.2										
					6.0													
		CR2 24	6.0 8.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 2.0 in., brick fragments, slag-like fragments, cinder-like fragments, no structure, strong petroleum-like odor, wet, sheen-oil-like	258	5	30	35	10	10	10				
								216										
								237										
							-FILL-											
							Pre-cleared at 6.5 ft	207										
								198										
		CR3 27	8.0 10.0					403.7										
								376.2										
						SP-SM	Similar to above except, wood fragments 9.5 ft to 10.0 ft 2302-103013-1018	313.8										
								326.7										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-113

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-114

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller J. Graglia
H&A Rep. M. MacDonald/J. Miller
Elevation Datum
Location WA-114

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC	CR1	0.0 6.0	NO WELL INSTALLED			8.0 in. CORE CONCRETE (NO VOID)											
					0.7	SM	Black silty SAND with gravel (SM), mps 0.5 in, no structure, slight chemical odor, moist			5	10	15	20	25	25			
5					5.3		Concrete debris (removed)											
						SP	Pre-cleared at 6.5 ft	119.7	5	30	40	20	5					
		CR2 18	6.0 8.0				Dark gray poorly-graded SAND with gravel (SP), mps 1.5 in., brick fragments, slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet, sheen -FILL-	163.7 201.3 197.6 163.1										
		CR3 22	8.0 10.0			SP	Similar to above except, wood fragments, glass fragments 2301-103013-1049	67.3 201.2 179.6 113.7	5	30	40	15	5	5				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-114

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-115

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 16 October 2013
Finish 30 October 2013
Driller J. Graglia
H&A Rep. M. MacDonald/J. Miller
Elevation Datum
Location WA-115

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC	CR1	0.0 4.8	NO WELL INSTALLED	0.3	GW	3.0 in. ASPHALT SURFACE											
					0.5	SM	3.0 in. GRAVEL SURFACE Black silty SAND with gravel (SM), mps 1.0 in, glass, and brick fragments, no structure, no odor, moist		100	5	10	15	20	25	25				
					4.3		Refusal at ~52 in. Brick and concrete blocks											
					4.8		Cleared to rough 4.5 ft Concrete-like pieces, mps 4.0 in.											
5						SM	Wet at 4.8 ft, chemical odor	21.7	15	15	20	15	15	20				
							Dark brown to dark gray silty SAND with gravel (SM), mps 3.0 in., brick fragments, cinder-like fragments, slag-like fragments, no structure, sweet odor, moist	83.2										
		CR2 9	6.0 8.0		6.0	SP	-FILL- Dark gray poorly-graded SAND with gravel (SP), mps 2.0 in., wood-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet-sheen-oil-like droplets	117.6	20	20	40	10	5	5				
								115.7										
		CR3 24	8.0 10.0			SP	Similar to above except, has a stronger petroleum-like odor from 8.5 ft to 8.5 ft, wood fragments, from 9.5 ft to 10.0 ft 2102-103013-1117	230.7										
								184.9										
								76.3										
								64.1										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/15/13	1100	0	NA	4.83	±4.83

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-115

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-116

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 15 October 2013
Finish 30 October 2013
Driller P. Gaynor/J. Graglia
H&A Rep. M. MacDonald/J. Miller
Elevation Datum
Location WA-116

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR/HA	-	Rig Make & Model: Guzzler/BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC	HA1	0.0 5.7	NO WELL INSTALLED	0.3	GP	3.0 in. ASPHALT (JACK HAMMER)											
					0.5	GP	3.0 in. GRAVEL		90	10								
						SM	Black silty SAND with gravel (SM), mps 1.0 in, no structure, no odor, moist		5	10	15	20	25	25				
					3.0		Bricks 3.0 ft to 4.6 ft removed with post hole digger											
							Wet at ~4.5 ft											
5							Brick structure *Layer of oily gravel at 5.7 ft											
						GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 3.0	97.6	20	20	40	10	5	5				
		CR1 14	6.0 8.0			GP	in., brick pieces, ash-like fragments, slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, moist			80	10	10						
							Poorly graded GRAVEL with sand (GP), mps 1/2 in., cinder-like fragments, slag-like fragments, petroleum-like odor, wet, sheen, oil-like droplets on water	142.3										
							-FILL-	197.3										
								168.1										
		CR2 15	8.0 10.0			GP	Similar to above			60	20	20						
							2302-103013-1157	117.6										
								143.7										
								151.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled hole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/15/13	1215	0	NA	5.7	±4.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 1H, 2CR

Boring No. WA-116

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-117

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 10 October 2013
Finish 30 October 2013
Driller P. Gaynor/J. Graglia
H&A Rep. D. Mukherjee/J. Miller
Elevation Datum
Location WA-117

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR/HA	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		ASPHALT - JACK HAMMER											
					0.8	GP	GRAVEL SUBBASE	0.0	100									
	AIR KNIFE		1.0	NO WELL INSTALLED		SM	Black silty SAND with gravel (SM), mps 4.5 in., no structure, no odor, 30% to 50% brick, steel wire mesh, wood, glass and concrete, wet at 5.5 ft		10	15	15	20	20	20				
			2.0				Collect sample 2351-101013-1010 (0.0 to 2.0 ft)	0.0										
			2.5					0.0										
								0.0										
5								0.0										
							Cleared to 6.5 ft - no voids	0.0										
		CR1 23	6.0 8.0		6.5		Brick layer	62.2										
					6.9	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1.5	119.3	15	30	20	10	10	15				
					7.0	SM	in., slag-like fragments, cinder-like fragments, wood fragments, no structure, petroleum-like odor, wet	183.2	10	20	15	20	15	20				
							-FILL-	137.6										
		CR2 21	8.0 10.0			SM	Dark gray, silty SAND with gravel (SM), mps 1.5 in., 10-25% cinder-like fragments, ash-like material, brick fragments, no structure, petroleum-like odor, wet, sheen, oil-like droplets	76.2										
							Similar to above except, wood fragments 9.5-10.0 ft	12.3										
							2302-103013-1432	84.1										
10					10.0			27.6										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/10/13		0	NA	6.5	± 5.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	2CR

Boring No. WA-117

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-118

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 11 November 2013
Driller J. Graglia
H&A Rep. J. Miller/S. Brousseau
Elevation
Datum
Location WA-118

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.3		BITUMINOUS CONCRETE											
						SM	Dark brown to black silty SAND (SM), mps 1.5 in., no structure, creosote odor, dry, ~70% slag, coal, and cinders, trace asphalt and concrete	25.0	5	5	20	25	20	25				
		CR1 21	2.0 4.0			SM	Dark brown silty SAND (SM), mps 1.5 in., no structure, hydrocarbon odor, wet, ~30% cinders, slag, and coal, trace wood, sheen on soil	23.4	5	5	35	25	15	15				
5		CR2 6	4.0 6.0			SM	Dark brown silty SAND (SM), mps 3.2 in., no structure, hydrocarbon odor, wet, ~40% cinders, slag, and coal, trace wood, sheen on soil	17.0	5	5	15	25	25	25				
		CR3 21	6.0 8.0			SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., slag-like fragments, brick fragments, no structure, no odor, moist	0.7	10	25	15	15	15	20				
								1.3										
								1.6										
						SM	Similar to above except gray, more slag-like fragments, and glass fragments	0.2										
		CR4 24	8.0 10.0			SM	Similar to above except, tile-like fragments, wood fragments, no odor, wet	0.4										
							2302-103013-1458	1.6										
								1.3										
								0.4										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/11/13	1245	0.0	2.0	4.0	± 2.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	2CR

Boring No. WA-118

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-118

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 13 June 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-118

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface Asphalt	0.0										
							Base Course Material Fill Material (brick, wood, slag)	0.0										
						SP-SM	Medium grayish-brown poorly graded SAND with silt (SP-SM)	0.0										
					1.5	SP	Yellowish-brown poorly graded SAND (SP)	0.0										
		CR1 18	2.0 4.0				Similar to above	0.0										
								0.0										
								0.0										
							At 3.5 ft, color change to grayish-brown, saturated	0.0										
		CR2 24	4.0 6.0		4.0	GP	Gray-black poorly graded fine GRAVEL (GP) 0387-061314-1057	0.0										
5								0.0										
								0.0										
								0.0										
		CR3 24	6.0 8.0				Similar to above 0387-061314-1103	0.0										
								0.0										
								0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT	0.0										
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-118

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-119

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-119

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Cleared to 6.0 ft											
		CR1 22	6.0 8.0		6.0		Slag-like fragments, brick fragments -FILL-	0.6										
					6.9	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, slag-like fragments, cinder-like fragments, no structure, slight septic-like odor, moist	0.6	10	10	20	20	20	20				
		CR2 14	8.0 10.0			SM	Similar to above except, shell fragments, tile-like fragments, wet 2302-103013-1524 -FILL-	0.4 0.2 0.7 0.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-119

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-119

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 12 June 2014
Finish 12 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-119

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface Area Asphalt Fill Material (slag, brick, glass, copper wire, tile)											
		CR1 18	2.0 4.0			SP	Yellowish-brown poorly graded SAND with gravel (SP), wet 0387-061214-1422	0.0 0.0 0.0 0.0										
		CR2 24	4.0 6.0				Similar to above, color change to black, saturated 0387-061214-1428	0.0 0.0 0.0 0.0										
5					5.6	GP	Black poorly graded GRAVEL with sand (GP) 0387-061214-1432	0.0 0.0 0.0										
		CR3 24	6.0 8.0				Similar to above	0.0 0.0										
		CR4 24	8.0 10.0		8.0	SM	Grayish-black silty SAND with gravel (SM) 0387-061214-1436	0.0 0.0 0.0 0.0										
10					10.0		BOTTOM OF EXPLORATION											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-119

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-120

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-120

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 61	0.0 6.0	NO WELL INSTALLED			Cleared 1.5 ft											
					1.5													
					1.8	SM	Brick -FILL- Dark brown silty SAND with gravel (SM), mps 2.0 in., cinder-like fragments, wood fragments, no structure, no odor, moist	0.0	10	20	20	10	20	20				
					3.0													
					3.2	SP-SM	Black, ash-like material -FILL- Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 2.0 in., wood fragments, slag-like fragments, cinder-like fragments, no structure, no odor, wet	0.2	20	20	30	10	10	10				
							-FILL-	0.7										
5								0.4										
		CR2 11	6.0 8.0					0.3										
								0.7										
								0.5										
		CR3 24	8.0 10.0			SP-SM	Similar to above except, with septic-like odor, wet 2302-103013-1663	4.3 4.3										
								6.2										
								3.7										
								4.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.	3.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-120

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-120

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 12 June 2014
Finish 12 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-120

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Asphalt Ground Surface Fill Material (brick, glass, metal, slag)											
		CR1 24	2.0 4.0			GP	Dark brown silty SAND with gravel (GP)											
		CR2 24	4.0 6.0				Similar to above, saturated											
5		CR3 24	6.0 8.0				Similar to above, more gravel											
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-120

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-121

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-121

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Cleared to 4.0 ft											
					4.0													
		CR1 24	4.0 6.0			SM	Dark gray silty SAND with gravel (SM), mps 2.5 in., brick fragments, slag-like fragments, glass-like fragments, wood fibers, no structure, septic-like odor, wet -FILL- 2302-103113-1053	13.2 16.8 11.3	10	25	10	15	20	20				
5		CR2 24	6.0 8.0					10.9 14.2 0.9										
						SM	Similar to above except light brown to tan, plastic-like material, 4. in. diameter	1.3										
		CR3 13	8.0 10.0			SM	-FILL- Dark brown silty SAND with gravel (SM), mps 3/4 in., slag-like fragments, no odor, wet 2302-103113-1052	13.7 6.6 12.3 16.2		20	10	20	20	30				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion	10.4										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-121

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-122

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-122

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 69	0.0 6.0	NO WELL INSTALLED	0.4		GRAVEL, mps 2.5 in.											
						SM	Dark brown to dark gray silty SAND with gravel (SM), mps 2.0 in., brick fragments, cinder-like fragments, slag-like fragments, no structure, no odor, moist	0.3	5	20	15	20	20	20				
								0.7										
								1.2										
								1.0										
								0.8										
5								1.3										
		CR2 24	6.0 8.0					1.7										
					6.8			1.2										
					7.1	SM	Tan to light brown, plastic-like material, 4.0 in. in. diameter and 5.0 in. in length	0.9										
					7.5	SM	-FILL-	0.6										
						SM	Brown to dark brown, rope-like material-strands, not sticky, strands are roughly 6.0 in. in length, no odor, moist -FILL-	0.7	10	20	30	10	10	20				
		CR3 24	8.0 10.0					1.0										
						SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., slag-like fragments, tile-like fragments, wood fragments, no structure, no odor, moist	0.4										
							Similar to above except, slight sheen to water 2301-103113-121	0.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-122

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-123

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 10 October 2014
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation
Datum
Location WA-123

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR		0.0	NO WELL INSTALLED	0.3		ASPHALT - JACK HAMMER											
					0.7	GP	GRAVEL SUBBASE	0.0	100									
						SM	Black silty SAND with gravel (SM), mps 4.0 in., no structure, no odor, approximately 40% brick, rebar, steel wire, wood, glass, cinder, slag, and coal ash, wet at 5.0 ft		10	10	15	20	25	20				
	KNIFE		2.0					0.1										
			2.5				Collect sample 2351-101013-1150 (2.0 to 4.0 ft)	0.0										
5 ▽								0.0										
								0.0										
		CR1 11	6.0 8.0		6.5		Cleared up to 6.5 ft - no voids	0.6										
						GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1/2 in., no structure, no odor, moist, mostly cinders -FILL-	0.3		70	20	10					
					8.0			0.7										
		CR2 24	8.0 10.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 2.0 in., slag-like fragments, cinder-like fragments, glass fragments, wood fragments, no odor, wet -FILL-	0.2										
							2302-103113-1512	0.6	15	20	35	10	10	10				
								0.3										
								0.2										
10					10.0			0.4										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/10/13		0	NA	6.5	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 1H, 2CR

Boring No. WA-123

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-124

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 02 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. P. Gaynor/J. Graglia
Elevation Datum
Location WA-124

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	HA/CR	-	Rig Make & Model: Guzzler/BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR		0.0	NO WELL INSTALLED	0.3	GP	ASPHALT - JACK HAMMER GRAVEL SUBBASE	0.1	100									
					0.4	SM	Black silty SAND with gravel (SM), mps 5.0 in., no structure, no odor, wet at 4.0 ft, 30-50% brick, steel mesh, wire, wood, glass, and concrete	0.1 0.3 0.0										
	KNIFE		2.0 2.5					0.7										
							Collect sample 2331-10020-1415 (2.0 to 2.4 ft)	0.6										
								1.2										
5							Vac cleared to 6.5 ft	1.7										
		CR1 23	6.0 8.0		6.5	SP	Dark gray poorly-graded SAND with gravel (SP), mps 1/4 in., brick fragments, no structure, no odor, wet -FILL-	0.9 1.7		15	50	20	10	5					
					7.5	SM	Olive-brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, slag-like fragments, no structure, septic-like odor, moist -FILL-	1.2 0.6		10	25	15	15	20	15				
		CR2 8	8.0 10.0		8.5	SP	Light brown poorly-graded SAND with gravel (SP), mps 1/3 in., slag-like fragments, no structure, no odor, wet 2302-103113-1542	0.4 0.4 0.3 0.9			15		25	60				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion. Air knifed 10/2/13 Drilled 10/31/13											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/2/13	1340	0.5	NA	-	4.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 1H, 2CR

Boring No. WA-124

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-124

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 13 June 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-124

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			ASPHALT Drilled to 4 ft previously, started sampling at 4 ft Fill Material (slag, fabric, brick, glass, tile)											
		CR1 24	4.0 6.0		4.0	SM	Grayish-brown silty SAND with gravel (SM), saturated 0387-061314-1333	0.0 0.0 0.0										
5					5.6	SP	Gray-brown poorly graded SAND with gravel, saturated 0387-061314-1347	0.0										
		CR2 24	6.0 8.0				Similar to above	0.0 0.0 0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	2CR

Boring No. WA-124

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-125

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 02 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation Datum
Location WA-125

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		ASPHALT - JACK HAMMER											
					0.8	GP	GRAVEL SUBBASE	0.0	100									
	AIR KNIFE		1.0				Rubble, building debris, brick, metal pieces, glass fragments, wood chips and wire -FILL-	0.0										
			2.0		2.0	SM	Black silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, moist, slag-like fragments, cinder-like fragments, glass fragments, and brick fragments -FILL-	0.0	10	10	10	25	25	20				
			2.5				Collect sample 2351-100213-1130 (2.0 to 4.0 ft)	0.0										
					4.0		Wet at 4.0 ft											
					4.5		Concrete layer at 4.0 ft											
5				NO WELL INSTALLED			Pea gravel layer from 4.5 ft to 5.5 ft	0.0										
							Obstruction at 5.5 ft Note: backfilled borehole with clean sand upon completion.	0.0										
						GP	Dark brown poorly-graded GRAVEL with sand (GP), mps 1.0 in., cinder-like fragments, slag-like fragments, no structure, petroleum-like odor, wet	137.3	15	55	25	5						
		CR1 23	6.0 8.0		6.0	SP-SM	-FILL-	267.3										
							Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., slag-like fragments, cinder-like fragments, brick fragments, no structure, strong petroleum-like odor, wet, sheen, petroleum-like droplets on water	273.4 214.3 243.2										
		CR2 12	8.0 10.0			SP-SM	Similar to above 2302-103113-1634	276.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/2/13		0	NA	6.5	± 4.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-125

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-126

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 02 October 2013
Finish 04 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-126

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Guzzler/BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 22	0.0 2.0	NO WELL INSTALLED	0.0	SM	22.0 in. ASPHALT Dark brown silty SAND with gravel (SM), mps 1.5 in., wood fragments, brick fragments, no structure, no odor, dry -FILL-	0.0 0.2 0.2 0.0	10	20	10	20	20	20				
		CR2 24	2.0 4.0			SM	Similar to above except, mps 4.0 in., concrete pieces, brick pieces, metal fragments, dark gray at 3.0 ft -FILL- 2302-110413-1101	0.1 0.4 0.3 0.2										
5		CR3 24	4.0 6.0					0.7 1.6 4.3 27.6										
		CR4 21	6.0 8.0		6.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., brick fragments, slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet -FILL-	147.2 113.7 84.3 41.2		30	10	40	10	10				
		CR5 12	8.0 10.0				2302-110413-1123	31.7 10.7 16.1										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: Backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-126

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-127

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 02 October 2013
Finish 04 November 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation
Datum
Location WA-127

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR	H1	0.0 6.0	NO WELL INSTALLED	0.3		ASPHALT - JACK HAMMER											
					0.8	GP	GRAVEL SUBBASE	0.0	100									
						SM	Dark brown to black silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist to wet, timber, cinder, concrete, and wood blocks, metal wire and fragments, pieces, and particles of brick -FILL-	0.0	20	20	10	15	15	20				
	KNIFE		2.0 4.0 2.5				Collect sample 2351-100213-1600 (2.0 to 4.0 ft)	0.0										
5							Wet at 4.0 ft	0.0										
						SM	Similar to above, except all wet											
							Rebar at 5.5 ft	0.0										
		CR1 24	6.0 8.0				Cleared to 6.5 ft											
					6.5	SM	Dark gray silty SAND with gravel (SM), mps 1/2 in., cinder-like fragments, glass fragments, no structure, no odor, wet -FILL-	0.3 0.2		20	20	20	20	20				
		CR2 11	8.0 10.0			SM	Dark gray silty SAND with gravel (SM), mps 3/4 in., slag-like fragments, cinder-like fragments, no structure, slight petroleum-like odor, wet 2302-110413-1024	10.0 4.2 24.7 37.7 41.6		20	20	20	20	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion. Airkifed 10/2/14											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/2/13		0	NA	6.5	± 4.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR, 1H

Boring No. WA-127

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 31 Jul 15

TEST BORING REPORT

Boring No. WA-127

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 13 June 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-127

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			ASPHALT	0.0										
						SP-SM	Medium grayish-brown poorly graded SAND with silt (SP-SM), moist	0.0										
							0387-061314-1451	0.0										
								0.0										
		CR2 24	2.0 4.0				Similar to above	0.0										
							Fill Material (copper wire, glass, brick, wood debris)	0.0										
					3.4			0.0										
						SM	Medium brown silty SAND with gravel (SM), saturated	0.0										
		CR3 24	4.0 6.0		4.4			0.0										
5						GP	Black poorly graded GRAVEL with sand and silt (GP), saturated	0.0										
								0.0										
								0.0										
							Similar to above	0.0										
							0387-061314-1505	0.0										
								0.0										
							Strong petroleum-like odor	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
10																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-127

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-128

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-128

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, glass fragments, no structure, no odor, dry -FILL-	0.6										
								0.7	5	10	15	20	30	20				
								0.3										
								1.1										
		CR2 19	2.0 4.0					0.4										
								5.7										
								3.1										
								2.6										
							2302-110613-1546	9.9										
		CR3 13	4.0 6.0		4.5			3.7										
5						SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, moist 2302-110613-1530	6.8		30	10	40	10	10				
								4.7										
								13.2										
		CR4 17	6.0 8.0					11.7										
								3.2										
							2302-110613-1556	3.7										
					7.5													
						SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., slag-like fragments, no structure, no odor, wet -FILL-	4.1	5	25	15	15	20	20				
		CR5 16	8.0 10.0					2.6										
								8.7										
						SM	Similar to above except red-brown 2302-110613-1602	3.4		20	10	10	30	30				
								1.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	7.4										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-128

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-129

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-129

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 19	0.0 2.0	NO WELL INSTALLED	0.3	SM	ASPHALT Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, glass fragments, copper wire fragments, no structure, no odor, dry 2202-110613-1507	1.7	5	15	20	20	20	20				
								3.6										
								9.2										
		C2 41	2.0 4.0			SM	Similar to above except, cinder-like fragments, slag-like fragments -FILL-	4.3										
								6.1										
								13.1										
						SM	Dark brown silty SAND with gravel (SM), mps 3/4 in., copper wire strands, no structure, no odor, dry -FILL-	7.2		20	10	20	30	20				
5								9.3										
								14.7										
								11.2										
		C3 22	6.0 8.0		6.0	SP	Olive-gray poorly-graded SAND with gravel (SP), mps 2.0 in., slag-like fragments, no structure, no odor, wet 2302-110613-1523	13.2	10	30	10	40	10					
								17.4										
								15.2										
		C4 16	8.0 10.0					9.3										
								4.1										
								4.7										
								6.3										
10					10.0			3.6										
							BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 4CR

Boring No. WA-129

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-129

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 22 May 2014
Finish 22 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location WA-129

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED			2.0 IN. ASPHALT	0.0										
								0.0										
								0.0										
								0.0										
								0.0										
	H	CR2 24	2.0 4.0		2.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments 10%, metal fragments 5%, copper wire 5%, asphalt-like rubbery material, 5%, slag-liked fragments 5%, no structure, no odor, dry	0.0	10	25	10	20	20	15				
								0.0										
								0.2										
					3.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 1.0 in., cinder-like fragments 20%, slag-liked fragments 5%, brick fragments 5%, no structure, no odor, moist 2302-052214-1317	0.0	10	20	10	40	10	10				
								0.3										
	A	CR3 24	4.0 6.0					0.0										
								0.1										
					4.5	GP	Dark brown to gray poorly graded GRAVEL with sand (GP), mps 3.0 in., brick fragments 5%, slag-liked fragments 25%, cinder-like fragments 15%, no structure, no odor, wet 2302-052214-1322 2302-052214-0003	0.0	15	35	20	15	15					
5								0.3										
								0.4										
	H	CR4 24	6.0 8.0					0.4										
								0.0										
								0.0										
					7.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., wood fragments 5%, cinder-like fragments 10%, slag-like fragments15%, no structure, no odor, wet 2302-052214-1336	0.3	10	20	15	20	15	20				
								0.2										
					8.0		BOTTOM OF EXPLORATION 8.0 FT	0.1										
								0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-129

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-130

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 01 October 2013
Finish 04 November 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation
Datum
Location WA-130

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR	H1	0.0 6.5	NO WELL INSTALLED	0.3		ASPHALT - JACK HAMMER											
					0.8	GP	GRAVEL SUBBASE	0.0	100									
						SM	Black silty SAND with gravel (SM), mps 3.5 in., no structure, no odor, moist, 20% cinder fragments, brick fragments, glass fragments and coal ash-like material		10	20	25	10	20	15				
							-FILL-	0.0										
	KNIF		2.0 4.0				Roofing material from 2.5 to 3.0 ft	0.1										
							Collect sample 2351-1002113-1525 (2.0 to 4.0 ft)											
						SM	Dark brown silty SAND with gravel (SM), mps 4.0 in., no structure, no odor, wet, brick fragments, whole bricks and concrete fragments	0.0	10	15	30	20	10	15				
	E		4.0				-FILL-	0.0										
5								0.0										
		CR1 19	6.0 8.0															
					6.5	SP-SM	Dark gray poorly-graded SAND with gravel (SP-SM), mps 1.0 in., slag-like fragments, cinder-like fragments, no structure, no odor, wet	0.3	10	20	40	20		10				
							-FILL-	0.1 0.2 0.0										
					8.0			0.2										
		CR2 23	8.0 10.0			SM	Dark gray silty SAND with gravel (SM), mps 1.0 in, wood fragments, glass fragments, slag-like fragments, cinder-like fragments, no structure, no odor, wet	0.4	10	20	10	20	20	20				
							-FILL-	0.7 1.1										
							2302-110413-0947	0.3										
10					10.0			1.0										
							BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/1/13		0	NA	6.5	± 3.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR, 1H

Boring No. WA-130

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-131

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 01 October 2013
Finish 18 October 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation Datum
Location WA-131

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		ASPHALT - JACK HAMMER											
					0.9	GP	GRAVEL SUBBASE	0.1	100									
	AIR KNIFE		1.0 7.5	NO WELL INSTALLED		SM	Dark black silty SAND with gravel (SM), mps 4.0 in., no structure, no odor, moist to wet, 15% wood chips, brick fragments, metal and glass fragments	0.0	20	20	10	15	15	20				
			2.0 2.5				-FILL-	0.0										
							Roofing material from 2.8 to 3.0 ft Collect sample 2351-100113-1450 (2.0 to 4.0 ft)											
					3.5	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 3.0 in., no structure, no odor, wet, brick pieces and concrete fragments	0.0	15	15	30	20	10	10				
5								0.0										
								0.0										
					6.5													
		C1 18	6.5 8.0			SM	Dark brown silty SAND with gravel (SM),mps 1.5 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, wet	0.0	10	20	10	20	20	20				
							-FILL-	0.3 0.2										
		C2 23	8.0 10.0			SM	Similar to above except black in color	0.0 0.0										
10					10.0		-FILL-	0.0 0.0										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/1/13		0	NA	6.5	± 3.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-131

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WA-132

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 01 October 2013
Finish 18 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-132

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR		0.0	NO WELL INSTALLED	0.3		ASPHALT - JACK HAMMER											
			6.5		0.8	GP	GRAVEL SUBBASE	0.0	100									
						SM	Dark gray to black silty SAND with gravel (SM), mps 4.0 in., no structure, no odor, moist, slag-like fragments, cinder-like fragments and glass fragments	0.0	10	20	15	25	10	20				
	KNIFE		2.0					0.2										
			2.5					0.0										
					4.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 3.0 in., no structure, no odor, wet, brick pieces and concrete fragments	0.0	15	15	40	10	10	10				
5							-FILL-	0.0										
		C1 19	6.5 8.0			SP-SM	Olive-brown poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., slag-like fragments, cinder-like fragments, glass fragments, tile-like fragments, no structure, no odor, wet	0.0	15	15	20	40	10					
							-FILL-	0.1										
					8.0			0.0										
		C2 22	8.0 10.0			SM	Dark gray to black silty SAND with gravel (SM),mps 2.5 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, wet	0.3	10	20	10	20	20	20				
							-FILL-	0.0										
							2302-101813-1154	0.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.1										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/1/13		0	NA	6.5	± 3.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	2CR

Boring No. WA-132

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-133

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-133

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 22	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, slag-like fragments, no structure, no odor, dry	0.7	5	25	15	15	20	20				
							2302-110613-1446	13.2										
								11.1										
								7.6										
					2.0													
		CR2 24	2.0 4.0			GP	Olive-gray poorly graded GRAVEL with sand (GP), mps 1.0 in., slag-like fragments, no odor, wet -FILL	13.4		70	10	10	10				
								1.3										
								4.2										
								3.7										
		CR3 46	4.0 8.0				4-8 ft low recovery	1.7										
5						GP	Similar to above -FILL-	4.3										
		CR4 11	8.0 10.0			GP	Similar to above except, more sand 2302-110613-1452	0.7		60	10	15	15					
								13.2										
								16.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-133

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-134

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 01 October 2013
Finish 18 October 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation Datum
Location WA-134

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE		0.0 6.5	NO WELL INSTALLED	0.3		ASPHALT - JACK HAMMER											
						GP	GRAVEL SUBBASE	0.0	100									
					1.0	SM	Dark brown silty SAND with garvel (SM), mps 6.0 in., no structure, no odor, moist, 25% brick fragments, wood chips, metal fragments, glass fragments, steel wire, cobbles and nails	0.0	10	15	15	15	30	15				
							-FILL-	0.0										
							Collect sample 2351-100113-1340 (2.0 to 4.0 ft)	0.0										
5						SM	Same as above, except with gray-brown silty sand pockets	0.0										
								0.0										
		C1 22	6.5 8.0		6.5	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1.5 in., slag-like fragments, cinder-like fragments, wood fragments, no structure, no odor, wet	0.0	25	40	20	15						
							-FILL-	0.0										
		C2 23	8.0 10.0		8.0	SM	Dark gray silty SAND with gravel (SM), mps 1.0 ft, slag-like fragments, cinder-like fragments, glass fragments, wood fragments, tile-like fragments, no structure, no odor, wet	0.0	10	20	20	20	15	15				
							-FILL-	0.3										
							2302-101813-1127	0.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.1										
							Note: backfilled borehole with clean sand upon completion., collected MS, MSD, and DUP											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/1/13		0	NA	6.5	± 5.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-134

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-135

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 01 October 2013
Finish 18 October 2013
Driller J. Graglia
H&A Rep. J. Miller/D. Mukherjee
Elevation
Datum
Location WA-135

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR	HI	0.0 6.5	NO WELL INSTALLED	0.3		ASPHALT - JACK HAMMER											
					0.9	GP	GRAVEL SUBBASE	0.0	100									
						SP-SM	Dark brown poorly graded SAND with gravel (SP-SM), mps 2.0 in., no structure, no odor, moist, slag-like fragments, glass fragments, brick fragments, concrete blocks, wood pieces and nails	0.0	10	20	10	40	10	10				
							Chemical odor from 2.0 to 3.0 ft Collect sample 2351-100113-0001 Collect sample 2351-100213-1600 (2.0 to 4.0 ft)	0.0										
	KNIFE		4.0					0.0											
5								0.0											
								0.0											
		C1 18	6.5 8.0			SP-SM	Dark brown poorly-graded SAND with silt (SP-SM), mps 2.0 in., slag-like fragments, cinder-like fragments, wood fragments, no structure, no odor, moist	0.0	10	20	20	40	10					
							-FILL-	0.0											
								0.0											
		C2 21	8.0 10.0			SP-SM	Similar to above except olive-brown, wet	0.0	10	10	20	50	10					
							2302-101813-0946	0.0											
							-FILL-	0.0											
								0.0											
10					10.0			0.0											
							BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion..											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/1/13			NA	6.5	± 4.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR, 1H

Boring No. WA-135

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-136

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 September 2013
Finish 18 October 2013
Driller J. Graglia/P. Gaynor
H&A Rep. J. Miller/D. Mukherjee
Elevation
Datum
Location WA-136

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE		0.0	NO WELL INSTALLED			ASPHALT - JACK HAMMER											
			6.5		0.3	GP	GRAVEL SUBBASE	0.0	100									
					1.0	SM	Black silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, wet at 2.0 ft, presence of cinder, brick and rock fragments		10	10	10	20	30	20				
								0.0										
						SM	-FILL-		10	15	10	20	15	20				
							Similar to above except dark brwon, mps 1.5 in., wet	0.0										
		HI	4.0					0.0										
5								0.0										
							Air knife to 6.5 ft	0.0										
		C1 16	6.5 8.0			SM	Dark brown silty SAND with gravel (SP), mps 1.5 in., slag-like fragments, cinder-like fragments, glass fragments, asphalt-like fragments, "not sticky", no structure, no odor, moist		20	20	10	20	15	15				
								0.0										
								0.1										
		C2 21	8.0 10.0			SM	Similar to above except, wet	0.0	20	20	10	20	15	15				
							2302-101813-0926	0.3										
								0.0										
								0.0										
10					10.0			0.0										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled hole in with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
9/30/13		11	NA	6.5	± 2.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR, 1H

Boring No. WA-136

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-137

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 September 2014
Finish 18 October 2013
Driller J. Graglia/P. Gaynor
H&A Rep. J. Miller/D. Mukherjee
Elevation
Datum
Location WA-137

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE		0.0 6.5	NO WELL INSTALLED		SM	Cleared out rubble with bobcat to get to gravel surface Black silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, moist, concrete, brick fragments	0.0	10	5	10	25	30	20				
							-FILL-	0.0										
						SM	Similar to above except black	0.0										
								0.0										
								0.0										
5						SM	Similar to above except, mps 1.0 in.	0.0	10	15	20	25	10	20				
						SM	-FILL- Same as above, except mps 1.0 in.	0.0										
							-FILL-											
					6.5		Air knife to 6.5 ft											
		C1 19	6.5 8.0			SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 2.0 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, moist	0.0	10	20	10	40	10	10				
								0.0										
								0.0										
		C2 40	8.0 10.0			SP-SM	Similar to above except, wet	0.0										
							2302-101813-0908	0.0										
							-FILL-	0.2										
								0.0										
10					10.0			0.3										
							BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
9/30/13		0	NA	6.5	± 4.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-137

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-138

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-138

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 49	0.0 6.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB (NO VOID)											
					0.8	SP	Dark brown poorly-graded SAND with gravel (SP), mps 2.0 in., brick fragments, slag-like fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.0	10	20	20	40	10					
5								0.3 0.0 0.0										
		C2 40	6.0 8.0		6.0	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, cinder-like fragments, no structure, petroleum-like odor, wet -FILL-	0.0	10	20	10	20	20	20				
						SM	Similar to above except olive brown 2302-101713-1202 (8.0 ft to 10.0 ft)		10	20	10	20	20	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT. Note: backfilled borehole in with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	1CR

Boring No. WA-138

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-139

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-139

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 32	0.0 5.0	NO WELL INSTALLED			10.0 in. CONCRETE SLAB (NO VOID)											
					0.8	SP	Dark brown to gray poorly-graded SAND with gravel (SP), mps 2.0 in., slag-like fragments, cinder-like fragments, no structure, no odor, dry	0.0	15	15	20	40	10					
								0.1										
								0.0										
								0.0										
5		C2	5.0 10.0					0.1										
								3.3										
								0.2										
					8.0	SM	Olive-brown silty SAND with gravel (SM), mps 1.0 in., slag-like fragments, no structure, petroleum-like odor, wet -FILL-	11.6	15	15	20	20	15	15				
							2302-101713-1128	14.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT. Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-139

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-140

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-140

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 38	0.0 5.0	NO WELL INSTALLED			11.0 in. CONCRETE SLAB (NO VOID)											
					0.9	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., slag-like fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.0 0.3 0.1 0.0	15	15	20	20	15	15				
5		C2	5.0 10.0					0.0										
					6.0	SP-SM	Dark brown poorly-graded SAND with gravel (SP-SM), mps 2.0 in., slag-like fragments, glass fragments, brick fragments, no structure, no odor, moist -FILl-	0.3 0.2	10	20	10	40	10	10				
					8.0	SM	Gray-brown silty SAND with gravel (SM), mps 1.5 in., slag-like fragments, no structure, hydrogen sulfide odor, wet -FILL- 2302-101713-1041	0.6 0.1	10	20	10	20	20	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT. Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-140

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-141

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-141

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 6	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., brick fragments, no structure, no odor, dry	0.4	5	15	10	10	30	20				
		CR2 16	2.0 4.0			SM	Similar to above	0.7										
								1.2										
								1.1										
		CR3 20	4.0 6.0				2312-110613-1143	0.3										
5						SM	Similar to above	0.7										
								0.4										
								0.2										
		CR4 18	6.0 8.0					1.3										
					6.5	SP-SM	Brown poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, moist	4.2		20	10	45	15	10				
								3.1										
								3.7										
		CR5 20	8.0 10.0					1.7										
								13.2										
						SP-SM	Similar to above	6.4										
							2302-110613-1157	8.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-141

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-141

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 21 May 2014
Finish 21 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location WA-141A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.5		6.0 IN. CONCRETE											
						SM	Dark brown to gray silty SAND with gravel (SM), mps 4.0 in., metal fragments 10%, cocnrete fragments 20%, slag-like fragments 10%, no odor, no moisture	0.0	25	15	10	15	10	15				
		CR1 23	2.0 4.0					0.0										
								0.0										
								0.0										
	A	CR2 24	4.0 6.0			SM	Similar to above except, cinder-like fragments 10%, porcelin-like fragments 5%, glass-like fragments 5%, slag-like fragments 5%, asphalt-like pieces, mps 4.0 in., no structure, no odor, moist 2302-052114-1354	0.0	10	30	10	25	10	15				
5								0.0										
								0.0										
								0.0										
	H	CR3 24	6.0 8.0			SM	Similar to above except dark gray, brick pieces, mps 3.0 in., wood fragments 5%, turn light gray in color at 5.5 ft to 6.0 ft 2302-052114-1406	0.0	15	25	10	25	20	5				
								0.2										
								0.0										
								0.3										
					8.0		BOTTOM OF EXPLORATION 8.0 FT	0.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	3CR

Boring No. WA-141A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-142

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-142

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		C1 13	0.0 5.0	NO WELL INSTALLED			CONCRETE SLAB, 3.5 ft thick. (NO VOID)											
					3.5	SP	Dark brown poorly-graded SAND with gravel (SP), mps 1.5 in., slag-like fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.0	20	20	10	40	10					
5		C2 44	5.0 10.0				2302-101713-0956	0.0 0.1 0.0										
					7.0	SM	Olive-brown silty SAND with gravel (SM), mps 1.5 in., slag-like fragments, no structure, no odor, wet	0.3	10	20	20	20	15	15				
							2302-101713-1004	0.4 0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 2CR

Boring No. WA-142

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-143

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 07 October 2013
Finish 07 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-143

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 11	0.0 2.0	NO WELL INSTALLED	0.6		6.0 in. concrete slab NO VOID											
						SW	Brown well-graded SAND with gravel (SW), mps 1.5 in., 10 % slag and brick fragments, no structure, no odor, dry -FILL-	0.0	20	10	20	30	20					
		CR2 23	2.0 4.0			SP	Similar to above except dark brown	0.0 0.0 0.1 0.3										
		CR3 18	4.0 6.0		4.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.0 in., 20% slag-like and cinder-like fragments, no structure, no odor, dry -FILL- 2302-100713-1524	0.0 0.2 0.1 0.0	20	20	10	30	10	10				
5		CR4 11	6.0 8.0		6.0	SM	Dark gray silty SAND with gravel (SM), mps 1.0 in., 10% slag-like fragments, no structure, no odor, wet	0.0 0.3 0.4 0.2	20	20	10	20	15	15				
		CR5 18	8.0 10.0		8.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM),mps 1.0 in., 20% slag-like and cinder-like fragments, no structure, no odor, wet -FILL- 2302-100713-1542	0.0 0.7 0.4 0.0	20	20	20	20	10	10				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-143

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-144

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 07 October 2013
Finish 07 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-144

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 11	0.0 2.0	NO WELL INSTALLED	0.1	SP	11.0 in. concrete slab (NO VOID)		20	20	20	30	10					
							Dark brown poorly-graded SAND with gravel (SP), mps 1.5 in., no structure, no odor, dry	0.0										
								0.0										
		CR2 23	2.0 4.0			SP	Similar to above except, 10% brick fragments, mps 1.5 in., 10% slag-like fragments	0.0	30	10	20	30	10					
							-FILL-	0.1										
								0.0										
								0.0										
		CR3 22	4.0 6.0		4.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.0 in., 5% brick fragments, 5% cinder-like fragments, 10% slag-like fragments, no structure, no odor, moist	0.1	20	10	20	30	10	10				
5								0.3										
							2302-100713-1453	0.0										
								0.6										
		CR4 23	6.0 8.0			SP-SM	Similar to above except, petroleum-like odor, slight sheen on water, wet	0.8	20	10	20	30	10	10				
							-FILL-	1.3										
								4.7										
								5.3										
		CR5 23	8.0 10.0		8.0	SP	Dark gray poorly-graded SAND with gravel (SP-SM),mps 1.5 in., 10% cinder-like fragments, 10% slag-like fragments, 5% brick fragments, no structure, slight petroleum-like odor, wet	4.6	25	10	20	35	10					
							-FILL-	0.1										
							2302-100713-1507	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-144

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-145

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-145

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 53	0.0 6.0	NO WELL INSTALLED			13.0 in CONCRETE SLAB (NO VOID)	0.3										
					1.0	SM	Dark brown to dark gray silty SAND with gravel (SM), mps 2.5 in., concrete fragments, brick fragments, no structure, no odor, dry -FILL-	0.6	10	10	10	25	25	20				
								1.2										
								0.7										
								0.2										
5								1.7										
		CR2 25	6.0 8.0			SM	Similar to above except, mps 3.0 in. Wood pieces, roughly 4.0 in. in length -FILL-	1.4										
		CR3 19	8.0 10.0			SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, no structure, no odor, wet -FILL- 2302-110613-1132		5	15	10	10	30	30				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WA-145

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-146

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 01 October 2013
Finish 01 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-146

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 12	0.0 2.0	NO WELL INSTALLED	0.5	GW	Concrete Slab (NO VOID)											
						SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 40 mm, 10% metal fragments, no structure, no odor, dry	0.0	40		10	30	10	10				
								1.7										
								3.2										
		CR2 15	2.0 4.0			SP-SM	Similar to above except, no metal fragments, 30% cinder-like fragments, moist 2302-100113-1527	2.6	40		10	30	10	10				
								0.0										
								0.6										
		CR3 16	4.0 6.0					0.0										
								0.0										
								0.3										
5					5.0	SM	Dark gray, silty SAND with gravel (SM), mps 50 mm, 20% cinder-like fragments, 10% slag-like fragments, no structure, no odor, wet	0.0	30	5	5	10	20	30				
								0.0										
		CR4 12	6.0 8.0					0.0										
								0.0										
								0.0										
								0.6										
					8.0			0.3										
		CR5 22	8.0 10.0			GM	Dark gray silty GRAVEL (GM), mps 40 mm, 20% cinder-like fragments, 10% slag-like fragments, no structure, no odor, wet 2302-100113-1546	0.2	50			20	10	20				
							2302-100113-1546 (ms)	0.4										
10					10.0		2302-100113-1546 (msd)	0.0										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-146

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-147

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 01 October 2013
Finish 01 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-147

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED	0.5		Concrete Pad NO VOID											
						SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), mps 80 mm, 10% brick fragments, no structure, no odor, dry	0.0 0.3 0.4	30			40	20	10		
		CR2 22	2.0 4.0			SP-SM	Similar to above except dark brown, 10% cinder-like fragments, 10% slag-like fragments 2302-100113-1431	0.0 0.4 0.0 0.0	40			30	20	10		
5		CR3 19	4.0 6.0			SP-SM	Similar to above except dark gray	0.0 0.0 0.0 0.4 0.7	35	10	10	25	10	10		
		CR4 18	6.0 8.0		6.5	GP	Dark brown, poorly-graded GRAVEL with sand (GP), mps 40 mm, 20% cinder-like fragments, 10% slag-like fragments, no structure, no odor, moist	0.0 0.0 0.3	40	20		25	10	5		
		CR5 22	8.0 10.0					1.9 3.6 0.0										
					9.0	GM	Dark gray silty GRAVEL with sand (GM), mps 80 mm, 15% cinder-like fragments, 15% slag-like fragments, 10% brick fragments	0.0 0.0	50			20	10	20		
10					10.0		2302-100113-1502 2302-100113-0003 BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion boring location moved 2.0 ft to the South due to fence.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-147

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-148

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 01 October 2013
Finish 01 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WA-148

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5	GP	Poorly graded GRAVEL (GW), mps 60 mm		100									
						SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 40 mm, no structure, no odor, dry	0.0	20			40	30	10				
								0.0										
								0.0										
		CR2 15	2.0 4.0			SP-SM	Similar to above except red, brick fragments, mps 2 in.	0.0										
						SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 30 mm, 15% wood, 5% glass, 10% miscellaneous fill, no structure, no odor, dry	0.0	40			30	20	10				
							2302-100113-1140	0.0										
					4.0			0.0										
		CR3 20	4.0 6.0			GP	Poorly graded GRAVEL (GW), mps 60 mm	0.0	100									
					4.5	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 30 mm, 50% brick-like fragments, and miscellaneous fill	0.0										
5					5.0	GP	Red-gray poorly graded GRAVEL with sand (GP), mps 80 mm, layered	0.0	70			20	10					
		CR4 15	6.0 8.0		6.5	SP-SM	Dark brown poorly graded SAND with silt and gravel (SW-SM), mps 50 mm, 10% brick-like fragments, no structure, no odor, dry	0.0	50			30	10	10				
								0.0										
								0.3										
		CR5 16	8.0 10.0		8.0	GM	Dark gray silty GRAVEL (GM), mps 30 mm, 40% slag-like fragments, 10% brick-like fragments	0.6	50	10		10	10	20				
							2302-100113-1207	0.0										
								0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-148

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-149

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 01 October 2013
Finish 01 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-149

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED	0.5	GP	Poorly graded GRAVEL (GP)		100									
						SW-SM	Dark brown, well-graded SAND with silt and gravel (SW-SM), mps 40 mm, no structure, no odor, dry	0.0	20		20	30	20	10				
							-FILL-	0.0										
								0.0										
		CR2 22	2.0 4.0		2.0	GP	Tan poorly graded GRAVEL with sand (GP), mps 60 mm	0.0	60			30	10					
					2.5	SP-SM	Dark brown, poorly-graded SAND with silt and gravel (SP-SM), mps 20 mm, no structure, no odor, dry	0.0	30			30	30	10				
							-FILL-	0.4										
								0.6										
5		CR3 6	4.0 6.0			SP-SM	Light brown, poorly-graded SAND with silt and gravel (SP-SM), mps 20 mm, 30% cinder-like material, 10% slag-like material	13.3											
							Low recovery, similar to above	0.0										
								0.0										
								0.0										
		CR4 19	6.0 8.0		6.0	GM	Dark gray silty GRAVEL with sand (GM), mps 40 mm, 40% cinder-like fragments, 20% slag-like fragments, no structure, no odor, moist	0.0	40	25		15		20				
							2302-100113-1102	0.3										
							2302-100113-0002	0.4										
								0.6										
		CR5 11	8.0 10.0			GM	Dark brown, SILT with gravel (ML), mps 30 mm, 30% cinder-like fragments, 10% slag-like fragments, 10% wood	0.0	10	50		5	5	30				
							2302-100113-1114											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-149

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-152

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 30 September 2013
Finish 30 September 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-152

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0			SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 50 mm, no odor, dry	0.0	30			40	20	10				
								0.0										
								0.0										
		CR2 23	2.0 4.0			SP-SM	Similar to above except, with 20% cinder-like material, no odor, dry	0.0	20			40	10	10				
								0.0										
								0.0										
		CR3 21	4.0 6.0	NO WELL INSTALLED	4.0	SM	Dark brown silty SAND with gravel (SM), mps 30 mm, 20% cinder-like fragments, 10% wood, no structure, slight-hydrocarbon odor, moist 2302-093013-1544	0.0	20			20	20	30				
5								0.0										
								0.0										
								36.8										
		CR4 16	6.0 8.0			SM	Similar to above except dark gray, 50% cinder-like fragments, no odor, wet	0.0	10	20	20	25	5	20				
								0.0										
								0.0										
								0.4										
		CR5 13	8.0 10.0			SM	Similar to above 2302-093013-1558		10	10	15	25	10	30				
								0.8										
								0.3										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-152

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-153

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 30 September 2013
Finish 30 September 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-153

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 40 mm, no structure, no odor, dry	0.0 0.0 0.0	30			10	30	30				
		CR2 22	2.0 4.0			SM	Similar to above except, mps 50 mm, 20% cinder-like fragments, no odor, dry	0.0 0.0 0.0	20			20	40	20				
5		CR3 13	4.0 6.0			SM	Similar to above except, mps 80 mm, 15% concrete fill, no odor, moist at 5.8 ft	0.0 0.0 0.0 0.0	20		15	30	20	15				
		CR4 14	6.0 8.0		6.0	ML	Dark gray sandy SILT with sand (ML), mps 20 mm, 10% concrete fill, 25% slag-like fragments, 15% cinder-like fragments, no odor, wet 2302-093013-1421	0.0 0.0 0.0 0.0	5	5	10	10	20	50				
		CR5 16	8.0 10.0			ML	Similar to above except, mps 15 mm, 20% wood pieces, 15% concrete fragments, 15% miscellaneous fill, no odor, wet 2302-093013-1456	0.0 0.0	10	10	10	20	10	40				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-153

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-154

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 30 September 2013
Finish 30 September 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-154

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED		SW	Loose gray well-graded SAND and gravel (SW), mps 60 mm, no structure, no odor, moist	0.0 0.0 0.0	10	20	50	20						
		CR2 24	2.0 4.0		2.0	SM	Black silty SAND with gravel (SM), 60% cinder-like fragments, no structure, no odor, moist	0.0 0.0 0.0	10	20	20	20	10	20				
		CR3 14	4.0 6.0		4.0	SW-SM	Gray well-graded SAND with silt (SW-SM), 30% cinder-like fragments and particles, 10% wood fragments, 10%, concrete fill, no odor, wet 2302-093013-1137 Olive-gray color to water around the wood	0.0 0.0 0.0 0.0		10	25	20	35	10				
5		CR4 18	6.0 8.0		6.0	ML	Gray-brown SILT with sand (ML), mps 40 mm, 35% cinder-like particles, trace glass particles 2302-093013-1149	0.0 0.0 0.0 0.0			10	20	15	55				
		CR5 17	8.0 10.0			ML	Similar to above except, mps 40 mm, 45% cinder, wood, and brick fragments and particles 2302-093013-1202	0.0 0.0		15		10	20	55				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion threads snapped off casing rod is stuck 11-13 ft bgs (sunk in silt) could not get it out.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-154

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-157

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-157

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 9	0.0 2.0	NO WELL INSTALLED			12.0 in. concrete slab (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, slag-like fragments, glass fragments, no structure, no odor, dry	0.3	5	20	15	20	20	20				
							-FILl-	0.7										
		CR2 22	2.0 4.0			SM	Similar to above	1.2										
								1.6										
							2302-110613-1001	0.3										
								1.4										
		CR3 24	4.0 6.0				Similar to above	4.1										
							2302-110613-1007	4.3										
5								5.1										
					5.5	GP	Light brown poorly-graded GRAVEL with sand (GP), mps 1.5 in., 100% slag fragments and particles	1.6	15	55	20	10						
					6.0													
		CR4 15	6.0 8.0			SP-SM	Brown poorly-graded SAND with silt and gravel (SP-SM), mps 2.0 in., slag-like fragments, glass fragments, wood fragments, no structure, no odor, wet	1.3	10	30	10	40	10					
							2302-110613-1011	1.6										
								0.9										
								1.4										
		CR5 13	8.0 10.0			SP-SM	Similar to above except dark gray, no wood fragments, wet	1.9										
							2302-110613-1016	2.7										
								16.3										
								41.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	27.6										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-157

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-158

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-158

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 9	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, slag-like fragments, cinder-like fragments, no structure, no odor, dry -FILL-	0.3	15	15	15	15	20	20				
								0.4										
		CR2 22	2.0 4.0					1.2										
								1.3										
							2302-110613-0921	0.7										
								1.6										
								4.2										
		CR3 24	4.0 6.0					3.7										
							2302-110613-0926	2.1										
5								4.5										
						SM	Similar to above except dark gray in color, moist -FILL-	3.6										
		CR4 16	6.0 8.0					1.7										
							2302-110613-0931	116.3										
					7.0	GP	Olive-gray poorly-graded GRAVEL with sand (GP), mps 1.0 in., no structure, petroleum-like odor, wet, sheen on water-oil-like residue on sample bag -SLAG-LIKE FILL-	92.7	10	60	10	10	10					
								142.6										
		CR5 14	8.0 10.0		8.0	SP-SM	Dark gray to olive-gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.0 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, petroleum-like odor, wet, brown, oil-like sheen on water -FILL-	121.4	10	25	15	40	10					
								109										
								137										
							2302-110613-0936	146										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-158

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-159

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 November 2013
Finish 04 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-159

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: / Drill Mud:
Hammer Weight (lb)	-	-	-	Casing:
Hammer Fall (in.)	-	-	-	Hoist/Hammer: - - / PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 7	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., concrete fragments, brick fragments, no structure, no odor, dry -FILL-	0.0	10	20	10	20	20	20				
		CR2 11	2.0 4.0			SM	Similar to above except, more brick fragments, mps 1.5 in.	0.2	5	25	10	20	20	20				
								0.0										
								0.3										
		CR3 22	4.0 6.0					0.0										
5						SM	2302-110413-1526	0.4										
								0.6										
								0.3										
		CR4 24	6.0 8.0					0.0										
								1.3										
					7.0	SP	Brown poorly-graded SAND (SP), mps 1/4 in., no structure, no odor, moist	4.7		10	10	20	55	5				
					7.5	GP	2302-110413-1531	13.2		70	10	20						
		CR5 21	8.0 10.0		8.0	SM	Dark gray poorly-graded GRAVEL with sand (GP), mps 3/4 in., cinder-like fragments, no structure, petroleum-like odor, wet	54.7		30	10	20	20	20				
							-FILL-	13.7										
							Dark gray silty SAND with gravel (SM), mps 3/4 in., wood fragments, glass fragments, cinder-like fragments, no structure, no odor, wet	37.2										
							-FILL-	99.7										
10					10.0		2302-110413-1540	46.3										
							BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-159

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-160

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 November 2013
Finish 07 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-160

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 2.0	NO WELL INSTALLED			12.0 CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 3.5 in., brick pieces, no structure, no odor, dry	0.3	15	20	15	10	20	20				
								0.0										
		CR2 23	2.0 4.0			SM	Similar to above	0.4										
								0.7										
								1.1										
								1.6										
5		CR3 11	4.0 6.0			SM	Similar to above 2302-110413-1554	7.0										
								13.1										
								16.4										
								12.9										
		CR4 18	6.0 8.0			SM	Similar to above 2302-110413-1607	10.3										
								84.1										
					7.5	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1.0 in., cinder-like fragments, no structure, slight petroleum-like odor, wet, sheen, oil-like droplets on water	48.2		65	10	10	10	5				
		CR5 12	8.0 10.0			GP	Similar to above except, slag-like fragments, mps 3/4 in. -FILL- 2302-110413-1621	56.7		70	10	10	10					
								22.7										
								27.1										
								57.6										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.	66.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-160

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-161

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-161

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 9	0.0 2.0	NO WELL INSTALLED			12.0 CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, slag-like fragments, no structure, no odor, dry -FILL-	0.3	5	15	10	20	30	20				
								0.7										
		CR2 22	2.0 4.0			SM	Similar to above	1.4										
								3.7										
								3.1										
								12.2										
		CR3 24	4.0 6.0		4.0		Slag-like fragments, mps 1/2 in. -FILL-	7.6										
					4.5	SM	Red-brown silty SAND with fine gravel (SM), mps 1.0 in., no structure, no odor, dry	1.3		15	10	10	40	25				
5								0.9										
					5.5	SP	Dark gray poorly-graded SAND with gravel (SP), mps 1.0 in., no structure, slight petroleum-like odor, moist	13.7										
		CR4 7	6.0 8.0		6.0	GP	2302-110513-0840	48.2		80	10	10						
							Dark gray poorly-graded GRAVEL with sand (GP), mps 3/4 in., no structure, slight petroleum-like odor, wet											
							2302-110513-0846	69.4										
		CR5 16	8.0 10.0					141										
						GP	Similar to above except olive-gray, glass fragments 2302-110513-0853	213		60	20	20						
								123										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	106										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-161

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-162

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-162

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 10	0.0 2.0	NO WELL INSTALLED			12.0 CONCRETE SLAB (NO VOID)											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., brick fragments, concrete fragments, wood fragments. cinder-like fragments, no structure, no odor, dry -FILL-	0.3	20	10	10	20	20	20				
		CR2 22	2.0 4.0			SM	Similar to above	13.4 17.6 18.4 13.2 22.3										
5		CR3 21	4.0 6.0			SM	Similar to above except dark gray, more cinder-like fragments, petroleum-like odor, moist 2302-110513-0970	37.2 46.8 52.3 104.7		30	20	10	20	20				
		CR4 6	6.0 8.0		6.0	GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 3/4 in., no structure, slight petroleum-like odor, wet, 60% slag-like fragments 2302-110513-0915	166.3		60	20	20						
		CR5	8.0 10.0		8.0	SP-SM	Dark gray to olive-brown poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., slag-like fragments, wood fragments, glass fragments, no structure, slight petroleum-like odor, wet	148.2 137.1 121.3 126.4	5	30	5	40	10	0				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.	97.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-162

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-163

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WA-163

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 10	0.0 2.0	NO WELL INSTALLED			13.0 CONCRETE SLAB (NO VOID)											
					1.1	SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., concrete pieces, brick fragments, no structure, no odor, dry -FILL-	0.6	15	15	10	20	20	20				
		CR2 21	2.0 4.0					1.3 4.2 3.1 0.9 1.3 2.7 6.8										
5		CR3 23	4.0 6.0			SM	Similar to above except, with wood fragments, slag-like fragments 2302-110513-1140	23.7 31.0										
					5.5	GP	Slag-like and cinder-like fragments, mps 1/2 in., no odor -FILL-	32.2		70	10	10	10					
		CR4 16	6.0 8.0		6.0	SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., slag-like fragments, glass fragments, no structure, slight odor, wet -FILL- 2302-110513-1144	24.2 97.2 111.6 119.2	10	30	5	15	20	20				
		CR5	8.0 10.0					107.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WA-163

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 03 June 2014
Finish 03 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location WA-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE NO VOID											
					1.0	SP	Black poorly graded fine to coarse SAND (SP), trace fine gravel, moist, 100% slag material											
					1.4		8.0 in. Concrete											
		CR-1 24	2.0 4.0		2.2	SP-SM	Grayish-brown poorly graded SAND with silt and gravels, sand fine to coarse, silty non-plastic, fine gravels, moist, fill material (brick, glass, slag, ~40% fill)	0.2											
						SP-SM	0387-060314-1029	0.1											
							Similar to above	0.1											
		CR-2 24	4.0 6.0	NO WELL INSTALLED			0387-060314-1033 From 5.3 to 5.5 ft, material grayish-brown, soft, wet	0.4										
5								0.3										
							From 5.8 ft to 5.9 ft, thin brown silty sand layer	0.1										
								0.1										
		CR-3 24	6.0 8.0					4.1										
					6.9	SM	Grayish-black silty SAND with gravel (SM), sand fine to coarse, silt non-plastic, slight odor, wet, pieces of glass, brick, slight odor (25% fill)	6.7											
					7.8	SM		8.3											
		CR-4 24	8.0 10.0			SM	0387-060314-1047 Similar to above, strong odor, very discolored, from 7.5 to 7.8 material grayish-white	5.2										
						SM	Grayish-black silty SAND (SM), sand fine to meedium, silty non-plastic, trace fine gravels, wet, wood, brick (20% fill material)	4.1										
10					10.0		Similar to above, glass 0387-060314-1055	3.7										
								4.0										
								4.2										
							BOTTOM OF EXPLORATION 10.0 FT											

Note: Backfill with clean sand upon completion.

Water Level Data					
Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 04 June 2014
Finish 04 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location WA-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE											
					1.0	SM	Black silty SAND with gravels (SM), sand fine to coarse, silt non-plastic, gravels fine, moist, brick, glass, wood, slag (20% fill material)	4.0		15	10	35	20	20				
		CR-2 24	2.0 4.0			SM	0387-060414-1100 Similar to above, strong odors, wire, glass bottles 0387-060414-1105	0.0 32.5										
		CR-3 24	4.0 6.0			SM	Similar to above, pieces of wire, strong odors 0387-060414-1112	40.7 66.0 75.1										
5								70.3 81.0										
		CR-4 24	6.0 8.0			SM	Similar to above 0387-060414-1120	90.7 80.7										
					7.0	ML	Stiff medium brown SILT with sand and gravel (ML), silt non-plastic, fine gravel, moist	83.0		5			15	80				
		CR-5 24	8.0 10.0			ML	Black silty SAND with gravel (SM), sand fine to coarse, silty non-plastic, fine gravel, strong odors, wet, wire, wood, glass, slag (fill material 20%) 0387-060414-1135	87.5 23.1 42 38.6		20	20	30	10	20				
10								27.3 21.6 19.5										
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 04 June 2014
Finish 04 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location WA-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.2	SP-SM	2.0 in. CONCRETE											
					0.8	SP	Black poorly graded fine to coarse SAND with silt (SP-SM), trace fine gravels, sand fine to coarse, silt non-plasic, no odor, moist, 10% wood debris 0387-060414-1015	0.0		10	20	30	20	20				
					1.6	SP-SM	Tan brown poorly graded SAND with fine gravel (SP), sand fine to coarse, no odor, moist, 15% bricks and metal (fill material)	0.0	10	20	20	20	20	10				
		CR-2 24	2.0 4.0		2.2	SM		0.0										
						SM	Black poorly graded SAND with silt and gravels (SP-SM), sand fine to coarse, gravels fine, moist, 15% wood, brick, metal, and glass Materal from 2.0 ft to 2.3 ft white in color (brick) 0387-060414-1028	0.0 0.6 1.7 0.0		15	20	20	25	20				
		CR-3 24	4.0 6.0			SM	Black silty SAND with gravel, sand fine to coarse, gravels fine, silt non-plastic, no odor, moist, 15% brick, wire, and glass (fill material) 0387-060414-1033	26.6 29.3											
5		CR-4 24	6.0 8.0				Gray-brown silty SAND with gravel (SM), sand fine to coarse, silty non-plastic, no odor, moist, 30% brick and wood 0387-060414-1037	31.4 36.6											
							Similar to above except, strong odor, wet	36.1 65.1 66.3										
		CR-5 24	8.0 10.0			SM	Similar to above 0387-060414-1045	65.2 39.8										
						SM	Similar to above, bottles	61.7										
10					10.0		Color change to grayish brown, increase silt content BOTTOM OF EXPLORATION 10.0 FT	15.7 3.7										
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 04 June 2014
Finish 04 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location WA-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.2	SP	2.0 in. CONCRETE NO VOID	0.0										
						SP	Black silty SAND with gravel (SP), sand fine to coarse, gravels fine, silt non-plastic, fill material 10% slag, metal, bricks 0387-060414-0928	0.0		20	30	40	10					
		CR-2 24	2.0 4.0		2.6		Tan brown poorly graded SAND with gravel (SP), sand fine to coarse, gravels fine to coarse, moist, fill material 20% yellow brick and metal	0.0										
						SP	Black poorly graded SAND with gravel (SP), sand fine to coarse, gravels fine, moist, fill material 20% brick, metal, glass 0387-060414-0928	0.6		20	30	40	10					
					2.9	SM		0.0		20	30	15	20	15				
					3.8	SP	Gray brown silty SAND with gravel (SM), silt non-plastic, sand fine to coarse, gravel fine, wet, fill material brick, glass, metal	0.0										
		CR-3 24	4.0 6.0				Black poorly graded SAND with gravel (SP), sand fine to coarse, gravel fine, wet, fill material 30% brick, metal, glass	17.6										
5								43.7										
								50.7										
								53.3										
		CR-4 24	6.0 8.0			SP	Similar to above	47.8										
								32.2										
								27.6										
								34.8										
		CR-5 24	8.0 10.0			SP	Similar to above	38.7										
								41.2										
						SP	Similar to above except, wood	50.7										
10								32.2										
					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 20 May 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location WA-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		AIR KNIFE	0.0	NO WELL INSTALLED	0.3		ASPHALT											
						SM	NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.	0.0	15	20	20	15	15	15				
							Black silty SAND with gravel (SM), mps 1.5 in., 5% brick-like fragments, 10% asphalt-like fragments, no odor, moist											
							Similar to above, 5% wood-like fragments	0.0										
						SM	Gray silty SAND with gravel (SM), 15% brick-like fragments Water at 3.25 ft	0.0	20	20	20	10	15	5				
					4.0	GP	Red and dark gray poorly graded GRAVEL with sand (GP), mps 3.0 in., brick-like fragments, slag-like fragments, 5% wood-like fragments 0710-052014-1110	0.0	25	20	15	20	15	5				
5		CR1	6.0 8.0				Similar to above, dark brown, petroleum-like odor 0710-052014-1310	0.5	30	15	15	15	15	10				
					6.5		Pre-cleared to 6.5 ft, borehole backfilled with clean sand 5/20/14											
							Similar to above 0387-061314-0905											
					7.6	SM	Grayish-brown silty GRAVEL with sand (SM), saturated 0387-061314-0917											
		CR2	8.0 10.0		8.8	SM	Black silty SAND with gravel (SM), copper wire, glass, metal, tile, shells											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. WA-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-206

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 13 June 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-206

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.5		Asphalt on Surface Gravel Base Course	0.0										
						SM	Fill material (brick, copper wire, wire, metal, rubber, glass, wood, tile) Dark brown to black silty SAND with gravel (SM) 0387-061314-0830	0.3 1.7 5.2										
		CR1 18	2.0 4.0				Similar to above	4.2 1.7 3.0										
	▽						Wet to saturated at 3.5 ft											
		CR2 20	4.0 6.0				0387-061314-0834	0.0 0.0										
5							At 5.0 ft, color change grayish-brown	0.6 0.3										
		CR3 20	6.0 8.0				Similar to above 0387-061314-0839	0.6 0.2 0.3 0.1										
		CR4 24	8.0 10.0				Similar to above, increase in gravel at 8.0 ft 0387-061314-0845 0387-061314-0002	0.6 0.0 0.6 0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-206

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-207

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 21 June 2014
Finish 12 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WA-207

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Asphalt on Surface											
							Fill Material (brick, slag, glass, copper wire, tile, shells, metal, wood, rubber											
						SP	Black poorly graded SAND with gravel (SP)											
		CR1 24	2.0 4.0			SM	Black silty SAND with gravel (SM)	0.0										
								0.0										
								0.5										
							At 3.5 ft, saturated	0.0										
		CR2 24	4.0 6.0				Similar to above	0.0										
								0.0										
					4.8													
5						GP	Grayish-brown poorly graded GRAVEL with sand and silt (GP), saturated	0.0										
								0.0										
					6.0													
		CR3 24	6.0 8.0			SP	Gray-brown poorly graded SAND with gravel and silt (SP), lots of fill material	0.0										
								0.0										
								0.0										
								0.0										
		CR4 24	8.0 10.0				Similar to above	0.0										
					8.6													
						GP	Black poorly graded GRAVEL with sand and silt (GP)	0.0										
					9.2													
						SM	Grayish-black silty SAND with gravel (SM), slight oily-like odor, sheen on soil	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WA-207

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-208

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 22 May 2014
Finish 22 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location WA-208

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 0.3 in., 5% wood fragments, 5% metal fragments, 5% concrete pieces, no structure, no odor, dry	0.0 0.0 0.0 0.0	10	15	5	20	25	20				
					1.8													
		CR-2 23	2.0 4.0			SM	Similar to above, except 5% metal pieces, 5% brick fragments, 5% glass fragments, 5% wire strands 2302-052214-1442	0.0 0.1 0.3 0.6 0.5 0.0	10	25	10	25	15	15				
5		CR-3 21	4.0 6.0			SM	Similar to above, except no glass fragments, metal or wire stands/fragments 2302-052214-1455	0.0 0.0 0.0 0.0 0.0 0.7 1.6	10	20	20	25	10	15				
		CR-4 24	6.0 8.0															
					7.5	ML	Gray-brown sandy SILT (ML), 25% brick fragments, 25% gravel fragments, no structure, petroleum-like odor, sheen on water, wet 2302-052214-1503	13.2	5	5	10	20	20	40				
		CR-5 24	8.0 10.0		8.0	SP		26.2 0.9 1.7										
					9.0	GP-GM	Dark gray to black poorly graded SAND with gravel (SP), mps 1.0 in., 15% slag-like fragments, 5% brick fragments, 5% cinder-like fragments, 5% glass fragments, no structure, slight petroleum-like odor, wet	6.3	10	40	15	15	10	10				
10					10.0		Gray poorly graded GRAVEL with silt and sand (GP-GM), 35% slag-like fragments, 5% glass fragments, 5% brick fragments, 5% cinder-like fragments, no structure, petroleum-like odor, sheen on water, wet 2302-052214-1511	17.6 16.7										
							BOTTOM OF EXPLORATION 10.0 FT											

Note: Backfill with clean water upon completion.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-208

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WA-209

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 22 May 2014
Finish 22 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location WA-209

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.2	SM	0.2 IN. ASPHALT CAP Dark brown silty SAND with gravel (SM), mps 2.0 in., 5% brick fragments, 5% metal fragments, 5% slag-like fragments, no structure, no odor, moist 2302-052214-0831	0.0 0.0 0.0 0.1	10	15	20	20	15	20				
		CR-2 24	2.0 4.0					0.0 0.0 0.2										
					3.0	GP	Dark gray poorly graded GRAVEL with sand (GP), mps 15 in., 20% slag-like fragments, 10% brick fragments, 10% cinder-like fragments, no structure, no odor, wet 2302-052214-0837	0.0	20	35	10	20	10	5				
		CR-3 24	4.0 6.0				2302-052214-0002	0.4 0.0 0.0										
5					4.5	SP	Dark brown poorly graded SAND with gravel (SP), mps 2.0 in., 20% slag-like fragments, 5% metal fragments, no structure, no odor, wet	0.4 0.3	15	15	15	40	10	5				
		CR-4 24	6.0 8.0		5.5	SP	Similar to above, except wood pieces, mps 2.0 in. 2302-052214-0854	0.0 0.0 0.2 0.3										
					7.0	GP	Gray poorly graded GRAVEL with sand (GP), mps 15 in., 30% slag-like fragments, 10% brick fragments, 5% rubber-like fragments (not sticky), no structure, no odor, wet 02302-052214-0857	0.1 0.0 0.0	40	15	20	15	10					
		CR-5 23	8.0 10.0		8.5	GM	Dark gray silty GRAVEL with sand (GM), mps 1.5 in., 15% slag-like fragments, 5% shell fragments, 5% metal fragments, no structure, no odor, wet 2302-052214-0907	0.0 0.4 1.3 0.7	35	15	5	10	15	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: Backfill with clean fill upon completion.	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-209

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-210

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 21 May 2014
Finish 22 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location WA-210

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 23	0.0 2.0	NO WELL INSTALLED	0.2	SM	ASPHALT CAP	0.0	20	15	20	20	10	15				
							Dark brown silty SAND with gravel (SM), mps 2.0 in., 10% brick fragments, 5% metal fragments, 5% rope-like material (not sticky), 10% cinder-like fragments, no structure, no odor, dry	0.0										
							2302-052214-0924	0.0										
		CR-2 24	2.0 4.0		2.5	SM	Similar to above, except tan, brick pieces, mps 3.0 in.	0.1										
							2302-052214-0929	0.0										
								0.2										
								0.3										
								9,9										
								0.0										
		CR-3 24	4.0 6.0		4.0	GP	Brown poorly graded GRAVEL with sand, mps 1.5 in., 40% slag-like fragments, 10% brick fragments, no structure, no odor, moist	0.0	15	45	15	15	10					
							2302-052214-0936	0.0										
5								0.6										
					5.5	SM	Black silty SAND with gravel, mps 1.0 in., 10% slag-like fragments, 5% brick fragments, no structure, no odor, moist	0.0	10	25	15	25	20	5				
		CR-4 24	6.0 8.0					0.2										
					6.5	SM	Similar to above, except brown	0.0										
					7.0	GP	Brown poorly graded GRAVEL with sand (GP), mps 1.5 in., 5% wood fragments, 35% slag-like fragments, 10% brick fragments, 5% metal fragments, 5% glass fragments, no structure, no odor, wet	1.1	45	15	10	15	15					
							2302-052214-0953	0.0										
		CR-5 24	8.0 10.0		8.5	SM	Dark brown to dark gray silty SAND with gravel (SM), mps 2.0 in., 15% slag-like fragments, 5% metal fragments, 5% rubber-like fragments (not sticky), 5% glass fragments, no structure, no odor, slight sheen on water, wet	0.4	20	10	10	20	20	20				
								0.0										
10								0.2										
					10.0		2302-052214-0956	0.0										
							BOTTOM OF EXPLORATION 10.0 FT											

Note: Backfill with clean sand upon completion.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-210

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WA-211

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 21 May 2014
Finish 21 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location WA-211

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE PAD	0.0										
						SM	Dark gray silty SAND with gravel (SM), mps 4.0 in., 15% concrete pieces, 10% brick fragments, 5% cinder-like fragments, no structure, no odor, dry	0.0 0.1 0.0	20	15	15	20	15	15				
		CR-2 22	2.0 4.0			SM	Similar to above, except dark brown, 5% metal fragments, 10% slag-like fragments, 5% asphalt-like fragments, no odor, moist 2302-052214-1504	0.0 0.0 0.3 0.7 0.0	15	15	20	20	15	15				
		CR-3 24	4.0 6.0		4.0	GP	Dark brown poorly graded GRAVEL with sand (GP), mps 2.5 in., 45% slag-like fragments, 10% glass-like fragments, 5% wood fragments, no structure, no odor, moist 2302-052114-1504	0.0 0.3 0.0 0.4 0.0 0.1 0.2 0.6	50	10	15	15	10					
5		CR-4 23	6.0 8.0		7.0	GP	Similar to above, except black, wet 2302-052114-1510	0.4 0.2	20	40	15	15	10					
		CR-5 19	8.0 10.0		8.0	SP	Brown to dark brown poorly graded SAND with gravel (SP), mps 1.0 in., 10% slag-like fragments, 5% cinder-like fragments, 5% glass fragments, no structure, no odor, wet 2302-052114-1519	0.0 0.0 0.0 0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: Backfill with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WA-211

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WB-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.3		GRAVEL fragments											
						SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., brick pieces, cinder-like fragments, no structure, no odor, dry -FILL-	1.3 1.7	10	10	10	20	30	20				
								0.7										
								1.3										
		CR2 22	2.0 4.0				2302-103113-1023	1.6 0.4										
							2302-103113-1029	0.9										
						SM	Similar to above except tan in color, brick fragments	2.1										
		CR3 9	4.0 6.0		4.0	SP	Light brown poorly-graded SAND with gravel (SP), mps 1.5 in., brick fragments, no structure, no odor, wet -FILL-	3.6	20	15	15	40	10					
5							2302-103113-1034	0.7										
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. WB-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WB-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 26	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry		10	15	15	20	20	20				
							2302-103113-0920	1.3										
								0.6										
						SM	Similar to above except, brick fragments, cinder-like fragments, ash-like fragments, no structure, no odor, dry											
		CR2 20	2.0 4.0				-FILL-	1.3										
					2.5													
						GP	Dark gray poorly-graded GRAVEL with sand (GP), mps 1/4 in., cinder-like material, no structure, no odor, moist	1.2		70	15	15					
							-FILL-	2.1										
							2302-103113-0924	3.7										
		CR3 23	4.0 6.0					1.3										
5																		
								0.8										
							2302-103113-0928											
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. WB-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WB-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							GRAVEL Pavement											
		CR1 23	0.0 2.0		0.3	SM	Dark brown silty SAND with gravel (SM), mps 1/2 in., no structure, no odor, dry	16.2		10	20	20	30	20				
					1.2			10.9										
					1.4		Brick pieces											
						SM	Dark brown silty SAND with gravel (SM), mps 1/2 in, brick fragments, no structure, no odor, dry	7.4		10	20	20	30	20				
		CR2 22	2.0 4.0				2302-103113-0940	13.2										
								16.2										
								9.1										
					3.5													
							Slag-like fragments, mps 3/4 in	4.2										
					3.9													
							Brick pieces, mps 3.5 in	3.7										
		CR3 7	4.0 6.0		4.3	SP-SM	Dark gray poorly-graded SAND with gravel (SP-SM), mps 2.5 in., brick pieces, cinder fragments, slag-like fragments, no structure, petroleum-like odor, moist	42.7	30	10	20	20	10	10				
5							2302-103113-0950											
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. WB-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WB-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																		
		CR1 23	0.0 2.0	NO WELL INSTALLED	0.3	GP	GRAVEL fragments, mps 2.0 in.		100									
						SM	Dark brown silty SAND with gravel (SM), mps 1/2 in., brick fragments, no structure, no odor, dry -FILL- 2302-103113-1004	0.6 0.7 0.2 0.4		15	15	20	30	20				
		CR2 24	2.0 4.0			SM	Similar to above except, mps 3.0 in., concrete pieces, slag-like fragments, more medium to coarse sands -FILL- 2302-103113-1007	1.3 2.7 4.1 1.6										
5		CR3 5	4.0 6.0			SM	Brick pieces, mps 3.5 in., slag-like fragments -poor recovery- 2302+103113-1012	0.9										
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. WB-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 13 June 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WB-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			ASPHALT	0.0										
							Fill Material (brick, slag, glass, copper wire)	0.0										
						SM	Black silty SAND with gravel (SM), moist	0.0										
								0.0										
		CR1 24	2.0 4.0				Similar to above 0387-061314-1416	0.0										
								0.0										
								0.0										
					3.8			0.0										
		CR2 24	4.0 6.0			SP-SM	Yellow/gray/brown poorly graded SAND with silt and gravel, large brick, saturated	0.0										
					4.4	GP	Black poorly graded GRAVEL with sand (GP) 0387-061314-1419	0.0										
5								0.0										
								0.0										
		CR3 24	6.0 8.0				Similar to above 0387-061214-1425	0.0										
								0.0										
								0.2										
					7.5	SM	Grayish-black silty SAND with GRAVEL (SM), organic odor, saturated	1.8										
					8.2	GP	Grayish-black silty GRAVEL with sand, saturated 0387-061214-1431	0.0										
								0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	3CR

Boring No. WB-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 13 June 2014
Finish 13 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location WB-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.6		ASPHALT Base Course - gravel 0.75 in. minus	0.0										
					0.8		Yellow brick layer from 0.6 to 0.8	0.0										
					1.0	SP-SM	Fill Material (fabric, brick, slag, wood, glass, tile) Dark brown/black poorly graded SAND with silt and gravel (SP-SM)	0.0										
		CR1 24	2.0 4.0				Similar to above	0.0										
					3.0			0.0										
						GP	Black poorly graded GRAVEL (slag material), saturated from 3.0 to 3.5 ft 0387-061314-1114	0.0										
		CR2 24	4.0 6.0				Similar to above 0387-061314-1120	0.0										
5								0.0										
					5.6			0.0										
						SM	Black/grayish-black silty SAND with fine gravel (SM), saturated	0.0										
		CR3 24	6.0 8.0				Similar to above 0387-061314-1127 Organic odor	0.0										
		CR4 24	8.0 10.0				Similar to above 0387-061314-1137	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WB-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WB-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 19 May 2014
Finish 19 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location WB-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.3	GC	4.0 in. ASPHALT Fill Material (wood, glass, slag) Black clayey GRAVEL with sand (GC), mps 0.5 in., no odor, moist, 20% clayey pieces, 15% asphalt-like fragments, two nail-like fragments	0.0	15	25	5	20	20	15				
		CR1 24	2.0 4.0		2.0	GP	Black poorly graded GRAVEL with sand (GP), mps 2.5 in., no odor, moist, 10% wood-like fragments Note: 4.0 in. pipe at 32.0 in.	0.7 0.0	25	15	15	15	20	10				
						GP	Note: 10 brick-like pieces removed from vac boring. Similar to above, except dark brown, wet Note: Water at 3.25 ft.	0.0 0.0	25	15	15	15	20	10				
		CR2 18	4.0 6.0		4.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 0.5 in., no odor, wet, 10% wood-like fragments Note: Minimal recover due to water	0.0	35	10	10	10	20	15				
5					5.0	GP-GM	0710-051914-1145; 0710-062714-0953 Dark gray poorly graded GRAVEL with silt and sand (GP-GM) 0710-062714-0956	0.0										
		CR3 22	6.0 8.0		6.2	SM	Dark gray silty SAND with gravel (SM)	0.0										
					7.4	SM	Medium gray silty SAND with gravel (SM) 0710-062714-1006											
		CR4	8.0 10.0		8.0	SP-SM	Medium brown poorly graded SAND with silt and gravel (SP-SM), sheen											
					9.1	GP-GM	Medium gray poorly graded GRAVEL with sand and silt (GP-GM) 0710-062714-1016											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WB-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. WB-206

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 03 June 2014
Finish 03 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location WB-206

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR	--	Rig Make & Model:
Inside Diameter (in.)	6	1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	3.5		3.0 ft to 3.5 ft CONCRETE Note: Terminated boring, moded to the East Per Ana and Dave (new boring WB-208)											
							BOTTOM OF EXPLOARTION 3.5 FT Note: 14.0 ft North of original WB-201											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	3.5
Rock Cored (ft)	-
Samples	'-

Boring No. WB-206

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WB-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 26 June 2014
Finish 26 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location WB-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5	SM	6.0 in. CONCRETE NO VOID Fill Material (metal, slag, wood) Light brown silty SAND with gravel (SM)	0.0										
					1.2		Concrete 0710-062614-1119	0.0										
		CR2 20	2.0 4.0					0.0										
					3.2	SM	Black silty SAND with gravel (SM) 0710-062614-1124	0.0										
		CR3 22	4.0 6.0		4.0	SM	Light brown silty SAND with gravel (SM) Note: Concrete fragments	0.0										
5					4.8	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.0										
					5.8		0710-062614-1132	0.0										
		CR4 22	6.0 8.0		6.5	GP-GM	Black poorly graded GRAVEL with sand and silt (GP-GM)	0.0										
					7.2	ML	Medium brown and black sandy SILT (ML)	0.3										
					7.9	SM	Black silty SAND with gravel (SM) 0710-062614-1139	5.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. WB-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WC-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-309
Sheet No. 1 of 1
Start 02 October 2013
Finish 02 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation Datum
Location SB-06

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: -
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: NA
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIRKNIFE		0.0	NO WELL INSTALLED	0.3	0p	ASPHALT (Jack Hammer)	0.0										
			1.0		0.8		Gray-black GRAVEL sub-base		100									
			1.5					0.0										
						SM	Dark brown, silty SAND with gravel (SM), mps 8.0 in., no structure, no odor, wet at 3.5 ft, ~15% wood chips, metal, and glass fragments		10	15	10	15	30	20				
							Note: collect 2351-100213-1415, 2-4 ft hand auger	0.0										
					4.0		BOTTOM OF EXPLORATION 4.0 FT	0.0										
							Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/2/13	1010	0	NA	4.0	+3.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 4
Rock Cored (ft) -
Samples 1HA

Boring No. WC-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WC-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 02 October 2013
Finish 02 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation Datum
Location PDSB-22

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: N/A
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.2		ASPHALT											
	AIR KNIFE		1.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 2 in., trace roots, no odor, moist, trace gray silt from 1.0 to 2.0 ft	0.3	10	10	10	20	30	20				
			2.0		2.0													
			2.5			SM	Black silty SAND with gravel (SM) no structure, no odor, wet at 3.5 ft, 50% cinders, brick, wood, and concrete fragments, trace glass	0.0	10	10	15	25	20	20				
							-FILL-	0.2										
5							Collect sample 2351-100213-0935 (4.0 to 6.0 ft)	1.0										
					6.0		BOTTOM OF EXPLORATION 6.0FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/2/13	0915	0	NA	4.0	± 3.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.0
Rock Cored (ft)	-
Samples	1H

Boring No. WC-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WC-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 07 November 2013
Finish 07 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WC-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED	0.3	SM	-ASPHALT-											
							Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, dry	0.3	5	15	10	20	30	20				
							-FILL-	0.2										
								0.1										
		CR2 23	2.0 4.0			SM	Similar to above except, with slag-like fragments	0.7										
							2302-110713-0833	1.1										
								0.3										
								0.4										
		CR3 17	4.0 6.0					1.0										
5								1.3										
								1.4										
						SM	Similar to above except, wet	0.9	10	20	15	15	20	20				
					6.0		2302-110713-0036											
		CR4 15	6.0 8.0			SP-SM	Brown to dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.0 in., slag-like fragments, no structure, no odor, wet	0.3	5	10	15	40	20	10				
								1.2										
							2302-110713-0846	1.7										
								2.1										
		CR5 13	8.0 10.0			SP-SM	Similar to above	2.6										
								4.1										
							2302-110713-0851	3.7										
								6.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WC-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WC-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 07 November 2013
Finish 07 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WC-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 13	0.0 2.0	NO WELL INSTALLED	0.3		-ASPHALT-											
						SM	Dark brown silty SAND with gravel (SM), mps 1/2 in., brick fragments, no structure, no odor, dry -FILL-			15	15	20	30	20				
		CR2 24	2.0 4.0			SM	Similar to above except light brown in color, no brick fragments, moist -FILL- 2302-110713-1107			15	10	20	25	30				
		CR3 16	4.0 6.0		4.0	SP	Dark gray poorly-graded SAND with gravel (SP), mps 2.0 in., slag-like fragments, cinder-like fragments, no structure, no odor, wet 2302-110713-1113		10	25	15	40	5	5				
		CR4 18	6.0 8.0		6.5	SM	Dark gray silty SAND with gravel (SM), mps 1/2 in., slag-like fragments, glass fragments, no structure, no odor, wet 2302-110713-1120			25	5	20	30	20				
5		CR5 7	8.0 10.0			SM	Similar to above except light brown in color, poor recovery 2302-110713-1124											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WC-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WC-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 07 November 2013
Finish 07 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WC-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 2.0	NO WELL INSTALLED	0.3		-ASPHALT-											
						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry	0.2	10	15	15	20	20	20				
							-FILL-	1.6										
								0.6										
		CR2 23	2.0 4.0					10.4										
								9.2										
								12.2										
							2302-110713-1044	10.3										
5		CR3 22	4.0 6.0			SM	Similar to above except dark gray, more slag-like fragments, wet	10.7	10	25	10	15	20	20				
							-FILL-	10.1										
							2302-111713-1049											
					6.0													
		CR4 24	6.0 8.0			SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., slag-like fragments, glass fragments, metal fragments, no structure, no odor, wet	11.6		25	10	40	15	10				
							-FILL-	13.2										
							2302-110713-1502	9.1										
								7.6										
		CR5	8.0 10.0			SP-SM	Similar to above except, poor recovery-wet, slag fragments 2302-110713-1102	14.1										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WC-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WC-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 07 November 2013
Finish 07 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WC-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 12	0.0 2.0	NO WELL INSTALLED	0.3	SM	Dark brown silty SAND with gravel (SM), mps 3/4 in., brick fragments, no structure, no odor, dry	3.4		20	10	25	20	25				
							-FILL-	1.7										
		CR2 23	2.0 4.0			SM	Similar to above except red-brown in color, no brick fragments 2302-110713-0932	2.1		10	15	20	35	20				
								5.6										
								9.2										
								7.8										
		CR3 16	4.0 6.0		4.0	GP	Poorly graded GRAVEL with sand (GP), slag-like fragments, no odor, wet 2302-110713-0936	8.7		70		15	15					
5								3.6										
								9.4										
								3.1										
		CR4 13	6.0 8.0			GP	Similar to above	6.5										
								7.1										
							2302-110713-0939	13.2										
								9.2										
		CR5 7	8.0 10.0		8.0	SP	Dark gray poorly-graded SAND with gravel (SP), mps 1/2 in., slag-like fragments, no structure, no odor, wet 2302-110713-0943			10	10	20	55	5				
								5.8										
								6.2										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WC-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WC-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 07 November 2013
Finish 07 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location WC-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 2.0	NO WELL INSTALLED	0.3		Asphalt Cap											
						SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, dry	1.6	5	10	15	30	20	20				
								0.2										
								1.9										
		CR2 23	2.0 4.0		2.0	SP	Dark brown poorly-graded SAND with gravel (SP), mps 2.5 in., concrete fragments, slag-like fragments, no structure, no odor, dry	2.1	10	25	10	40	10	5				
							-FILL-	0.6										
							2302-110713-0901	0.7										
								1.2										
5		CR3 11	4.0 6.0			SP	Similar to above except, mps 3.0 in., wet, poor recovery, concrete pieces	0.9										
							2302-110713-0906	0.7										
								3.1										
		CR4 18	6.0 8.0		6.0	SM	Red-brown to dark brown silty SAND with gravel (SM), mps 1.5 in., slag-like fragments, cinder-like fragments, no structure, no odor, wet	1.4		20	10	30	20	20				
							-FILL-	7.6										
							2302-110713-0914	13.1										
		CR5 12	8.0 10.0			SM	Similar to above	5.4										
								6.1										
							2302-110713-0919	3.2										
								4.6										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	5CR

Boring No. WC-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WC-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 22 May 2014
Finish 22 May 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location WC-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.2	SM	0.2 IN. ASPHALT CAP	0.0										
							Dark brown silty SAND with gravel (SM), mps 1.5 in., 5% brick fragments, 5% concrete fragments, no structure, no odor, dry	0.0	15	10	20	15	20	20				
							2302-052214-1041	0.0										
								0.7										
		CR-2 24	2.0 4.0		2.5			0.0										
						GP	Dark gray to black poorly graded GRAVEL with sand (GP), mps 1.0 in., 10% slag-like fragments, 30% cinder-like fragments, 10% brick fragments, 5% metal fragments, no structure, no odor, moist2302-052214-1045	0.1	15	40	15	15	15					
								0.3										
								0.0										
		CR-3 20	4.0 6.0					0.2										
								0.0										
5						GP	Similar to above except dark brown in color, wet 2302-052214-1247	0.0										
								0.3										
								0.1										
		CR-4 24	6.0 8.0					0.0										
								0.2										
								0.0										
						GP	Similar to above except gray brown in color, glass fragments 2302-052214-1252	0.0										
								0.0										
								0.4										
		CR-5 24	8.0 10.0					0.0										
								0.3										
							2302-052214-1301	0.6										
								0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Note: Backfill with clean sand upon completion.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. WC-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WD-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 01 October 2013
Finish 01 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location WD-001 former FL-21

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED		SW-SM	Dark brown well graded SAND with silt and gravel (SW-SM), mps 60 mm, no structure, no odor, dry 2302-100113-0923	0.0	20	20	20	30	10					
								0.0	10	10	20	20	30	10				
								0.0										
								0.0										
		CR2 23	2.0 4.0		2.0	SM	Red-brown, silty SAND with gravel (SM), mps 30 mm, cinder-like fragments, brick-like fragments, no structure, no odor, dry 2302-100113-0931		30	10		35	10	15				
								0.0										
								0.0										
								0.0										
		CR3 22	4.0 6.0			SM	Similar to above except brown											
5						SM	Red to brown silty SAND (SM), mps 40 mm, 10% brick, no structure, no odor, dry 2302-100113-0943	0.3	10	10		20	30	30				
								0.4										
					5.5	SP-SM	Dark gray poorly graded SAND with silt (SP-SM), mps 10 mm, cinder-like fragments, no structure, no odor, moist	0.7		50		30	10	10				
					6.0	SM		0.7	10	20	20	10	10	30				
		CR4 13	6.0 8.0			SM	Olive-brown silty SAND with gravel (SM), mps 10 mm, 40% cinders 2302-100113-0954											
		CR5 17	8.0 10.0			SM	Similar to above except, with slag-like fragments, and glass fragments, mps 30 mm 2302-100113-1024		10	30	20	10	10	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											
							Note: Borehole filled woth clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 5CR

Boring No. WD-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. WE-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-307
Sheet No. 1 of 1
Start 10 October 2013
Finish 10 October 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation Datum
Location TB-17

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 override
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 62	0.0 6.0	NO WELL INSTALLED		SP-SM	Brown poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., root strands, "not sticky", slag-like material, 10% cinder-like material, no structure, no odor, dry		20	20	20	30	10					
5		CR2	6.0 8.0		6.0	SW-SM	Red brown well graded SAND with silt and gravel (SP-SM), mps 1.5 in., 10 % brick fragments and particles, 10% slag-like fragments, no structure, no odor, wet	13.1 10.3 0.9	20	10	20	20	20	10				
						SP-SM	Similar to above except dark gray, petroleum-like odor 2302-101013-0932	28.4 16.3 32.1	20	10	20	20	20	10				
		CR3	8.0 10.0			SP-SM	Similar to above except, petroleum-like odor from 8.0 ft to 8.5 ft with sheen to water, slag-like fragments 2302-101013-0943	10.3 0.3	20	10	20	20	20	10				
10					10.0		-FILL-	0.1 0.2										
							BOTTOM OF EXPLORATION 10.0 FT Note: backfilled borehole with clean sand upon completion, location moved 3.0 ft to the South.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10
Rock Cored (ft) -
Samples 3CR

Boring No. WE-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-307TB_PDI_3.GPJ 30 Jul 15

SOUTH BORING REPORTS

TEST BORING REPORT

Boring No. SA-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 08 October 2013
Finish 08 October 2013
Driller R. Beeman
H&A Rep. D. Mukherjee
Elevation Datum
Location Moved 2.5 ft East, SB-118

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						SM	Black silty SAND (SM), mps 1.7 in., no structure, no odor, moist, plan roots, cinders, slag, crushed brick, glass and nails	0.0	5	10	25	20	20	20				
	AIR KNIFE		1.0					0.0										
			2.0															
			2.5				Collect sample 2351-100813-1205 (2.0 to 4.0 ft)	0.0										
					3.5	SP-SM	Tan-brown poorly graded SAND with silt and gravel (SP-SM), mps 2.0 in., no structure, no odor, moist, wet from 5.0 ft, approximately 20% brick fragments and glass particles	0.0	10	10	20	30	20	10				
5				NO WELL INSTALLED			Collect sample 2351-100813-1215 (4.0 to 6.0 ft)	0.0										
								0.0										
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/8/13	-	-	NA	6.0	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.0
Rock Cored (ft)	-
Samples	2H

Boring No. SA-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 June 2014
Finish 30 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SA-001

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.1	SM	Red brick, rubble at surface NO VOID	00.0										
					0.7		Brown silty SAND with gravel (SM)											
						SP-SM	Brown poorly graded SAND with gravel (SP-SM)	0.0										
								0.0										
						SP-SM	Similar to above except black 0710-063014-1525	0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
							Note: Fill material: Red brick and wood.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2.0
Rock Cored (ft) -
Samples 1CR

Boring No. SA-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 08 October 2013
Finish 08 October 2013
Driller R. Beeman
H&A Rep. D. Mukherjee
Elevation Datum
Location 3 ft North of Plan, HB-01

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						SM	Black silty SAND (SM), mps 1.5 in., no structure, no odor, moist, plant roots, concrete and brick fragments	0.0		10	25	25	20	20				
	AIR KNIFE		1.0				Collect sample 2351-100813-1020 (0.0 to 2.0 ft)											
								0.0										
			2.0			SM	Same as above, except with glass, nails, and wood chips											
			2.5					0.0										
				NO WELL INSTALLED			Collect sample 2351-100813-1100 (2.0 to 4.0 ft)	0.0										
					4.0													
5						SP-SM	Gray-brown poorly graded SAND with silt and gravel (SP-SM), mps 3.0 in., no structure, no odor, wet at 4.5 ft, 10% brick fragments, coal, and glass fragments	0.0	10	10	20	35	15	10				
								0.0										
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/8/13	-	-	NA	6.0	± 4.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.0
Rock Cored (ft)	-
Samples	2H

Boring No. SA-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-003

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 07 October 2013
Finish 05 November 2013
Driller J. Posterick/R. Beeman
H&A Rep. S. Brousseau/D. Mukherjee
Elevation Datum
Location 3 ft Southwest of plan, SB-012

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						SP	Dark brown to black poorly graded SAND (SP), mps 2.0 in., no structure, no odor, dry to moist, approximately 60% cinders, slag and coal, trace organics	0.0	5	5	40	30	20					
	AIR KNIE		1.0															
			2.0					0.0										
			2.5															
					3.0			0.0										
						SP	Brown to tan poorly graded SAND with gravel (SP), mps 3.0 in, no structure, no odor, moist, 40% cinders, slag and coal		5	10	40	30	10	5				
					4.0			0.0										
						SM	Black silty SAND with gravel (SM), mps 2.1 in., no structure, slight chemical odor, wet at 5.5 ft		5	5	30	25	20	15				
5							Collect sample 2351-100813-0950 (4.0 to 6.0 ft)	0.0										
							Cleared to 6.0 ft											
					6.0													
		CR1 15	6.0 8.0			SM	Brown to gray silty SAND (SM), mps 3.3 in., no structure, hydrocarbon odor, wet, ~5% concrete, trace glass and organics, slight sheen on water	23.8	5	5	15	35	25	15				
		CR2 14	8.0 10.0			SM	Brown silty SAND (SM), mps 2.0 in., no structure, slight hydrocarbon odor, wet, trace glass and organics	5.1	5	5	25	30	20	15				
10		CR3 10	10.0 12.0			SM	Brown silty SAND (SM), mps 2.0 in., no structure, organic odor, wet, trace organics	0.0	5	5	15	25	25	25				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/08/13	-	-	NA	6.0	± 5.5
11/5/13	1400	0	6.0	8.0	± 6.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	1h, 4CR

Boring No. SA-003

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SA-003
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4 10	12.0 14.0	NO WELL INSTALLED		MH	Gray SILT (MH), mps 2.3 in., no structure, organic odor, wet, trace organics -FILL-	0.0				5	15	80				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: borehole backfilled with sand upon completion. Note: location air knife to 6.5 ft and backfilled with sand prior to drilling, begin sampling at 6.0 ft											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SA-003

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-004

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 07 October 2013
Finish 07 October 2013
Driller R. Beeman
H&A Rep. D. Mukherjee
Elevation Datum
Location 2.5 ft South of plan, SB-112

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						SW	Dark brown well graded SAND with gravel (SW), mps 3.0 in., no structure, no odor, moist, 25% brick, cinders and slag, trace plant roots	0.0	5	10	30	30	20	5				
	AIR KNIFE		1.0				-FILL-	0.0										
			2.0					0.0										
			2.5				Collect sample 2351-100713-1510 (2.0 to 4.0 ft)	0.0										
					3.0	SM	Brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, moist		5	10	25	20	20	20				
				NO WELL INSTALLED				0.0										
5							Collect sample 2351-100713-1515 (4.0 to 6.0 ft)	0.0										
								0.0										
					6.0		BOTTOM OF EXPLORATION 6.0 FT	0.0										
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/7/13	-	-	NA	6.0	± 6.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.0
Rock Cored (ft)	-
Samples	2H

Boring No. SA-004

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 November 2013
Finish 04 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.2	SM	Note: begin sampling at 2.0 ft CONCRETE NO VOID Dark brown silty SAND (SM),mps 0.8 in., no structure, organic odor, dry, ~50% cinders, slag, and coal	0.2		5	10	45	20	20				
		CR1 22	2.0 4.0			SM	Dark brown to black silty SAND (SM), mps 1.2 in., no structure, no odor, dry, ~50% cinders, slag, and coal	0.0		5	15	40	25	15				
							Note: no recovery, move location 15 ft West											
		CR2 15	4.0 6.0			SM	Similar to above except, moist, trace fire brick	0.1										
5		CR3 13	6.0 8.0			SM	Tan silty SAND with gravel (SM), mps 3.0 in., no structure, hydrocarbon odor, wet -FILL-	0.6	10	5	20	30	20	25				
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/4/13	1215	0	6.0	8.0	± 6.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 3CR

Boring No. SA-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SA-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 04 November 2013
Finish 04 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.5		CONCRETE NO VOID											
						SM	Dark brown to black silty SAND with gravel (SM), mps 3.5 in., no structure, no odor, dry, ~60% cinders, slag, and coal	0.1	5	10	25	25	20	25				
5		CR1 12	4.0 6.0			SM	Brown silty SAND (SM), mps 2.5 in., no structure, organic odor, wet	0.0	5	5	10	45	20	15				
		CR2 16	6.0 8.0			SM	Brown silty SAND with gravel (SM), mps 2.5 in., no structure, no odor, wet	0.0	10	5	15	35	20	15				
		CR3 6	8.0 10.0			SM	Gray-brown silty SAN D(SM),mps 1.0 in., no structure, organic odor, wet	0.0		5	15	40	25	15				
10		CR4 16	10.0 12.0			SM	Gray-brown silty SAND (SM),mps 2.0 in., no structure, organic odor, wet, trace organics	0.2	5	5	15	30	25	20				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/4/13	1400	0	4.0	6.0	± 4.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 5CR

Boring No. SA-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SA-105
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR5 18	12.0 14.0	NO WELL INSTALLED	12.0	MH	Gray SILT (MH), mps 1.0 in., no structure, organic odor, wet, trace wood and organics -FILL-	0.1				5	20	75				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: borehole backfilled with sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SA-105

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location moved 10.0 ft North from marked location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE NO VOID											
						SP	Dark brown poorly-graded SAND with gravel (SP), mps 3.0 in., no structure, no odor, dry, ~75% cinders, slag, and coal, trace organics	0.0										
		CR2 19	2.0 4.0			SP	Similar to above	0.0										
		CR3 12	4.0 6.0															
5					5.0	SM	Brown, silty SAND (SM), mps 3.0 in, no structure, no odor, wet at 5.0 ft	0.0										
		CR4 10	6.0 8.0			SM	Similar to above	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: unable to retrieve 6.0 ft. Drill to 8.0 ft and borehole collapsed (no sample), moved 1.5 ft West and pushed concrete to 5.0 ft (no sample), move 1.5 ft North East and sample from 5.0 ft to 8.0 ft Boring locations backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/5/13	0900	0	4.0	6.0	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4CR

Boring No. SA-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 03 June 2014
Finish 03 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SA-106

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.7		CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
						SM	Black silty SAND with gravel (SM), mps 0.5 in., 10% slag-like fragments, no odor, moist 0710-060314-1130	0.0	10	15	15	20	25	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. SA-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-107

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location moved 10.0 ft North of marked location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.4		CONCRETE NO VOID											
						SP	Dark brown to black poorly-graded SAND with gravel (SP), mps 1.0 in., no structure, no odor, dry, ~75% cinders, slag, and coal	0.0	5	45	30	15	5					
		CR1 18	2.0 4.0			SP	Dark brown poorly-graded SAND with gravel (SP), mps 2.5 in., no structure, no odor, dry, ~75% cinders, slag, and coal, trace organics	0.0	5	10	40	30	10	5				
		CR2 20	4.0 6.0			SP	Similar to above except, wet	0.0										
5					5.0	SM	Brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, wet		10	5	25	30	15	15				
		CR3 11	6.0 8.0			SM	Similar to above -FILL-	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/5/13	1100	0	4.0	6.0	± 4.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	3CR

Boring No. SA-107

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-107

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 June 2014
Finish 30 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SA-107

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 24	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. Concrete at surface NO VOID											
						GP	Black poorly graded GRAVEL with sand (GP)											
					1.6													
					2.0	SP	Black poorly graded SAND with gravel (SP) 0710-063014-1500 0710-063014-0004 BOTTOM OF EXPLORATION 2.0 FT											
							Note: Fill material: Asphalt, slag, and concrete.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SA-107

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SA-108

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location SA-108

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: Location air knife to 6.5 ft and backfilled with sand prior to drilling Begin sampling at 6.0 ft. -RUBBLE FILL-											
5		CR1 14	6.0 8.0			SM	Brown silty SAND (SM), mps 3.0 in., no structure, no odor, wet -FILL-	0.0	5	5	10	35	20	25				
					8.0		BOTTOM OF EXPLORATION 8.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	1CR

Boring No. SA-108

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SA-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 08 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location SA-201A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Fill material - brick, concrete, shells Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
						SM	Black silty SAND with gravel (SM), mps 0.5 in., 5% wood-like fragments, 10% organic-like fragments, no odor, moist		5	10	10	15	40	20				
	AIR		2.0			SM	Similar to above (SM), except mps 2.0 in., wet 0710-060314-0950 0710-060314-0955		5	10	10	20	30	15				
	KNIFE		4.0			SM	Similar to above, except light brown 0710-060314-1010		15	10	15	25	20	15				
5				NO WELL INSTALLED	5.0	SC	Light brown clayey SAND with gravel (SC), mps 1.0 in., no structure, no odor, moist 0710-060314-1040 0710-060314-0003		5	15	5	20	40	25				
		CR1 24	6.0 8.0		6.0		Refusal at 6.0 ft	0.0										
						SM	Gray silty fine to coarse SAND (SM), non plastic, no odors, wet	0.0										
					7.5	SM	Grayish-brown silty SAND with gravel and cobbles (SM), saturated 0387-061012-1254	0.0										
		CR2 24	8.0 10.0			SM	Similar to above	0.0										
					9.0	SP/GP	Yellow poorly graded SAND with gravel/poorly graded GRAVEL with sand 0387-061074-1302	0.0										
10		CR3 24	10.0 12.0			SP/GP	Similar to above 0387-061014-1308	0.0										
					11.0	ML	Soft dark gray SILT with sand (ML), saturated	0.0										
		CR4 24	12.0 14.0			CL/ML	Dark gray lean CLAY/SILT (CL/ML), shells 0387-061014-1319	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
- Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SA-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SA-201
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
								0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SA-201

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SA-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 02 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location SA-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
						SM	Dark brown silty SAND with gravel (SM), mps 0.25 in., 5% slag-like fragments, 5% organic-like fragments, no odor, moist		10	10	20	20	25	15				
	AIR		2.0			SM	Similar to above, except 15% slag-like fragments 0710-060214-1500											
						SM	Similar to above, except 50% black/50% brown, wet		10	5	10	15	35	25				
	KNIFE		4.0			SM	Similar to above, except 25% tan/25% yellow-brown/50% light brown, no organic-like fragments 0710-060214-1515											
5				NO WELL INSTALLED														
		CR1 24	6.0 8.0			SM	Similar to above, except yellow-brown 0710-060214-1530	0.0	15	10	10	20	20	25				
					6.5		Pre-cleared to 6.5 ft	0.0										
						SM	Fill Material (brick) Grayish-brown silty SAND (SM), saturated 0387-061014-1421	0.0										
					7.6			0.0										
		CR2 20	8.0 10.0			SM	Grayish-brown poorly graded SAND with silt and gravel (SM), cobbles 0387-061014-1430	0.0										
								0.0										
							Cobble in tip of sample tube	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	2CR

Boring No. SA-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SB-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 11 June 2014
Finish 11 June 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum
Location SB-001

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
						SM	Red silty SAND with gravel (SM), mps 1.0 in., 50% brick-like fragments, 5% organic-like fragments, organic odor, moist		10	10	25	20	20	15				
						SM	Similar to above, except dark red-brown 0710-061114-0950											
						SM	Similar to above, except black, 15% brick-like fragments 0710-061114-1000 0710-061114-0002		15	15	20	20	15	15				
						SM	Similar to above, except light gray, petroleum-like odor											
5					5.5	SM	Similar to above, except wet, oil-like sheen 0710-061114-1010											
					6.5		BOTTOM OF EXPLORATION 6.5 FT											
							Note: Pre-cleared to 6.5 ft.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	0CR

Boring No. SB-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SB-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 October 2013
Finish 29 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation Datum
Location 3 ft West of plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model:
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. dia. Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						SP	Dark brown poorly graded SAND with gravel (SP), mps 3.0 in., no structure, no odor, dry, 50% cinders, slag, organics, whole bricks and glass fragments	0.0	5	10	35	30	15	5				
	AIR KNIFE		1.0				Collect sample 2351-100413-1410 (0.0 to 0.2 ft)	0.0										
			2.0		2.0			0.0										
			2.5	NO WELL INSTALLED			BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion.	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2.0
Rock Cored (ft) -
Samples 1H

Boring No. SB-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SB-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SB-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 ?	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID Fill Material (brick wood, tile, slag)											
					1.0	SM	Yellowish-brown silty SAND (SM)											
		CR2 24	2.0 4.0		2.5	SM	Dark brown silty SAND with gravel (SM)	0.3 0.7 0.4										
							Large brick at 3.5 ft	0.4										
		CR3 24	4.0 6.0		4.0	SP	Dark brown poorly graded SAND with gravel and silt (SP)	0.7 0.2 0.2										
5							From 5.5 to 6 ft, GRAVEL, slight petroleum-like odor	0.2										
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: Dave and Ana change sampling - stopped at 6 ft instead of going to 10 ft.	0.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 6.0
Rock Cored (ft) -
Samples 3CR

Boring No. SB-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED		GM	Red-brown silty GRAVEL with sand (GM), mps 3.0 in., no structure, organic odor, dry, ~60% brick, trace glass, wood, organics, and tar-like material (roof-like)		30	20	10	10	15	15				
		CR1 21	2.0 4.0		2.0	SM	Red-brown to gray-brown silty SAND with gravel (SM),mps 3.5 in., no structure, organic odor, dry, ~50% brick, metal, wood, asphalt, and organics	1.6	5	10	15	30	25	15				
5		CR2 22	4.0 6.0			SM	Brown silty SAND (SM), mps 5.0 in., no structure, musty odor, moist, ~20% concrete, wood, brick, and slag -FILL-	0.3	5	5	10	30	30	20				
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
not		encountered			

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6
Rock Cored (ft)	-
Samples	2CR

Boring No. SC-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED		GM	Red-brown silty GRAVEL with sand (GM), mps 3.3 in., no structure, organic odor, dry, ~60% brick and concrete, trace organics	0.7	30	20	10	10	15	15				
		CR1 24	2.0 4.0		2.0	SM	Red-brown to brown silty SAND with gravel (SM), mps 3.0 in., no structure, organic odor, dry, ~50% brick, concrete, and wood	0.8	15	10	10	15	30	20				
5		CR2 10	4.0 6.0			SM	Brown silty SAND with gravel (SM), mps 3.0 in., no structure, organic odor, wet, ~10% wood, concrete, and metal, trace glass	1.9	5	5	10	30	35	15				
		CR3 16	6.0 8.0			SM	Dark gray silty SAND with gravel (SM), mps 3.5 in., no structure, concrete odor, moist, ~50% concrete, trace organics	24.5	15	10	15	20	25	15				
		CR4 21	8.0 10.0			SM	Gray-brown silty SAND with gravel (SM), mps 2.0 in., no structure, hydrocarbon odor, moist, gray staining -FILL-	104	5	5	15	15	35	25				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
not		encountered			

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	4CR

Boring No. SC-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 3.0 in., no structure, organic odor, dry, ~30% brick, concrete, and organics	6.1	15	10	10	25	25	15				
		CR1 24	2.0 4.0			SM	Red-brown silty SAND with gravel (SM), mps 3.0 in., no structure, musty odor, moist, ~30% brick and wood, trace cardboard and organics	4.3	10	5	15	25	25	20				
5		CR2 24	4.0 6.0			SM	Brown silty SAND with gravel (SM), mps 2.8 in., no structure, musty odor, moist, ~30% concrete, wire, brick, and wood, trace organics and glass	2.4	10	5	20	35	20	30				
		CR3 12	6.0 8.0		6.0	GP	Gray poorly-graded GRAVEL (GP), mps 3.5 in., no structure, no odor, wet, ~90% concrete, rubber tire, and wood	0.0	80	10	10							
		CR4 15	8.0 10.0		8.0	SM	Dark gray to black silty SAND with gravel (SM), mps 3.0 in., no structure, hydrocarbon odor, wet, ~30% concrete, metal, and wood, trace glass, black staining -FILL-	13.6	10	5	15	25	25	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/6/13	1615	0	8.0	10.0	± 8.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	4CR

Boring No. SC-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED		GM	Red-brown silty GRAVEL with sand (GM), mps 3.3 in., no structure, organic odor, dry, ~60% brick, 5% organics, trace glass	1.1	30	20	10	10	15	15				
					2.0													
		CR1 24	2.0 4.0			SM	Red-brown to brown silty SAND with gravel (SM), mps 2.5 in., no structure, organic odor, ~40% brick, wood, and concrete, trace asphalt and organics	0.8	10	5	10	30	30	15				
5		CR2 14	4.0 6.0			SM	Dark gray silty SAND with gravel (SM), mps 3.0 in., no structure, musty odor, moist, ~30% concrete, trace organics	0.0	20	10	15	25	15	15				
		CR3 11	6.0 8.0			SM	Gray silty SAND with gravel (SM), mps 3.8 in., no structure, musty odor, wet from drill water, ~75% concrete	0.0	15	10	15	15	25	20				
		CR4 15	8.0 10.0			SM	Gray silty SAND with gravel (SM), mps 3.0 in., no structure, hydrocarbon odor, oily, gray and black staining -FILL-	24.5	15	10	15	15	25	20				
10					10.0		BOTTOM OF EXPLORATION 10.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/6/13	1145	0	10.0	10.0	± 8.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10
Rock Cored (ft)	-
Samples	4CR

Boring No. SC-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 09 June 2014
Finish 09 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SC-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface Area - vegetation, brick Fill Material (rock, brick, metal pipes, wood debris)											
		CR1 24	4.0 6.0			SP	Medium brown poorly graded SAND with silt and gravel (SP)	0.0										
					4.8			0.0										
5						SM	Yellowish-brown silty fine to medium SAND (SM) 0387-060914-1552, 0387060914-002	0.0										
					5.6													
		CR2 24	6.0 8.0			SP	Medium brown poorly graded SAND with gravel and silt (SP), slight odor 0387-060914-1603	0.0 11.0 20.0										
					7.0													
		CR3 20	8.0 10.0			SM	Grayish-brown silty SAND with gravel (SM), moderate petroleum-like odor, concrete in rip of sample barrel, sheen on water at soil	43.0 63.0										
						SM	Similar to above	44.0 34.0 60.0 37.0										
10		CR4 ?	10.0 12.0		10.0	SM	Similar to above, less odor	10.0 6.0 5.0										
					11.6													
					12.0	SP	Grayish-brown poorly graded SAND with gravel and silt (SP)	5.0										
							BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SC-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SC-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 09 June 2014
Finish 09 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SC-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface Area - vegetation, brick Fill Material (rock, brick, metal pipes, wood debris)											
		CR1 24	4.0 6.0			SP	Medium grayish-brown poorly graded SAND with silt and gravel (SP), slight odor	11.0 10.0										
5					5.6													
		CR2 24	6.0 8.0			SP	Concrete layer Below concrete in bit of sample 2.0-in. steel pipe Poorly graded SAND with gravel and silt (SP), slight petroleum-like odor, sheen on water and sample, cobbles	8.0 11.0 25.0 37.0 42.0										
		CR3 24	8.0 10.0		8.0	SM	Grayish-brown silty SAND with gravel (SM), slight odor, large cobbles	13.0 11.0 19.0										
10		CR4 24	10.0 12.0		10.0	SP	Dark grayish-brown poorly graded SAND with gravel and silt (SP)	6.0 10.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT	12.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SC-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 09 June 2014
Finish 09 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SC-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0				NO WELL INSTALLED			Surface Area - brick, vegetation Fill Material (concrete, brick, wood, fabric, large cobbles)	
		CR1 24	4.0 6.0			SP	Medium grayish-brown poorly graded SAND with silt and gravel (SP) 0387-060914-1326	0.7
5							Lots of debris between 5 and 5.5 ft	1.1 0.5 0.3
		CR2 24	6.0 8.0		6.5			2.7
							Color change to black, slight sweet odor Concrete between 7 to 7.7 ft	3.3
					7.7		0387-060914-1331	1.2
		CR3 18	8.0 10.0			SP	Gray/white poorly graded SAND with gravel and silt (SP), slight petroleum-like odor, cobble present in sample 0387-060914-1339	27.0 32.0 31.0
10								20.0
		CR4 12	10.0 12.0			SP	Similar to above, large cobble in bit - very poor recovery 0387-060914-1348	20.0 18.0
					12.0		BOTTOM OF EXPLORATION 12.0 FT	

Gravel		Sand			Fines	Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SC-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SC-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SC-204B

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface Area - grass, brick - moved location three times to get pass obstruction at 5.5 ft Fill Material (concrete, brick, metal, wood, pipe)											
		CR1 24	4.0 6.0			SP	Medium brown poorly graded SAND with silt and gravel (SP) 0387-061014-0825 0387-061014-002	2.0 12.0										
5					5.2		Wood debris	21.0										
		CR2 24	6.0 8.0		5.7	SP	Black poorly graded SAND with gravel and silt (SP), saturated 0387-061014-0832	22.0 6.0										
					6.8		Concrete layer (basement floor?)	6.0										
					7.2	SM	Medium dark brown silty SAND with gravel (SM), moist	10.0 12.0										
		CR3 20	8.0 10.0			SM	Similar to above, gravel and cobbles, strong petroleum-like odor	95.0 30.0										
					9.2	SM	Similar to above, except color change to gray/white, cobble, strong petroleum-like odor	102 52.0										
10		CR4 20	10.0 12.0			SM	Similar to above	9.0 7.0 10.0 11.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 12.0
Rock Cored (ft) -
Samples 4CR

Boring No. SC-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SC-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 10 June 2014
Finish 10 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SC-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface Area - vegetation, brick Fill Material (concrete, brick, tile, metal, bolts)											
		CR1 24	4.0 6.0			SM	Medium brown silty SAND with gravel (SM), moist	4.0 3.0 1.2 0.9										
5					5.8		Concrete layer											
		CR2 24	6.0 8.0		6.0	SM	Medium brown/black silty SAND with gravel (SM), wet, lots of wood debris	7.0 10.0 9.0										
					7.8		Concrete	69.0										
		CR3 18	8.0 10.0		8.0	GP	Black poorly graded GRAVEL with silt and sand (GP), moderate petroleum-like odor, sheen on water and soil, saturated, cobble	10.0 8.0 11.0 3.0										
10		CR4 24	10.0 12.0			GP	Similar to above	9.0 15.0										
					11.0	SM	Grayish-brown silty SAND with gravel (SM), some cobbles	7.0 10.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 12.0
Rock Cored (ft) -
Samples 4CR

Boring No. SC-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 June 2014
Finish 30 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0								
		CR1 24	4.0 6.0	NO WELL INSTALLED			Red brick rubble at surface	0.0
					4.5		NO VOID	0.0
						SM	Red brown silty SAND with gravel (SM)	0.0
5								0.0
							Layer of concrete	0.0
					6.0		0710-063014-1339	
		CR2 12	6.0 8.0			SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.0
								0.0
								0.0
								0.0
		CR3 22	8.0 10.0		8.0	GP	Dark gray poorly graded GRAVEL with sand (GP)	0.0
					8.8	SM	Black silty SAND with gravel (SM)	0.1
							Layer of concrete	2.5
					9.8			4.7
10						SP-SM	Black poorly grad SAND with gravel and silty (SP-SM)	
		CR4 20	10.0 12.0				0710-063014-1406	0.0
								0.0
					11.2	ML	Gray sandy SILT (ML)	0.5
								3.5
		CR5 24	12.0 14.0					0.0
								0.0
							0710-063014-1430	0.0
					14.0		BOTTOM OF EXPLORATION 14.0 FT	
							Note: Fill material: Red brick, slag, wood.	

Gravel		Sand			Fines	Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SC-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 2
Start 27 June 2014
Finish 27 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0			0.0				Rubble at surface NO VOID Fill Material (red brick, concrete, glass, tile, metal)											
			2.0															
		CR1 24	4.0 6.0	NO WELL INSTALLED	4.0	SP	Red-brown poorly graded SAND with gravel (SP)	0.0										
					4.8	SP	Gray poorly graded SAND with gravel (SP)	0.0										
5					5.8	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	0.0										
		CR2 24	6.0 8.0		6.3	SP	0710-062714-1347 Red-brown poorly graded SAND with gravel (SP)	0.0										
					7.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0710-062714-1403	0.0										
		CR3 24	8.0 10.0		8.0	SP	Black poorly graded SAND with gravel (SP) 0710-062714-1408 Note: Mostly wood and red brick.	0.0										
10		CR4 24	10.0 12.0		10.0		Concrete layer	0.0										
					11.5	SP	Black poorly graded SAND with gravel (SP), organic odor, wet	0.0										
		CR5 24	12.0 14.0		12.0	SP-SM	0710-062714-1417 Note: Mostly wood and concrete.	0.0										
					12.4	ML	Black poorly graded SAND with silt and gravel (SP-SM), petroleum-like odor	0.0										
					13.2	SP-SM	Dark brown sandy SILT (ML)	0.0										
					13.5	SP	Medium brown poorly graded SAND with silt and gravel (SP-SM)	0.0										
					14.0		Tan poorly graded SAND with gravel (SP) 0710-062714-1427											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SC-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SC-302

File No. 28612-327

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SC-302

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 June 2014
Finish 30 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0			0.0				Red brick rubble at surface Fill Material (red brick, wood, metal, concrete, wire)											
			2.0															
		CR1 24	4.0 6.0	NO WELL INSTALLED	4.0	SM	Brown silty SAND with gravel (SM)	14.5 12.3										
5					5.1		Concrete layer	1.5										
					5.5	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM)	0.5										
		CR2 24	6.0 8.0		6.0	SM	0710-063014-0909 Brown silty SANd with gravel (SM)	1.3										
					6.5	GP-GM	Black poorly graded GRAVEL with silt and sand (GP-GM), petroleum-like odor, wet	2.5										
					7.3	GP	Tan poorly graded GRAVEL with sand (GP) 0710-063014-0917	21.5 22.5										
		CR3 22	8.0 10.0					9.0 8.3										
					9.4	SM	Medium gray silty SAND with gravel (SM)	48.0										
10					10.0		0710-063014-0923	61.0										
		CR4 18	10.0 12.0			SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM)	4.5 7.5 6.5										
					11.8	GP	Gray poorly graded GRAVEL with sand (GP)											
		CR5 12	12.0 14.0		12.3		0710-063014-0933	4.3										
					12.5	GP	Cobbles in sample Poorly graded GRAVEL with sand (GP) 0710-063014-0939	5.5										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SC-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 June 2014
Finish 30 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			Red brick rubble at surface NO VOID Fill Material (red brick, copper wire, concrete, wood)											
		CR2 22	2.0 4.0				Concrete layer from 3.0 to 3.5 ft											
		CR3 22	4.0 6.0		4.0	SP	Red-brown poorly graded SAND with gravel (SP)	0.0										
5					5.0			0.0										
					5.3		Concrete layer	0.0										
					5.9	SP-SM	Black poorly graded SANd with silt and gravel (SP-SM)	0.0										
		CR4 22	6.0 8.0		6.0	SP	Concrete layer \0710-063014-0948 Black poorly graded SAND with gravel (SP)	0.0 1.5										
					7.2	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM) 0710-063014-0958 0710-063014-0003 Note: Went through steel pipe containing copper wire at approximately 7.0 ft.	5.0 26.0 40.0 0.0										
		CR5 24	8.0 10.0		9.3	SM	Gray silty SANd with gravel (SM)	1.5										
					9.6	ML	Light tan sandy SILT (ML)	2.5										
10					10.0	SP-SM	0710-063014-1003 Dark gray poorly graded SAND with silt and gravel (SP-SM)	1.3 4.5										
					11.5	ML	Dark gray sandy SILT (ML)	8.5 9.0										
					12.0	SM	0710-063014-1007 Gray silty SAND with gravel (SM)	1.3										
					12.5	ML	Gray sandy SILT (ML) 0710-063014-1020	2.5 3.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT	4.5										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SC-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-305

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 June 2014
Finish 30 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-305

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0			0.0				Red brick at surface NO VOID Fill Material (red brick, tile, wood, glass, concrete)											
			2.0															
		CR1 24	4.0 6.0	NO WELL INSTALLED	4.0	SM	Brown silty SAND with gravel (SM)	0.0										
					4.8	SP	Red-brown poorly graded SAND with gravel (SP) 0710-063014-1129 Note: Mostly consists of red brick and wood.	0.0 0.0										
5					6.0	SP-SM	Dark gray poorly graded SANd with gravel and silt (SP-SM), wet	1.6										
		CR2 18	6.0 8.0					0.5 1.5 2.5										
					7.8	SM	Brown silty SAND with gravel (SM), dry	2.7										
		CR3 22	8.0 10.0		8.0	GP	0710-063014-1136 Dark gray poorly graded GRAVEL with sand (GP)	2.0										
					8.8	GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM)	3.5 20.0										
					9.4	ML	Light gray sandy SILT (ML), strong petroleum-like odor, sheen 0710-063014-1141	24.8										
10		CR4 16	10.0 12.0					4.0 4.5										
					10.8	SP	Dark gray poorly graded SAND with gravel (SM) 0710-063014-1149	7.0										
		CR5 20	12.0 14.0		12.5	ML	Dark gray sandy SILT (ML) 0710-063014-1156	2.0 0.3 0.2 0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SC-305

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-306

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 June 2014
Finish 27 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-306

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0			0.0				Rubble at surface NO VOID Fill Material (red brick, wire, glass, concrete)											
			2.0															
		CR1 24	4.0 6.0	NO WELL INSTALLED	4.0	SP	Red-brown poorly graded SAND with gravel (SP)	1.2 7.0										
5					5.0	SP	Concrete layer	13.5										
					5.1		Brown poorly graded SAND with gravel (SP) 0710-062714-1511	17.6										
		CR2 12	6.0 8.0		6.0	SP	Note: Mostly wood and concrete. Similar to above, except more sand	24.2										
					6.8	SP	Dark brown poorly graded SAND with gravel (SP), lemon cleaner chemical smell, wet 0710-062714-1528	6.5 1.0										
		CR3 14	8.0 10.0		8.0		Note: Mostly steel and wood. Concrete layer	0.5 0.0										
					9.0	SP-SM	Medium gray poorly graded SAND with silt and gravel (SP-SM), strong petroleum-like odor, moist 0710-062714-1532	0.0 18.0										
10		CR4 12	10.0 12.0		10.0	GP-GM	Gray poorly graded GRAVEL with sand and silt (GP-GM)	26.0 3.0										
					11.2	SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM) 0710-062714-1543	3.2 4.0										
		CR5 24	12.0 14.0		12.8	ML	Brown sandy SILT (ML) 0710-062714-1548	4.5 8.0 5.5										
					14.0		BOTTOM OF EXPLORATION 14.0 FT	7.5 4.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SC-306

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SC-307

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 14 July 2014
Finish 14 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SC-307

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.2	SP-SM	Red brick rubble at surface NO VOID Gray brown poorly graded SAND with silt and gravel (SP-SM)		0.0									
									0.0									
									0.0									
		CR2 24	2.0 4.0		2.0	SP	Black poorly graded SAND with gravel (SP), moth-ball-like odor, foundry, sand, slag		81.0									
									26.0									
						SP	Gray brown poorly graded SAND with gravel (SP)		8.0									
									7.1									
		CR3 23	4.0 6.0						0.0									
5									0.0									
									0.0									
					5.5		Red brick -FILL-		0.0									
		CR4 20	6.0 8.0				0387-071414-1122		0.0									
									0.0									
									0.0									
		CR5 22	8.0 10.0				0387-071414-1125		1.4									
					8.5		Wood debris		1.9									
									2.8									
					9.5	SM	Brown and black silty SAND with gravel (SM)		5.8									
10					9.9													
		CR6 20	10.0 12.0		10.0	GP	Concrete 0387-071414-1128		49.0									
							Gray poorly graded GRAVEL with sand (GP), petroleum-like odor 0387-071414-1137		2.5									
									14.4									
									2.3									
									13.0									
		CR7 15	12.0 14.0		12.0	SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM), petroleum-like odor 0387-071414-1142		10.5									
									10.7									
									4.4									
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Fill material: Foundry sand, slag, wood, wire, concrete.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-307

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-308

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 14 July 2014
Finish 14 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SC-308

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		Red bick rubble on surface											
						SP	Yellow brown poorly graded SAND with gravel (SP)	0.0										
								0.0										
								0.0										
		CR2 24	2.0 4.0					0.0										
								0.0										
								0.0										
								0.0										
		CR3 22	4.0 6.0		4.0		Wood debris Drilled through metal-what appears to be an I-Beam	0.0										
5					5.0		Concrete 0387071414-0955											
		CR4 20	6.0 8.0		6.0	SP	Black poorly graded SAND with gravel (SP), foundry sand											
						SP	Similar to above except, wet 0387-071414-0958											
		CR5 20	8.0 10.0		8.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), slight petroleum-like odor 0387-071414-1001 0387-071414-0002	0.4 5.1 6.0 7.4											
10		CR6	10.0 12.0			SP-SM	Similar to above except, strong petroleum-like odor, oil-like droplets 0387-071414-1014	10.1 13.2 20.0 25.0											
		CR7	12.0 14.0			SP-SM	Similar to above	20 21 12										
					13.5		Fine to coarse gravels 0387-071414-1018	19										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. SC-308

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-309

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 2
Start 14 July 2014
Finish 14 July 2014
Driller R. Radke
H&A Rep. S. Collininge
Elevation Datum
Location SC-309

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED		SP-SM	Red brown poorly graded SAND with silt and gravel (SP-SM)	0.0										
								0.0										
								0.0										
		CR2 24	2.0 4.0					0.0										
								0.0										
								0.0										
					3.5		Wood and brick debris	0.0										
		CR3 24	4.0 6.0		4.0		Mostly wood debris	0.0										
								0.0										
5					5.0		Concrete	0.0										
					5.8			0.0										
		CR4 20	6.0 8.0			SP-SM	Black poorly graded SAND with gravel (SM), most (foundry sand) 0384-071414-0900	0.0										
								0.0										
								0.0										
						SP-SM	Similar to above except, wet 0387-071414-0911	0.0										
		CR5 18	8.0 10.0		8.0	SM	Dark gray silty SAND (SM), trace of fine gravels, slight odor 0387-071414-0918	0.0										
								0.0										
								0.0										
10								0.0										
		CR6 20	10.0 12.0					0.0										
								0.0										
					11.5	SP	Gray brown poorly graded SAND with gravel (SP) 0387-071414-0924	0.0										
					12.0	SM	Gray silty SAND with gravel (SM), slight odor, sheen on water	2.2										
								3.2										
								1.8										
					13.6	SP	Yellow brown poorly graded SAND (SP) 0387-071414-0930	0.6										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-309

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SC-309

File No. 28612-327

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Fill material: Red brick, wood, concrete, foundry sand, slag.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SC-309

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-310

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 2
Start 14 July 2014
Finish 14 July 2014
Driller R. Radke
H&A Rep. S. Collininge
Elevation Datum
Location SC-310

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			Gravel and brick on surface		0.0									
					1.0		Went through 2.0 in. pipe-dry inside		0.1									
						SP	Red brown poorly graded SAND with gravel (SP)		1.4									
		CR2 24	2.0 4.0		2.5		Wood debris		0.0									
					3.0	SP	Red brown poorly graded SAND with gravel (SP)		0.0									
									0.25									
		CR3 24	4.0 6.0						0.0									
5									0.0									
									0.0									
						SP	Similar to above except, wet, more wood debris		0.0									
					6.0		0387-071414-1459											
		CR4 18	6.0 8.0				Wood debris with sand and gravel, sweet odor, wet		2.2									
									2.0									
									2.0									
					7.5		4.0 in. to 6.0 in. layer of concrete		18.0									
					7.8	SP	Medium gray poorly graded SAND (SP), sand fine to coarse		0.0									
		CR5 20	8.0 10.0		8.0	SM	0387-071414-1504											
							Gray silty SAND with gravel (SM) wood debris		1.6									
							0387-071414-1510		2.0									
									2.2									
10		CR6	10.0 12.0			SM	Gray silty SAND (SM), trace fine to coarse gravel		5.0									
							0387-071414-1515		7.8									
									1.7									
									1.3									
		CR7 15	12.0 14.0		12.0	GP	Gray poorly graded GRAVEL with sand (GP)		0.0									
									0.0									
					13.0	SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM)		0.0									
							0387-071414-1522		0.0									
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Fill material: Red brick, wood, concrete, paper, plastics,											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-310

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SC-310
File No. 28612-327
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			glass. Note: At 12.0 ft to 14.0 ft driving large gravel in bit FULL RECOVERY											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SC-310

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-311

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 2
Start 14 July 2014
Finish 14 July 2014
Driller R. Radke
H&A Rep. S. Collininge
Elevation Datum
Location SC-311

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		Gravels and brick on surface,											
						SP	Grayish brown poorly graded SAND with gravel (SP), moist Fill Material: Brick, nails, wood		0.0									
									0.0									
									0.0									
		CR2 24	2.0 4.0				Note: Mostly bricks to 4.0 ft		0.0									
									0.0									
									0.0									
						SP	Similar to above											
		CR3 20	4.0 6.0		4.0		All wood debris 0387-071414-1325		0.0									
5									1.0									
									0.3									
									4.2									
		CR4 18	6.0 8.0			GP	Grayish black poorly graded GRAVEL with silt and sand (GP), strong petroleum-like odor, wet		0.2									
					6.5	GP	0387071414-1330		14.7									
							Grayish black poorly graded GRAVEL with silt and sand (GP), strong petroleum-like odor, wet 0387-071414-1330		23									
									52.7									
		CR5 24	8.0 10.0		8.5	SP	Yellowish brown poorly graded SAND SP), sand fine to medium, strong petroleum-like odor, wet, wood debris 0387-071414-1336		27.2									
									22.1									
									25.1									
10		CR6 18	10.0 12.0			SP	Similar to above 0387-071414-1349		28.3									
									5.2									
									9.2									
									7.5									
		CR7 18	12.0 14.0		12.0	SM	Gray silty SAND with gravel (SM), gravel coarse, coarse to cobbles, railroad spikes, product-like droplets on water 0387-071414-1357		10.0									
									4.0									
									2.2									
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Fill material: Red brick, wood, concrete, paper, plastics,											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-311

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SC-311
File No. 28612-327
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			glass. Note: At 12.0 ft to 14.0 ft driving large gravel in bit FULL RECOVERY											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SC-311

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-312

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 28 October 2014
Finish 28 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SC-312

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., no structure, no odor, 30% brick fragments, 5% wood fragments	0.0										
						GP	Concrete fragments, mps 1.5 in.	0.0										
		CR2 21	2.0 4.0			SM	Similar to above, except brown, 20% brick fragments, 15% concrete fragments, 5% glass fragments	0.0										
								0.1										
		CR3 24	4.0 6.0		4.5			0.0										
5						SM	Similar to above, except 5% slag-like fragments, 10% ash-like fragments, 20% brick fragments, 10% concrete fragments	0.1										
		CR4 23	6.0 8.0					0.0										
								0.3										
		CR5 24	8.0 10.0		8.5		Wood pieces, mps 3.5 in.	0.9										
								12.3										
					9.8													
10		CR6 22	10.0 12.0		10.0	SM	Dark brown silty SANd with gravel (SM), mps 1 in., slight petroleum-like odor, dry, 40% wood fragments	8.2										
								16.3										
					11.8	SM	Similar to above, except black, petroleum-like odor, wet											
		CR7 17	12.0 14.0		12.3	SP	Black poorly graded coarse SAND (SP), no structure, petroleum-like odor, wet, oil residue on bag, 40% wood fragments	36.4										
								41.3										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfilled borehole with sand.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-312

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-313

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 28 October 2014
Finish 28 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SC-313

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 10% wood fragments, 10% brick fragments, 5% metal fragments	0.9										
								0.4										
		CR2 22	2.0 4.0			SM	Similar to above, except 10% concrete fragments, 15% brick fragments, 15% wood fragments, 5% glass fragments	0.6										
								13.2										
		CR3 24	4.0 6.0			SM	Similar to above, except 10% cinder-like fragments, 10% brick fragments, 5% slag-like fragments, 10% wood fragments, 5% metal fragments	0.9										
5								11.2										
		CR4 23	6.0 8.0					10.4										
								3.7										
					7.8	SM	Similar to above, except black, more coarse SAND											
		CR5 24	8.0 10.0		8.3	SM GP	Dark brown silty SAND with gravel (SM), mps 0.75 in., no structure, no odor, moist, 5% brick fragments, 5% glass fragments	13.4										
							Brick pieces, mps 3.5 in.	22.3										
					9.8		Brick, wood fragments, mps 2.5 in., petroleum-like odor, wet											
10		CR6 22	10.0 12.0		10.5	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 3 in., no structure, petroleum-like odor, wet, 10% brick pieces	38.1										
								47.2										
					11.8	SP-SM	Similar to above, except black, oil residue on bag											
		CR7 24	12.0 14.0					38.6										
								100.7										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-313

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-314

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 28 October 2014
Finish 28 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SC-314

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 13	0.0 2.0	NO WELL INSTALLED		SM	CONCRETE SLAB Red-brown silty SANd with gravel (SM), mps 2.25 in., no structure, no odor, dry, 10% concrete fragments, 10% metal fragments	0.3 0.1										
		CR2 20	2.0 4.0		2.0	SP	Red-brown to red poorly graded SAND with cobbles (SP), mps 3.5 in., no structure, no odor, dry, 35% brick pieces, 5% metal fragments	0.0 0.2										
5		CR3 21	4.0 6.0					0.1 0.3										
		CR4 18	6.0 8.0		6.8	GP	Concrete pieces, mps 3 in.	0.7										
		CR5 24	8.0 10.0		7.3 8.3	SP-SM SP-SM	Red brown poorly graded SAND with silt and gravel (SP-SM), mps 1 in., no structure, no odor, 10% brick fragments Similar to above, except dark brown	12.4 36.2										
10		CR6 24	10.0 12.0		9.5 10.0	SP-SC SP	Similar to above, except dark gray, slight petroleum-like odor, 10% wood fragments, 15% concrete fragments, 10% brick fragments Dark gray poorly graded SAND with clay and gravel (SP-SC), mps 1.25 in., no structure, petroleum-like odor, wet, 5% concrete fragments, 5% brick fragments, 5% glass fragments	68.1 11.7										
		CR7 24	12.0 14.0		11.5	SP	Red-gray poorly graded SAND with gravel (SP), mps 1.5 in., no structure, no odor, wet, 15% brick fragments, 10% wood fragments Similar to above, except dark brown to gray, no odor, wet, 20% concrete fragments	14.6 13.2 9.4										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfilled borehole with gravel.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. SC-314

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-315

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 28 October 2014
Finish 28 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SC-315

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 18	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 2.5 in., no structure, no odor, dry, 10% brick fragments, 5% wood fragments	0.0
								0.3
		CR2 21	2.0 4.0			SM	Similar to above, except 20% brick fragments, 15% wood fragments	0.7
								21.6
		CR3 24	4.0 6.0					13.6
5								11.4
		CR4 23	6.0 8.0					14.7
					7.3	GP	Concrete pieces, mps 3 in. (4.0 in. length)	16.8
					7.8	SM	Dark brown to dark gray silty SAND with gravel (SM), mps 0.75 in., no structure, no odor, moist, 5% cinder-like fragments, 10% brick fragments	21.3
		CR5 21	8.0 10.0		9.3	GP	Concrete pieces, mps 3.5 in.	72.6
					9.8	SM	Dark brown to gray silty SAND with gravel (SM), mps 1 in., no structure, no odor, dry	
10		CR6 18	10.0 12.0		10.0	SP	Dark gray poorly graded SAND with gravel (SP), mps 1.5 in., no structure, petroleum-like odor, wet, 10% wood fragments, 10% brick fragments	41.6
								39.2
		CR7 14	12.0 14.0		12.0	SP-SC	Dark gray poorly graded SAND with clay and gravel (SP-SC), mps 1.5 in., no structure, petroleum-like odor, wet, with residue on bag, 10% brick fragments, 10% wood fragments	46.2
								113.7
					14.0		BOTTOM OF EXPLORATION 14.0 FT	

Gravel		Sand				Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-315

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SC-316

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 05 November 2014
Finish 05 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SC-316

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 22	0.0 2.0	NO WELL INSTALLED		SM	Brown to dark brown silty SAND with gravel (SM), mps 2 in., no structure, no odor, dry, 15% concrete fragments, 10% brick fragments	0.0										
								0.3										
		CR2 24	2.0 4.0					0.3										
					2.8		Wood fragments	0.6										
		CR3 16	4.0 6.0		4.0	SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, 15% wood fragments, 15% brick fragments, 5% concrete fragments	0.3										
5								0.4										
		CR4 11	6.0 8.0					0.0										
								0.1										
		CR5 18	8.0 10.0					13.2										
					9.5			9.1										
10		CR6 13	10.0 12.0			SM	Similar to above, except dark gray, 5% brick fragments, 10% concrete fragments, 5% wood fragments, 5% wire strands											
						SM	Similar to above, except 20% concrete fragments, 5% slag-like fragments, 5% brick fragments	8.6										
								13.2										
		CR7 24	12.0 14.0		12.0	SP-SM	Dark gray poorly graded SAND with silt (SP-SM), no structure, petroleum-like odor, wet	93.7										
					12.5	SP-SM	Similar to above, except with wood, one piece 1.5 ft in length, and 1.25 to 1.5 in. in depth, coarse grain sand around wood piece	62.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-316

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-317

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 05 November 2014
Finish 05 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SC-317

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED		SM	Red-brown silty SANd with gravel (SM), mps 2.75 in., no structure, no odor, dry, 15% brick fragments, 10% concrete fragments	0.0										
					1.5	GP	Concrete fragments, mps 1.75 in.	0.0										
		CR2 21	2.0 4.0		2.0	SP	Brown poorly graded SANd with gravel (SP), mps 0.5 in., no structure, no odor, dry, 5% brick fragments	0.1										
								0.0										
		CR3 23	4.0 6.0		4.0	GP	Concrete fragments	0.0										
					4.5	SP	Brown poorly graded SAND with gravel (SP), mps 1.0 in., no structure, no odor, dry	0.0										
5		CR4 21	6.0 8.0					0.3										
					7.3	SP	Similar to above, except dark brown to gray-brown coarse SAND, moist to wet, 5% brick fragments	0.1										
		CR5 12	8.0 10.0					0.9										
					9.5	SP	Similar to above, except olive-gray, slight petroleum-like odor, slight sheen	18.2										
10		CR6 16	10.0 12.0			SP	Similar to above, except brown to red-brown, no odor, wet, 5% concrete fragments, 10% brick fragments	1.6										
								1.3										
		CR7 20	12.0 14.0			SP	Similar to above, except gray, no odor, wet	1.2										
								0.6										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. SC-317

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-318

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 05 November 2014
Finish 05 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SC-318

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED		SP-GP	Red-brown poorly graded SAND and GRAVEL (SP-GP), mps 1.75 in., no structure, no odor, dry, 25% brick fragments, 5% concrete fragments	0.0										
					1.3	GP	Concrete fragments, mps 2.25 in.	0.1										
		CR2 23	2.0 4.0		2.0	SP	Brown poorly graded SAND with gravel (SP), mps 1.25 in., no structure, no odor, dry, 5% brick fragments, 5% concrete fragments	0.0										
								0.0										
		CR3 17	4.0 6.0					0.0										
5					4.8	SP	Similar to above, except dark brown, no odor, moist, 10% slag-like fragments	0.0										
		CR4 16	6.0 8.0		6.0	GP	Brick fragments with sand, mps 2.25 in.	0.0										
								0.0										
		CR5 18	8.0 10.0		8.0	GP	Concrete fragments, mps 2.0 in.	0.0										
					8.8	SP	Red-brown poorly graded SAND with gravel, mps 1.25 in., no structure, no odor, wet, 20% brick fragments	0.4										
10		CR6 16	10.0 12.0					0.0										
					11.5	SP	Similar to above, except dark gray to black	0.0										
		CR7 23	12.0 14.0					12.6										
								1.9										
					13.8	GP	Concrete fragments, mps 1.25 in.											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-318

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SC-319

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 05 November 2014
Finish 05 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SC-319

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 15% brick fragments, 5% wood fragments	0.0										
								0.0										
		CR2 22	2.0 4.0					0.2										
					2.8	SM	Similar to above, except dark brown, 10% wood fragments, 5% glass fragments, 5% metal fragments, 5% plastic sheeting/bag	0.0										
		CR3 24	4.0 6.0		4.0	GP	Concrete fragments, mps 1.25 in.	0.0										
					4.5	SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 10% brick fragments, 10% wood fragments, 5% slag-like fragments	0.0										
5		CR4 24	6.0 8.0		6.0	SP	Red-brown to light brown poorly graded SAND with gravel (SP), mps 1.25 in., no structure, no odor, dry, 15% brick fragments, 5% wood fragments, 5% slag-like fragments	0.0										
								0.0										
		CR5 22	8.0 10.0			SP	Similar to above except 30% wood fragments, 15% cinder-like fragments, wet	0.0										
								0.0										
10		CR6 23	10.0 12.0			SP	Similar to above, except dark brown, 20% wood fragments	0.9										
								0.0										
		CR7 16	12.0 14.0		12.5	SM	Dark gray to olive-gray silty SAND with gravel (SM), mps 2.25 in., no structure, petroleum-like odor, wet, sheen to water, 10% concrete fragments											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SC-319

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SE-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 07 October 2013
Finish 30 October 2013
Driller D. Duscher
H&A Rep. D. Mukherjee/S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		0.75 in. stone											
	AIR KNIFE		1.0	NO WELL INSTALLED		SM	Brown silty SAND (SM), mps 1.0 in., no structure, no odor, moist, trace organic material, brick and concrete fragments -FILL-	0.0	5	10	10	20	30	25				
			2.0					0.0										
			2.5					0.2										
								0.0										
5						SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, wet, 20% coal fragments, cinders, slag, wood fibers and metal -FILL-	0.0	5	10	30	25	10	20				
							Cleared to 6.5 ft - no voids	0.0										
		CR1 20	6.0 8.0		6.5	SM	Black silty SAND with gravel (SM), mps 2.5 in., no structure, hydrocarbon/creosote odor, wet, ~30% wood, shingles, asphalt, and concrete, sheen on water	3.8	5	10	25	30	10	20				
		CR2 4	8.0 10.0			SM	Similar to above	1.9										
10		CR3 20	10.0 12.0			SM	Gray-brown silty SAND (SM), mps 2.5 in., no structure, organic odor, wet, trace organics	4.8	5	5	15	25	25	25				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/11/13	-	-	NA	6.5	± 4.0
10/30/13	1415	0	-	-	± 6.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	4CR

Boring No. SE-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SE-101
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4 10	12.0 14.0	NO WELL INSTALLED		SM	Dark brown silty SAND (SM), mps 1.0 in., no structure, hydrocarbon odor, wet, trace metal and organics, slight sheen on water -FILL- BOTTOM OF EXPLORATION 14.0 FT Note: borehole backfilled with sand upon completion.	13.0	5	5	15	25	25	25				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SE-101

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SE-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 07 October 2013
Finish 29 October 2013
Driller D. Duscher
H&A Rep. D. Mukherjee/S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		ASPHALT - JACK HAMMER											
	AIR KNIFE		1.0	NO WELL INSTALLED		SM	Black to brown silty SAND (SM), mps 2.0 in., no structure, no odor, moist, 15% brick fragments, concrete, wood chips, and coal	0.0	5	15	25	20	20	15				
			2.0					0.1										
			2.5					0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, wet at 4.5 ft, 30% cinder, brick, metal, wire, and organics	0.0	10	10	10	30	20	20				
							-FILL-	0.2										
5							Cleared up to 6.5 ft - no voids											
		C1 8	6.0 8.0			SM	Brown silty SAND (SM), mps 1.0 in., no structure, organic odor, wet				5	25	35	35				
		C2 13	8.0 10.0			SM	Dark brown silty SAND (SM), mps 3.8 in., no structure, organic odor, wet, metal piece lodged in core bit				10	25	30	35				
10		C3 21	10.0 12.0			SM	Dark brown silty SAND (SM), mps 2.5 in., no structure, slight hydrocarbon odor, wet, metal piece at 12 ft, trace organics			5	30	25	20	20				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
4.5		10/11/13	-	-	NA
± 4.5		10/29/13	5.5 1000	0	6.0
± 6.0			8.0		

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	4CR

Boring No. SE-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SE-102
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		C4 24	12.0 14.0	NO WELL INSTALLED		SM	Dark brown silty SAND (SM), mps 2.3 in., no structure, organic odor, wet, trace concrete, ~90% wood from 13-14 ft -FILL-			5	30	25	20	20				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: borhole backfilled with bentonite chips from 7.0 ft to 11.0 ft Note: borehole air knife to 6.5 ft and backfilled with sand prior to drilling, begin sampling at 6.5 ft											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SE-102

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SE-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 29 October 2013
Finish 29 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location moved 1.0 ft East from stake

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.4		ASPHALT - JACK HAMMER	0.0										
							(NO VOIDS)											
						SM	Brown silty SAND with gravel (SM), mps 4 in., no structure, no odor, moist, 25% concrete, brick, wood chips and organic material											
	AIR KNIFE		1.0															
			2.0				-FILL-	0.0										
			2.5				Note: Block of wood (possible concrete wall formboard) at 29 in., bgs	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, wet at 5.0 ft, approximately 40% cinder fragments, brick fragments, wood chips and organic material	0.0										
				NO WELL INSTALLED			-FILL-	0.0										
5																		
							Cleared to 6.0 ft - no voids	0.0										
		CR1 24	6.0 8.0				Wood with trace sand, creosote odor, wet	1.1										
		CR2 21	8.0 10.0			SM	Black silty SAND with gravle (SM), mps 2.0 in., no structure, creosote odor, wet, 10% brick, glass, and wood, slight sheen	0.9	5	10	10	20	25	30				
10																		
		CR3 13	10.0 12.0				Wood with trace sand, ketosate odor, wet	0.8										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	3CR

Boring No. SE-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SE-103
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR4 21	12.0 14.0	NO WELL INSTALLED		SM	Black to brown silty SAND (SM), mps 2.0 in., no structure, creosote odor, wet, ~15% wood, and organics -FILL-	3.7 0.7 0.4	5	5	15	30	20	25				
							BOTTOM OF EXPLORATION 14.0 FT Note: borehole backfilled with sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SE-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SE-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 28 May 2014
Finish 28 May 2014
Driller R. Radke
H&A Rep. M. Pomponio
Elevation Datum (Antea)/S. Collinge
Location SE-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Air Knife Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3	GP	3.0 in. ASPHALT NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.		100									
					1.0	SM	Dark gray poorly graded GRAVEL (GP), 1.5-2.5 in., no odor, moist		10	10	15	20	30	15				
						SM	Black silty SAND with gravel (SM), mps 1.0 in., slag-like fragments 10%, no odor, moist Similar to above except, mps 20 in.		15	10	15	25	30	15				
				NO WELL INSTALLED		SM	Similar to above except brown, wet		15	15	15	20	20	15				
5						SM	Similar to above except, wood-like fragments 10%, oil-like substance present											
	H* AIR	CR1 24	6.0 8.0			SM	Similar to above except , petroleum-like odor Sample 4-6 ft 0710-052814-1445	0.2										
					6.5		BOTTOM OF EXPLORATION	0.5										
					7.0		Pre-cleared to 6.5 ft 0387-052914-0956											
					7.8		CONCRETE											
	H KNIFE	CR2 20	8.0 10.0				Black gravels, j-beam, concrete wet, oilly looking, asphalt and concrete, gravel fine to coarse 0387-052914-1021	0.4 0.0 0.0 0.0										
10	H	CR3 24	10.0 12.0		10.0	SM	Similar as above	0.0										
							-FILL-	0.0										
					11.0	ML	0387-052914-1052	0.0						100				
					11.4	SP-SM	Dark gray black SILT (ML), silt non plastic, slight odor, moist Black poorly graded SAND with silt (SP-SM), sand fine to medium grain, silt, non plastic, slight odor, wet	0.2			45	40	15					
	A	CR4 24	12.0 14.0		12.3	SP-SM / ML/	Similar to above Gray black SILT/lean CLAY (ML/CL), clay low plastic, silt non plastic, moist	0.1 0.0						100				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SE-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SE-201
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED		CL	0387-052914-1042	0.0										
								0.0										
					14.0		BOTTOM OF EXPLOARTION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SE-201

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SE-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 24 May 2014
Finish 24 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SE-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	no sample	CR1 15	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE											
						ML	Dark brown silty SAND (ML), sand fine to coarse, silty non plastic, no odor, saturated, with pieces of brick Poor recovery due to water	0.0 0.0 0.0			35	25	20	20				
	no sample	CR2	2.0 4.0			ML	Dark brown silty SAND with gravel (ML). sand fine to coarse, silty non plastic, gravels fine to coarse, no odor, wet to saturated	0.0 0.0 0.0 0.0	25		30	15	10	20				
	H	CR3	4.0 6.0			ML	Similar to above 0387-052914-1120	0.0 0.0 0.0 0.0 0.0										
5	H	CR4 20	6.0 8.0			ML	Similar to above except color change to gray black, with pieces of wood 0387-052914-1126	0.0 0.0 0.0 0.0										
	H	CR5 24	8.0 10.0		8.5	ML	Similar to above	0.0										
						SM	Black silty SAND with gravel (SM) gravels fine to coarse, sand fine to coarse, grain, silty non plastic, wet, no odor, 0387-052914-1132	0.0 0.1 0.0	20		35	15	10	20				
10	A DUP	CR6 20	10.0 12.0			SM	Similar to above 0387-052914-1152	0.0 0.0 0.0 0.0										
		cr7 24	12.0 14.0			SM	Black silty SAND (SM), sand fine to coarse grained, silty non plastic, no odor, wet, pieces of wood	0.6			20	20	30	30				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. SE-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SE-202
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.0	ML/ CL	Gray brown SILT/lean CLAY (ML/CL), non plastic, clay low to medium plastic, no odor, moist 0387-052914-1202	0.5 0.3										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
						SM	Black silty SAND (SM), sand fine to coarse grained, silty non plastic, no odor, wet, pieces of wood	0.4			20	20	30	30				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SE-202

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 31 October 2013
Finish 11 June 2014
Driller D. Duscher
H&A Rep. S. Brousseau/ S. Collinge
Elevation Datum
Location Sampler MW-01A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		Gravel on surface Fill Material (brick, slag, glass, tile)	0.0										
						SM	Yellowish-brown silty SAND (SM) 0387-061114-1136	0.0 0.0										
					2.0													
		CR2 24	2.0 4.0			SP	Yellowish-brown poorly graded SAND 0387-061114-1144	0.0 0.0 0.0										
					3.5													
		CR3 24	4.0 6.0			SM	Medium brown silty SAND with gravel (SM) At 4.0 ft, color change to black 0387-061114-1151	0.0 0.0 0.0 0.0 0.0										
5																		
		CR4 24	6.0 8.0			SM	Similar to above 0387-061114-1156	0.0 0.0 0.0 0.0										
					8.0													
		CR5	8.0 10.0			SP	Similar to above	0.2 0.0										
					9.0													
		CR6 18	9.0 11.0			SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., no structure, hydrogen sulfide odor, wet, slight sheen on water, ~50% cinders, coal, and ash, ~10% wood, glass, and organics		5	10	30	15	20	20				
10																		
					11.0													
		CR7 10	11.0 13.0			SM	Similar to CR1		5	10	25	15	15	30				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/31/14	1400	0	11.0	11.0	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	13
Rock Cored (ft)	-
Samples	7CR

Boring No. SG-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 7 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SG-001
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.0		BOTTOM OF EXPLORATION 13.0 FT Note: Borehole backfilled borehole with sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SG-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 7 Aug 15

TEST BORING REPORT

Boring No. SG-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 07 November 2013
Finish 01 November 1977
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation
Datum
Location PDSB-36

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 0	0.0 2.0	NO WELL INSTALLED	0.3		3/4 in. MINUS STONE											
					0.5		ASPHALT											
							No recovery											
		CR2 26	2.0 6.0		2.0	SM	Brown to dark brown silty SAND (SM), mps 1.5 in., no structure, no odor, wet at 4.0 ft, ~15%, wood, concrete, and organics	0.0	5	5	15	30	20	25				
5		CR3 18	6.0 8.0		6.0	SP	Dark brown poorly graded SAND with gravel (SP), mps 1.0 in., no structure, no odor, wet, ~ 75% cinders, coal, ash, and organics	0.0	5	10	30	30	20	5				
		CR4 10	8.0 10.0			SP	Similar to CR3 except, organic odor, and slight sheen	0.0										
10		CR5 12	10.0 12.0		10.0	SM	Dark gray silty SAND (SM), mps 1.5 in., no structure, organic odor, wet, slight sheen, ~60% cinders, coal, ash, trace wood, and organics	0.0	5	5	30	20	20	20				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/7/13	1430	0	6.0	6.0	24.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 6CR

Boring No. SG-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SG-002
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR6 18	12.0 14.0	NO WELL INSTALLED		SM	Dark brown silty SAND (SM), mps 1.0 in., no structure, no odor, wet, ~40% cinders, coal, ash, ~10% porcelain, wood, glass, and organics -FILL-	0.0	5	5	35	25	15	15				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Borehole backfilled borehole with sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SG-002

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-004

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: Begin sampling at 3.0 ft											
		CR1 6	3.0 5.0			SM	Gray silty SAND with gravel (SM), mps 2.0 in., no structure, organic odor, moist, trace organics		10	10	15	15	30	20				
5		CR2 18	5.0 7.0			SM	Dark gray silty SAND with gravel (SM), mps 2.0 in., no structure, hydrogen sulfide odor, wet, sight sheen on water, ~50% coal cinders, ash, slag, ~10% wood, and organics		10	15	25	20	15	15				
		CR3 20	7.0 9.0			SM	Similar to CR2 except, no sheen, mps 2.5 in., no structure, organic odor, moist, trace organics											
					9.0		BOTTOM OF EXPLORATION 9.0 FT Note: Borehole backfilled borehole with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/31/13	1330	0	5.0	5.0	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	9
Rock Cored (ft)	-
Samples	3CR

Boring No. SG-004

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-006

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 02 July 2014
Finish 02 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SG-006

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 12	0.0 2.0	NO WELL INSTALLED	0.3		4.0 in. CONCRETE NO VOID											
						SP	Fill Material (red brick, wood, glass, wire) Black poorly graded SAND with gravel (SP)											
					1.1	SM	Brown poorly graded SAND with gravel (SP-SM) 0701-070214-0838	0.0										
		CR2 12	2.0 4.0		2.5	GP	Gray poorly graded GRAVEL with sand (GP)	0.0										
					3.1	GP-GM	Gray poorly graded GRAVEL with silt and sand (GP-GM) 0710-070214-0842	0.0										
		CR3 16	4.0 6.0		4.6	GP	Gray poorly graded GRAVEL with sand (GP)	0.0										
5					5.5			0.0										
					5.8	SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM)											
						SM	0710-070214-0850 0710-070214-0002											
		CR4 22	6.0 8.0		6.3	SP-SM	Black silty SAND with gravel (SM) Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.0										
					7.6	GP	Dark gray poorly graded GRAVEL with sand (GP) 0710-070214-0904	0.0										
					8.0		BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SG-006

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 31 October 2013
Finish 31 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: Begin sampling at 2.0 ft											
		CR1 22	3.0 5.0			SM	Brown silty SAND with gravel (SM), mps 2.5 in., no structure, organic odor, moist to wet at 3.5 ft, trace concrete, brick, and organics	0.1	10	5	10	25	25	25				
5		CR2 8	5.0 7.0			SM	Dark gray silty SAND (SM), mps 2.0 in., no structure, organic odor, wet, trace brick and organics, slight sheen on water	0.9	5	5	5	20	25	40				
		CR3 10	7.0 9.0			SM	Dark gray to black silty SAND (SM), mps 2.0 in., no structure, hydrocarbon odor, wet, ~30% organics, sheen to water soil oil coated	3.1	5	5	10	30	20	30				
							-FILL-											
					9.0		BOTTOM OF EXPLORATION 9.0 FT											
							Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/31/13	1135	0	3.0	5.0	±4.5

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 9
Rock Cored (ft) -
Samples 3CR

Boring No. SG-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 29 October 2013
Finish 29 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location moved 1.0 ft East from stake

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: begin sampling at 8.0 ft											
	H	CR1 21	8.0 10.0			SM	Brown to dark brown silty SAND (SM), mps 3.0 in., no structure, organic odor, wet, trace brick, wood, organics, and tile	0.0		5	15	30	30	20				
10	H	CR2 23	10.0 12.0			SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., no structure, organic odor, wet, ~25% coal, wood, glass, cinders, slag, metal, and organics	0.0	5	15	25	20	15	20				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/29/13	1445	0	8.0	10.0	± 8.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	3CR

Boring No. SG-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SG-103
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
	H	CR3 0	12.0 14.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., no structure, organic odor, wet, ~40% cinders, coal, wood, glass, shells, rubber, and organics -FILL-	0.0	5	10	35	20	15	15				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: borehole backfilled with sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SG-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location EE-02

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: begin sampling at 3.0 ft											
		CR1 16	3.0 5.0			SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., no structure, hydrocarbon odor, wet, sheen on soil and water, ~35% coal, cinders, and slag, trace wood, brick, and metal	6.8	5	10	20	25	20	20				
5		CR2 20	5.0 7.0			SM	Gray to dark gray silty SAND with gravel (SM), mps 2.5 in., no structure, hydrogen sulfide odor, wet, ~45% coal, cinders and slag, ~15% wood, organics, metal, and glass, slight sheen on water	3.9	5	10	35	25	10	15				
		CR3 21	7.0 9.0			SM	Similar to above	13.9										
		CR4 16	9.0 11.0			SM	Dark gray silty SAND with gravel (SM), mps 2.0 in, no structure, slight hydrocarbon odor, wet, ~20% coal, cinders, slag, glass, metal, shells, wood, and organics, slight sheen on water	6.9	5	10	15	25	25	20				
10							-FILL-											
					11.0		BOTTOM OF EXPLORATION 11.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/31/13	1600	0	3.0	5.0	± 3.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	11
Rock Cored (ft)	-
Samples	4CR

Boring No. SG-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 11 June 2014
Finish 11 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SG-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface - 0.75 in. minus gravels Fill Material (brick, gravel, wood, leather, rubber, clay tile)											
					1.5	SM	Dark brown poorly graded SAND with silt and gravel (SM)											
						SM	Similar to above, increase in gravel											
							Wet at 3.8 ft											
		CR1 12	4.0 6.0		4.0	GP	Poorly graded GRAVEL with silt and sand (GP), saturated, poor recovery due to gravel 0387-061114-0928 03287-061114-0002	0.0 0.0 0.0										
5		CR2 24	6.0 8.0		6.2	SP	Black poorly graded SAND with gravel and silt (SP)	0.7 0.9 1.2										
							From 7.5 to 8 ft, lots of wood debris 03887-061114-0936	8.8										
		CR3 ?	8.0 10.0		8.6	SM	Black silty SAND with gravel (SM), slight odor 0387-061114-0942	1.2 1.4 2.8 12.4										
10		CR4 20	10.0 12.0			SM	Similar to above 0387-061114-0954	0.0 0.0 0.0 0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SG-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SG-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 11 June 2014
Finish 11 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SG-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Surface - 0.75 in. minus gravels Fill Material (glass, slag, metal, red brick, yellow-brick)											
					2.0	SP	Yellowish-brown poorly graded SAND (SP)											
					2.5	SM	Black silty SAND with gravel (SM)											
						SM	Black silty SAND with gravel (SM)											
		CR1 24	4.0 6.0			SM	Similar to above, except saturated 0387-061114-1020	0.0 0.0 0.0 0.0										
5		CR2 24	6.0 8.0			SM	Similar to above 0387-061114-1025	0.0 0.0 0.0 0.0										
		CR3 24	8.0 10.0			SM	Similar to above 0387-061114-1035	0.0 0.0 0.0 0.0										
10		CR4 24	10.0 12.0			SM	Similar to above 0387-061114-1042	1.2 0.5 0.2 0.9										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 12.0
Rock Cored (ft) -
Samples 4CR

Boring No. SG-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 11 June 2014
Finish 11 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SG-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED		SM	Surface - 0.75 in. minus gravels Grayish-brown silty SAND with gravel (SM), contains gravel, metal copper wire, slag, tile, clay tile, glass, fabric											
		CR1 24	1.0 3.0			SM	Grayish-brown silty SAND with gravel (SM) Fill Material (gravel, metal, copper wire, slag, tile, clay tile, glass, fabric)											
		CR1 24	2.0 6.0			SM	Similar to above	0.0										
		CR2 24	3.0 5.0					0.0										
		CR2 24	4.0 6.0			SM	Similar to above 0387-061114-1400	0.0										
5		CR3 24	5.0 7.0					0.0										
		CR3 24	6.0 8.0			SM	Similar to above 0387-061114-1410	0.0										
		CR4 24	7.0 9.0				Black in color	0.0										
		CR4 24	8.0 10.0				Wood debris - possible old piling log? 0387-061114-1420	0.0										
		CR5 24	9.0 11.0		8.8	ML	Black sandy SILT (ML), slight organic odor 0387-061114-1428	1.3										
10		CR5 24	10.0 12.0		9.8	SP	Black silty SAND with gravel (SP) At 10 ft, encountered 0.5 in. layer of coarse to fine sand	28.7										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SG-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SG-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 11 July 2014
Finish 11 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SG-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.1	GP	Rubble at surface NO VOID Fill Material (wood)											
					1.2	SP-SM	Medium brown poorly graded GRAVEL with sand (GP) Black poorly graded SAND with silt and gravel (SP-SM) 0710-070114-1329											
							0710-070114-1337											
				NO WELL INSTALLED	4.0	GP	Dark gray poorly graded GRAVEL with sand (GP)											
					4.6	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)											
5					5.7	SM	Black silty SAND with gravel (SP-SM) 0710-070114-1344											
					6.3	GP-GM	Dark gray poorly graded GRAVEL with sand and gravel (GP-GM)											
					7.0	SP-SM	Dark poorly graded SAND with silt and gravel (SP-SM)											
					7.4	SM	Dark gray silty SAND with gravel (SM) 0710-070114-1351											
					8.0	GP	Dark gray poorly graded GRAVEL with sand (GP)											
					8.8	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)											
10					9.8	GP	Dark gray poorly graded GRAVEL with sand (GP) 0710-070114-1359											
							0710-070114-1405											
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	--

Boring No. SG-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SG-302

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 01 July 2014
Finish 01 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SG-302

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.1	SM	Rubble at surface Fill Material (slag, fabric, wood, glass)	0.0										
					0.8	SP-SM	Brown silty SAND with gravel (SM) Brown poorly graded SAND with silt and gravel (SP-SM)	0.0										
					1.6	SM	Brown silty SAND with gravel (SM)	0.0										
		CR2 14	2.0 4.0			SM	0710-070114-1139 Similar to above (SM) 0710-070114-1145	0.0										
								0.0										
								0.0										
		CR3 20	4.0 6.0		4.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), no odor, wet, sheen 0710-070114-1149 0710-070114-0004	0.0										
5								0.0										
								0.0										
					6.0	GP	Dark gray pooly graded GRAVEL with sand (GP)	0.0										
		CR4 24	6.0 8.0		6.4	SP	Dark gray poorly graded SAND with gravel (SP)	0.0										
					7.2	GP	Dark gray poorly graded GRAVEL with sand (GP)	0.0										
					7.4	SP-SM	Medium gray poorly graded SAND with silt and gravel (SP-SM) 0710-070114-1155	0.0										
		CR5 24	8.0 10.0		8.5	GP	Dark gray poorly graded GRAVEL with sand (GP)	0.0										
								0.0										
					9.7	SM	Dark gray silty SAND with gravel (SM)	0.0										
10		CR6 22	10.0 12.0		10.0	GP-GM	0710-070114-1203 Dark gray poorly graded GRAVEL with silt and sand (GP-GM)	0.0										
								0.0										
					11.1	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM) 0710-070114-1212	0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	6CR

Boring No. SG-302

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SG-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 02 July 2014
Finish 02 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SG-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED	0.3	GP	Dark gray poorly graded GRAVEL (GP)	0.0										
						SP-SM	Fill Material (glass, wood, concrete, red brick, slag)	0.0										
					1.0		Brown poorly graded SAND with silt and gravel (SP-SM)											
					1.2	SP-SM	Concrete layer	0.0										
							Dark brown poorly graded SAND with silt and gravel (SP-SM) 0710-070214-1045	0.0										
		CR2 22	2.0 4.0					0.0										
					3.0	GP-GM	Poorly graded GRAVEL with silt and gravel (GP-GM)	0.0										
					3.7	SM	Black silty SAND with gravel (SM)	0.0										
		CR3 22	4.0 6.0		4.0	GP	0710-070214-1052	0.0										
					4.6	GP-GM	Dark gray poorly graded GRAVEL with sand (GP)	0.0										
5					5.2	SP	Dark gray poorly graded RAVEL with silt and sand (GP-GM)	0.0										
					5.6	SP-SM	Dark gray and tan poorly graded SAND with gravel (SP)	0.0										
		CR4 22	6.0 8.0		6.0	SP	Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.0										
							Dark gray poorly graded SAND with gravel (SP)	0.0										
					7.5	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM)	0.0										
					8.0	GP-GM	0710-070214-1107	0.0										
		CR5 24	8.0 10.0		8.2	GP	Dark gray poorly graded GRAVEL with sand and silt (GP-GM)	0.0										
							Dark gray poorly graded GRAVEL with sand (GP) 0710-070214-1112	0.0										
10					10.0	GP-GM	Medium gray poorly graded GRAVEL with silt and gravel (GP-GM)	0.0										
					10.1			0.0										
					10.7	SM	Dark gray silty SAND with gravel (SM)	1.3										
						SM	Similar to above, except black 0710-070214-1117	3.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SG-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SG-304

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 02 July 2014
Finish 02 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SG-304

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED	0.4	GP	Gray poorly graded GRAVEL (GP)	0.0										
						SP	Fill Material (red brick, wood, steel, concrete)	0.0										
					1.0		Gray poorly graded SAND with gravel (SP)											
						SP-SM	Gray poorly graded SAND with silt and gravel (SP-SM) 0710-070214-0947	0.0										
								0.0										
		CR2 22	2.0 4.0		2.4			0.0										
					2.8		Concrete layer	0.0										
					3.2		Red brick layer											
						SM	Black silty SAND with gravel (SM) 0710-070214-0954	0.0										
					4.0			0.0										
		CR3 20	4.0 6.0			GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM)	0.0										
5								0.0										
					5.5			0.0										
						GP	Dark gray poorly graded GRAVEL with sand (GP) 0710-070214-1000	0.0										
		CR4 24	6.0 8.0		6.3			0.0										
						GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM) 0710-070214-1016	0.0										
								0.0										
								0.0										
		CR5 24	8.0 10.0		8.0			0.0										
						GP-GM	Similar to above, except more silt and sewage-like odor 0710-070214-1024	0.0										
								0.0										
								0.0										
10								0.0										
		CR6 20	10.0 12.0		10.0	GP	Dark gray poorly graded GRAVEL with sand (GP)	0.0										
								0.0										
					11.5			0.0										
						SM	Medium gray silty SAND with gravel (SM) 0710-070214-1029	0.3										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SG-304

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SH-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location moved 1.0 ft East of stake, SB-058

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						GM	Black silty GRAVEL with sand (GM), mps 4.0 in., rock pieces, brick pieces, concrete pieces, moistly demolition fill material, no structure, no odor, moist		30	20	10	10	10	20				
		CR1 24	2.0 4.0	NO WELL INSTALLED	2.0	SM	Brown to dark brown silty SAND with gravel (SM), mps 1.0 in., no structure, organic odor, moist to wet at 3.5 ft, trace organics, ~20%, coal, cinders, slag from 3.5 ft at 4.0 ft -FILL-	0.0	5	10	15	40	15	15				
					4.0		-BOTTOM OF EXPLORATION 4.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/29/13	1600	0	2.0	4.0	± 3.5

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 4
Rock Cored (ft) -
Samples 1CR

Boring No. SH-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SH-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 29 October 2013
Finish 29 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location moved 1.0 ft East of stake

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.3	GP	3/4 in. CRUSHED STONE		100									
						SM	Brown silty SAND (SM), mps 0.8 in., no structure, organic odor, moist, trace organics	0.0		10	10	25	30	25				
		CR2 9	2.0 4.0			SM	Brown silty SAND (SM), mps 2.0 in., no structure, organic odor, moist, trace concrete and organics	0.0	5	5	10	35	25	20				
5		CR3 21	4.0 6.0			SM	Brown to dark brown silty SAND with gravel (SP), mps 2.0 in., no structure, no odor, wet, ~30% coal, cinders, slag, and wood -FILL-	0.0	5	10	30	20	20	15				
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: borehole backfilled with sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/29/13	1530	0	4.0	6.0	± 4.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. SH-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SH-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED		SM	Brown to dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, organic odor, moist, ~30% cinders, slag, and concrete	10.8	5	10	15	30	20	20				
		CR2 10	2.0 4.0			SM	Dark brown silty SAND (SM), mps 0.5 in., no structure, organic odor, wet, trace cinders and coal	10.4		5	25	20	20	30				
		CR3 24	4.0 6.0		4.0	SP	Dark brown poorly-graded SAND with gravel (SP), mps 2.5 in., no structure, no odor, coal, slag, trace firebrick -FILL-	1.2	5	10	45	25	10	5				
5					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/30/13	1100	0	2.0	4.0	± 2.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. SH-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SH-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller D. Duscher
H&A Rep. S. Brousseau
Elevation Datum
Location moved 2.0 ft East of stake

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.9	SP	3/4 in. CRUSHED STONE		100									
						SM	Gray silty SAND (SM), mps 0.8 in., no structure, organic odor, moist, trace organics	0.7			10	35	30	25				
		CR2 14	2.0 4.0			SM	Gray to dark brown silty SAND with gravel (SM), mps 3.5 in., no structure, organic odor, moist, ~40% concrete, 4.0 in. concrete lodged in core bit	10.2	5	10	20	25	20	20				
		CR3 17	4.0 6.0		4.0	SM	Dark brown to black silty SAND with gravel (SM), mps 1.5 in, no structure, organic odor, wet, ~25% concrete, cinders, and organics -FILL-	10.8	5	10	20	25	20	20				
5					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: borehole backfilled with sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/30/13	1040	0	4.0	6.0	± 4.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6
Rock Cored (ft)	-
Samples	3CR

Boring No. SH-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SI-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.6		7 3/4 in. CORE CONCRETE (NO VOID)											
						SM	Dark brown to black silty SAND with gravel (SM), mps 2.0 in, brick and metal fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101713-0934		5	10	15	20	25	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 3HA

Boring No. SI-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SI-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED			9.0 in. CORE CONCRETE (NO VOID)											
					0.8	SM	Black silty SAND (SM), mps 1.5 in, brick cinders, and brick fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101613-1450		10	5	15	20	25	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SI-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SI-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.6		7 1/2 in. CORE CONCRETE											
						SM	(NO VOID) Black silty SAND (SM), mps 1.0 in, brick, and metal fragments, no structure, no odor, moist		5	10	15	20	25	25				
					2.0	SM	Dark brown to black silty SAND (SM), mps 1.0 in., brick fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101713-0934		5	10	15	20	25	25				
							BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SI-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SI-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location 5.0 ft SE of or

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.6		7.0 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND with gravel (SM), mps 0.5 in, wood fragments, brick, and metal fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-102313-1340		20	10	20	20	15	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SI-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SI-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SI-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Hand Auger
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.6		7.5 IN. CONCRETE NO VOID											
						SM	Boring pre-excavated using vacuum truck and hand tools. Soil decriptions based on hand auger cuttings.	0.0	10	15	10	25	25	15				
							Black silty SAND with gravel (SM), mps 0.75 in., slag-like fragments, no odor, moist 02-0710-053014-1500	0.0										
	hand auger	CR-1 A	2.0 4.0		2.0		BOTTOM OF EPXLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SI-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SI-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SI-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Hand Auger
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.6		8.25 IN. CONCRETE NO VOID											
						SM	Boring pre-excavated using vacuum truck and hand tools. Soil decriptions based on hand auger cuttings.	0.0	5	10	15	25	30	15				
							Black silty SAND with gravel (SM), mps 0.5 in., brick-like fragments 5%, slag-like fragments 5%, no odor, moist	0.0										
					2.0		Note: Bricks at 1.5 ft											
	hand auger	CR-1 A	2.0 4.0				0-2 ft 0710-053014-1450											
							BOTTOM OF EPXLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SI-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SJ-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 16 October 2013
Finish 16 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location 3.0 ft to the N of SJ-101 (A)

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.7		8.5 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND (SM), mps 0.5 in, wood fragments, crushed brick, metal fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101613-1540		10	10	15	20	20	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SJ-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SJ-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 16 October 2013
Finish 16 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED			9.0 in. CORE CONCRETE (NO VOID)											
					0.8 1.0	SM	Black silty SAND (SM), mps 1.5 in, brick, and concrete fragments, no structure, no odor, moist, Concrete at ~1.0 ft bgs		5	10	20	20	25	20				
							BOTTOM OF EXPLORATION 1.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2
Rock Cored (ft)	-
Samples	1HA

Boring No. SJ-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SJ-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 16 October 2013
Finish 16 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.6		7.0 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND (SM), mps 1.5 in, steel, cinder, glass, and brick fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101613-1515		10	5	15	20	25	25				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SJ-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SJ-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 16 October 2013
Finish 16 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED			8 1/2 in. CORE CONCRETE											
					0.7	SM	Black silty SAND (SM), mps 2.0 in, cinders, no structure, no odor, moist		5	10	20	20	25	20				
					2.0	SM	Light brown silty SAND (SM), mps 2.0 in, brick fragments, concrete particles, no structure, no odor, moist Obstruction-concrete at ~1.0 ft bgs *Sample collected at 0-2 ft 0710-101013-1155		5	10	20	20	25	20				
							BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SJ-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SK-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.4		4 3/4 in. CORE CONCRETE (NO VOID)											
						SM	Dark brown silty SAND (SM), mps 2.0 in, brick fragments, concrete fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101713-1149		5	10	15	25	25	20				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SK-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SK-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 23 October 2013
Finish 23 October 2013
Driller R. Molina
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 1.5	NO WELL INSTALLED		SW-SM	Brown to light brown well-graded SAND with silt (SW-SM) , no structure, no odor, moist *Sample collected at 0-18 in. 0710-102313-1500 Refusal at ~18.0 in.				30	30	30	10				
					1.5		Concrete slab											
							BOTTOM OF EXPLORATION 1.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	1.5
Rock Cored (ft)	-
Samples	1HA

Boring No. SK-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SK-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.4		4 1/2 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND (SM), mps 2.0 in, 40% coal fragments, 50% ash-like material, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101713-1445		25	10	10	15	20	20				
					2.0		BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples 1HA

Boring No. SK-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SK-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 17 October 2013
Finish 17 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	HA1	0.0 2.0	NO WELL INSTALLED	0.3		4.0 in. CORE CONCRETE (NO VOID)											
						SM	Dark brown silty SAND (SM), mps 2.5 in, brick fragments, cinder fragments, no structure, no odor, moist *Sample collected at 0-2 ft 0710-101713-1345		5	5	20	20	25	25				
					2.0	SM	Similar to above except, mps 0.25 in.			5	15	25	30	25				
							BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2
Rock Cored (ft)	-
Samples	1HA

Boring No. SK-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SL-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 08 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			10.0 in. CORE CONCRETE NO VOID											
					0.8	SM	Black silty SAND (SM), mps 1.5 in, crushed brick, no structure, no odor, moist		20	15	15	20	15	15				
	HAND	HA1	2.0 4.0			SM	*Sample collected at 2-4 ft, similar to above 0710-102213-1600		20	15	15	20	15	15				
5	AUGER	HA2	4.0 6.0			SM	*Sample collected at 4-6 ft, similar to above 0710-110813-1900		20	15	15	20	15	15				
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 2HA

Boring No. SL-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SL-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 08 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Hand Auger
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							15.0 in. CORE CONCRETE (NO VOID)											
					1.3	SM	Brown silty SAND (SM) with gravel, mps 2.0 in, crushed brick, no structure, no odor, moist		10	15	15	10	20	30				
	AIR KNIFE	HA1	2.0 4.0			SM	*Sample collected at 2-4 ft, similar to above 0710-102213-1600											
	AND VAC	HA2	4.0 10.0	NO WELL INSTALLED		SM	*Sample collected at 4-6 ft, similar to above 0710-110813-1900											
5					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 2HA

Boring No. SL-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SL-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 08 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location 16.0 in./SW of org. proposed location

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							9 1/4 in. CORE CONCRETE (NO VOID)											
					0.8	SM	Black silty SAND (SM) with gravel, mps 1.0 in., brick fragments, no structure, no odor, moist		20	15	15	20	15	15				
	HAND	HA1	2.0 4.0	NO WELL INSTALLED		SM	*Sample collected at 2-4 ft, similar to above 0710-102213-1423											
5	AUGER	HA2	4.0 6.0			SM	*Sample collected at 4-6 ft, similar to above 0710-110813-0450											
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 2HA

Boring No. SL-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SL-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 29 May 2014
Finish 29 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SL-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	No Sample		0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE											
						SP	Grayish-brown poorly graded fine to coarse SAND with fine gravel (SP), no odor, moist											
		CR1 24	2.0 4.0		2.0	SM	Medium dark brown silty fine to coarse SAND with fine gravel (SM), non-plastic, no odor, moist 0387-052914-1402	0.0 0.0										
					3.0	SP	Orange/white fine gravelly fine to coarse SAND, no odor, moist, in tip of sample 3 in. pipe	0.0 0.0 0.0										
		CR2 24	4.0 6.0		4.5	SM	Brown poorly graded fine to coarse SAND with gravel (SM), no odor, wet 0387-052914-1409	0.0 0.0 0.0										
5		CR3 24	6.0 8.0			SP	Similar to above 0387-0592914-1415	0.0 0.0 0.0 0.0										
		CR4 24	8.0 10.0		8.0	SP	Medium brown poorly graded fine to coarse SAND (SP), no odor, no staining, wet	0.0 0.0										
					9.0	ML/CL	Grayish-black non-plastic SILT/low to medium plasticity lean CLAY (ML/CL), no odor 0387-052914-1420	0.0 0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SL-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SL-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 25 May 2014
Finish 25 May 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SL-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	No Sample		0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CONCRETE NO VOID											
						SP	Reddish-brown/black poorly graded fine to coarse SAND with fine gravel, brick, slag, metal debris		10	20	30	20	20					
		CR1 24	2.0 4.0			SP	Similar to above, wet 0387-052914-1430	0.0 0.0 0.0										
					3.5	CL/ML	Medium brown low to medium plasticity lean CLAY/non-plastic SILT (CL/ML), moist, slag, shells	0.0						100				
		CR2 10	4.0 6.0		4.0	GP	White/gray fine to coarse GRAVEL, wet, large gravel in tip, very poor recovery 0387-052914-1440	0.0	70	30								
5								0.0										
		CR3 10	6.0 8.0				Similar to above 0387-052914-1449	0.0										
					7.1	SP-SM	Brownish-gray poorly graded fine to coarse SAND with fine gravel (SP-SM), no odor, wet	0.0		20	40	25	15					
		CR4 18	8.0 10.0					0.0										
						SP-GP	Similar to above, except fine to coarse gravel, large gray in tip, poor recovery 0387-052914-1463	0.0 0.0	15	20	30	20	15					
10					10.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SL-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SL-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 28 May 2014
Finish 29 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SL-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air knife		0.0 6.0	NO WELL INSTALLED			7.5 in. CONCRETE NO VOID											
					0.7	SM	Black silty SAND with gravel (SM), mps 0.5 in., no odor, moist 5% wood-like fragments		5	10	10	25	30	15				
						SM	Similar to above, except 25% ash-like fragments											
						SM	Similar to above, except brown		10	5	10	20	25	25				
						SM	Similar to above, except light brown 0710-052814-1105		5	5	15	20	25	25				
5					5.0	SM-SW	Brown and gray well graded SAND with silt (SM-SW), no mps, petroleum-like odor, wet (50% brown, 50% gray) 0710-052814-1120			20	15	35	15	15				
					6.5	SP	Black/gray poorly graded fine to coarse SAND, no odor, wet (saturated), 10% fine gravel At 7.0 ft, color change to gray 0387-052914-1509	2.7 2.5 1.7 1.2	10		45	30	15					
						SP	Similar to above 0387-052914-1520	0.0 0.0										
					9.0	CL/ML	Grayish-black low to medium plasticity lean CLAY/non-plastic SILT, no odor, moist	0.1						100				
					9.5	SP	Brownish-red poorly graded fine to coarse SAND (SP), no odor, wet, trace fine gravel	0.0			30	40	30					
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	--

Boring No. SL-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SM-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 22 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			10.0 in. CORE CONCRETE											
					0.8		2.0 in. void											
					1.0	SM	Brown to dark brown silty SAND with gravel (SM), mps 5.0 in., no structure, no odor, moist *Sample collected at 0-2 ft 0710-102213-1030		10	15	10	20	25	20				
	HAND	HA1	2.0 4.0				*Sample collected at 2-4 ft 0710-102213-1100											
	AUGER	HA2	4.0 5.0			SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., wood/plant material, no structure, mild chemical odor, moist to wet *Sample collected at 4-5 ft 0710-102213-1145 Auger refusal at 5.0 ft ~5.0 bgs		10	5	10	15	30	30				
5					5.0		BOTTOM OF EXPLORATION 5.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 5
Rock Cored (ft) -
Samples 2HA

Boring No. SM-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SM-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 22 October 2013
Finish 21 November 2013
Driller J. Graglia
H&A Rep. J. Miller/M. McDonald
Elevation
Datum
Location SM-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND AUGER	CR1	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., whole bricks, concrete pieces, cobbles, brick fragments, concrete fragments, moistly debris and fill material, no structure, no odor, dry to moist *Not enough sample material to collect sample Hand auger refusal at ~2.0 ft whole bricks, concrete blocks		15	5	25	20	20	5				
		CR2 16	2.0 4.0			SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., brick fragments, wood fragments, glass fragments, metal strands, no structure, no odor, dry 2302-112113-0903 2302-112113-0914	0.4 0.6 0.9	10	10	10	20	30	20				
5		CR3 20	4.0 6.0			SM	Similar to above except, with metal fragments-flange-like metal Concrete from 5.5 ft to 6.0 ft	1.3 1.7 0.6										
					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/23/13	1055	0	NA	5.0	± 3.66

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3CR

Boring No. SM-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SM-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 29 May 2014
Finish 29 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SM-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 6.5	NO WELL INSTALLED			15.0 in. CONCRETE NO VOID											
					1.3	SM	Black silty SAND with gravel (SM), mps 0.75 in., no odor, dry, 15% slag-like fragments	0.0 0.0	15	15	10	15	30	15				
						SM	Similar to above, except dark brown, 10% wood-like fragments, 10% slag-like fragments 0710-052814-0925 0710-052814-0002	0.0 10.9	10	10	15	20	30	15				
5						SM	Similar to above, except black, moist 0710-052914-0936	67.4										
					5.0	SM	Similar to above, except petroleum-like odor, wet, oil-like droplets forming sheen 0710-052914-0943	1										
					6.5	SP-SM	Black poorly graded fine to coarse SAND with non-plastic silt and fine gravel (SP-SM), hydrocarbon-like odor, sheen on soil and water, slag, wood debris, glass 0387-052914-1604	1.7 2.8 10.4 2.9	15	15	30	10	10	25				
							At 8.0 ft, increase in gravel	1.8	10	20	25	15	15	15				
					8.5		Black wood debris - possible railroad tie or log, slight odor 0387-052914-1613	2.4 2.7										
10					9.8	SP-GP	Black poorly graded fine to coarse SAND/fine GRAVEL (SP-GP), saturated, wood debris, slag	1.0 0.7	10	20	25	15	15	15				
					10.1		Wood debris - possible railroad tie or log, material appears to be burnt 0387-052914-1623	0.6 1.1	10	20	25	15	15	15				
					11.0	SP-GP	Black poorly graded fine to coarse SAND/fine to coarse GRAVEL (SP-GP), wood debris	3.7						100				
					11.8 12.0	CL	Grayish-brown lean CLAY (CL), low to medium plasticity, strong odor, moist											
							BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	--

Boring No. SM-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SM-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 30 May 2014
Finish 30 May 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SM-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	-		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE		0.0 6.5	NO WELL INSTALLED	0.6		7.5 in. CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
						SM	Black silty SAND with gravel (SM), 5% slag-like fragments, no odor, moist 0710-053014-1540		10	15	15	25	25	15				
						SM	Similar to above except brown, mps 2.0 in. 0710-053014-1548		10	15	25	20	15	15				
5						SM	Similar to above except, wet 0710-053014-1555		10	15	25	20	15	15				
					6.5		BOTTOM OF EXPLORATION 6.5 FT Pre-cleared to 6.5 ft											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	-

Boring No. SM-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SM-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 20 November 2014
Finish 20 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation Datum
Location SM-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2 in., no structure, no odor, moist, 10% brick fragments, 10% cinder-like fragments, 5% slag-like fragments	0.0										
								0.0										
		CR2 8	2.0 4.0		2.0		White rubbery material, producing stringers when pulled apart	0.0										
								0.0										
		CR3 21	4.0 6.0		4.0	SM	Black silty SAND (SM), mps 1 in., no odor, wet	0.0										
5								0.0										
		CR4 11	6.0 8.0				Black rubbery material with lots of stringers, oil sheen on water, strong diesel-like odor from 6.0 ft, concrete layer from 5.5 to 6.0 ft	0.6										
								0.3										
		CR5 22	8.0 10.0					1.7										
					9.0	SM	Dark gray silty SANd with gravel (SM), mps 3 in., light petroleum-like odor, moist,15% gravel, 10% wood, 5% cinder-like fragments, 5% rock fragments	2.9										
10		CR6 23	10.0 12.0					2.7										
								1.8										
		CR7 24	12.0 14.0					0.2										
								0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SM-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SM-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-328
Sheet No. 1 of 1
Start 20 November 2014
Finish 20 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation
Datum
Location SM-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing: 4x6 override
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 2 in., no structure, no odor, dry to moist, 15% brick fragments, 10% cinder-like fragments, 5% slag-like fragments, trace plant roots	0.0										
								0.0										
		CR2 13	2.0 4.0					0.0										
								0.9										
		CR3 19	4.0 6.0		4.0	SM	Black silty SANd with gravel (SM), no structure, no odor, wet, oily sheen on water, 20% cinder-like fragments, 10% brick fragments, 10% slag-like fragments, 5% wood, concrete from 5.5 to 6.0 ft, piece of steel in rod tip	0.0										
5								0.0										
		CR4 23	6.0 8.0		6.0	SM	Black rubbery material with PCBM-like stringers, no odor, wet	2.1										
								0.7										
		CR5 21	8.0 10.0		8.0	SM	Black silty SAND with gravel (SM), mps 1.25 in., no odor, wet, 15% cinder-like material, 5% brick fragments, 5% wood fragments, stringers observed from 8 to 9 ft, oily sheen on water	2.2										
								1.6										
10		CR6 20	10.0 12.0					0.0										
					11.0	ML	Dark gray SILT (ML), mps 0.25 in., no structure, no odor, moist	0.0										
		CR7 24	12.0 14.0					0.0										
								0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14.0
Rock Cored (ft) -
Samples 7CR

Boring No. SM-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-328TB_PDI_3-R.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SN-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 2
Start 08 November 2013
Finish 08 November 2013
Driller J. Posterick
H&A Rep. S. Brousseau
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: Mini Sonic #1409
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 4x6 over ride
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: Location air knifed to 5.0 ft and backfilled with sand prior to drilling, begin sampling at 5.0 ft											
5		CR1 12	5.0 6.0		5.0	SM	Gray brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, moist, trace organics	0.0	10	5	10	30	30	15				
		CR2 16	6.0 8.0			SM	Brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, moist, trace organics Note: move boring 1.0 ft North to re-align casing to vertical	0.0	5	5	15	30	25	20				
		CR3 18	8.0 10.0			SM	Gray brown silty SAND with gravel (SM), mps 3.0 in., occasional silty pocket, slight hydrobarbon odor, wet,	0.0	10	10	20	15	25	20				
10		CR4 14	10.0 12.0			SM	Gray brown silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, wet, trace organics	0.0	10	15	15	20	20	20				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/8/13	1100	0	8.0	10.0	± 8.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	5CR

Boring No. SN-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SN-001
File No. 28612-311
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
		CR5 24	12.0 14.0	NO WELL INSTALLED		SM	Gray silty SAND (SM), mps 2.0 in., no structure, organic odor, wet, trace organics -FILL-	0.0	5	5	5	35	35	15				
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: borehole backfilled with sand upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SN-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3 - ENV.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SN-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 11 November 2013
Finish 11 November 2013
Driller P. Gaynoc
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: GUZZLER and Air-knife
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.2		2.0 in. ASPHALT SURFACE 4.0 in. GRAVEL											
					0.5	SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., cinder fragments, no structure, no odor, dry to moist		15	10	25	20	15	15				
	AIR KNIFE	HA1	2.0 4.0			SM	Dark brown silty SAND with gravel (SM), mps 3.0 in., brick fragments, cinders, bone *Sample collected at 2-4 ft 0710-11113-1025		15	10	25	20	15	15				
	AND VAC	HA2	4.0 6.0		4.0	GM	Light brown silty GRAVEL with sand (GM), mps 4.0 in., asphalt pieces, brick fragments, moistly gravel, no structure, no odor, moist to wet *Sample collected at 4-6 ft 0710-111113-1045		40	10	15	10	10	5				
5							Pre-cleared to 6.5 ft											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
11/11/13	1045	0	NA	6.5	± 6.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	2HA

Boring No. SN-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SN-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 21 November 2013
Finish 21 November 2013
Driller J. Graglia
H&A Rep. J. Miller
Elevation
Datum
Location SN-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED			Loose GRAVEL											
					1.5	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, dry	0.0	10	10	10	20	30	20				
		CR2 22	2.0 4.0					0.0										
								0.0										
							2302-112113-1015	0.0										
5		CR3 24	4.0 6.0			SM	Similar to above except dark gray, mps 3.5 in., concrete pieces 2302-112113-1025	0.0	10	10	10	20	30	20				
								0.1										
							Concrete pieces, mps 3.5 in.	0.0										
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6
Rock Cored (ft) -
Samples 3R

Boring No. SN-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SO-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 October 2013
Finish 04 October 2013
Driller P. Gaynor/F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: NA
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		ASPHALT - JACK HAMMER											
						GP	GRAVEL SUBBASE	0.0	100									
					0.5	SM	Black silty SAND (SM), mps 2.0 in., no structure, no odor, moist, 20% brick fragments and particles	0.0		10	20	25	25	20				
	AIR KNIFE		1.0 3.0				Sample 2351-100413-1105 (0 ft-2 ft)	0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT	0.0										
				NO WELL INSTALLED			Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples HA

Boring No. SO-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SO-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 October 2013
Finish 04 October 2013
Driller P. Gaynor/F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: NA
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.3		3 in. ASPHALT											
						GP	8 in GRAVEL SUBBASE	0.0	100									
					0.6	SM	Brown silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist, 20% brick fragments and particles	0.0	5	15	20	20	25	15				
	AIR KNIFE		1.0 3.0				Sample 2351-100413-1025 (0 ft-2 ft) MS/MSD	0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
				NO WELL INSTALLED			Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples HA

Boring No. SO-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SO-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 October 2013
Finish 04 October 2013
Driller P. Gaynor/F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0						GP	0 in.-2.5 in. ASPHALT - JACK HAMMER 2.5 in.-7 in GRAVEL SUBBASE	0.0	100									
					0.6	SM	Brown silty SAND (SM), mps 1.5 in., no structure, no odor, moist, brick fragments	0.0		10	20	25	25	20				
	AIR KNIFE		1.0 3.0					0.0										
							1.5 ft-2.0 ft Similar to above except brown	0.0										
					2.0			0.0										
							BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion Sample Collected 2351-100413-0940 (0 ft-2 ft) 2351-100413-0002 (FD)	0.0										
				NO WELL INSTALLED														

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2
Rock Cored (ft) -
Samples HA

Boring No. SO-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SP-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller B. Beeman
H&A Rep. M. McDonald
Elevation Datum
Location SB-093

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.5		6.0 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist		15	10	20	20	15	20				
	AIR KNIFE	HA1	2.0 4.0				*Sample collected at ~4.0 ft 0710-103013-1020											
					3.5													
						SP	Tan poorly-graded SAND with gravel (SP), mps 1.0 in., brick fragments, no structure, no odor, moist		20	15	30	20	10	5				
5	AND VAC	HA2	4.0 6.0	NO WELL INSTALLED			*Sample collected at 4-6 ft 0710-103013-1035											
					6.0		BOTTOM OF EXPLORATION 6.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6
Rock Cored (ft)	-
Samples	2HA

Boring No. SP-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SP-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 11 June 2014
Finish 11 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SP-001

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: MINISONIC 1415
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE	0.0										
						SM	Dark medium brown silty SAND with gravels (SM), brick 0387-061114-1615	0.0 0.0 0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SP-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SP-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 03 October 2013
Finish 03 October 2013
Driller F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location Moved 6 in. North

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. diameter Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - CORED	0.2										
					0.8		1-in. diameter copper pipe at 3-in. depth											
						GP	No void Copper Sheathing	2.0	100									
	AIR KNIFE		1.0		1.2	SM	GRAVEL SUBBASE Collect sample 2351-100313-1025 (0.0 to 2.0 ft)	0.0	5	10	15	25	25	20				
			2.0				Brown silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist, 15% brick fragments and particles	0.0										
			2.5															
	AND VAC	HA2	4.0 6.0	NO WELL INSTALLED			*Sample collected at 4-6 ft 0710-103113-1425											
5						SC	Light brown clayey SAND (SC), mps <0.5 in., no structure, no odor, moist to wet				25	20	20	35				
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 6.5
Rock Cored (ft) -
Samples 2H

Boring No. SP-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SP-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 03 October 2013
Finish 03 October 2013
Driller F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan-moved 15 in. North

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: 960 Probe 7022 BT/UTILI VAC
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. ØWA
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	HA1	0.0 2.0	NO WELL INSTALLED			CONCRETE - CORED (NO VOID)	0.0										
					0.8	SM	Copper Sheathing											
	A I R		1.0		1.2	GP SM	Dark brown silty SAND (SM), mps 2.5 in., whole bricks, brick pieces, fragments, no structure, no odor, moist	0.0	20 100	15	20	15	15	15				
							GRAVEL SUBBASE	0.0	5	10	15	25	25	20				
							Collect sample 2351-100313-1125 (0.0 to 2.0 ft)	0.0										
	K N I F E		2.0 2.5				Brown silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, moist, brick fragments, trace copper	0.0										
5		HA2	4.0 6.0				*Sample collected at 4-6 ft 0710-110613-1135											
							Pre-cleared to 6.5 ft											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	1H

Boring No. SP-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SP-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 03 October 2013
Finish 03 October 2013
Driller F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. diameter Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - CORED Copper pipe at 3 in.	0.0										
					0.6	GP	No voids Copper Sheathing	0.0	100									
	AIR KNIFE		1.0		1.1	SM	GRAVEL SUBBASE Collect sample 2351-100313-1530 (0.0 to 2.0 ft)	0.0	10	5	10	25	25	25				
			2.0		2.0		Brown silty SAND with gravel (SM), mps 3.0 in., no structure, no odor, moist, trace concrete, brick (yellow) and glass											
			2.5	NO WELL INSTALLED														
							0710-110513-1455 4.0 ft to 6.0 ft	0.0										
							Refusal at ~6.0 ft											
5					5.0													
							BOTTOM OF EXPLORATION 5.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.0
Rock Cored (ft)	-
Samples	1H

Boring No. SP-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SP-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 03 October 2013
Finish 03 October 2013
Driller F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. diameter Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - CORED Copper tubes at 3 in.	0.0										
					0.6	GP	No voids Copper Sheathing	0.0	100									
	AIR KNIFE		1.0		1.2	SM	GRAVEL SUBBASE Collect sample 2351-100313-1500 (0.0 to 2.0 ft)	0.0	10	15	15	20	20	20				
			2.0				Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, moist, brick, and glass fragments Note: backfilled borehole with clean sand upon completion	0.0										
			2.5				-FILL-											
				NO WELL INSTALLED		SM	Dark brown to black silty SAND with gravel (SM), mps 30 in., brick, concrete fragments, no structure, no odor, dry to moist *Sample collected at 4-6 ft 0710-110613-1600		20	5	25	15	20	15				
5					6.0		BOTTOM OF EXPLORATION 6.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 6.0
Rock Cored (ft) -
Samples 1H

Boring No. SP-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SP-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 03 October 2013
Finish 03 October 2013
Driller F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location Moved 15 in. Southeast

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. diameter Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0	NO WELL INSTALLED			CONCRETE - CORED	0.0										
			3.0				Copper pipe at 1-in. depth											
					0.8	SM	No voids	0.0	20	15	20	20	15	10				
	AIR		1.0			GP	Rebar at 7.0 in.	0.0	100									
					1.3	SM	Copper Sheathing	0.0										
							Dark brown to black silty SAND with gravel (SM), mps 6.0 in., brick pieces, concrete pieces, no structure, no odor, moist	0.0	5	10	20	25	20	20				
	KNIFE		2.0		2.0		GRAVEL SUBBASE	0										
							Collect sample 2351-100313-1350 (0.0 to 2.0 ft)	0.0										
			2.5				Brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, moist, brick fragments,											
					3.0		Refusal at ~3.0 ft											
							Fill material/debris, brick, and concrete											
							BOTTOM OF EXPLORATION 3.0 FT											
							Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 3.0
Rock Cored (ft) -
Samples 1H

Boring No. SP-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SP-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 03 October 2013
Finish 03 October 2013
Driller F. Cross
H&A Rep. D. Mukherjee
Elevation Datum
Location Moved 12 in. Northwest of plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	H	-	Rig Make & Model: UTILIVAC VE75
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: 3 in. diameter Hand Auger
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							CONCRETE - CORED	0.0										
					0.8		Copper pipe at 2-in. depth No voids											
	AIR KNIFE		1.0			GP	Copper Sheathing	0.0	100									
					1.2		GRAVEL SUBBASE											
			2.0			SM	Collect sample 2351-100313-1450 (0.0 to 2.0 ft)	0.0	5	10	15	25	25	20				
			2.5		2.0		Brown silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist, 10% brick, and concrete fagments											
								0.0										
	AND VAC	HA2	4.0 5.0	NO WELL INSTALLED			BOTTOM OF EXPLORATION 2.0 FT Note: backfilled borehole with clean sand upon completion Moved 12.0 in. Northwest of plan											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 2.0
Rock Cored (ft) -
Samples 1H

Boring No. SP-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SP-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 October 2014
Finish 29 October 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea) /J. Miller
Elevation Datum
Location SP-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0	NO WELL INSTALLED			9.0 in. CONCRETE NO VOID											
					0.8	GP	Dark gray well graded GRAVEL (GP), mps 1 in., no structure, no odor, dry		100									
						SM	Dark brown silty SAND with gravel (SM), mps 1 in., no odor, moist, trace red brick-like fragments		10	15	20	20	20	15				
		CR2 11	2.0 4.0			SM	Similar to above, except medium brown 0710-102714-1115											
					2.5	GM	Brown and tan silty GRAVEL (GM), mps 5 in., 10% red brick-like fragments, 15% slag-like fragments		30	25	10	10	10	15				
					2.8 3.0	ML	Dark brown SILT with sand (ML), no mps, no structure, no odor, moist					25	30	45				
						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, 10% brick fragments	0.0										
		CR3 18	4.0 6.0			SM	Similar to above, except yellow-brown in color, no brick fragments	0.1										
5								0.2										
		CR4 19	6.0 8.0		6.3	SP	Yellow-brown poorly graded SAND with gravel (SP), mps 1.25 in., no structure, no odor, wet	0.0										
					7.3	CL	Yellow-brown lean CLAY with sand (CL), no structure, no odor, wet	0.1										
					7.8 8.0	SP	Brown poorly graded medium SAND with gravel (SP), mps 1 in., no structure, no odor, wet											
							BOTTOM OF EXPLORATION 8.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SP-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SQ-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation Datum
Location SB-069

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.5		9.0 in. CORE CONCRETE (NO VOID)											
						SM	Black silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, moist		15	10	20	20	20	15				
	AIR KNIFE AND VAC	HA1	2.0 4.0	NO WELL INSTALLED			*Sample collected at 2-4 ft 0710-103013-1145											
					4.0		BOTTOM OF EXPLORATION 4.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 4
Rock Cored (ft) -
Samples 1HA

Boring No. SQ-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SQ-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	HA1	0.0 2.0	NO WELL INSTALLED			8.5 in. CORE CONCRETE (NO VOID)											
					0.7	SM	Black silty SAND with gravel (SM), mps 1.0 in., crushed brick, brick fragments, no structure, no odor, moist		20	10	25	15	15	15				
	AND VAC	HA2	2.0 4.0				*Sample collected at 0-2 ft 0710-110513-1030 *Sample collected at 2-4 ft 0710-110513-1130											
							Charcoal at ~3.0 ft											
		HA3	4.0 6.0				*Sample collected at 4-6 ft 0710-110513-1157											
5							Brick fragments at ~5.0 ft											
							Pre-cleared to 6.5 ft											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	3HA

Boring No. SQ-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 05 November 2013
Finish 05 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE AND VAC		0.0 2.3	NO WELL INSTALLED	0.7		8.0 in. CORE CONCRETE (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., no structure, no odor, moist		20	10	10	15	20	25				
					2.3		Refusal at 2.3 in. Concrete											
							BOTTOM OF EXPLORATION 2.25 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.25
Rock Cored (ft)	-
Samples	0

Boring No. SQ-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 05 November 2013
Finish 06 June 2014
Driller R. Rodke
H&A Rep. S. Collinge/ M. McDonald
Elevation Datum
Location SQ-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	HA1	0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CORE CONCRETE (NO VOID)											
						SM	Dark brown silty SAND with gravel (SM), mps 2.0 in., no structure, no odor, moist *Sample collected at 0-2 ft 0710-110513-1390 See Test Boring Report SQ-103 for soil description from 0 to 6 ft Brick fragments at 2-4 ft *Sample collected at 2-4 ft 0710-110513-1410		20	15	20	15	10	20				
	AND VAC	HA2	2.0 4.0															
		HA3	4.0 6.0			SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, no structure, no odor, moist *Sample collected at 4-6 ft 0710-110513-1455 Drilled to 6 ft before sampling, moved boring 1 ft east of original location		10	10	10	20	30	20				
5					6.0													
		CR1 12	6.0 8.0			SM	Moderate brown silty AND (SM), slight odor, pushing large cobble in tip (very poor recovery) 0387-060614-1442 Pre-cleared to 6.5 ft	0.0										
		CR2 24	8.0 10.0				Similar to above, cobbles 0387-060614-1446	0.0 0.0 0.0 0.0 0.0										
10		CR3 24	10.0 12.0		10.0	SP/GP	Gray poorly graded SAND with gravel/poorly graded GRAVEL with mostly coarse sand (SP/GP)	0.0 0.0										
					11.0	ML	Dark gray SILT with gravel (ML)	0.0										
		CR4 24	12.0 14.0		11.5	SP	Gray poorly graded mostly fine to medium SAND with gravel (SP) 0387-060614-1458 Similar to above 0386-060614-1515	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SQ-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 5 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SQ-103
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.2	ML	Dark gray SILT, trace fine sand, rounded gravel, shells											
15					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SQ-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 5 Aug 15

TEST BORING REPORT

Boring No. SQ-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	HA1	0.0 2.0	NO WELL INSTALLED			8.0 in. CORE CONCRETE (NO VOID)											
					0.7	SM	Dark brown silty SAND with gravel (SM), mps 1.0 in., brick fragments, crushed brick, no structure, no odor, moist *Sample collected at 0-2 ft 0710-110613-0850		20	15	20	15	10	20				
	AND VAC	HA2	2.0 4.0				*Sample collected at 2-4 ft 0710-110613-0910											
5		HA3	4.0 6.0				*Sample collected at 4-6 ft 0710-110613-0945											
							Pre-cleared to 6.5 ft											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	3HA

Boring No. SQ-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 November 2013
Finish 04 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	HA1	0.0 2.0	NO WELL INSTALLED			8.0 in. CORE CONCRETE (NO VOID)											
					0.7	SM	Black silty SAND with gravel (SM), mps 4.0 in., concrete pieces and fragments, no structure, no odor, moist		15	10	25	20	15	15				
	AND VAC	HA2	2.0 4.0				*Sample collected at 0-2 ft 0710-110413-1040 *Sample collected at 2-4 ft 0710-110413-1125											
							Brick pieces at 2-4 ft											
5		HA3	4.0 6.0				*Sample collected at 4-6 ft 0710-1100413-1150											
					6.5		BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	3HA

Boring No. SQ-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. SQ-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P., ANTEA

File No. 28612-311
Sheet No. 1 of 1
Start 04 November 2013
Finish 04 November 2013
Driller B. Beeman
H&A Rep. M. MacDonald
Elevation
Datum
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	HA	-	Rig Make & Model: Geoprobe 7822
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 3.0 in. & Hand Auger
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIR KNIFE	HA1	0.0 2.0	NO WELL INSTALLED	0.7		8.0 in. CORE CONCRETE (NO VOID)											
						SM	Dark brown to black silty SAND with gravel (SM), mps 5.0 in., brick fragments and particles, no structure, no odor, moist, cobbles *Sample collected at 0-2 ft 0710-110413-1325 Rebar at ~2.0 ft		20	15	20	20	10	15				
	AND VAC	HA2	2.0 4.0				*Sample collected at 2-4 ft 0710-110413-1430											
5					5.0		Refusal at ~5. ft, boulders BOTTOM OF EXPLORATION 5.0 FT Note: backfilled borehole with clean sand upon completion											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 5
Rock Cored (ft) -
Samples 2HA

Boring No. SQ-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013_28612-311TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SQ-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 12 June 2014
Finish 12 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SQ-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			CONCRETE											
					0.7		Gravel Base Course Fill Material (gravel)											
							From 3.5 to 4 ft, drilled through more concrete											
		CR1 24	4.0 6.0				Gravel Base Coarse 0387-061214-0910	0.0										
					4.4	SM	Grayish-brown silty SAND with gravel (SM), moderate petroleum-like odor, sheen on soil, wet	0.0										
5					5.4	SP	Brown silty SAND (SP), cobble in tip of sampler	0.0										
		CR2 24	6.0 8.0					0.0										
					6.5	SP	Large cobble / boulder 0387-061214-0914	0.0										
								0.0										
					7.8		Wood debris	0.0										
		CR3	8.0 10.0		8.2	SP	Grayish-brown poorly graded SAND with silt (SP) 0387-061214-0935	0.0										
					9.2	ML	Medium brown SILT (ML)	0.0										
					9.4	SP	Dark gray-brown poorly graded SAND with silt and gravel (SP)	0.0										
10		CR4 24	10.0 12.0				Similar to above	0.0										
								0.0										
							From 11.5 to 11.8 ft, increase in gravel	0.0										
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.0
Rock Cored (ft)	-
Samples	4CR

Boring No. SQ-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SQ-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 12 June 2014
Finish 12 June 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SQ-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5		-CONCRETE- Three times to the South and one to the North location 8.0 in. concrete	0.0										
							-FILL-	0.0										
						SM	Fill material - concrete, brick, cobble, rebar Dark brown silty SAND with gravel 0387-061214-1120 0387-061214-0002	0.0										
		CR2 24	2.0 4.0				Gravels (base coarse), possible 2.0 in. concrete	0.0										
						SM	Dark brown silty SAND with gravel (SM), wet 0387-061214-1128	0.0.										
								0.0										
		CR3 24	4.0 6.0			SM	Similar to above	0.0										
5								0.0										
								0.0										
					5.5	ML	Medium brown sandy SILT with fine gravel (ML), wet	0.0										
		CR4 24	6.0 8.0		6.5			0.0										
						SM	Medium brown silty SAND with gravel (SM), slight hydrocarbon-like odor, wet	0.6										
								0.8										
		CR5 24	8.0 10.0			SM	Similar to above except, no odor	0.0										
								0.0										
								0.0										
10					9.8	SP	Gray to dark gray poorly graded SAND with gravel (SP), trace cobbles	0.0										
		CR6 24	10.0 12.0		11.8													
					12.0	ML	Dark gray SILT (ML)											
							BOTTOM OF EXPLORATION 12.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	6CR

Boring No. SQ-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

File No. 28612-327
Sheet No. 1 of 1
Start 16 May 2014
Finish 12 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea) /S. Collinge
Elevation Datum
Location SQ-203

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			8.0 in. CONCRETE											
					0.8	GP	Dark brown poorly graded GRAVEL (GP), mps 2.5 in., no structure, no odor, dry, 100% crushed stone		100									
					1.0	SM	Dark brown silty SAND (SM), mps 2.5 in., no structure, no odor, moist		15	20	15	15	20	15				
		CR2 23	2.0 4.0			SM	Similar to above (SM) 0710-051614-1430		15	20	15	5	20	15				
						SM	Similar to above (SM), except mps 4 in., 10% slag-like material		20	20	15	15	25	15				
		CR3 16	4.0 6.0			SM	Similar to above (SM), except mps 1.5 in., 10% black slag-like fragments 0710-051614-1437		15	15	25	25	15	15				
5					5.0	GP	Gray poorly graded GRAVEL (GP), mps 1.5 in., no odor, moist, 80% ash-like material, 15% slag-like fragments		30	10	25	20	5	10				
		CR4 12	6.0 8.0			GP	Similar to above, except wet 0710-051614-1445		30	20	25	20	5	10				
					6.5	GP	Similar to above, slag											
					7.6	ML	Soft dark gray SILT (ML)											
					8.2	SP	Gray poorly graded SAND with gravel (SP), saturated											
					9.5	SP	Gray poorly graded fine to medium SAND (SP)											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 10.0
Rock Cored (ft) -
Samples 2CR

Boring No. SQ-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 11 June 2014
Finish 12 June 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SQ-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID											
					0.7		Fill Material (brick, slag, gravel base coarse)	0.0										
					1.5	SM	Medium brown silty SAND with gravel 0387-061114-1624	0.0										
		CR2 24	2.0 4.0					0.0										
								0.0										
							From 3.5 to 3.9 ft, increase in brick	0.0										
					3.9	SP	0387-06114-1630											
		CR3 24	4.0 6.0		4.2	GP/SP	Black foundry SAND (SP) Gray/black/brown poorly graded fine GRAVEL/poorly graded coarse SAND (GP/SP)	0.0										
5					5.0	SM	0387-061114-1640 Gray silty SAND with gravel (SM)	0.0										
							Stopped at 6 ft on 6/11/14	0.0										
		CR4 24	6.0 8.0		6.2	SP	Gray/black/brown poorly graded SAND (SP) 0387-061214-0829	0.0										
								0.0										
								0.0										
		CR5 24	8.0 10.0					0.0										
					8.6	SP	Gray poorly graded SAND with gravel (SP), no odor 0387-061214-0835	0.0										
								0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SQ-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 June 2014
Finish 27 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SQ-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 0	0.0 2.0	NO WELL INSTALLED			CONCRETE NO VOID Fill Material (concrete)											
		CR2 12	2.0 4.0					0.0										
		CR3 20	4.0 6.0					0.0										
					4.5	SM	Light brown silty SAND with gravel (SM) 0710-062714-1143	0.0										
5								0.0										
								0.0										
					6.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM)	0.0										
		CR4 22	6.0 8.0		6.3	SM	Medium brown silty SAND with gravel (SM)	0.0										
					7.2	SM	Gray silty SAND (SM) 0710-062714-1149	0.0										
		CR5 24	8.0 10.0					0.0										
					8.8	SM	Gray-brown silty SAND with gravel (SM) 0710-062714-1156	0.0										
10					10.0		BOTTOM OF EXPLORATION 10.0 FT	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 10.0
Rock Cored (ft) -
Samples 5CR

Boring No. SQ-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SQ-303

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 29 October 2014
Finish 29 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SQ-303

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			Concrete fragments to 1.5 ft, mps 2 in.	0.2										
					1.5	SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 10% brick fragments	7.6										
		CR2 23	2.0 4.0					4.3										
								6.2										
		CR3 16	4.0 6.0		4.0	GP	Gray poorly graded GRAVEL (GP), mps 0.5 in. to 4.75 ft, from 4.75 to 5.75 ft concrete pieces, mps 3 in.	0.9										
5								1.2										
					5.8	SP	Dark brown poorly graded medium SAND with gravel (SP), mps 1 in., no structure, no odor, dry, 10% concrete fragments											
		CR4 12	6.0 8.0		6.0	GP	Dark brown poorly graded GRAVEL with sand (SP), mps 0.5 in., no structure, no odor, dry	0.3										
					8.0	SP	Dark brown poorly graded SAND with gravel (SP), mps 1 in., some clay, no structure, organic-like odor, wet											
10					10.0		BOTTOM OF EXPLORATION 10.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	5CR

Boring No. SQ-303

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SR-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 02 June 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: HAND AUGER
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND		0.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
	AUGER		1.0		0.8	SM	Light brown silty SAND with gravel (SM), mps 0.5 in., 10% concrete-like fragments, no odor, moist 0710-060214-1010		10	10	15	20	30	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. SR-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SR-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 02 June 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	Air Knife		0.0 2.0	NO WELL INSTALLED	0.6		7.25 in. CONCRETE NO VOID											
						SM	Dark gray silty SAND with gravel (SM), mps 0.25 in., no odor, moist, 5% slag-like fragments, 5% concrete-like fragments 0710-060214-1020 0710-060214-003	0.0	5	5	20	20	35	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	--

Boring No. SR-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SR-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 02 June 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-103

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: HAND AUGER
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND		0.0	NO WELL INSTALLED	0.4		CONCRETE AT SURFACE											
						SM	NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.	0.0	10	15	15	15	30	15				
	AUGER		1.0				Black silty SAND with gravel (SM), mps 0.25 in., 5% metal-like fragments, 5% wood-like fragments, 5% slag-like fragments, no odor, moist 0710-060214-1040											
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. SR-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SR-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 1
Start 02 June 2014
Finish 02 June 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: HAND AUGER
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	HAND		0.0	NO WELL INSTALLED			CONCRETE AT SURFACE NO VOID Boring pre-excavated using vacuum truck and hand tools. Soil descriptions based on hand auger cuttings.											
	AUGER		1.0		1.2	SM	Black silty SAND with gravel (SM), mps 1 in., 10% slag-like fragments, no odor, moist 0716-060214-0955	0.0	10	15	15	15	20	15				
					2.0		BOTTOM OF EXPLORATION 2.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	0CR

Boring No. SR-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SR-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 01 July 2014
Finish 01 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE NO VOID Fill Material (slag, red brick, wood)	0.0 0.0										
					1.0	SM	Black silty SAND with gravel (SM), moist 0710-070114-1026	0.0 0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SR-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SR-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 01 July 2014
Finish 01 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.2	SM	2.0 in. CONCRETE NO VOID Fill Material (red brick, wood) Black silty SAND with gravel (SM) 0710-070114-1005											
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SR-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SR-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 01 July 2014
Finish 01 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.5	SP-SM	6.0 in. CONCRETE NO VOID Fill Material (slag, concrete) Black poorly graded sand with silt and gravel (SP-SM) 0710-070114-0912 0710-070114-0003	0.0 0.0 0.0 0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SR-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SR-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 01 July 2014
Finish 01 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED			12.0 in. CONCRETE NO VOID Fill Material (asphalt, concrete)	0.0										
					1.0	SM	Dark brown silty SAND with gravel (SM)	0.0										
					1.8			0.0										
					2.0		Asphalt-like fragments 0710-070114-0903											
							BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SR-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SR-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 01 July 2014
Finish 01 July 2014
Driller R. Radke
H&A Rep. M. Pomponio (Antea)
Elevation Datum
Location SR-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED			6.0 in. CONCRETE NO VOID	0.0										
					0.5	SM	Fill Material (red brick, slag) Black silty SAND with gravel (SM)	0.0										
					1.0	SP	Red-brown poorly graded SAND with gravel (SP) 0710-070114-1036	0.0										
								0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SR-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SR-301

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 10 July 2014
Finish 10 July 2014
Driller R. Radke
H&A Rep. S. Collinge
Elevation Datum
Location SR-301

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 2.0	NO WELL INSTALLED	0.3	SP	4.0 in. ASPHALT Fill Material (slag, foundry, sand) Black poorly graded fine to coarse sand with fine gravel (SP), no odor, moist, staining (foundry sand) 0387-071014-1625	0.0 0.0 0.0 0.0										
					2.0		BOTTOM OF EXPLORATION 2.0 FT											
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	2.0
Rock Cored (ft)	-
Samples	1CR

Boring No. SR-301

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-101

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 14 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-101

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED			CONCRETE 0387-071714-1608											
					1.0	SP	Black poorly graded SAND with gravel (SP), no odor, moist, (foundry sand/silt)	0.0										
					1.8	SP	Grayish-brown poorly graded SAND with gravel (SP), no odor, moist 0387-071714-1612	0.0										
		CR2 24	2.0 4.0					0.0										
								0.0										
								0.0										
		CR3 20	4.0 6.0			SP	Similar to above 0387-071714-1615	7.6										
								3.2										
5					5.0	SM	Grayish-brown silty SAND (SM), moist to wet	5.9										
					5.3	SP	Grayish-brown poorly graded SAND (SP), moderate odor, wet 0387-071714-1628	32.9										
		CR4 24	6.0 8.0			SP	Similar to above, sheen on water, saturated	14.7										
								13.6										
								18.9										
								13.1										
		CR5 24	8.0 10.0		8.0	GP/SP	Grayish-brown poorly graded GRAVEL/SAND (GP/SP), strong odor, saturated, free product droplets, cobbles and boulders 0387-071714-1633	8.9										
								10.1										
								13.5										
								11.2										
10		CR6 24	10.0 12.0		10.0	SP	Grayish-brown poorly graded SAND with gravel and silt (SP), slight odor, saturated 0387-071714-1640	3.7										
								5.2										
								3.2										
								3.3										
		CR7 24	12.0 14.0			SP	Grayish-brown poorly graded SAND with gravel and silt (SP), slight odor, saturated 0387-071714-1645											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-101

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-101

File No. 28612-326

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-101

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-102

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 17 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED	0.4		Surface grass and brick	0.0										
						SM	Light grayish-brown silty SAND with gravel, no staining, no odor, moist 0387-071714-1449	0.0 0.0 0.0										
		CR2 20	2.0 4.0		2.5	SM	Similar to above	0.0										
						GP	Grayish-brown poorly graded GRAVEL with sand and silt (GP), slight weet odor, moist to wet, black stick material from 3.4 to 3.7 ft	0.0 0.0										
					3.7		Concrete 0387-071714-1454	0.0										
		CR3 15	4.0 6.0		4.3	SM/ML	Black silty SAND/sandy SILT with gravel (SM/ML), slight odor, wet, black product drops on water 0387-071714-1503	3.7 4.2										
5		CR4 10	6.0 8.0		6.0	GP	Black poorly graded GRAVEL with silt (GP), slight odor, saturated, oily substances 0387-071714-1508	3.1 0.7										
		CR5 10	8.0 10.0			GP	Similar to above, purge product 0387-071714-1513	3.8 9.0										
10		CR6 18	10.0 12.0		10.0	GP	Black silty SAND with gravel (GP), saturated, free product 0387-071714-1522 Color change to grayish-brown in bottom 6 in.	1.0 0.8 0.6										
		CR7 20	12.0 14.0				Similar to above 0387-071714-1531											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-102

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-102

File No. 28612-326

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-102

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-103

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 17 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-103/SS-103A

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED			Surface brick and grass	0.0										
						SP-SM	Brown/black poorly graded SAND with silt and gravel (SP-SM), no odor, moist	0.0										
							Fill Material (brick, concrete, and slag)	0.0										
							0387-071714-0845	0.0										
		CR2 24	2.0 4.0			SP-SM	Similar to above	0.0										
							0387-071714-0851	0.0										
					3.0	SM	Medium brown silty SAND with gravel (SM), no odor, moist	0.0										
								0.0										
		CR3 ?	4.0 6.0		4.0	SP	Yellowish-brown poorly graded SAND (SP), slight petroleum-like/sweet odor, wet	2.4										
							0387-071714-0855	10.1										
5							From 4.5 to 4.9 ft, color change to grayish-brown-black											
							At 4.9 ft, color change to grayish-brown	29.0										
					5.6	GP	Grayish-brown poorly graded GRAVEL with sand (GP), slight odor, saturated											
		CR4 12	6.0 8.0				0387-071714-0901	0.8										
								0.7										
								1.1										
		CR5 18	8.0 10.0			GP	Similar to above	1.8										
							0387-071714-0906	3.2										
								2.1										
10		CR6 18	10.0 12.0		10.0	SM	Grayish-brown silty SAND with gravel (SM), no odor, saturated	0.0										
							0387-071714-0910	0.0										
								0.0										
							At 11.8 ft, hit something hard, possible large cobble											
		CR7 14	12.0 14.0				Drilled through cobble	0.0										
						SM	Grayish-brown silty SAND with gravel (SM), no odor, saturated	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	18.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-103

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. SS-103
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
							0387-071714-0918	0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											
15																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-103

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. SS-104

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 17 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED	0.4		Surface grass, brick 0387-071714-1401	0.0										
					1.0	SP-SM	Grayish-brown poorly graded SAND with silt and gravel (SP-SM), no odor, moist	0.0										
						SP	Black poorly graded SAND with gravel (GP), no odor, moist, (foundry sand and slag)	0.0										
		CR2 24	2.0 4.0		2.2	SP	Yellowish-brown poorly graded SAND with gravel (SP), no odor, moist 0387-071714-1405	0.0										
		CR3 14	4.0 6.0		4.2		CONCRETE	0.0										
5					4.6	SP	Yellowish-brown poorly graded SAND with gravel (SP), no odor, wet to saturated 0387-071714-1410 At 5.0 ft, black staining	0.0 4.9										
		CR4 18	6.0 8.0			SP	At 6.0 ft, color change to grayish-brown, slight to moderate petroleum-like/sweet odor Similar to above, moderate odor 0387-071714-1415	3.7 10.9 13.1										
		CR5 24	8.0 10.0			SP	Similar to above, sheen on water 0387-071714-1422	10.7 17.6 15.5 19.7										
10		CR6 24	10.0 12.0			SP	Similar to above, slight odor 0387-071714-1427	8.1 10.2 13.9 14.2										
		CR7 20	12.0 14.0			SP	Yellowish-brown poorly graded SAND with gravel (SP), slight odor, saturated 0387-071714-1431											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-104

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-104
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-104

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-105

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 17 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-105

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED			Surface area brick and glass	0.0										
					1.0	SP	Black/brown poorly graded SAND with gravel (SP), no odor, moist	0.0										
							0387-071714-0937	0.0										
					1.4	SP	CONCRETE	0.0										
		CR2 24	2.0 4.0				Black poorly graded SAND with gravel (SP), no odor, moist 0387-071714-0943 Fill material (brick, concrete and metal)	0.0										
					3.0	SP	Yellowish-brown poorly graded SAND (SP)	0.0										
					3.2	SP-SM	Grayish-brown poorly graded SAND with silt and gravel (SP-SM), no odor, moist	0.0										
		CR3 20	4.0 6.0			SP-SM	0387-071714-0948 Similar to above	0.0										
					4.5	SP	Yellowish-brown poorly graded SAND with gravel (SP), no odor, very moist	0.0										
5 ▽								0.0										
								0.0										
		CR4 20	6.0 8.0			SP	Similar to above 0387-071714-0952	0.0										
								0.0										
								0.0										
								0.0										
		CR5 20	8.0 10.0			SP	Similar to above 0387-071714-0956	0.0										
								0.0										
								0.0										
								0.0										
10		CR6 24	10.0 12.0		10.0	SP	Yellowish-brown/grayish-brown poorly graded SAND (SP), no odor, saturated 0387-071714-1000	0.0										
								0.0										
								0.0										
								0.0										
		CR7 24	12.0 14.0		12.0	SP	Similar to above	0.0										
						SM	Medium grayish-brown silty SAND, no odor, saturated (SM) 0387-071714-1005	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-105

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-105
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								0.0										
					13.6			0.0										
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-105

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-106

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 17 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-106

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED			Surface area brick and grass	0.0										
						SP	Dark brown/black poorly graded SAND with gravel (SP), no odor, moist (foundry sand) 0387-071714-1118	0.0										
							Fill Material (concrete, boulder, cobbles, wood and brick)	0.0										
		CR2 24	2.0 4.0		2.0	SP	Yellowish-brown poorly graded SAND with gravel (SP), no odor, moist 0387-071714-1121	0.0										
								0.0										
								0.0										
					3.8			0.0										
		CR3 24	4.0 6.0		4.4	SP-SM	Grayish-brown silty SAND with gravel (SP-SM), moist	0.0										
5						SC	Grayish-brown clayey SAND with gravel (SC), no odor, very moist to wet 0387-071714-1127	0.0										
					5.5			0.0										
		CR4 20	6.0 8.0			SM	Grayish-brown silty SAND with gravel (SM), no odor, saturated, cobble size	0.0										
						SM	Similar to above 0387-071714-1132	0.0										
								0.0										
								0.0										
		CR5 20	8.0 10.0			SM	Similar to above, large concrete piece throughout sample 0387-071714-1136	0.0										
								0.0										
								0.0										
10								0.0										
		CR6 ?	10.0 12.0				Hard drilling between 10.0 and 12.0 ft, appear to be coring through boulder 0387-071714-1153	0.0										
								0.0										
								0.0										
					12.0			0.0										
		CR7 10	12.0 14.0			GP	Grayish-brown silty GRAVEL with sand (GP), no odor, saturated, wood debris 0387-0711714-1342	0.0										
								0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-106

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-106

File No. 28612-326

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-106

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-107

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-326
Sheet No. 1 of 2
Start 17 July 2014
Finish 17 July 2014
Driller R. Rodke
H&A Rep. S. Collinge
Elevation Datum
Location SS-107

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Override	CR		Rig Make & Model: SONIC 1416
Inside Diameter (in.)	6	4		Bit Type:
Hammer Weight (lb)			-	Drill Mud:
Hammer Fall (in.)			-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 24	0.0 1.0	NO WELL INSTALLED	0.4		Surface area red brick	0.0										
						SP	Dark brown/black poorly graded SAND with gravel (SP), no odor, moist, slag (foundry sand) 0387-071714-1032 Fill Material (bricks and concrete)	0.0										
								0.0										
								0.0										
		CR2 24	2.0 4.0			SP	Similar to above	0.0										
								0.0										
					3.0													
		CR3 20	4.0 6.0			SP	Yellowish-brown/grayish-brown poorly graded SAND with gravel (SP), no odor, very moist 0387-071714-1036	0.0										
								0.0										
						SP	Similar to above, except wet to saturated 0387-071714-1042	0.0										
								0.0										
5					5.2													
						SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), no odor, saturated	0.0										
					6.0			0.0										
		CR4 24	6.0 8.0			SP	Yellowish-brown poorly graded SAND with gravel (SP), no odor, saturated 0387-071714-1047	0.0										
								0.0										
								0.0										
								0.0										
		CR5 24	8.0 10.0			SP	Similar to above 0387-071714-1054	0.0										
								0.0										
								0.0										
								0.0										
10		CR6 24	10.0 12.0			SP	Similar to above 0387-071714-1058	0.0										
								0.0										
								0.0										
								0.0										
		CR7 20	12.0 14.0			SP	Yellowish-brown poorly graded SAND with gravel (SP), no odor, saturated 0387-071714-1102	0.0										
								0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.0
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-107

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-107
File No. 28612-326
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	13.2	ML	Grayish-brown SILT (ML), no odor, saturated	0.0										
								0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. SS-107

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-326TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-201

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 October 2014
Finish 27 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-201

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., no structure, no odor, dry, 15% brick fragments, 10% concrete fragments, 5% slag-like fragments	0.0										
								0.0										
		CR2 19	2.0 4.0		2.5	SP-SM	Yellow-brown poorly graded SAND with silt and gravel (SP-SM), mps 1.25 in., no structure, no odor, dry, 5% brick fragments	0.1										
								0.3										
		CR3 16	4.0 6.0					1.3										
5								64.8										
					5.3	SP-SM	Similar to above, except dark gray, petroleum-like odor, wet, petroleum-like residue on bag	73.4										
		CR4 14	6.0 8.0			SP-SM	Similar to above, except slight petroleum-like odor, dry, no residue on bag	18.4										
								16.7										
					7.0	SP	Brown poorly graded SAND with gravel (SP), mps 2.5 in., no structure, no odor, wet	0.0										
		CR5 19	8.0 10.0					14.0										
								8.0										
								4.0										
10		CR6 21	10.0 12.0					6.0										
								2.0										
								0.0										
		CR7 23	12.0 14.0			SP	Similar to above, except tan, mps 2 in.	0.3										
								0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-201

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-202

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 October 2014
Finish 27 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-202

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED		SM	Dark gray to light black silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, 10% brick fragments, 10% concrete fragments, 5% slag-like fragments, 5% copperwire strands	0.0										
								0.6										
		CR2 21	2.0 4.0		2.5	SP	Yellow-brown poorly graded medium to coarse SAND with gravel (SP), ps 2.5 in., no structure, no odor, dry, 5% brick fragments	0.3										
								0.2										
		CR3 13	4.0 6.0		4.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., no structure, no odor, moist, 10% wood fragments, 10% brick fragments, 10% ash-like fragments	0.4										
5								1.1										
		CR4 11	6.0 8.0			SP-SM	Similar to above, except wet, no wood fragments, no brick fragments	0.4										
								0.3										
		CR5 20	8.0 10.0					0.1										
								0.0										
10		CR6 24	10.0 12.0		11.0	SP	Brown to light-brown poorly graded SAND with gravel (SP), mps 2 in. no structure, no odor, wet											
		CR7 19	12.0 14.0		13.5													
					14.0	OL-OH	Dark brown to gray ORGANIC SOIL (OL-OH), no structure, no odor, wet											
							BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfilled borehole with sand.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-202

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-203

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 October 2014
Finish 27 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-203

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SANd with gravel (SM), mps 2 in., no structure, no odor, dry, 10% brick fragments, 5% concrete fragments	0.0										
								0.2										
		CR2 24	2.0 4.0			SM	Similar to above, except brown	0.0										
					2.5	SP	Yellow-brown poorly graded medium to coarse SAND with gravel (SP), mps 1.5 in., no structure, no odor, dry, 10% brick fragments	0.0										
		CR3 16	4.0 6.0			SP	Similar to above, except dark brown, moist to wet	0.6										
5								0.3										
		CR4 13	6.0 8.0					0.2										
					6.5	SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, moist to wet, 5% slag-like fragments	0.1										
		CR5 11	8.0 10.0		8.0	SP	Light brown to tan poorly graded medium to coarse SAND with gravel (SP), mps 2 in., no structure, no odor, wet	0.0										
								0.4										
10		CR6 14	10.0 12.0					0.1										
								0.3										
		CR7 20	12.0 14.0		12.5	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet	0.0										
								0.4										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfilled borehole with sand.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-203

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-204

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 24 October 2014
Finish 24 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-204

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 2 in., no structure, no odor, dry, 5% slag-like fragments, 10% brick fragments	0.4										
		CR2 11	2.0 4.0		2.0		Concrete pieces, mps 3.5 in.	0.6										
					2.8	SM	Similar to CR1 above, except yellow-brown, mps 2.5 in.	0.3										
		CR3 13	4.0 6.0					1.6										
5								4.3										
		CR4 12	6.0 8.0		6.0	SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 1.25 in., no structure, no odor, wet, 5% brick fragments	3.2										
								1.7										
		CR5 10	8.0 10.0			SP-SM	Similar to above, except no visible brick fragments, wet	4.6										
								6.7										
10		CR6 20	10.0 12.0					3.9										
								0.4										
		CR7 21	12.0 14.0		12.0	CL	Gray CLAY with sand (CL), no structure, no odor, wet	4.2										
					13.3	SP	Gray poorly graded coarse SAND with gravel (SP), mps 1 in., no structure, no odor, wet, 5% shells	3.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-204

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-205

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 24 October 2014
Finish 24 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-205

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 13	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 1 in., no structure, no odor, dry, 5% brick fragments	0.0
								0.0
		CR2 24	2.0 4.0		2.5	GP	Concrete fragments	1.7
								1.4
								1.2
		CR3 10	4.0 6.0		3.8	SM	Similar to CR1 above, except with a 2.5 in. diameter ball that contained some chicken wire, majority of ball containing a warm peanut butter-like gooey material in both color, texture and consistency	0.7
5								13.2
		CR4 24	6.0 8.0		6.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 2 in., no structure, no odor, moist	0.9
					6.8	SP	Yellow-brown poorly graded coarse SAND with gravel (SP), mps 1.75 in., no structure, no odor, wet	10.3
		CR5 21	8.0 10.0					9.2
								7.6
10		CR6 17	10.0 12.0					8.1
								0.9
		CR7 18	12.0 14.0			SP	Similar to above, except red-gray, mps 2.5 in., 5% brick fragments	11.2
					12.5	SP	Similar to above, except yellow-brown, faint petroleum-like odor, no brick fragments	14.6
					14.0		BOTTOM OF EXPLORATION 14.0 FT	
							Note: Backfilled borehole with sand.	

Gravel		Sand			Fines	Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-205

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-206

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 24 October 2014
Finish 24 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-206

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 18	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel fragments (SM), mps 2 in., no structure, no odor, dry, 15% brick fragments, 10% slag-like fragments, 10% ash-like fragments	0.0										
		CR2 20	2.0 4.0			SM	Similar to above, except with 10% 10% metal fragments, mps 1 in., moist, no brick fragments	0.4										
								6.2										
		CR3 24	4.0 6.0		4.5			26.3										
5						SM	Similar to above, except black, petroleum-like odors, wet, more coarse sand present, sheen to water	93.0										
								132.0										
		CR4 24	6.0 8.0					21.2										
					7.0			92.0										
						SP	Dark gray poorly graded coarse SAND (SP), no structure, petroleum-like odor, wet, sheen to water, petroleum-like residue on bag	78.0										
		CR5 18	8.0 10.0					74.0										
								92.0										
					9.3			177.0										
						SP	Similar to above, except black, some coarse sand, petroleum-like odor, petroleum-like residue on bag, 30% wood fragments, 20% leather-like fragments											
10		CR6 17	10.0 12.0		10.0	SP	Dark gray poorly graded coarse SAND (SP), no structure, petroleum-like odor, wet, sheen to water, petroleum-like residue on bag	87.0										
								82.0										
					11.3	SP	Similar to above, except mps 1 in., petroleum-like odor, wet, oily residue on bag, metal fragments, copper strands, wood fragments, nails	23.7										
		CR7 20	12.0 14.0					13.7										
					12.5	SP-SC	Brown poorly graded SAND with clay and gravel (SP-SC), mps 0.75 in., no structure, slight petroleum-like odor, wet	0.0										
								0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											
							Note: Backfilled borehole with sand.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-206

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-207

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 27 October 2014
Finish 27 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-207

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SANd with gravel (SM), mps 3 in., no structure, no odor, dry, 15% brick pieces, 15% concrete pieces	0.0										
								0.4										
		CR2 20	2.0 4.0					9.7										
					2.8	SM	Similar to above, except PCBM-like smell, 15 in. dia. ball of PCBM material, small strands when pulling material apart, tacky to touch											
					3.0			0.0										
					4.0		Concrete pieces with small rebar strands											
		CR3 16	4.0 6.0			SM	Dark brown silty SANd with gravel (SM), mps 2.5 in., no structure, no odor, dry, 10% rick fragments, 10% concrete fragments	0.9										
5								4.8										
		CR4 24	6.0 8.0					4.6										
								32.7										
					7.0	SM	Similar to above, except black, petroleum-like odor, wet, slight sheen to water, 5% glass fragments, 5% metal fragments	39.2										
		CR5 13	8.0 10.0					47.2										
					9.3	SP	Black poorly graded coarse SAND (SP), no structure, petroleum-like odor, wet, 5% brick fragments	51.3										
10		CR6 24	10.0 12.0					31.6										
								47.3										
								50.2										
		CR7 24	12.0 14.0					13.2										
					13.3	OL-OH	Dark gray ORGANIC SOIL (OL-OH), no structure, no odor, wet, 5% shells	0.7										
					14.0		BOTTOM OF EXPLORATION 14.0 FT Note: Backfilled borehole with sand.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-207

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-208

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 03 November 2014
Finish 03 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-208

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SANd with gravel (SM), mps 2.25 in., no structure, no odor, dry, 15% brick fragments	0.3										
					1.3	SM	Similar to above, except black, 10% slag-like fragments, 10% cinder-like fragments	0.2										
		CR2 24	2.0 4.0					0.1										
								0.4										
					3.8	SP-SM	Brown poorly graded medium SAND with silt and gravel (SP-SM), mps 1.25 in., no structure, no odor, dry	0.6										
		CR3 16	4.0 6.0			SP-SM	Similar to above, except red-brown, 10% brick fragments	0.4										
5																		
		CR4 14	6.0 8.0			SP-SM	Similar to above, except black, 10% cinder-like fragments, 5% slag-like fragments	0.0										
					7.3	SP-SM	Similar to above, except brown to yellow-brown, moist to wet, no cinder or slag-like fragments	0.1										
		CR5 19	8.0 10.0					0.4										
								0.6										
10		CR6 23	10.0 12.0		10.0	SM	Light brown silty SAND with gravel (SM), mps 2 in., no structure, no odor, wet	0.5										
								0.2										
		CR7 24	12.0 14.0					0.3										
					12.8	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet, some shell fragments	0.4										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-208

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-209

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 03 November 2014
Finish 03 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-209

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB											
						SM	Dark brown silty SANd with gravel (SM), mps 2.25 in., no structure, no odor, dry, 20% concrete fragments, 10% brick fragments, 10% slag-like fragment	0.3										
		CR2 21	2.0 4.0		2.0	GP	Concrete pieces, mps 3.5 in.											
		CR3 13	4.0 6.0		4.0	SM	Dark brown silty SAND with gravel (SM), mps 1.25 in., no structure, no odor, dry, 20% concrete fragments, 5% brick fragments	0.6										
5								1.2										
		CR4 18	6.0 8.0					0.4										
								0.7										
		CR5 23	8.0 10.0		8.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 1 in., no structure, no odor, wet, 5% brick fragments	0.3										
					8.8	SP	Light brown poorly graded SAND with gravel (SP), mps 0.75 in., no structure, no odor, wet	0.2										
10		CR6 24	10.0 12.0					1.6										
								0.8										
		CR7 23	12.0 14.0					0.3										
					12.8	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, some shell fragments	0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-209

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-210

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 31 October 2014
Finish 31 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-210

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, 25% concrete fragments, 10% brick fragments	0.3										
		CR2 22	2.0 4.0					0.1										
					3.0	SP-SM	Yellow-brown poorly graded SAND with gravel (SP-SM) mps 0.75 in., no structure, no odor, dry, 10% brick fragments	0.0										
		CR3 24	4.0 6.0					0.6										
5								1.3										
					5.8	GP	Brick pieces, mps 3.5 in.											
		CR4 23	6.0 8.0		6.0	SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 0.75 in., no structure, no odor, dry, 10% cinder-like fragments, 15% slag-like fragments, 5% concrete fragments	13.2										
					7.3	SP	Gray poorly graded SAND with gravel (SP), mps 1.5 in., no structure, petroleum-like odor, wet, 10% slag-like fragments	42.6										
		CR5 13	8.0 10.0		8.0	SP	Olive-gray poorly graded SAND with silt and gravel (SP-SM), mps 0.5 in., no structure, no odor, wet, 10% slag-like fragments	13.2										
								16.6										
10		CR6 24	10.0 12.0			SP	Similar to above, except red-gray	14.2										
					11.3	SP	Light brown poorly graded SAND with gravel (SP), mps 0.5 in., no structure, no odor, wet	9.1										
					12.0			0.3										
		CR7 24	12.0 14.0			OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet, some shells	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-210

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-211

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 31 October 2014
Finish 31 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-211

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB	0.0										
						SM	Dark brown to dark gray silty SAND with gravel (SM), mps 2 in., no structure, no odor, dry, 15% brick fragments, 15% concrete fragments, 5% cinder-like fragments	0.6										
		CR2 19	2.0 4.0					1.9										
					3.3	GP	Dark gray poorly graded GRAVEL with sand (GP), mps 0.75 in., 50% slag-like fragments, 15% cinder-like fragments, 10% brick fragments	0.9										
		CR3 24	4.0 6.0		4.0	SM	Yellow-brown silty SAND with gravel (SM), mps 2.75 in., no structure, no odor, moist, 10% brick fragments, 15% concrete fragments	16.2										
5								68.3										
					5.8	SP	Gray poorly graded SAND with gravel (SP), mps 1.25 in., no structure, petroleum-like odor, moist, 10% concrete fragments											
		CR4 17	6.0 8.0		6.3	SM	Dark gray silty SAND with gravel (SM), mps 3.25 in., no structure, no odor, dry, 15% brick pieces, 10% concrete fragments	0.3										
								13.2										
		CR5 24	8.0 10.0		8.0	SP-SM	Olive-gray to gray poorly graded SANd with silt and gravel (SP-SM), mps 1.75 in., no structure, petroleum-like odor, wet, 10% brick fragments	32.1										
					8.8	SP-SM	Similar to above, except brown to yellow-brown	14.7										
10		CR6 24	10.0 12.0			SP-SM	Similar to above, except gray-brown, petroleum-like odor, slight sheen to water	9.7										
					10.8	SP	Brown to light brown poorly graded SAND with gravel (SP), mps 2.75 in., no structure, no odor, wet	13.6										
		CR7 24	12.0 14.0					4.6										
								3.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-211

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-212

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 31 October 2014
Finish 31 October 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation Datum
Location SS-212

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB	0.6										
						SM	Dark brown silty SANd with gravel (SM), mps 2.5 in., no structure, no odor, dry, 15% concrete fragments, 5% brick fragments	1.3										
		CR2 16	2.0 4.0					2.1										
					3.3	GP	Brick pieces, mps 3.5 in., concrete fragments	4.7										
		CR3 24	4.0 6.0		4.0 4.3	SM GP	Dark brown to black silty SAND with gravel (SM), mps 0.75 in., no structure, no odor,dry, 10% concrete fragments, 5% terra cotta pipe, 10% cinder-like fragments	16.2										
5							Gray-brown poorly graded GRAVEL with sand (GP), petroleum-like odor, wet, 40% cinder-like fragments, 30% slag-like fragments	36.4										
		CR4 10	6.0 8.0		6.0	SM	Brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 35% brick fragments, low recovery, pushed brick or concrete	0.0										
		CR5 24	8.0 10.0		8.0	GP	Dark gray to olive-gray poorly graded GRAVEL with sand (GP), mps 1.75 in., no structure, petroleum-like odor, wet, 30% slag-like fragments, 25% cinder-like fragments,, 20% cloth-like strands (mop-like)	52.3										
								48.6										
10		CR6 21	10.0 12.0			GP	Similar to above, except no cloth-like strands	31.6										
								29.4										
		CR7 24	12.0 14.0			GP	Similar to above, except olive-green sheen on water, petroleum-like odor	0.6										
					13.3	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet	0.1										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-212

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-213

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 04 November 2014
Finish 04 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-213

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 18	0.0 2.0	NO WELL INSTALLED			Concrete fragments, mps 2.25 in., 10% metal fragments	
		CR2 22	2.0 4.0		2.3	SM	Dark brown to black silty SAND with gravel (SM), mps 1 in., no structure, no odor, dry, 10% slag-like fragments, 5% concrete fragments	0.0
								0.3
		CR3 21	4.0 6.0					0.8
5								1.3
		CR4 18	6.0 8.0					108.0
					7.3	SP-SM	Olive-gray poorly graded SAND with silt and gravel (SP-SM), mps 0.75 in., no structure, petroleum-like odor, wet, 10% slag-like fragments, 10% cinder-like fragments, PCBM-like material encountered, stringy, sticky, soil bubbles when pressed, some free product present	182.0
		CR5 17	8.0 10.0		8.0	SP-SM		46.3
					8.8	GP	Similar to above, except dark gray, petroleum-like odor, wet, oil droplets on water, no PCBM present, 10% slag-like fragments, 10% cinder-like fragments, 10% glass fragments	21.2
10		CR6 24	10.0 12.0				Dark gray poorly graded GRAVEL with sand (GP), mps 1.25 in., no odor, wet, 60% slag-like fragments, 15% cinder-like fragments, 10% glass fragments	16.2
								18.1
		CR7 24	12.0 14.0		12.3	OL-OH	Dark gray ORGANIC SOIL (OL-OH), no structure, organic-like odor, wet	3.4
								6.2
					14.0		BOTTOM OF EXPLORATION 14.0 FT	

Gravel		Sand			Fines	Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-213

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-214

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 04 November 2014
Finish 04 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-214

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1	0.0 2.0	NO WELL INSTALLED			Concrete fragments, mps 2.5 in.											
		CR2	2.0 4.0															
		CR3 16	4.0 6.0		4.5	SM	Black silty SAND with gravel (SM), mps 0.75 in., no structure, petroleum-like odor, moist, 10% concrete fragments, 10% slag-like fragments	41.6										
5								43.2										
		CR4 15	6.0 8.0		6.0	SP-SM	Black poorly graded SAND with silt and gravel (SP-SM), mps 1.75 in., no structure, petroleum-like odor, wet, slight sheen on water, 20% slag-like fragments, 10% cinder-like fragments, 10% glass fragments	41.3										
								61.2										
		CR5 17	8.0 10.0		8.3	SP-SM	Similar to above, except hydrogen-sulfide odor, wet, with 10% wood fragments, 5% metal fragments	117.0										
								68.3										
10		CR6 19	10.0 12.0		10.0	GP	Dark gray poorly graded GRAVEL with sand (GP), mps 1.75 in., petroleum-like odor, wet, slight sheen to water, 60% slag-like fragments, 10% cinder-like fragments, 10% glass fragments	24.0										
								175.0										
		CR7 24	12.0 14.0		12.3	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet	6.2										
								3.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-214

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-215

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 04 November 2014
Finish 04 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-215

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED			Concrete fragments											
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 1.75 in., no structure, no odor, dry, 15% slag-like fragments, 10% cinder-like fragments, 5% glass fragments	0.0										
		CR2 22	2.0 4.0					0.1										
								0.0										
		CR3 16	4.0 6.0					0.9										
5								33.4										
					5.8	SM	Similar to above, except black, petroleum-like odor, wet											
		CR4 27	6.0 8.0			SM	Similar to above, except dark-brown, no odor, moist	16.2										
								22.8										
					7.8	SP	Brown to dark brown poorly graded coarse SAND with gravel (SP), mps 1.25 in., no structure, no odor, wet											
		CR5 18	8.0 10.0		8.0	SP-SM	Dark gray to black poorly graded SAND with silt and gravel (SP-SM), mps 1.25 in., no structure, no odor, wet, 10% slag-like fragments	12.3										
					9.3	SP	Light brown to brown poorly graded SAND with gravel (SP), mps 2.25 in., no structure, no odor, wet	0.9										
10		CR6 23	10.0 12.0					0.6										
								0.0										
		CR7 24	12.0 14.0					0.4										
								1.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-215

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-216

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 04 November 2014
Finish 04 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-216

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2.25 in., no structure, no odor, dry, 10% brick fragments, 10% slag-like fragments, 10% cinder-like fragments	0.1										
								0.0										
		CR2 21	2.0 4.0		2.3	SM	Similar to above, more sand, 5% glass fragments	0.2										
								0.1										
		CR3 17	4.0 6.0			SM	Similar to above, except no glass, no brick fragments	0.3										
5								0.0										
		CR4 20	6.0 8.0			SM	Similar to above, except black, 30% cinder-like fragments, 10% slag-like fragments	0.0										
					7.3	SP	Brown poorly graded SAND with gravel (SP), mps 0.75 in., no structure, no odor, wet	0.1										
		CR5 24	8.0 10.0		8.0	SP	Similar to above, except dark brown, mps 2.25 in.	0.0										
								0.0										
10		CR6 24	10.0 12.0					0.0										
								0.0										
		CR7 15	12.0 14.0			GP	Gray-brown poorly graded GRAVEL with sand (GP), mps 2.5 in., 75% concrete pieces	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-216

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-217

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 04 November 2014
Finish 04 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-217

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 16	0.0 2.0	NO WELL INSTALLED		SM	Black silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, dry, 15% brick fragments, 15% cinder-like fragments, 10% slag-like fragments	0.0										
								0.0										
		CR2 21	2.0 4.0		2.5	SP	Brown poorly graded medium sANd with gravel (SP), mps 1 in., no structure, no odor, dry, 5% brick fragments	0.1										
								0.0										
		CR3 22	4.0 6.0			SP	Similar to above, except mps 2.25 in.	0.0										
5					5.3	SP	Similar to above, except dark brown, mps 1.5 in.	0.1										
		CR4 24	6.0 8.0					0.2										
								0.1										
		CR5 15	8.0 10.0		8.0	SP-SM	Dark gray poorly graded SANd with silt and gravel (SP-SM), no structure, no odor, wet, 10% concrete fragments	0.0										
								0.0										
10		CR6 19	10.0 12.0					0.0										
								0.0										
		CR7 24	12.0 14.0		12.0	SP	Tan poorly graded SAND with gravel (SP), mps 1.25 in., no structure, no odor, wet	0.0										
					13.3	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, no odor, wet, some shell fragments	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-217

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-218

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 10 November 2014
Finish 10 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-218

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2.25 in., no structure, no odor, dry, 15% brick fragments, 10% concrete fragments, 5% cinder-like fragments	0.0										
								0.0										
		CR2 24	2.0 4.0					0.0										
								0.3										
					3.8	SP	Yellow-brown poorly graded SANd with gravel (SP), mps 1.25 in., no structure, no odor, moist	1.3										
		CR3 22	4.0 6.0		4.8	SP	Similar to above, except tan, slight sweet odor, most to wet											
5					5.0	SP	Similar to above, except no odor, wet	1.6										
		CR4 23	6.0 8.0					0.0										
								0.2										
		CR5 21	8.0 10.0			SP	Similar to above, except yellow-brown	0.1										
					9.3	SP	Similar to above, except tan	0.0										
10		CR6 24	10.0 12.0					0.0										
								0.3										
		CR7 24	12.0 14.0			SP	Similar to above, except brown	0.2										
					12.8	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-218

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-219

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 07 November 2014
Finish 07 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-219

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 16	0.0 2.0	NO WELL INSTALLED			Concrete fragments, mps 1.5 in.	0.0
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 0.75 in., no structure, no odor, dry, 10% concrete fragments, 5% slag-like fragments	0.0
		CR2 21	2.0 4.0					0.0
								0.2
					3.8	SP	Yellow-brown poorly graded SAND (SP), no structure, no odor, moist	0.0
		CR3 14	4.0 6.0			SP	Similar to above, except with gravel, mps 1.25 in., more coarse sand, moist, 10% brick fragments	0.1
5		CR4 15	6.0 8.0			SP	Similar to above, except dark brown, 10% slag-like fragments	0.6
								0.3
		CR5 23	8.0 10.0			SP	Similar to above, except gray-brown to gray, petroleum-like odor, wet	37.6
					9.3	SP	Similar to above, except yellow-brown to brown, no odor, wet	13.2
10		CR6 19	10.0 12.0					0.4
								0.0
		CR7 24	12.0 14.0					0.3
					13.3	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic-like odor, wet	0.2
					14.0		BOTTOM OF EXPLORATION 14.0 FT	

Gravel		Sand				Field Test			
% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-219

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-220

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 07 November 2014
Finish 07 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-220

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 19	0.0 2.0	NO WELL INSTALLED			Concrete fragments	0.0
					1.0	SM	Dark brown silty SAND with gravel (SM), mps 2.25 in., no structure, no odor, dry, 10% slag-like fragments, 5% brick fragments	0.2
		CR2 23	2.0 4.0			SM	Similar to above, except with 10% cinder-like fragments	0.0
								0.0
		CR3 14	4.0 6.0			SM	Similar to above, except black, petroleum-like odor, wet	63.8
5								67.2
		CR4 16	6.0 8.0			SM	Similar to above, except dark brown, no odor	92.0
								43.0
		CR5 19	8.0 10.0			SM	Similar to above, except black, petroleum-like odor, oil droplets to water	36.2
								49.3
10		CR6 21	10.0 12.0		10.0	GP	Dark gray poorly graded GRAVEL with sand (GP), mps 1.25 in., no odor, wet, slight sheen, 60% slag-like fragments, 10% cinder-like fragments	11.4
								16.2
		CR7 24	12.0 14.0		12.3	OL-OH	Dark gray ORGANIC SOILS (OL-OH), no structure, no odor, wet	3.2
								0.0
					14.0		BOTTOM OF EXPLORATION 14.0 FT	

Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-220

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-221

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 13 November 2014
Finish 13 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-221

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 23	0.0 2.0	NO WELL INSTALLED		SM	Brown to red-brown silty SAND with gravel (SM), mps 1.15 in., no structure, no odor, dry, 15% brick fragments, 5% slag-like fragments, 5% concrete fragments	0.0										
								0.0										
		CR2 17	2.0 4.0					0.0										
					3.3	SM	Similar to above, except black	0.0										
					3.8	GP	Concrete fragments, mps 1.75 in.											
		CR3 16	4.0 6.0		4.3	SM	Dark gray silty AND with gravel (SM), mps 1.5 in., no odor, wet, 15% concrete fragments, 10% brick fragments, 5% slag-like fragments	0.6										
5								1.2										
					5.8	GP	Concrete fragments, mps 0.75 in.											
		CR4 22	6.0 8.0		6.0	SP	Olive-gray poorly graded SANd with gravel (SP), mps 1.25 in., no structure, slight petroleum-like odor, wet, oil droplets to water, 15% slag-like fragments, 5% brick fragments, 5% concrete fragments	9.7										
								11.1										
		CR5 17	8.0 10.0					0.7										
								10.4										
10		CR6 23	10.0 12.0					4.6										
					11.5	GP	Slag-like fragments with sand, mps 1.0 in., no odor, wet, sheen to water	7.2										
		CR7 24	12.0 14.0		12.5	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, no odor, wet, slight sheen	4.2										
								0.3										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-221

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-222

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 12 November 2014
Finish 13 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-222

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED		SM	Red-brown silty SAND with gravel (SM), mps 2.5 in., no structure, no odor, dry, 10% brick fragments, 10% slag-like fragments, 5% rubber-like fragments, not sticky	0.0										
								0.3										
		CR2 24	2.0 4.0			SM	Gray semi-soft material, bentonite-like in color, some fibrous strands, slight odor, moist	0.1										
								0.0										
		CR3 12	4.0 6.0		4.0	GP-GM	At 3.5 ft, 6.0 in. rubber-like material, not sticky, 4.0 in. in diameter, no odor, dry Concrete fragments with silt and sand, mps 1.75 in.	0.3										
5								0.2										
		CR4 16	6.0 8.0		6.0	SM	Olive-brown silty SAND with gravel (SM), mps 1.25 in., no structure, no odor, wet, 10% brick fragments, 5% slag-like fragments	0.1										
								0.7										
		CR5 22	8.0 10.0			SM	Similar to above, except mps 0.75 in., 10% slag-like fragments, 5% brick fragments, 5% rubber-like fragments	1.2										
								4.9										
10		CR6 21	10.0 12.0		10.0	SP	Dark gray poorly graded SAND with gravel (SP), mps 0.75 in., no structure, no odor, wet, 10% slag-like fragments	10.2										
								6.4										
		CR7 20	12.0 14.0			SP	Similar to above, except with oil droplets on water, sheen, slight petroleum-like odor	3.6										
								14.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-222

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-223

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 13 November 2014
Finish 13 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-223

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SANd with gravel (SM), mps 1.75 in., no structure, no odor, dry, 10% brick fragments, 5% metal fragments	0.0										
								0.2										
		CR2 23	2.0 4.0		2.3		Gray fill-like material, fibrous hair-like strands, semi-soft to medium hard texture, septic/grease-like odor	0.0										
					3.5		Hockey puck-like material, rubber but firm, pulls apart, not sticky, no odor	0.6										
		CR3 15	4.0 6.0		4.0		Similar to above, except smaller in size, more frequent sized, with 0.5 in. wide strips with silver coating, tops or sealing tape, no odor, some sand, silt and gravel Hit obstruction at 5.0 ft	0.0										
5								0.4										
		CR4 12	6.0 8.0		6.0	SM	Dark brown silty SANd with gravel (SM), mps 1.25 in., no structure, petroleum-like odor, wet, 5% rubber-like fragments, 5% brick fragments, 5% slag-like fragments	16.2										
								28.2										
		CR5 13	8.0 10.0			SM	Similar to above, except dark gray, cement pieces and/or boulders, mps 3.5 in., no odor, slight sheen	4,2										
								6.7										
10		CR6 18	10.0 12.0		10.0	SP	Dark gray poorly graded SAND with gravel (SP), mps 1.75 in., on structure, no odor, wet, 10% brick fragments, 5% slag-like fragments, 5% wood fragments	0.6										
								0.2										
		CR7 21	12.0 14.0		13.5	SP	Similar to above, except olive-gray, no brick wood or slag-like fragments, gravel mps 0.75 in.											
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-223

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-224

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 12 November 2014
Finish 12 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation Datum
Location SS-224

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED		SM	Black silty SAND with gravel (SM), mps 2 in., no structure, no odor, moist, 15% brick fragments, 10% concrete fragments, 5% cinder-like material	0.0 0.0 0.0 0.0										
		CR2 21	2.0 4.0		2.0	SP-SM	Brown poorly graded SAND with silt and gravel (SP-SM), mps 2.8 in., no structure, no odor, moist, 15% brick fragments, 5% concrete fragments	0.0 0.0 0.0 0.0										
		CR3 18	4.0 6.0		4.5	SM	Brown silty SAND with gravel (SM), mps 1.2 in., no structure, no odor, wet from 5.5 ft, slight sheen observed, 5% concrete fragments, 5% cinder-like fragments, 5% rock fragments	0.0										
5		CR4 19	6.0 8.0					0.0 0.0 0.0 0.0										
		CR5 17	8.0 10.0					0.0 0.0 0.0 0.0										
10		CR6 8	10.0 12.0					0.0 0.0 0.0 0.0										
		CR7 21	12.0 14.0					0.0 0.0 0.0 0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-224

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-225

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 17 November 2014
Finish 17 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation
Datum
Location SS-225

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5		ASPHALT, CRUSHED STONE	0.0										
						SM	Brown silty SAND with gravel (SM), mps 1.25 in., no structure, no odor, moist, 10% brick fragments, 10% concrete fragments,	0.0										
		CR2 20	2.0 4.0					0.0										
								0.0										
		CR3 22	4.0 6.0					0.0										
5					5.0	SP-SM	Brown to tan-brown poorly graded SAND with silt and gravel (SP-SM), mps 1.4 in., no structure, no odor, wet at 5.5 ft, 10% brick fragments, 5% slag-like fragments	0.0										
		CR4 10	6.0 8.0				Note: Piece of wood stuck in rod while drilling from 6.0 to 8.0 ft.	0.0										
		CR5 23	8.0 10.0		8.5			0.0										
						SM	Brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, wet, 5% brick fragments	0.0										
10		CR6 24	10.0 12.0					0.0										
								0.0										
		CR7 24	12.0 14.0					0.0										
					13.0	ML	Dark gray ORGANIC SILT with sand (ML), mps 1 in. (shell), light organic odor, wet	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-225

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-226

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 17 November 2014
Finish 17 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation
Datum
Location SS-226

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE	0.0										
						SM	Black silty SANd with gravel (SM), mps 1.5 in., no structure, no odor, 10% concrete fragments, 5% brick fragments	0.0										
		CR2 19	2.0 4.0					0.0										
					3.0	SP	Tan poorly graded SAND with gravel (SP), ps 1.25 in., no odor, wet from 6 ft, 5% slag-like fragments, 5% concrete fragments	0.0										
		CR3 21	4.0 6.0					0.0										
5								0.2										
		CR4 23	6.0 8.0					0.9										
					7.0	SP	Similar to above, except black, light petroleum-like odor	29.3										
		CR5 19	8.0 10.0					1.4										
								2.9										
10		CR6 24	10.0 12.0		10.0	SP	Olive-gray poorly graded SAND with gravel (SP), mps 1 in., no structure, no odor, wet	0.0										
								0.0										
		CR7 24	12.0 14.0		12.0	OL-OH	Dark gray to black ORGANIC SOIL (OL-OH), with occasional sand laminae, no odor, wet	0.0										
								0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-226

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-227

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 14 November 2014
Finish 14 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-227

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 17	0.0 2.0	NO WELL INSTALLED	0.5		6.0 in. CONCRETE SLAB											
						SM	Brown silty SAND with gravel (SM), mps 1.25 in., no structure, no odor, 10% brick fragments, 5% concrete fragments	0.9										
					1.8	SM	Similar to above, except PCBM-like material, brown, stringy,											
		CR2 20	2.0 4.0			SM	sticky, tacky, sweet odor (not petroleum-like)											
					2.5	SM	Similar to above, except black											
							Similar to above, except no PCBM-like material, 5% slag-like fragments	4.7										
		CR3 14	4.0 6.0			SM	Similar to above, except petroleum-like odor, moist											
5					5.0	GP	Concrete fragments, mps 1.25 in.	6.2										
					6.0	SP-SM	Brown to olive-brown poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., no structure, petroleum-like odor, wet, 10% concrete fragments, 10% slag-like fragments, free product saturated 60% of bag and soils/gravel											
		CR4 16	6.0 8.0					14.7										
		CR5 20	8.0 10.0					10.4										
10					9.8	GP	Slag-like fragments, mps 1 in. with 5% glass fragments and some sand, no odor, wet											
		CR6 21	10.0 12.0					0.9										
		CR7 24	12.0 14.0			GP	Similar to above, except more sand present											
					12.5	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, no odor, wet	0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-227

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-228

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 14 November 2014
Finish 14 November 2014
Driller R. Radke
H&A Rep. J. Miller
Elevation
Datum
Location SS-228

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 1.25 in., no structure, no odor, dry, 10% brick fragments, 5% wood fragments	0.0										
		CR2 20	2.0 4.0					0.0										
								0.2										
					3.5		Wood fragments, mps 2.5 in.	0.0										
		CR3	4.0 6.0		4.0		Concrete fragments, mps 1.75 in.											
5																		
		CR4 16	6.0 8.0		6.0	SP	Olive-gray poorly graded SAND with gravel (SP), mps 1.25 in., no structure, petroleum-like odor, wet, oil droplets on water, slight olive sheen, 10% wood fragments, 10% slag-like fragments, 5% glass fragments	2.8										
		CR5 17	8.0 10.0					3.4										
10		CR6 19	10.0 12.0					4.6										
		CR7 24	12.0 14.0		12.5	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, no odor, wet	3.2										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-228

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. SS-229

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 20 November 2014
Finish 20 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation Datum
Location SS-229

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 19	0.0 2.0	NO WELL INSTALLED			CONCRETE	3.9										
								2.6										
		CR2 23	2.0 4.0		2.0	SM	Dark brown silty SANd with gravel (SM), mps 1.25 in., no structure, no odor, moist, 10% brick fragments, 5% concrete fragments, 5% cinder-like fragments	0.0										
								0.0										
		CR3 22	4.0 6.0					0.0										
5								0.0										
					5.5		Concrete fragments											
		CR4 23	6.0 8.0		6.0	SM	Black silty SANd with gravel (SM), mps 1 in., no structure, petroleum-like odor, wet, 5% brick fragments, 5% concrete fragments, 5% cinder-like fragments, 5% glass fragments	0.9										
								2.5										
		CR5 22	8.0 10.0					0.9										
					9.5			1.8										
10						GP	Black slag-like fragments, mps 1.0 in., petroleum-like odor, wet, 5% wood fragments, 5% glass fragments											
		CR6 21	10.0 12.0					0.7										
					11.5			0.3										
						SM	Black silty SAND with gravel (SM), mps 1.5 in., 10% wood fragments, 10% cinder-like fragments, 5% slag-like fragments, 5% glass fragments, 5% micaceous rock fragments											
		CR7 19	12.0 14.0					0.0										
								0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-229

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-230

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 20 November 2014
Finish 20 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation Datum
Location SS-230

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 21	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 2.5 in., no structure, hydrogen sulfide-like odor, moist, 25% brick fragments, 5% decomposed wood fragments	3.9										
								20.7										
		CR2 22	2.0 4.0			SM	Similar to above, except no odor, 15% wood fragments, decomposed ring-like substance	0.0										
					3.0		Brick fragments, mps 3 in.	0.3										
		CR3 17	4.0 6.0					0.9										
5					5.0		Concrete fragments, mps 1.5 in.	1.3										
		CR4 20	6.0 8.0		6.0	SM	Brown silty SAND with gravel (SM), no structure, no odor, wet, 15% brick fragments, 10% decomposed wood, 5% cinder-like fragments	0.0										
								0.0										
		CR5 18	8.0 10.0			SM	Similar to above, except light petroleum-like odor, 5% brick fragments, 5% wood fragments	0.9										
								3.5										
10		CR6 24	10.0 12.0		10.0	GP	Black slag-like fragments, mps 0.75 in., no structure, petroleum-like odor, wet, 5% wood fragments, 5% glass fragments, 5% cinder-like fragments	0.5										
								0.3										
		CR7 23	12.0 14.0		12.5	OL-OH	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, slight organic odor, moist	0.0										
								0.0										
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-230

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. SS-231

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 20 November 2014
Finish 20 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation
Datum
Location SS-231

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 20	0.0 2.0	NO WELL INSTALLED		SM	Brown silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, moist, 10% wood, 50% cinder-like fragments, trace plant roots	0.0										
								0.0										
		CR2 22	2.0 4.0					37.2										
					3.0	SM	Similar to above, except strong hydrogen sulfide-like odor	43.8										
		CR3 19	4.0 6.0		4.0		Black hard rubber-like material, chemical odor, moist	2.8										
5								5.9										
		CR4 22	6.0 8.0		6.0	SM	Brown silty SAND with gravel (SM), mps 1.25 in., no structure, petroleum-like odor, moist, 10% brick fragments, 5% slag-like fragments, 5% wood fragments, 5% cinder-like fragments	0.8										
								21.7										
		CR5 9	8.0 10.0		8.0	GP	Dark gray poorly graded SAND with gravel (SP), mps 1.25 in., no structure, slight petroleum-like odor, wet, 15% wood fragments, 10% slag-like fragments, 5% glass fragments	0.0										
								5.2										
10		CR6 20	10.0 12.0					0.0										
					11.0	SP	Dark gray ORGANIC SOIL with sand (OL-OH), no structure, organic odor, moist	0.0										
		CR7 24	12.0 14.0					0.0										
								0.0										
					13.5	OL-OH												
					14.0		BOTTOM OF EXPLORATION 14.0 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	7CR

Boring No. SS-231

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

TEST BORING REPORT

Boring No. SS-232

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-327
Sheet No. 1 of 1
Start 21 November 2014
Finish 21 November 2014
Driller R. Radke
H&A Rep. D. Morse
Elevation
Datum
Location SS-232

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	6	CR		Rig Make & Model: Sonic 1416
Inside Diameter (in.)	-	4		Bit Type:
Hammer Weight (lb)	-		-	Drill Mud:
Hammer Fall (in.)	-		-	Casing:
				Hoist/Hammer:
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)
0		CR1 19	0.0 2.0	NO WELL INSTALLED	0.5		CONCRETE SLAB	0.0
						SM	Brown silty SANd with gravel (SM), mps 1.25 in., no structure, slight petroleum-like odor, moist, 10% brick fragments, 10% cinder-like fragments, 5% glass	0.0
		CR2 24	2.0 4.0					2.9
								3.1
		CR3 23	4.0 6.0			SM	Similar to above, except very strong petroleum-like odor, trace PCBM-like stringers	9.2
5								6.3
		CR4 21	6.0 8.0					0.0
					7.0		Brick fragments, mps 2 in.	0.0
		CR5 24	8.0 10.0		8.0	GP	Black slag-like fragments, no structure, very strong petroleum-like odor, wet, oily sheen on water, 5% brick fragments, 5% wood fragments	10.3
								8.2
10		CR6 9	10.0 12.0		10.0	SM	Dark gray silty SAND (SM), mps 0.5 in., no structure, no odor, wet, 5% slag-like fragments, 5% wood fragments, 5% glass fragments	0.0
								0.0
		CR7 23	12.0 14.0		12.5	ML	Dark gray ORGANIC SILT (ML), mps 0.5 in. (shell), no structure, organic odor, moist, trace fine sand	0.0
								0.0
					14.0		BOTTOM OF EXPLORATION 14.0 FT	

Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 14
Rock Cored (ft) -
Samples 7CR

Boring No. SS-232

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014_28612-327TB_PDI_3.GPJ 30 Jul 15

SECTION 3.4

Boring Reports

Vibracore Reports

BORING REPORTS

TEST BORING REPORT

Boring No. LP-2

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 13 November 2013
Finish 13 November 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 3.3 (est.)
Datum NAVD88
Location See Plan
N 788,061
E 661,493

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 53	0.0 5.0	NO WELL INSTALLED		SM	Dark brown silty SAND with gravel (SM), mps 2 in., wood, metal, wire, and glass fragments, no structure, odor, moist	41.6	10	20	10	20	20	20				
								174.3										
							PCBM at 2.5 ft, trace wire-like strands, sticky	125.6										
								130.9										
								109.3										
5		CR2 51	5.0 10.0			SM	Similar to above, except copper wire strands, rope-like strands, semi-solid PCBM at 8 ft to 10 ft, odor, wet, PCBM observed within rope-like fibers, very thin, tacky, and dense	316.2	10	20	15	15	20	20				
								377.4										
								330.1										
							-FILL-	284.1										
								262.3										
10		CR3 26	10.0 15.0			SM	Similar to above, dark gray in color, less rope-like fibers, trace PCBM observed		10	20	15	15	20	20				
								76.3										
15		CR4 55	15.0 20.0				Trace PCBM found between 5 to 10 ft above the silt	367.2										
					-13.7 17.0	ML	Dark gray SILT (ML), no structure, no odor, moist						10	90				
							-MARINE SILT-	381.2										
								380.2										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 25
Rock Cored (ft) -
Samples 5CR

Boring No. LP-2

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-2
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 58	20.0 25.0	NO WELL INSTALLED			Similar to CR4 except, trace hair-like PCBM found within the silt	63.2					10	90				
							Trace hair-like PCBM encountered at 21.3 ft on outside of silt	63.1										
								24.2										
25					-21.7 25.0		BOTTOM OF EXPLORATION 25.0 FT Note: tremie grouted borehole to the surface with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-2

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-3

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 30 September 2013
Finish 12 November 2013
Driller P. Gaynor/J. Graglio
H&A Rep. D. Mukherjee/J. Miller
Elevation 3.7 (est.)
Datum NAVD88
Location See Plan
N 661,523
E 788,061

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: GUZZLER/BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: N/A
				Hoist/Hammer: N/A N/A
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					3.4		ASPHALT - JACK HAMMER-											
					0.3	GP	GRAVEL SUBBASE	0.0		100								
	AIRKNIFE	HA1	1.0		2.4		4-in. steel pipe at edge of hole											
			2.0		1.3		-ASPHALT - JACK HAMMER	0.0										
			2.5		2.2		BUILDING DEBRIS, wires, concrete, brick and metal pieces											
					1.5													
					1.2		Black roofing material	0.0										
					2.5													
					0.7													
					3.0	SM	Boring pre-cleared with vac truck to 6.5 ft	0.0		10	10	25	25	15	15			
							Black silty SAND with gravel (SM), mps 2 in., no structure, no odor, moist to wet at 5.5 ft, approximately 30% cinder-like fragments, slag-like fragments, brick fragments, concrete fragments, and metal pieces											
5		C1 31/60	5.0 10.0	NO WELL INSTALLED				0.0										
								0.0										
						SM	Dark gray silty SAND with gravel (SM), mps 2 in., brick and wood fragments, trace hair-like PCBM at 7 ft, sticky, no structure, odor, wet, sheen	13.2	30	10	10	10	20	20			
								64.6										
								103.7										
							-FILL-	101.3										
							PCBM placed in a sample bag											
10		C2 56/60	10.0 15.0				Wood piece roughly 3.5 ft in length	276										
								13.4										
						SP	Light brown to brown poorly graded SAND with gravel (SM), mps 1/4 in., no structure, no odor, wet	12.3		20	15	40	20	5			
15		C3 54/60	15.0 20.0		-11.9 15.5	SM	Dark gray silty SAND with gravel (SM), mps 0.5 in., wood fragments, no structure, no odor, wet	14.1		10	15	15	30	30				
					-13.4 17.0	ML	Dark gray sandy SILT with gravel (ML), mps 0.25 in., shell fragments, no structure, organic odors, moist	16.2		5	5	10	20	60				
							-MARINE SILT-	13.7										
20								11.4										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/9/13		-	NA	6.5	± 5.5

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 25
Rock Cored (ft) -
Samples 5CR

Boring No. LP-3

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-3
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		C4 60/60	20.0 25.0	NO WELL INSTALLED	-16.4 20.0		Similar to above -MARINE SILT-	16.2 17.1 14.7					10	90				
25					-21.4 25.0		BOTTOM OF EXPLORATION 25.0 FT Note: borehole was tremie grouted with portland bentonite grout * - Denotes non-standard split spoon used											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-3

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-4

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 08 October 2013
Finish 11 October 2013
Driller P. Gaynor/J. Graglio
H&A Rep. D. Mukherjee/J. Miller
Elevation 3.9 (est.)
Datum NAVD88
Location See Plan
N 661,569
E 788,104

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: GUZZLER/BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: N/A
				Hoist/Hammer: N/A N/A
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIRKNIFE		1.0	NO WELL INSTALLED	3.5 / 0.4 / 3.0 / 0.9		ASPHALT - JACK HAMMER	0.0										
						GP	GRAVEL SUBBASE			100								
			2.0		1.7 / 2.2 / 1.2		BUILDING DEBRIS, concrete blocks, rebar, wire, brick, nails, and metal pieces -RUBBLE-	0.0										
			2.5		2.7		Black roofing material	0.0										
						SM	Black silty SAND with gravel (SM), mps 2.2 in., no structure, no odor, moist to wet at 5.0 ft, approximately 30% cinder-like fragments, slag, coal ash, whole bricks and brick fragments, concrete fragments and metal wires		5	15	25	30	10	15				
5		CR1 42/60	5.0 10.0				Boring pre-cleared up to 6.5 ft - no voids	0.0 / 0.0										
					-2.6 / 6.5	SW-SM	Dark gray well graded SAND with silt and gravel (SW-SM), mps 1.5 in., 20% slag-like fragments, 10% cinder-like fragments, 5% wood fragments, trace glass fragments and tile-like fragments, no structure, no odor, wet -FILL-	0.0 / 0.6 / 0.8	20	20	10	20	20	10				
10		CR2 46/60	10.0 15.0			SP-SM	Similar to above except no glass fragments	0.0 / 0.0 / 0.0 / 0.0 / 0.1	20	20	10	20	20	10				
15		CR3 28/60	15.0 20.0		-11.1 / 15.0	SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., 15% slag-like fragments, 15% wood fragments, 10% cinder-like fragments, no structure, no odor, wet	0.3 / 0.0 / 0.3 / 0.0	20	20	10	20	20	10				
20								0.2										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/9/13	-	-	NA	6.5	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	35
Rock Cored (ft)	-
Samples	6CR

Boring No. LP-4

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-4
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR4 44/60	20.0 25.0	NO WELL INSTALLED	-16.1 20.0	SP-SM	Dark brown to dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 2 in., 10% slag-like fragments, 10% cinder-like fragments, 5% metal fragments, no structure, no odor, wet	0.0	15	15	10	30	20	10				
							-FILL-	0.3										
								0.0										
								0.0										
25		CR5 56/60	25.0 30.0			SM	Dark brown silty SAND with gravel (SM), mps 1 in., 15% slag-like, cinder-like, brick, and wood fragments, no structure, no odor, moist	0.0	10	20	10	10	30	20				
								0.3										
								0.2										
					-24.1 28.0	ML	Dark gray SILT (ML), no structure, organic odor, moist	0.0					10	90				
							-MARINE SILT-	0.7										
30		CR6 /60	30.0 35.0															
35					-31.1 35.0		BOTTOM OF EXPLORATION 35.0 FT Notes: borehole was tremie grouted portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-4

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-5

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 09 October 2013
Finish 14 October 2013
Driller P. Gaynor/J. Graglio
H&A Rep. D. Mukherjee/J. Miller
Elevation 7.5 (est.)
Datum NAVD88
Location See Plan
N 661,571
E 788,134

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: GUZZLER/BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: N/A
				Hoist/Hammer: N/A N/A
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIRKNIFE		1.0	NO WELL INSTALLED		SM	Boring pre-cleared with vac truck to 6.5 ft	0.0										
			2.0				Note: During pre-clearing, hit obstruction (concrete slab) at 4.0 ft, moved 1 ft North.	0.0										
			2.5				Black, silty SAND with gravel (SM), mps 2.5 mm, no structure, no odor, moist, ~20% cinder, slag, brick fragments, and wood chips	0.0										
								0.0										
5		CR-1 42/60	5.0			SM	Dark brown, silty SAND with gravel (SM), mps 1.5 mm, no structure, no odor, moist at 5.0 ft, ~15% brick fragments, metal fragments, slag-like pieces, cinder pieces	0.0										
			10.0				-FILL-	0.0										
						SM	Dark brown silty SAND with gravel (SM), mps 2.5 in., slag-like fragments, mps 1 in., glass fragments, mps 0.5 in., cinder-like fragments, mps 3/4 in., wood fragments, mps 2.5 in., no structure, no odor, moist		20	10	10	20	20	20				
								0.0										
								0.0										
								0.2										
10		CR-2 47/60	10.0			SP-SM	Dark brown to gray-brown poorly-graded SAND with silt and gravel (SP-SM), mps 1 in., slag-like fragments, glass fragments, cinder-like fragments, wood fragments, no structure, no odor, wet	0.0	20	20	10	20	20	10				
			15.0					0.0										
							-FILL-	0.2										
								0.0										
								0.1										
15		CR-3 39/60	15.0			SP-SM	Similar to above except dark gray in color tile-like fragments	0.0	20	20	10	20	20	10				
			20.0					0.0										
								0.3										
								0.2										
20								0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/9/13	-	-	NA	6.5	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 35
Rock Cored (ft) -
Samples 6CR

Boring No. LP-5

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-5
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR-4 48/60	20.0 25.0	NO WELL INSTALLED		SP-SM	Similar to above except, trace bone fragments, brick fragments	1.3	20	20	20	20	10	10				
							-FILL-	3.0										
								3.3										
								2.0										
								1.2										
25		CR-5 33/60	25.0 30.0		-17.5 25.0	SP	Gray-brown poorly-graded SAND with gravel (SP), mps 1/2 in., no structure, no odor, moist			20	30	30	20					
					-18.0 25.5	SW-SM	Dark gray poorly-graded SAND with silt and gravel (SW-SM), mps 1.5 in., slag-like fragments, cinder-like fragments, wood fragments, glass fragments, metal fragments, no structure, no odor, wet	0.0	10	20	20	20	20	10				
								0.3										
								0.4										
30		CR-6 56/60	30.0 35.0					0.0										
					-23.5 31.0	SW-SM	Similar to above except no glass fragments, and no wood fragments	0.0	10	20	20	20	20	10				
						ML	Dark gray SILT (ML), no structure, no odor, moist	0.2					10	90				
							-MARINE SILT-	0.3										
								0.3										
								0.0										
35					-27.5 35.0		BOTTOM OF EXPLORATION 35.0 FT											
							Note: borehole was tremie grouted with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-5

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-5A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 30 September 2013
Finish 30 September 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation
Datum NAVD88
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	-	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing: N/A
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Rubble, concrete debris and wires from 0 to 4 ft	0.0										
	AIRKNIFE		1.0				-RUBBLE FILL-	0.0										
			2.0					0.0										
			2.5					0.0										
							Hole terminated at 5.0 ft - no voids											
5				NO WELL INSTALLED	5.0		BOTTOM OF EXPLORATION 5.0 FT											
							Note: backfilled borehole with clean sand upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	5.0
Rock Cored (ft)	-
Samples	0

Boring No. LP-5A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. LP-5B

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 09 October 2013
Finish 09 October 2013
Driller P. Gaynor
H&A Rep. D. Mukherjee
Elevation
Datum NAVD88
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	-	-	Rig Make & Model: GUZZLER
Inside Diameter (in.)	-	-	-	Bit Type:
Hammer Weight (lb)	-	-	-	Drill Mud:
Hammer Fall (in.)	-	-	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	AIRKNIFE		1.0	NO WELL INSTALLED		SM	CLEARED ACCESS RAMP TO GET TO GROUND SURFACE Black silty SAND with gravel (SM), mps 2.5 mm, no structure, no odor, moist, ~20% cinder, slag, brick fragments, wood chips	0.0										
			2.0					0.0										
			2.5				-FILL-	0.0										
5						SM	Dark brown silty SAND with gravel (SM), mps 1.5 mm, no structure, no odor, moist at 5.0 ft, ~15% brick fragments, metal fragments, slag-like pieces, cinder pieces	0.0										
							-FILL-	0.0										
					6.5		Cleared up to 6.5 ft NO VOIDS											
							BOTTOM OF EXPLORATION 6.5 FT Note: backfilled borehole with clean sand upon completion, hit obstruction (concrete slab) at 4.0 ft, moved 1 ft North.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/9/13	-	-	NA	6.5	± 5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	6.5
Rock Cored (ft)	-
Samples	-

Boring No. LP-5B

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. LP-6

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 10 October 2013
Finish 10 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 6.7 (est.)
Datum NAVD88
Location See Plan
N 788,164
E 661,572

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 46	0.0 5.0	NO WELL INSTALLED	5.7 1.0		CONCRETE SLAB											
						SW-SM	Dark brown well graded SAND with gravel (SW-SM), mps 2 in., no structure, petroleum odor, dry, 20% slag-like fragments and cinder-like fragments	0.0	20	20	20	20	20				
								0.3										
								0.6										
								0.4										
5		CR2 29	5.0 10.0			SW	Dark gray poorly graded SAND with gravel (SW), mps 2.5 in., slag-like fragments, mps 2 in., cinder-like fragments, glass fragments, brick fragments, no structure, no odor, wet	23.1	20	10	20	30	20					
								63.4										
								85.7										
						SP-SM	Olive brown poorly graded SAND with silt and gravel (SP-SM), mps 1 in., cinder-like fragments, slag-like fragments, no structure, strong petroleum-like odor, wet, black sheen to water, oil-like	76.3	20	20	20	20	10	10				
10		CR3 44	10.0 15.0			SM	Dark gray silty SAND with gravel (SM), mps 2.5 in., slag-like fragments, mps 2 in., cinder-like fragments, glass fragments, brick fragments, no structure, no odor, wet	46.2	10	15	15	20	20	20				
								8.6										
							-FILL-	0.3										
								0.7										
								0.9										
15		CR4 17	15.0 20.0			SM	Similar to above except wood fragments, mps 2 in., poor recovery	0.3	15	10	15	20	20	20				
								0.4										
								0.2										
								0.1										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 40
Rock Cored (ft) -
Samples 8CR

Boring No. LP-6

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-6
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 29	20.0 25.0	NO WELL INSTALLED		SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 2.5 in., 40% slag-like fragments, cinder-like fragments, 10% wood fragments, brick fragments, glass fragments, no structure, no odor, moist -FILL-	0.3 0.3 0.2 0.1 0.0	20	10	10	30	20	10				
25		CR6 38	25.0 30.0			SP	Dark gray poorly graded SAND with gravel (SP), mps 1 in. slag-like fragments, mps 1 in., cinder-like fragments, mps 3/4 in., wood fragments, mps 1.5 in., rubber-like fragments, wet, not sticky, no structure, no odor, moist	0.0 0.3 0.2 0.6 0.0	20	20	30	20	10					
30		CR7 52	30.0 35.0			SP	Similar to above	0.0 0.2 0.0 1.2 0.4	20	20	30	20	10					
35		CR8 60	35.0 40.0		-28.3 35.0	OL/ OH	Dark gray ORGANIC SOILS (OL/OH), no structure, no odor, moist	0.0 0.0 0.6 0.7 0.3					10	90				
40					-33.3 40.0		BOTTOM OF EXPLORATION 40.0 FT Note: Tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-6

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-7

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 07 October 2013
Finish 07 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 6.6 (est.)
Datum NAVD88
Location See Plan
N 788,194
E 661,573

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 51	0.0 5.0	NO WELL INSTALLED	5.7 0.9		11.0 in concrete											
						SP	Dark brown poorly-graded SAND with gravel (SP), mps 1 in., 15% brick, cinders, and slag particles and fragments, no structure, no odor, no moist -FILL-	0.0 0.1 0.3	20	10	30	30	10					
5		CR2 38	5.0 10.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., 20% wood, glass, slag, and brick fragments, and particles, no structure, slight petroleum-like odor, wet	1.4 0.0 0.3 0.7 2.9	20	10	20	30	10	10				
10		CR3 42	10.0 15.0			SP-SM	Similar to above except with shells, mps 1.5 in., 5 %, copper wire fragments, mps 1 in., slight petroleum odor, wet	0.0 1.9 0.3 0.0 0.1	20	10	20	30	10	10				
15		CR4 37	15.0 20.0			SP-SM	Similar to above except trace wood-like fibers (non sticky), mps 1/2 in., no structure, no odor, wet -FILL-	0.0 0.0 0.0 0.0 0.0	20	10	20	20	20	10				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 38
Rock Cored (ft) -
Samples 8CR

Boring No. LP-7

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-7
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 28	20.0 25.0	NO WELL INSTALLED			Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., 30% metal, wood, glass, cinders, slag fragments and pieces, no structure, no odor, wet	0.0	20	10	10	20	20	10				
								0.3										
								0.2										
								0.1										
25		CR6 43	25.0 30.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1 in., wood, glass, metal, cinders, slag fragments and particles, no structure, no odor, wet		20	10	30	20	10	10				
								0.0										
								0.3										
								0.4										
								0.0										
30		CR7 54	30.0 35.0					0.1										
					-25.9			0.3										
					32.5	ML	Dark gray SILT (ML)						10	90				
							-MARINE SILT-	0.0										
35		CR8 50	35.0 38.0					0.0										
								0.4										
								0.2										
								0.5										
					-31.4			0.1										
					38.0		BOTTOM OF EXPLORATION 38.0 FT											
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-7

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-8

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 10 October 2013
Finish 10 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 6.8 (est.)
Datum NAVD88
Location See Plan
N 788,224
E 661,575

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 49	0.0 5.0	NO WELL INSTALLED	5.8 1.0		CONCRETE SLAB											
						SP	Dark brown poorly graded SAND with gravel (SP), mps 1.5 in., 30% brick, slag-like and cinder-like fragments, no structure, no odor, moist -FILL-	0.0 0.0 0.0 0.0										
5		CR2 0	5.0 10.0				No recovery from 5 ft to 10 ft Recovered two slag-like cobbles, mps 3 in.	0.0										
10		CR3 11	10.0 15.0			SP	Dark brown poorly graded SAND with fine gravel (SP), mps 1 in., 10% slag-like fragments, no structure, no odor, wet Low recovery	0.0 0.3										
15		CR4 10	15.0 20.0			SP	Similar to above except with more slag-like fragments, mps 2.5 in., metal, mps 2 in., no structure, no odor, wet Low recovery	0.3 0.2										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 35
Rock Cored (ft) -
Samples 8CR

Boring No. LP-8

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-8
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 42	20.0 25.0	NO WELL INSTALLED		GP-GM	Dark gray poorly graded GRAVEL with silt and sand (GP-GM), mps 1 in., 60% cinder and slag-like fragments, wet	0.0										
							-FILL-	0.1										
								0.3										
								0.0										
								0.0										
25		CR6 44	25.0 30.0			SP	Dark gray poorly graded SAND with gravel (SP), mps 2 in., 25% brick fragments, metal fragments, (nails) and wire strands, tile-like fragments, bone fragments, glass fragments, no structure, no odor, moist	0.0	20	20	30	20	10					
								0.3										
								0.2										
								0.0										
								0.0										
30		CR7	30.0 35.0			GP	Dark gray poorly graded GRAVEL with sand (GP), mps 1 in., slag and cinder-like fragments, no structure, no odor, moist	0.1	25	30	15	20	10					
								0.3										
					-25.7			0.0										
					32.5	ML	Dark gray SILT (ML), no structure, no odor, moist					10	90					
							-MARINE SILT-	0.2										
								1.3										
35		CR8	35.0 40.0		-28.2 35.0		BOTTOM OF EXPLORATION 35.0 FT											
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-8

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-9

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 08 October 2013
Finish 08 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 4.5 (est.)
Datum NAVD88
Location See Plan
N 788,255
E 661,577

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 47/60	0.0 5.0	NO WELL INSTALLED		SP	Dark gray poorly-graded SAND with gravel (SP), mps 2 in., 20% cinder-like fragments, slag-like fragments, (trace, semi-solid PCBM in an asphalt-like matrix from 1 in. to 1.2 in., matrix was round 1.5 in. diameter), no structure, no odor, dry	0.0	20	20	20	30	10					
								8.1										
								4.3										
								0.0										
								0.0										
5		CR2 41/60	5.0 10.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM) ,mps 1 in., 30% slag-like fragments, brick fragments, glass fragments, cinder-like fragments, no structure, no odor, wet		20	10	20	30	10	10				
								0.0										
							-FILL-	0.1										
								0.3										
								0.0										
10		CR3 46/60	10.0 15.0			SP-SM	Similar to above except, copper wire strands		20	10	20	30	10	10				
								0.0										
								0.3										
								0.6										
								0.0										
15		CR4 52/60	15.0 20.0			SP-SM	Similar to above except a thin layer of dark gray poorly-graded SAND with gravel, mps 1/4 in., from 15 ft to 15.5 ft	0.1										
								0.0										
								0.3										
								0.0										
								0.0										
20								0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 35
Rock Cored (ft) -
Samples 7CR

Boring No. LP-9

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-9
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 56/60	20.0 25.0	NO WELL INSTALLED		SM	Dark gray silty SAND with gravel (SM), mps 2 in., 45% glass fragments, brick fragments, slag-like fragments, metal fragments, no structure, no odor, wet	0.0	25	15	15	20	10	15				
							-FILL-	0.3										
								0.4										
								0.0										
								0.2										
25		CR6 57/60	25.0 30.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1 in., 30% glass fragments, slag-like fragments, cinder-like fragments, brick fragments, no structure, no odor, wet	0.0	20	10	25	25	10	10				
								0.7										
								1.0										
								3.0										
								4.1										
30		CR7 60/60	30.0 35.0		-25.5 30.0	ML	Dark gray SILT (ML), no structure, organic odor, moist	0.6					10	90				
							-MARINE SILT-	0.7										
								1.2										
								1.0										
35					-30.5 35.0		BOTTOM OF EXPLORATION 35.0 FT	1.3										
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-9

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-10

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 08 October 2013
Finish 08 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 4.4 (est.)
Datum NAVD88
Location See Plan
N 788,272
E 661,578

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 54	0.0 5.0	NO WELL INSTALLED		SP	Dark brown poorly-graded SAND with gravel (SP), mps 1 in., 35% slag-like fragments, cinder-like fragments, brick fragments, no structure, no odor, moist	0.0	20	20	20	30	10					
							-FILL-	0.0										
								0.0										
								0.0										
5		CR2 47	5.0 10.0			SP	Similar to above except, non-sticky wood fragments, mps 1 in., trace wood-like fibers, wet	0.0	25	20	20	25	10					
								0.0										
								0.1										
								0.0										
								0.3										
10		CR3 13	10.0 15.0			GW	Gray well graded GRAVEL (GW), mps 2 in., 40% wood fragments, brick fragments, cinder-like fragments, slag-like fragments, leather-like fragments, wet	0.1	40	45	5	5	5					
								0.0										
								0.0										
15		CR4 43	15.0 20.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1 in., 35% cinder-like fragments, slag-like fragments, wood fragments, copper wire strands, no structure, no odor, moist		20	20	20	20	10	10				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 35
Rock Cored (ft) -
Samples 7CR

Boring No. LP-10

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-10
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 39	20.0 25.0	NO WELL INSTALLED	-15.6 20.0	SW	Light brown, well-graded SAND (SW), no structure, no odor, moist			10	20	40	30					
					-16.1 20.5	SP-SM	Gray poorly-graded SAND with silt and gravel (SP), mps 1 in., cinder-like fragments, 45% slag-like fragments, wood fragments and particles, brick fragments, no structure, no odor, wet		20	20	20	20	10	10				
							-FILL-											
25		CR6 55	25.0 30.0		-21.1 25.5	SP SP-SM	Dark gray poorly-graded SAND with gravel (SP), mps 1/2 in, no structure, no odor, moist	0.0	10 20	20	20	30	20					
							Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., wood fragments, mps 1.5 in., 10%, slag-like fragments, mps 1 in., 10%, cinder-like fragments, mps 1/2 in., 10%, no structure, no odor, wet	0.1	20	20	20	20	10	10				
							-FILL-	0.0										
								9.4										
30		CR7 58	30.0 35.0					11.8 27.6										
					-26.6 31.0 -27.1 31.5		PCBM encountered, semi-solid strands, solid rubber-like globs, roughly 1/2 in. diameter, 31.0 ft to 31.5 ft	33.4					10	90				
						ML	Dark gray SILT (ML)											
							-MARINE SILT-											
35					-30.6 35.0		-BOTTOM OF EXPLORATION 35.0 FT											
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-10

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-11

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 03 October 2013
Finish 03 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 4.8 (est.)
Datum NAVD88
Location See Plan
N 788,280
E 661,578

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR-1 59	0.0 5.0	NO WELL INSTALLED		SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., no structure, no odor, moist, trace wood and brick fragments	0.0	10		30	30	20	10				
								0.3										
								0.6										
								0.4										
5		CR-2 6	5.0 10.0			SM	Dark brown silty SAND with gravel (SM), mps 2 in., 40% cinder-like fragments, slag-like and wood fragments and particles, no structure, no odor, wet	0.3	20	10	10	10	20	30				
							-FILL-											
								0.0										
10		CR-3 15	10.0 15.0			SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1 in., 20% cinder-like fragments, slag-like fragments, no structure, no odor, wet	0.0	20	10	10	20	30	10				
								0.0										
								0.0										
15		CR-4 38	15.0 20.0			SP-SM	Similar to above except 20% glass and wood fragments		30	10	10	30	10	10				
								0.0										
								0.0										
								0.0										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	35
Rock Cored (ft)	-
Samples	7CR

Boring No. LP-11

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-11
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR-5 34	20.0 25.0	NO WELL INSTALLED			Similar to above except less wood fragments, 5%	0.1	20	10	20	20	20	10				
								1.3										
								5.0										
								6.2										
25		CR-6 46	25.0 30.0			SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), 2.5 in., glass fragments, wood-like fibers, rubber band like particles, cinder-like, slag-like fragments, mps 1 in, 10% no structure, no odor, moist, contains particles		20	10	20	30	10	10				
								1.1										
							-FILL-	1.3										
								2.7										
								2.6										
30		CR-7 53	30.0 35.0			SP-SM	Similar to above	8.0										
					-26.2			28.0										
					31.0 -26.7		PCBM encountered, hair-like strands at 31.0 ft, semi-solid, 3 in thick, and trace material to 31.5 ft	43.1										
					31.5	ML	Dark gray SILT (ML), no odor, moist						10	90				
							-MARINE SILT-	2.4										
								2.1										
								2.3										
35					-30.2 35.0		BOTTOM OF EXPLORATION 35.0 FT Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-11

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-12

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 04 October 2013
Finish 04 October 2013
Driller J. Graglio
H&A Rep. J. Miller

Elevation 5.4 (est.)
Datum NAVD88
Location See Plan
N 788,279
E 661,595

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 39	0.0 5.0	NO WELL INSTALLED		SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 2 in., 25% wood, concrete, cinder, and glass particles and fragments, no structure, no odor, moist	0.0	20	10	20	30	10	10				
								0.3										
								0.8										
5		CR2 35	5.0 10.0			SP-SM	Similar to above except olive-brown		20	10	20	30	10	10				
							-FILL-	0.0										
								0.0										
								0.3										
10		CR3 31	10.0 15.0			SP-SM	Gray poorly-graded SAND with gravel (SP-SM), mps 1.5 in., 35% cinder-like fragments, wood, slag like fragments, no structure, no odor, moist	0.1	30	20	20	20	10					
								0.2										
								0.0										
								0.1										
15		CR4 33	15.0 20.0					0.3										
								0.2										
								0.0										
						SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 3/4 in., 20%, slag-like fragments, no structure, no odor, wet		20	20	20	20	10	10				
								0.3										
20								0.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 35
Rock Cored (ft) -
Samples 7CR

Boring No. LP-12

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-12
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 28	20.0 25.0	NO WELL INSTALLED				0.3										
					-16.6 22.0	SW	Light brown well-graded SAND (SW), fine gravel fragments, mps 1/4 in., no structure, no odor, moist			20	20	35	20	5				
					-17.6 23.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1 in., 40% cinder-like and glass fragments, no structure, no odor, wet	0.6 0.8	20	10	20	30	10	10				
25		CR6 37	25.0 30.0				-FILL-	0.0										
						SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1/2 in., brick fragments, wood fragments, cinder-like fragments, bone-like fragments, tile-like fragments, no structure, no odor, wet	0.0 0.3 0.1 0.2	20	20	10	30	10	10				
30		CR7 60	30.0 35.0		-24.6 30.0 -25.1 30.5	SP-SM / ML	Similar to above except with fine, fiber-like strands, mps 1.5 in Dark gray SILT (ML), no structure, no odor, moist	0.1					10	90				
							-MARINE SILT-	0.3 0.4 1.3 1.2 1.4										
35					-29.6 35.0		BOTTOM OF EXPLORATION 35.0 FT Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-12

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-13

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 09 October 2013
Finish 09 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 6.6 (est.)
Datum NAVD88
Location See Plan
N 788,278
E 661,610

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 51	0.0 5.0	NO WELL INSTALLED		SM	Brown poorly graded SAND with gravel (SM), mps 1.5 in., 25% brick fragments, slag-like fragments, concrete and wood fragments, no structure, no odor, dry	0.3	20	10	30	30	10					
								0.7										
								1.1										
								0.9										
								0.3										
5		CR2 48	5.0 10.0			SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 2 in., 25% brick fragments, cinder-like, slag-like, and metal fragments and particles, no structure, no odor, moist. Heavy petroleum-like odor from 5.5 ft to 6 ft, wet, black, dark gray, 2 in. rock fragments below zone	51.8	20	20	20	20	10	10				
								103.7										
							-FILL-	87.6										
								61.8										
								51.3										
10		CR3 37	10.0 15.0			SP-SM	Similar to above, except bone fragments, mps 1 in., 10% glass fragments, mps 2 in., sheen on water, wet	1.7	25	15	20	20	10	10				
								1.3										
								2.6										
								0.4										
								0.4										
15		CR4 33	15.0 20.0			SP-SM	Similar to above, except less glass	0.6	20	15	20	20	15	10				
								0.8										
								1.1										
								0.3										
20								0.1										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 35
Rock Cored (ft) -
Samples 7CR

Boring No. LP-13

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-13
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5	20.0	NO WELL INSTALLED	-13.4	SM	Dark brown silty SAND with gravel (SM), mps 1 in., 30% slag-like fragments, cinder-like fragments, glass fragments, metal fragments, copper wire strands, no structure, no odor, wet	0.3	20	20	10	10	20	20				
		34	25.0		20.0			0.0										
							-FILL-	0.1										
								0.4										
								0.3										
25		CR6	25.0			SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., 40% slag-like, cinder-like, and metal fragments and particles, moist	0.0	20	10	20	30	10	10				
		38	30.0					0.3										
								0.2										
								0.0										
					-22.9			0.0										
30		CR7	30.0		29.5	ML	Dark gray SILT (ML), no structure, no odor, moist						10	90				
			35.0				-MARINE SILT-	0.3										
								0.4										
								0.0										
35					-28.4													
					35.0		BOTTOM OF EXPLORATION 35.0 FT											
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-13

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-14

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 09 October 2013
Finish 09 October 2013
Driller J. Graglio
H&A Rep. J. Miller

Elevation 6.9 (est.)
Datum NAVD88
Location See Plan
N 788,277
E 661,625

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 56	0.0 5.0	NO WELL INSTALLED		SP	Dark brown poorly graded SAND with gravel (SP), mps 1.5 in., no structure, no odor, no moist	0.7	20	20	20	20	20					
								8.9										
								9.4										
								13.7										
							Red brick fragments, mps 1 in.											
						GP	Concrete-like cobbles, mps 3 in., with sand-like particles	31.6										
5		CR2 31	5.0 10.0			GP	Remaining 2.0 ft asphalt-like matrix, easily breakable 16 in. of concrete-like fragments, material poorly graded gravel with sand, mps 4 in.												
						SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 1.5 in., 30% slag-like fragments, cinder-like, brick fragments, and particles, no structure, no odor, wet	0.0	20	20	10	20	20	10				
								0.0										
10		CR3 53	10.0 15.0			SP-SM	Similar to above except dark gray, glass fragments, mps 2 in.	0.1	20	20	20	20	10	10				
							-FILL-	0.3										
								0.2										
								0.6										
								0.3										
15		CR4 51	15.0 20.0			SP-SM	Similar to above except, bone fragments, mps 1 in.	2.8	20	20	20	20	10	10				
								2.3										
								0.4										
								0.3										
20								0.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 35
Rock Cored (ft) -
Samples 7CR

Boring No. LP-14

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-14
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 44	20.0 25.0	NO WELL INSTALLED		SM	Dark gray silty SAND with gravel (SM), mps 2 in. 50% cinders, slag-like fragments, glass-like, bone fragments and particles, no odor, slight sheen, wet	1.3										
								0.3										
							-FILL-	0.3										
								0.2										
								0.4										
25		CR6 54	25.0 30.0		-18.6	SW	Dark gray to black well graded SAND with gravel (SW), mps	0.8		20	20	30	30					
					25.5 -19.1	SP-	0.25 in., no structure, no odor, wet		20	10	20	20	20	10				
					26.0 -19.6	SM	Dark gray poorly graded SAND with silt and gravel, mps 1 in.,	0.2		10	10	20	30	30				
					26.5	SM	slag-like fragments, cinder-like fragments, no structure,		10	20	10	30	20	10				
						SP-	petroleum-like odor, sheen to water, wet	0.0										
					-20.6	SM	Dark brown silty SAND with gravel (SM), mps 0.5 in., layered						10	90				
					27.5	ML	sand and silt, no odor, wet											
							Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 0.5 in., cinder-like fragments, slag-like fragments, no structure, no odor, wet	1.8										
								0.0										
30							Dark gray SILT (ML), no structure, no odor, moist	0.3										
		CR7	30.0 35.0				-MARINE SILT-											
35					-28.1 35.0		BOTTOM OF EXPLORATION 35.0 FT											
							Note: tremie grout borehole with portland bentonite grout upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-14

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-15

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 02 October 2013
Finish 02 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 7.6 (est.)
Datum NAVD88
Location See Plan
N 788,277
E 661,640

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: - -
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 14	0.0 5.0	NO WELL INSTALLED	6.9 0.7 6.6 1.0		7 in. concrete, 5 in. void under concrete slab											
							VOID											
						SP-SM	Dark brown poorly-graded SAND with silt and gravel (SP-SM), mps 2 in., 10% cinder-like fragments, 10% wood fragments	0.0	30		20	30	10	10				
								2.4										
								3.6										
								1.0										
5		CR2 32	5.0 10.0			SP-SM	Similar to above except less wood fragments, miscellaneous fragments, mps 1/4 in., wet		30		20	30	10	10				
							-FILL-	0.3										
								5.4										
						GP	Poorly-graded GRAVEL (GP), concrete-like fragments, mps 2 in., drilling slow from 5.5 ft to 8.5 ft	25.6	100								
10		CR3 0	10.0 15.0				No recovery from 10 ft to 15 ft with auger and flapper bit											
15		CR4 23	15.0 20.0			SM	Dark brown silty SAND with gravel (SM), mps 1/2 in., no structure, slight petroleum-like odor, moist	0.3	5	25	10	30	30					
							-FILL-											
						SM	Dark gray silty SAND with gravel (SM), mps 2 in., 15% glass and wood fragments, fine root (wood) like fibers, no structure, no odor, moist	3.9	15	15	10	20	20	20				
20								3.6										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	35
Rock Cored (ft)	-
Samples	7CR

Boring No. LP-15

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-15
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 26	20.0 25.0	NO WELL INSTALLED		SP-SM	Olive-gray poorly-graded SAND with silt and gravel (SP-SM), mps 1.5 in., 15% cinder-like and slag-like fragments, no structure, no odor, wet	0.3	10	10	20	30	20	10				
								0.7										
							-FILL-	0.9										
					-16.9													
					24.5 -17.4	ML	Dark gray sandy SILT with gravel (ML), mps 1/4 in., trace slag, no odor, moist	1.3		5	10	20	30	35				
25		CR6 27	25.0 30.0		25.0	SP-SM	Dark gray poorly-graded SAND with silt and gravel (SP-SM), mps 1/4 in., cinder-like fragments, no structure, no odor, wet	0.4	20	10	10	20	30	10				
						SP-SM	Similar to above except with 10% slag-like fragments, mps 1 in.	0.6	20		30	30	10	10				
								0.8										
30		CR7 57	30.0 35.0		-22.4 30.0	ML	Dark gray SILT with sand (ML), mps 1.5 in., 5% shell fragments, 5%, wood fragments, no odor, moist	0.1	5	5			10	80				
							-MARINE SILT-	0.4										
								0.3										
								0.1										
35					-27.4 35.0		BOTTOM OF EXPLORATION 35.0 FT											
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-15

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-16

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 09 October 2013
Finish 15 October 2013
Driller J. Graglio/P. Gaynor
H&A Rep. J. Miller/D. Mukherjee
Elevation 4.1 (est.)
Datum NAVD88
Location See Plan
N 788,074
E 661,567

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					3.8		ASPHALT - JACK HAMMER											
					0.3	GP	GRAVEL SUBBASE	0.0		100								
					3.2													
	AIRKNIFE		1.0		0.9		CONCRETE - JACK HAMMER											
					2.8			0.0										
			2.0		1.3		BUILDING DEBRIS, concrete block, brick, metal wire and cinder block											
			2.5					0.0										
					0.6													
					3.5	SM	Black silty SAND with gravel (SM), mps 2.5 in., no structure, no odor, moist to wet at 5 ft, approximately 25% cinder-like fragments, slag pieces, brick fragments, concrete fragments, metal pieces and wood chips	0.0		10	10	30	20	15				
5								0.0										
		CR1 44	5.0 10.0	NO WELL INSTALLED			Cleared up to 6.5 ft - no voids	0.0										
						SP-SM	Dark brown poorly graded SAND with silt and gravel (SP-SM), mps 2.5 in., slag-like fragments, cinder-like fragments, wood fragments, glass fragments, no structure, no odor, wet	0.2	20	15	15	30	10	10				
							-FILL-	0.1										
								0.0										
10		CR2 47	10.0 15.0					0.0										
								0.0										
								0.3										
								0.2										
15		CR3 13	15.0 20.0			SM	Dark brown silty SAND with gravel, mps 1.5 in., wood fragments, slag-like fragments, cinder-like fragments, no structure, no odor, wet	0.0	10	25	15	20	15	15				
								0.0										
								0.0										
								0.0										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/9/13	-	-	NA	6.5	± 5.0

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 40
Rock Cored (ft) -
Samples HR1, 7CR

Boring No. LP-16

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-16
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR4 14	20.0 25.0	NO WELL INSTALLED		SW	Gray-brown well graded SAND with gravel (SW), mps 1 in., glass fragments, wood fragments, slag-like fragments, cinder-like fragments, no structure, no odor, wet	0.0	5	30	20	25	20					
								0.3										
								0.0										
								0.0										
25		CR5 14	25.0 30.0			SW	Similar to above, except no glass fragments, no wood fragments	0.0	5	20	25	25	25					
							-FILL-	0.0										
								0.0										
								0.2										
30		CR6 27	30.0 35.0			ML	Dark gray SILT with gravel (ML), mps 0.5 in., rubber fragments, no structure, no odor, wet	0.0	10	30	10	10	10	30				
					-28.4 32.5	ML	Dark gray SILT (ML), no structure, organic odor, moist	0.2					10	90				
							-MARINE SILT-	0.0										
35		CR7 49	35.0 40.0					0.1										
						ML	Similar to above, except wet	0.5					10	90				
						OL	Similar to above, except moist	0.0					10	90				
								0.2										
40					-35.9 40.0		BOTTOM OF EXPLORATION 40.0 FT											
							Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-16

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-17

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 15 October 2013
Finish 15 October 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 4.8 (est.)
Datum NAVD88
Location See Plan
N 788,266
E 661,586

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 56	0.0 5.0	NO WELL INSTALLED		SP	Dark brown poorly graded SAND with gravel (SP), mps 3 in., concrete cobbles, glass fragments, slag-like fragments, cinder-like fragments, no structure, no odor, moist	0.0	20	10	20	40	10					
							-FILL-	0.3										
								0.0										
								0.6										
								0.0										
5		CR2 31	5.0 10.0			SP-SM	Dark brown to gray poorly graded SAND with silt and gravel (SP-SM), mps 3 in., wood fragments, slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, wet		20	15	10	35	10	10				
							-FILL-	0.0										
								0.0										
								0.0										
10		CR3 34	10.0 15.0			SM	Dark brown to dark gray silty SAND with gravel (SM), mps 2 in., wood fragments, cinder-like fragments, slag-like fragments, glass fragments, no structure, no odor, wet	0.3	20	20	10	15	15	20				
								0.2										
								0.0										
								0.1										
								0.3										
15		CR4 38	15.0 20.0			SW	Gray-brown well graded SAND with gravel, mps 0.25 in., no structure, no odor, wet			10	30	30	30					
						GP	Poorly graded GRAVEL with sand (GP), mps 1 in., no structure, no odor, wet	0.0	10	50	20	10	10					
						SP-SM	Dark gray poorly graded SAND with silt and gravel (SP-SM), mps 2 in., slag-like fragments, cinder-like fragments, glass fragments, no structure, no odor, wet		20	15	15	30	10	10				
								0.3										
								0.2										
								0.0										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 35
Rock Cored (ft) -
Samples 7CR

Boring No. LP-17

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-17
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20		CR5 35	20.0 25.0	NO WELL INSTALLED			Similar to above, except no glass fragments -FILL-	0.3	20	15	15	30	10	10				
								0.2										
								0.3										
								0.1										
25		CR6 52	25.0 30.0			SP-SM	Similar to above	0.0										
								0.0										
								2.4										
						SM	Red-gray to gray-brown silty SAND with gravel (SM), mps 0.5 in., no structure, no odor, wet	3.2		15	15	30	20	20				
					-24.7			1.7										
30		CR7 58	30.0 35.0		29.5	ML	Dark gray SILT (ML), no structure, organic odor, moist -MARINE SILT-	2.1					10	90				
								1.4										
								1.0										
								1.1										
								0.0										
35					-30.2 35.0		BOTTOM OF EXPLORATION 35.0 FT Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-17

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. LP-18

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 13 November 2013
Finish 13 November 2013
Driller J. Graglio
H&A Rep. J. Miller
Elevation 3.3 (est.)
Datum NAVD88
Location See Plan
N 788,045
E 661,497

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: -
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1 54	0.0 5.0	NO WELL INSTALLED		SM	Dark brown to dark gray silty SAND with gravel (SM), mps 1.5 in., copper wire strands, metal and glass fragments, nails, brick, trace hair-like PCBM encountered at 3 ft, no structure, no odor, moist	46.3	10	20	15	15	20	20				
								172.1										
								198.6										
								147.2										
5		CR2 51	5.0 10.0				Similar to above	62.2										
								84.3										
								93.4										
							Trace hair-like PCBM at 9 ft	106.7										
10		CR3 12.8	10.0 15.0			SM	Similar to above, except brick pieces, mps 3 in.		25	15	5	15	20	20				
							Trace hair-like PCBM at 12 ft	84.3										
15		CR4 58	15.0 20.0				Trace hair-like PCBM at 15.5 ft	72.1										
					-12.7													
					16.0	ML	Dark gray SILT (ML), no structure, organic odor, moist	14.3					10	90				
							-MARINE SILT-	16.2										
20								12.3										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 20
Rock Cored (ft) -
Samples 5CR

Boring No. LP-18

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. LP-18
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	-16.7 20.0		BOTTOM OF EXPLORATION 20.0 FT Note: tremie grout borehole with portland bentonite grout											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. LP-18

TEST BORING REPORT

Boring No. PLP-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 25 October 2013
Finish 25 October 2013
Driller D. Dusher
H&A Rep. S. Brousseau
Elevation 4.0 (est.)
Datum NAVD88
Location See Plan
N 788,379
E 661,532

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 4x6 overrride
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1* 36	0.0 3.0	NO WELL INSTALLED	3.6 0.4	GP	Crushed stone (1" minus)		100									
						SM	Brown to black silty SAND (SM), mps 1.2 in., no structure, petroleum odor, moist, trace brick, asphalt, wood and organics	0.0		5	20	35	20	20				
							-FILL-	0.6										
								368										
		CR2* 36	3.0 8.0			SM	Dark brown to dark gray silty SAND with gravel (SM), mps 2 in., no structure, PCBM odor, moist, ~15% concrete, brick, wood and organics, trace PCBM stringers from 3.5 to 4.0 ft	1.9	5	10	20	25	20	20				
5								2.2										
								2.9										
		CR3* 38	8.0 13.0			SP	Dark gray poorly graded SAND with gravel (SP), mps 2 in., no structure, PCBM odor, wet, ~30% coal ash fill (coal cinders and slag), ~10% fill (firebrick, concrete and wood), trace PCBM stringers from 8 to 10 ft, oil coated, slight sheen on water	0.2	5	10	40	25	15	5				
10								0.6										
								0.6										
		CR4* 46	13.0 18.0			SM	Gray to dark gray silty SAND with gravel (SM), mps 3 in., no structure, musty odor, wet, ~30% coal ash fill (coal, cinders and slag), ~25% fill (wood, glass, wire, porcelain, organics and shells)	0.1	5	10	30	20	20	15				
15							-FILL-	0.6										
								0.3										
		CR5* 43	18.0 23.0				Similar to CR4 above, except trace PCBM stringers with PCBM odor from 22.5 to 23.0 ft	1.5										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/25/13	1030	0	13.0	13.0	±8.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 43
Rock Cored (ft) -
Samples 9CR

Boring No. PLP-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-001
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED				0.9										
							-FILL-	2.9										
		CR6* 37	23.0 28.0			SP	Gray to dark gray poorly graded SAND with gravel (SP), mps 2 in., no structure, musty odor, wet, ~40% coal ash fill (coal, cinders and slag), ~15% fill (glass, wood, shells, rubber tubing and metal)	0.0	5	15	35	25	15	5				
25								0.0										
								0.0										
		CR7* 36	28.0 33.0			SP	Gray to dark gray poorly graded SAND with gravel (SP), mps 1.5 in., no structure, PCBM odor, wet, ~75% coal ash fill (coal, cinders and slag), ~10% fill (metal, porcelain, glass, wood, organics and shells), trace PCBM stringers from 32.5 to 33.0 ft	0.0	5	10	45	25	10	5				
30								0.0										
								0.7										
		CR8* 19	33.0 38.0				Similar to CR7 above, except no PCBM observed, and with trace leather and concrete	0.0										
35							-FILL-	0.0										
								0.0										
		CR9* 52	38.0 43.0			SP	Dark gray to black poorly graded SAND with gravel (SP), mps 1.5 in., no structure, PCBM odor, wet, ~75% coal ash fill (coal, cinders and slag), ~10% fill (glass, shells, metal and organics)	2.8	5	10	45	25	10	5				
					-35.0 39.0	SM	Gray-brown silty SAND, mps 1 in., no structure, PCBM odor, wet, 20% fill (glass, metal, coal, cinders, shells and organics), trace PCBM stringers from 39.0 to 40.0 ft, ~90% sticky semi-solid PCBM strand-like from 39.0 to 41.0			5	15	35	25	20				
40					-37.0 41.0	MH	-TRANSITIONAL SOIL-	84.8					5	95				
					-39.0 43.0		Dark gray elastic SILT (MH), no structure, organic odor, moist, trace organics and shells, ~20% sticky semi-solid PCBM strand-like in 0.25 in. sand seam at 41.5 ft	37.6										
							-MARINE SILT-											
							BOTTOM OF EXPLORATION 43.0 FT											

Notes: Borehole was grouted after completion.

*- Denotes drilling was performed at a 59 degree angle from the horizontal and sample depth was measured along the angled drilling orientation (i.e., not vertical depth)

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PLP-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 24 October 2013
Finish 24 October 2013
Driller D. Dusher
H&A Rep. S. Brousseau
Elevation 4.0 (est.)
Datum NAVD88
Location See Plan
N 788,379
E 661,546

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 4x6 overrride
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1* 36	0.0 3.0	NO WELL INSTALLED	3.7 0.3	SM	Crushed stone (1" minus) Dark brown to dark gray silty SAND (SM), mps 1.5 in., no structure, petroleum odor, moist, trace concrete and bricks	3.1		10	20	25	25	20				
							-FILL-	7.2										
								19.0										
		CR2* 44	3.0 8.0			SM	Dark gray silty SAND with gravel, mps 2 in., no structure, petroleum, musty and PCBM odor, moist, trace metal, brick, wood and concrete, trace PCBM stringers from 3 to 7.5 ft, ~5% semi-solid PCBM strands from 7.5 to 8.0 ft	32.7	5	10	15	25	25	20				
5								26.9										
								4.6										
		CR3* 35	8.0 13.0			SM	Dark gray silty SAND with gravel (SM), mps 3.5 in., no structure, PCBM odor, wet, ~10% coal ash fill (cinders, coal and slag), trace concrete, firebrick, wood, bones and organics, trace PCBM stringers, slight sheen on water	0.6	10	15	30	15	15	15				
10								3.5										
								7.5										
		CR4* 0	13.0 18.0				No Recovery - probable brick pushed with over ride casing to 18 ft											
15							-FILL-											
		CR5* 38	18.0 23.0			SM	Dark gray silty SAND with gravel, mps 2.3 in., no structure, PCBM odor, wet, ~70% coal ash fill (coal, cinders and slag), ~15% fill (brick, concrete, wood, metal, shells, glass and porcelain), trace PCBM stringers, slight sheen on water	0.4	5	10	30	25	15	15				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/24/13	1030	0	13.0	13.0	±8.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 44
Rock Cored (ft) -
Samples 9CR

Boring No. PLP-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-002
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED				1.4										
							-FILL-	1.7										
		CR6* 10	23.0 28.0			SM	Gray silty SAND, mps 1.5 in., no structure, PCBM odor, wet, ~15% fill (coal, cinders, shell, organics, wood and shells), trace semi-solid PCBM strands Note: Poor recovery from concrete piece being pushed by core barrel.			5	10	40	30	15				
25								0.3										
		CR7* 14	28.0 33.0				Similar to above Note: Recovered 3.5 in. concrete piece from core barrel, possibly pushed from 13.0 ft.											
30								0.4										
		CR8* 36	33.0 38.0			SP	Gray poorly graded SAND with gravel (SP), mps 1.3 in., no structure, PCBM odor, wet, ~30% coal ash fill (coal, cinders and slag), ~20% fill (wood, porcelain, metal, leather, organics and shells), ~30% semi-solid PCBM (strand-like) from 35.0 to 35.5 ft	0.8	5	15	25	30	20	5				
							-FILL-	1.8										
35					-32.5 36.5	SM	Brown silty SAND (SM), mps 1.5 in., no structure, musty organic odor, moist, ~10% fill (grass, cinders, slag, coal and wood), ~5% organics, trace semi-solid PCBM (strand-like) from 38.0 to 39.0 ft, ~50% semi-solid PCBM (strand-like) from 39.0 to 39.5 ft	5.7			10	35	35	20				
		CR9* 36	38.0 42.0					0.6										
					-35.5 39.5		-TRANSITIONAL SOIL-											
40						MH	Dark gray elasticSILT (MH), no structure, organic odor, moist, trace organics and shells	1.2 2.4					5	95				
							-MARINE SILT-											
					-40.0 44.0		BOTTOM OF EXPLORATION 43.0 FT Notes: Borehole was grouted after completion. *- Denotes drilling was performed at a 59 degree angle from the horizontal and sample depth was measured along the angled drilling orientation (i.e., not vertical depth)											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PLP-002

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-003

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 23 October 2013
Finish 23 October 2013
Driller D. Dusher
H&A Rep. S. Brousseau

Elevation 4.2 (est.)
Datum NAVD88
Location See Plan
N 788,377
E 661,558

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: x6 over ride
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1* 36	0.0 3.0	NO WELL INSTALLED	4.0 0.2	SM	Crushed stone (1" minus)	5.6	5	5	10	30	30	20				
							Dark brown to black silty SAND (SM), mps 1 in., no structure, petroleum odor, moist, ~20% coal ash fill (coal, cinders and slag), trace brick and concrete	0.6										
		CR2* 46	3.0 8.0			SM	Dark gray to black silty SAND with gravel (SM), mps 1.5 in., no structure, PCBM odor, moist, ~30% coal ash fill (coal, cinders and slag)	46.8	5	10	20	30	15	20				
								19.0										
5							-FILL-											
								25.9										
								32.6										
		CR3* 48	8.0 13.0			SM	Gray to dark gray silty SAND with gravel (SM), mps 1 in., no structure, PCBM odor, wet, ~50% coal ash fill (ash, cinders and slag), 10% fill (wood, shells, porcelain, trace PCBM sticky strands, Semi-solid PCBM hardened chunk at 8 ft	7.3	5	10	20	25	25	15				
10								1.8										
								8.8										
		CR4* 37	13.0 18.0			SM	Gray silty SAND with gravel (SM), mps 1 in., no structure, PCBM odor, wet, ~50% coal ash fill (ash and cinders), 10% (glass, shells, wood, and organics), trace non-sticky rubber-like strands, slight sheen on water	0.3	5	15	25	25	15	15				
15								0.0										
					-13.8			0.8										
		CR5* 38	18.0 23.0		18.0	SP	Gray poorly-graded SAND with gravel (SP), mps 2.8 in., no structure, musty odor, wet, ~60% coal ash fill (ash, cinders, coal, and slag), ~10% fill (wood, glass, metal, organics, and shells), slight sheen on water	0.3	10	15	25	25	20	5				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 44
Rock Cored (ft) -
Samples 9CR

Boring No. PLP-003

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-003
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED				2.0										
								0.2										
		CR6* 48	23.0 28.0			SP	Gray poorly-graded SAND with gravel (SM), mps 2 in., no structure, musty odor, wet, ~60% coal ash fill (ash, cinders, coal, and slag) ~15%, fill (metal, porcelain, glass, wood, organics, and shells)	0.0	5	15	25	30	20	5				
25							-FILL-	0.0										
								0.0										
		CR7* 44	28.0 33.0			SP	Dark gray poorly-graded SAND with gravel (SP), mps 2 in., no structure, musty odor, wet, ~20% coal ash fill (ash, coal, cinders, and slag), ~5% shells, trace wood, brick, metal, organics, and glass	0.0	5	15	25	35	15	5				
30								0.0										
								0.0										
		CR8* 40	33.0 38.0			SP	Similar to above	0.0										
								0.0										
35								0.0										
					-31.8 36.0	SM	Dark gray silty SAND with gravel (SM), mps 2.5 in., no structure, musty odor, wet, ~25% fill (glass, wood, coal, cinders, and shells, trace leather, metal, and brick, trace non-sticky rubber-like strand		10	15	20	25	15	15				
					-32.8 37.0	SM	-FILL-	0.0			5	35	35	25				
		CR9* 36	38.0 41.0		-34.8 39.0	ML	Brown to dark brown silty SAND (SM), mps 0.5 in., no structure, organic odor, wet, ~10% organics, trace glass, metal, shells, coal, and cinders, trace PCBM stringers from 38 ft. to 39 ft with PCBM odor	1.5					5	95				
40							-TRANSITIONAL SOIL-	0.0										
					-36.8 41.0		Dark gray SILT (ML), mps 1.5 in., no structure, organic odor, moist, trace organics and shells	0.0										
							-MARINE SILT-											
							BOTTOM OF EXPLORATION 41.0 FT											

Notes: Borehole was grouted after completion

*- Denotes drilling was performed at a 59 degree angle from the horizontal and sample depth was measured along the angled drilling orientation (i.e., not vertical depth)

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PLP-003

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PLP-004

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 18 October 2013
Finish 18 October 2013
Driller D. Dusher
H&A Rep. S. Brousseau/B.Issac
Elevation 4.1 (est.)
Datum NAVD88
Location See Plan
N 788,383
E 661,575

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 4x6 overrride
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							3 in. gravel layer on the ground surface											
					1.7													
					2.4	SM	Gray silty SAND (SM), with brick/concrete fragments		5	10	10	20	30	25				
								7.0		5	10	25	20	40				
5				NO WELL INSTALLED														
								10.0										
							Bulkhead was encountered in this layer and likely penetrated through	12.0										
10					-8.9													
					13.0	ML/SM	Soft drilling encountered by the driller: likely red-brown and gray sandy SILT and fine SAND, with trace PCBM				10	10	20	60				
15					-11.3													
					15.4	SM	Dark gray silty SAND with gravel (SM), mps 2 in., slight odor, wet, with trace PCBM, piece of glass, rope fiber observed			5	10	25	20	40				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.2
Rock Cored (ft)	-
Samples	0CR

Boring No. PLP-004

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PLP-004
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20																		
25				NO WELL INSTALLED	-21.1 25.2		BOTTOM OF EXPLORATION 25.2 FT Notes: Borehole was grouted after completion *- Denotes drilling was performed at a 25-26 degree angle from the horizontal and sample depth was measured along the angled drilling orientation (i.e., not vertical depth)											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PLP-004

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TEST BORING REPORT

Boring No. PLP-004A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 21 October 2013
Finish 21 October 2013
Driller D. Dusher
H&A Rep. S. Brousseau
Elevation 4.1 (est.)
Datum NAVD88
Location See Plan
N 788,375
E 661,574

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: x6 over ride
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1* 33	0.0 3.0	NO WELL INSTALLED	3.8 0.3	SM	Crushed stone (1" minus) Black silty SAND (SM), mps 1 in., no structure, musty odor, moist, ~25% coal ash fill (cinders and slag)	220	5	10	15	25	25	20				
								56										
		CR2* 48	3.0 8.0			SM	Similar to above	6.7										
								33										
5					-0.9 5.0	ML	Brown SILT (ML), no structure, no odor, moist	257					25	75				
					-1.9 6.0	SM	Dark brown silty SAND with gravel (SM), mps 1 in., no structure, musty odor, moist, ~20% coal ash fill (cinders and slag, trace metal with gravel)		5	10	15	25	25	20				
		CR3* 44	8.0 17.0			SM	Gray silty SAND (SM), mps 1.5 in., no structure, musty odor, wet, 20% coal ash fill (cinders and slag), 10% fill, (wire, glass, brick, porcelain, shells)	357	10	15	20	25	10	15				
10							-FILL-	159										
								5.0										
15								16.0										
		CR4* 40	17.0 22.0			SM	Dark gray silty SAND with gravel (SM), mps 1 in., no structure, musty odor, wet, ~20% coal ash fill (cinders and slag) ~20%, fill (glass, wire, wood, organic, shells, brick)	10.4	5	10	20	35	15	15				
20								5.4										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/21/13	1215	0	17	17	±8.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	41
Rock Cored (ft)	-
Samples	8CR

Boring No. PLP-004A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PLP-004A
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED				9.7										
		CR5* 27	22.0 27.0			SP	Dark gray poorly-graded SAND with gravel (SP),mps 1.0 in., no structure, musty odor, wet, ~50% coal ash fill (coal, cinders, and slag), ~20% fill (glass, shells, brick, metal, wood, and organics)	6.6	5	10	25	35	15	5				
								6.9										
25								2.7										
		CR6* 29	27.0 32.0			SP	Similar to above	2.5										
								2.4										
30								1.3										
		CR7* 37	32.0 37.0			SM	Dark gray silty SAND with gravel (SM), mps 1.5 in., no structure, musty odor, wet, ~30% coal ash fill (coal, cinders, and slag), ~20% fill (glass, brick, wire, wood, organics, porcelain, and shells -FILL-	3.3	5	10	25	30	15	15				
35								0.8										
					-32.4			6.9										
		CR8* 60	37.0 42.0		36.5	ML	Gray SILT (ML), no structure, organic odor, moist, trace shells, and organics -MARINE SILT-	0.7					5	95				
40								0.0										
					-37.9			0.0										
					42.0		BOTTOM OF EXPLORATION 42.0 FT Notes: Boring was grouted after completion *- Denotes drilling was performed at a 59 degree angle from the horizontal and sample depth was measured along the angled drilling orientation (i.e., not vertical depth)											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PLP-004A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-005

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 22 October 2013
Finish 22 October 2013
Driller D. Dusher
H&A Rep. S. Brousseau
Elevation 5.8 (est.)
Datum NAVD88
Location See Plan
N 788,372
E 661,613

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	override	CR	-	Rig Make & Model: BL 100C Sonic
Inside Diameter (in.)	6	4	-	Bit Type: N/A
Hammer Weight (lb)	-	-	-	Drill Mud: None
Hammer Fall (in.)	-	-	-	Casing: 4x6 overrride
				Hoist/Hammer: N/A N/A
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		CR1* 36	0.0 3.0	NO WELL INSTALLED	5.6 0.2	SM	Crushed stone (1" minus)											
							Dark brown silty SAND with gravel (SM), mps 1.5 in., no structure, musty odor, dry, ~10% fill (brick, concrete, metal and organics)	219	10	15	15	20	20	20				
								0.0										
							-FILL-											
								7.8										
		CR2* 38	3.0 8.0			SM	Dark brown silty SAND with gravel (SM) mps 2.5 in., no structure, musty odor, moist, ~10% fill (brick, coal, cinders, wood and organics)	329	5	10	15	25	25	20				
5								319										
					-1.7 7.5	ML	Brown SILT (ML), no structure, no odor, moist						25	75				
					-2.4 8.2		-FILL-	194										
		CR3* 35	8.0 13.0			SM	Dark gray to gray silty SAND with gravel (SM), mps 1.8 in., no structure, musty odor, wet, ~20% coal ash fill (coal and cinders, trace glass, wood, organics and shells), slight sheen on water at 11 ft	369	5	10	15	35	20	15				
10								4.4										
		CR4* 34	13.0 18.0			SM	Gray silty SAND with gravel (SM), mps 3 in., no structure, petroleum odor, wet, ~50% coal ash fill (coal and cinders), ~15% fill (brick, wood, organics, shells and glass)	2.6	5	10	20	40	10	15				
								37.0										
							-FILL-											
15								28.0										
		CR5* 31	18.0 23.0			SM	Dark gray to gray silty SAND with gravel (SM), mps 1 in., no structure, musty odor, wet, ~50% coal ash fill (coal, cinders and slag), ~15% fill (metal, glass, wood, rubber bands, organics and shells)	395 132	5	10	25	35	10	15				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
10/22/13	1100	0	13.0	13.0	±8.2

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 38
Rock Cored (ft) -
Samples 8CR

Boring No. PLP-005

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PLP-005
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED				162.8										
								1.5										
		CR6* 38	23.0 28.0			SM	Gray to dark gray silty SAND with gravel (SM), mps 1 in., no structure, musty odor, wet, ~35% coal ash fill (coal and cinders), ~20% fill (glass, wood, metal, shells and organics), trace fabric and fibrous hair-like material, and shell fragments	373	10	10	25	30	10	15				
25							-FILL-	113.0										
								18.2										
		CR7* 38	28.0 33.0			SM	Similar to above	394	10	10	25	30	10	15				
30								4.8										
								396										
		CR8* 51	33.0 38.0		-27.7	SM	Similar to above											
					33.5	SM	Brown silty SAND (SM), mps 0.5 in., no structure, organic odor, wet, trace wood, organics and shells					45	35	20				
35					-29.2		-TRANSITIONAL FILL-											
					35.0	MH	Gray to dark gray elastic SILT (MH), no structure, organic odor, moist, trace organics and shells	5.4					5	95				
							-MARINE SILT-	0.1										
					-32.2 38.0		BOTTOM OF EXPLORATION 38.0 FT											

Notes: Borehole was grouted after completion

*- Denotes drilling was performed at a 59 degree angle from the horizontal and sample depth was measured along the angled drilling orientation (i.e., not vertical depth)

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PLP-005

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-1A

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 05 August 2014
Finish 05 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,256
E 661,385

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 32.5 ft to mudline from deck. Push casing to refusal at 5.6 ft with 2500 lbs. pressure.											
5					5.6		Note: Roller bit through obstruction with 400 las, pressure form 5.6 ft to 7.5 ft (probable rubble, no return)											
					7.5		Note: Borehole stayed open to 25.3 ft without mud.											
10																		
15																		
20																		
25					25.3		BOTTOM OF EXPLORATION 25.3 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/5/14	0830	tideboard north		2.6	6.7

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.3
Rock Cored (ft)	-
Samples	-

Boring No. WP-1A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-1A
File No. 28612-333
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Borehole grouted upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-1A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. WP-1A1

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 05 August 2014
Finish 05 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,255
E 661,375

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 37.0 ft to mudline from deck. Push casing to 7.0 ft with 200 lbs. pressure. Roller bit to 25.3 ft with 200 lbs. pressure.											
25					25.3		BOTTOM OF EXPLORATION 25.3 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/5/14	1430	tideboard north		4.0	6.3

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.3
Rock Cored (ft)	-
Samples	-

Boring No. WP-1A1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-1A1
File No. 28612-333
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Borehole grouted upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-1A1

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. WP-1B

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 05 August 2014
Finish 05 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,250
E 661,402

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 22.5 ft to mudline from deck. Push casing to refusal at 8.0 ft with 2500 lbs. pressure.											
					2.1		Note: Push casing through obstructions from 2.1 ft to 8.0 ft with 500 to 1000 lbs. pressure (probable rip-rap).											
5																		
					8.0		Note: Roller bit through obstructions with 400 to 500 lbs. pressure from 8.0 ft to 12.0 ft (probable rubble, no return).											
10							Note: Use mud to keep borhole open at 15.8 ft. Lost ~52 gallons mud to 25.3 ft											
15																		
20																		
					21.4													
25					25.3		BOTTOM OF EXPLORATION 25.3 FT											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/5/14	1200	tideboard north		1.8	5.0

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.3
Rock Cored (ft)	-
Samples	-

Boring No. WP-1B

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-1B
File No. 28612-333
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			Note: Borehole grouted upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-1B

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-1C1

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 07 August 2014
Finish 07 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,429
E 661,479

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 19.0 ft to mudline from deck. Set casing at 0.0 ft. Roller bit through obstructions to 4.0 ft with 0 lbs. pressure. Roller bit from 4.0 ft to 5.3 ft through obstruction with 400 lbs. pressure. Roller bit from 5.7 ft to 10.1 ft through obstructions with 0 lbs. pressure. Roller bit from 10.1 ft to 12.1 ft with 400 lbs. pressure. Obstructions probable rip rap (no return).											
5																		
10					12.1		BOTTOM OF EXPLORATION 12.1 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/7/15	0730	tideboard north		4.75	3.7

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12.1
Rock Cored (ft)	-
Samples	-

Boring No. WP-1C1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-1C3

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 07 August 2014
Finish 07 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,448
E 661,477

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 18.0 ft to mudline from deck. Push casing to 6.0 ft. Roller bit to 25.0 ft with 0 lbs. pressure. No obstructions (no return).											
25					25.0		BOTTOM OF EXPLORATION 25.0 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/7/15	1130	tideboard north		1.8	3.9

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.0
Rock Cored (ft)	-
Samples	-

Boring No. WP-1C3

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-3E

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 07 August 2014
Finish 07 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,413
E 661,450

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 22.5 ft to mudline from push casing to refusal at 5.0 ft with 2500 lbs. pressure.											
5					5.0		Note: Roller bit from 5.0 ft to 7.6 ft with 400 to 500 lbs. pressure for ~20 minutes. Obstructions probable rip rap (no return).											
					7.6		BOTTOM OF EXPLORATION 7.6 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/7/15	0945	tideboard north		3.25	4.7

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	7.6
Rock Cored (ft)	-
Samples	-

Boring No. WP-3E

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-3E1

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 07 August 2014
Finish 07 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,416
E 661,446

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 22.5 ft to mudline fro deck. Push casing to 2.4 ft. Roller bit to 25.0 ft to with 0 lbs. pressure. No obstructions, (no return).											
25					25.0		BOTTOM OF EXPLORATION 7.6 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/7/15	1300	tideboard north		0.75	4.3

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.0
Rock Cored (ft)	-
Samples	-

Boring No. WP-3E1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-3F

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 06 August 2014
Finish 06 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,681
E 661,389

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.1		Note: 34.0 ft to mudline from deck. Push casing to refusal at 0.1 ft with 2500 lbs. pressure. Note: Roller bit through ~6.0 in. cobble at 0.1 ft. Roller bit to 2.0 ft with 0 to 200 lbs. pressure to 4.0 ft. Advanced roller bit with grout to 6.2 ft through cobbles with 200 to 400 lbs. pressure (no return).											
5					6.2		Note: Roller bit to 25.0 ft with 0-100 lbs. pressure. No obstructions.											
10																		
15																		
20																		
25					25.0		BOTTOM OF EXPLORATION 25.0 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/6/15	0800	tideboard north		4.1	6.6

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.0
Rock Cored (ft)	-
Samples	-

Boring No. WP-3F

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. WP-3F1

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 06 August 2014
Finish 06 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,282
E 661,381

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.5		Note: 33.5 ft to mudline from deck . Push casing to refusal at 0.5 ft with 2500 lbs. pressure.											
							Note: Rollerbit through obstructions to 4.2 ft with 0-100 lbs. pressure. Roller bit through obstruction from 4.2 ft to 5.5 ft with 400 lbs. pressure, (no return).											
5					5.5													
10																		
15																		
20																		
25					25.0		BOTTOM OF EXPLORATION 25.0 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/6/15	1045	tideboard north		2.0	6.7

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.0
Rock Cored (ft)	-
Samples	-

Boring No. WP-3F1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. WP-3F2

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 06 August 2014
Finish 06 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,280
E 661,375

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 34.0 ft to mudline from deck. Push casing through obstructions to 3.8 ft with up to 2500 lbs. of pressure, set casing at 5.0 ft Roller bit to 25.0 ft with 0 lbs. pressure. Observed probable concrete particle in drill wash from 0.0 ft to 9.6 ft. Last return at 9.6 ft. No obstructions with rollerbit.											
25					25.0		BOTTOM OF EXPLORATION 25.0 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/6/15	1380tideboard north			2.0	4.8

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.0
Rock Cored (ft)	-
Samples	-

Boring No. WP-3F2

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-333TB_PDI4.GPJ 2 Aug 15

TEST BORING REPORT

Boring No. WP-3F3

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling Antea AEAC

File No. 28612-333
Sheet No. 1 of 1
Start 06 August 2014
Finish 06 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation (est.)
Datum
Location See Plan
N 788,279
E 661,370

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/ U	--	Rig Make & Model: Diedrich D50
Inside Diameter (in.)	4.0	1 3/8/2 7/8	--	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Psuh/Drive
				Hoist/Hammer: Winch Safety Hammer/Autonmatic
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 37.0 ft to mudline from deck. Push casing to 1.9 ft, no obstruction. Roller bit to 25.0 ft with 0 lbs. pressure. No obstructions (no returns).											
25					25.0		BOTTOM OF EXPLORATION 25.0 FT Note: Borehole grouted upon completion.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
8/6/15	1500	tideboard north		3.45	5.7

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	25.0
Rock Cored (ft)	-
Samples	-

Boring No. WP-3F3

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-004

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 10 October 2013
Finish 10 October 2013
Driller M. Mueller
H&A Rep. S. Brousseau

Elevation -15.8 (est.)
Datum NAVD88
Location See Plan
N 788,105
E 661,408

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	20* 86*	S1 20	0.0 1.0	NO WELL INSTALLED		OL/OH	Note: 3-in. spoon used for sample S1. Very dark gray ORGANIC SOILS (OL/OH), mps 0.6 in., no structure, slight petroleum odor, wet, trace shells, ~5% metal fragments and particles, 10 in. wood at bottom of sample with slight kerosene odor.	0.8		5	5	5	10	75				
								12.8										
	WOH* WOH* WOH* WOH*	S2 0	2.0 4.0				No recovery. No PCBM observed on spoon	25.5-22.5										
5	WOH* WOH* 4* 2*	S3 14	4.0 6.0				Note: 3-in. spoon. Very dark gray ORGANIC SILT, mps 0.5 in., no structure, organic odor, wet, with ~5% organics, 5% shells and wood in spoon tip	2.9				5	15	80				
	WOH* WOH* WOH* 1*	S4 24	6.0 8.0				Note: 2-in. spoon. Similar to S3	1.8										
	WOR* WOR* WOR* WOR*	S5 0	8.0 10.0				No recovery. No PCBM observed on tools -RIVER SEDIMENT/FILL- Note: PCBM oil droplets observed on rods when pulled from 45.0 ft.	2.4										
10																		
					-30.3 14.5	ML	Dark gray SILT (ML), mps 1 in., no structure, no odor, trace PCBM, strands/sticky, few organics and shells, slight sheen on spoon water -MARINE SILT-	1.3					10	90				
15	WOH* WOH* WOH* WOH*	S6 14	15.0 17.0															
20	WOH*	S7	19.5				Similar to S6 above, except trace PCBM observed only in a fine	2.7										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	23.5
Rock Cored (ft)	-
Samples	8S

Boring No. WP-004

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-004
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOH* WOH* WOH*	1	21.5	NO WELL INSTALLED			sand and shell seam											
	1* 1* WOH* WOH*	S8 10	21.5 23.5				Similar to S6 above, with semi-solid PCBM observed in a fine sand and shell seam, slight sheen on spoon water -MARINE SILT-	3.4										
					-39.3 23.5		BOTTOM OF EXPLORATION 23.5 FT Note: Tremie-grouted borehole with bentonite grout upon completion. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-004

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-009

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 16 October 2013
Finish 16 October 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -20.0 (est.)
Datum NAVD88
Location See Plan
N 788,213
E 661,392

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing:
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR*	S1	0.0	NO WELL INSTALLED			No Recovery - Obstruction at 1 ft depth											
	WOR*	0	1.0				Note: Hard drilling from 1 ft to 2.3 ft, likely cobbles 3 in. to 5 in. interbedded with sediments.											
	50/0						Note: Advanced borehole to 5.9 ft while rig chatter continued, likely cobble pushing through soft material.											
5							-FILL-											
	3	S2	6.0			SP	Loose red and gray poorly graded SAND with gravel (SP), mps 2 in., fill material with trace PCBM in sample tip, brick fragments observed	150	5	10	30	40	10	5				
	3	4	8.0															
	1																	
	1				-28.0													
					8.0		BOTTOM OF EXPLORATION 8.0 FT											
							Note: Borehole abandoned at 8 ft depth below mudline. The barge moved with tide and flow of the river and the casing became misaligned with the borehole. Offset to WP-009A and redrilled.											
							Borehole was grouted with CETCO high solids grout to the mudline.											
							*- Denotes non-standard split-spoon used.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 8
Rock Cored (ft) -
Samples 2S

Boring No. WP-009

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-009A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 17 October 2013
Finish 17 October 2013
Driller M. Mueller
H&A Rep. B. Issac/J. Locsin
Elevation -20.8 (est.)
Datum NAVD88
Location See Plan
N 788,105
E 661,408

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	3* 3* 4* 25/1*	S1 4	0.0 2.0	NO WELL INSTALLED			Brick and concrete fragments with dark gray silty sands, no odor, drill rods and spoons clean.	0.0	60	15	5	5	5	10				
							Drilled through obstruction from 1.5 to 3.5 ft, likely material similar to above, no return of drill mud	0.0										
							-FILL-											
	WOH* WOH* WOH* WOH*	S2 0	3.5 5.5				No recovery. No PCBM material observed on drill rods or spoon											
5					-25.8													
	WOH* WOH* WOH* WOH*	S3 8	5.5 7.5		5.0	ML	Very soft dark gray sandy SILT with clay (ML), 0.25 in. sandy varve observed, brick, concrete/cinder fragment, no odor. No PCBM observed on drilling tools	0.0			5	10	25	60	S	L	M	
							-RIVER DEPOSITS-											
								0.0										
	WOR* WOR* WOR* WOR*	S4 24	8.0 10.0			ML	Similar to above, with plant root fibers	0.0										
					-29.8													
					9.0	CL-ML	Very soft gray sandy SILT with clay, very fine partings of sand with shell particles and organics. No PCBM observed on tools	0.0				5	20	75				
10	WOR* WOR* WOR* WOR*	S5 24	10.0 12.0			ML	Similar to S4. No PCBM on rods or spoon	0.0 0.0 0.0				5	20	75				
	WOR* WOR* WOH* 1*	S6 24	12.0 14.0			ML	Similar to above. No PCBM on rods or spoon	0.0 0.0				5	20	75				
							-MARINE SILT-	0.0										
	WOR* WOH* WOH* WOH*	S7 8	14.0 16.0			ML	Similar to above. No PCBM on rods or spoon	0.0 0.0				5	20	75				
15								0.0										
	WOR* WOR* WOR* WOR*	S8 12	17.0 19.0			ML	Similar to above, except with more shell fragments. No PCBM observed on rods or spoon	0.0			5	5	20	70				
					-39.8 19.0			0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	19
Rock Cored (ft)	-
Samples	8S

Boring No. WP-009A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-009A
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			BOTTOM OF EXPLORATION 19.0 FT Note: Borehole grouted to mudline with CETCO grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-009A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-011

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 23 October 2013
Finish 23 October 2013
Driller M. Mueller
H&A Rep. B. Issac/J. Locsin
Elevation -15.1 (est.)
Datum NAVD88
Location See Plan
N 788,244
E 661,400

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: Driven to 30 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	1* 5* 4* 1*	S1 0	0.0 2.0	NO WELL INSTALLED			No recovery. No PCBM on tools/sample											
	WOR* 1* 2* 3*	S2 4	2.0 4.0				Pieces of brick and shell fragment with river sediments, isolated sheen observed, may contain trace PCBM	12.5										
5	3* 5* 5* 16*	S3 10	4.0 6.0				Similar to above except, with concrete fragments, may contain trace PCBM, not observed on drilling tools/sample	121.3 5.6										
	WOR* WOR* WOH* WOH*	S4 0	6.0 8.0				No recovery. No PCBM observed on tools/sample Rig chatter during roller bit advance indicated possible brick/concrete debris											
	4* 7* 7* 2*	S5 4	8.0 10.0			ML	Dark gray sandy SILT with clay (ML), slight petroleum odor, trace organic fiber and oily substance. No PCBM on tools/sample	6.5				10	10	80				
10	1* WOH* 1* 1*	S6 7	10.0 12.0			ML	Similar to above except, poor recovery, gravel in the tip	2.5										
	WOR* WOR* WOR* WOH*	S7 0	12.0 14.0				No recovery, likely debris from above blocking the spoon -FILL/RIVER DEPOSITS-											
	2* WOR* 1* WOR*	S8 2	14.0 16.0			ML	Very soft dark gray sandy SILT (ML), brick/concrete particles, slight organic odor, trace sheen on the spoon. No PCBM on tools/sample	6.6										
15	WOR* WOR* WOR* WOR*	S9 6	16.0 18.0					<210										
					-32.6 17.5	ML ML	Very soft gray sandy SILT (ML), thin layers of silty sand, slight petroleum odor. No PCBM on tools/sample -MARINE SILT- Very soft gray sandy SILT with clay (ML), thin layers of sand and shell fragments, no odor. No PCBM on tools/sample	0.0					40 30	60 70				
20	WOR* WOR* WOR* WOR*	S10 15	18.0 20.0															

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	35.5
Rock Cored (ft)	-
Samples	16S

Boring No. WP-011

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-011
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOR* WOH* 1* 2*	S11 0	20.0 22.0	NO WELL INSTALLED			No recovery	0.0										
	2* 2* 2* 2*	S12 6	22.0 24.0			ML	Gray sandy SILT with clay (ML), layers of shell fragments, piece of gravel at the tip	0.0		10			25	65				
25	4* 1* 2* 1*	S13 0	24.0 26.0				No recovery due to debris from above											
	WOR* WOR* WOR* WOR*	S14 0	26.0 28.0				No recovery											
	WOR* WOH* WOH* WOH*	S15 0	28.0 30.0				No recovery											
30																		
	WOH* WOH* WOH* WOH*	S16 6	33.5 35.5				Poor recovery, likely wash from above, gray, sandy SILT with clay (ML). No PCBM on tools/sample	0.0										
35					-50.6 35.5		BOTTOM OF EXPLORATION 35.5 FT Note: boring was grouted *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-011

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-017

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 24 October 2013
Finish 24 October 2013
Driller P. Dickinson
H&A Rep. B. Issac/J. Locsin
Elevation -19.3 (est.)
Datum NAVD88
Location See Plan
N 788,369
E 661,436

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing: driven/spun to 14.0 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel %	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Toughness	Plasticity	Strength
0	WOR* WOR* WOR* WOR*	S1 8	0.0 2.0	NO WELL INSTALLED		OL/ OH	Very soft dark gray ORGANIC SOILS (OL/OH), mps 1/2 in., no odor, with brick/concrete pieces, no PCBM on tools/sample			5	10	10	20	55				
	5* 6* 7* 9*	S2 12	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), mps 1 in., organic odor, with brick, concrete, wood, shell fragments, no PCBM on tools and sample Rig chatter during rollerbit advance.			10	15	15	20	40				
5	8* 8* 8* 12*	S3 20	4.0 6.0				Predominantly brick, concrete, gravel, shell fragments mixed with organic soils, 4 in. wood piece at the tip, petroleum odor, oily substance observed in the sample, no PCBM on tools and sample	32 26 45 86									
	9* 18* 9* 7*	S4 8	6.0 8.0				Slight resistance to rollerbit advance, likely wood (6 to 12 in.) Brick, concrete fragments with wood shavings in organic soils, slight petroleum odor, no PCBM on tools and sample	7.2 7.5									
	WOR* 8* 33* 4*	S5 4	8.0 10.0				4 in. piece of concrete, no PCBM on tools/sample -FILL/RIVER SEDIMENT-										
10	12* 4* 3* 4*	S6 6	10.0 12.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), slight petroleum odor, with concrete fragments, trace organic matter, no PCBM observed on tools and sample	0.7		20	10	10	10	50				
	6* 9* 3* 3*	S7 18	12.0 14.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with concrete fragments, PCBM observed at 13 ft depth	8.3		20	10	10	20	40				
					-32.3 13.0	ML	Light gray sandy SILT with clay (ML), thin layers of fine to coarse sand, no PCBM observed	0.0				10	20	70				
15	1* 1* WOR* WOR*	S8 12	14.0 16.0			ML	Similar to above except, with gravel, PCBM observed -MARINE SILT-										
					-35.3 16.0		BOTTOM OF EXPLORATION 16.0 FT Boring terminated due to presence of semi-solid PCBM Note: borehole was grouted										
							*- Denotes non-standard split-spoon used.										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 16
Rock Cored (ft) -
Samples 8S

Boring No. WP-017

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-018

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 21 October 2013
Finish 21 October 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -17.1 (est.)
Datum NAVD88
Location See Plan
N 788,385
E 661,442

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	SS	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing: 25.0 ft 6.0 in. OD
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 20	0.0 2.5	NO WELL INSTALLED		OL/ OH	Very soft dark gray sandy ORGANIC SOILS (OL/OH) mps <1 mm, organic odor, with trace organic fibers -FILL/RIVER SEDIMENT-					10	30	60				
	WOR* WOH* 3* 6*	S2 10	2.5 4.5			OL/ OH	Similar to above except, with concrete pieces Brief rig chatter during advance, likely concrete.											
5	7* 9* 7* 4*	S3 12	4.5 6.5			SM	Concrete and brick fragments from 6 ft to 6.5 ft Dark gray-brown silty SAND (SM), slight petroleum odor, caked with an oily substance, possible PCBM	25.5										
	5* 6* 25/3*	S4 10	6.5 7.8		-24.6		Bricks, concrete fragments, wood in the tip of the spoon											
	6* 33* 24* 13*	S5 18	8.0 10.0		7.5		Rig chatter, mud loss during drilling 7.5 ft to 8 ft: drilled thru 6 in. obstruction 15 in. piece of wood	12.8										
10	1* 1* 2* 23*	S6 15	10.0 12.0		-27.1 10.0	ML	Soft dark gray sandy SILT with clay (ML), slight petroleum odor, wood at the tip of the spoon	4.6				10	20	70				
	20* 50/4*	S7 10	12.0 12.8				Piece of wood recovered with dark gray silty sands	16.2										
					-30.1 13.0		BOTTOM OF EXPLORATION 13.0 FT Notes: No roller bit advance beyond 13.0 ft at 900 psi down pressure The borehole advance was limited due to likely wood at about 13.0 ft below mudline. *- Denotes non-standard split-spoon used.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	13
Rock Cored (ft)	-
Samples	7S

Boring No. WP-018

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-020

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 14 October 2013
Finish 14 October 2013
Driller M. Mueller
H&A Rep. S. Brousseau
Elevation -15.8 (est.)
Datum NAVD88
Location See Plan
N 788,427
E 661,459

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5/1.375	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing:
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 NR	0.0 2.0	NO WELL INSTALLED			No recovery, no PCBM observed on tools	NA										
	WOR* WOR* WOR* WOR*	S2 3	2.0 4.0			OL/ OH	Very soft dark gray ORGANIC SOILS (OL/OH), mps <1 mm, no structure, organic odor, wet, no PCBM observed	0.0					5	95				
5	WOR* WOR* WOR* WOR*	S3 22	4.0 6.0			OL/ OH	Very soft dark gray to gray ORGANIC SOILS (OL/OH), mps 1 mm, no structure, organic odor, wet, ~5% organics (leaves and root matter), no PCBM observed	0.1					10	90				
	WOR* WOR* WOR* WOR*	S4 22	6.0 8.0			OL/ OH	Similar to above except, trace organics and seashells	1.3										
	2 1 1 2	S5 NR	8.0 10.0				Note: begin using mud at 8 ft and 2 in. spoon No recovery, no PCBM observed on tools -FILL/RIVER SEDIMENT-	NA										
10	4* 1* WOR* 1*	S6 10	10.0 12.0			SM	Note: resume using 3 in. spoon at 10 ft Very loose dark gray silty SAND (SM), mps 1 in., no structure, slight petroleum odor and sheen, trace roots, leaves, and coal	3.9	5	5	5	10	25	50				
	43* 50/2"*	S7 8	12.0 12.7			SM	Very loose dark gray silty SAND (SM),mps 1.5 in., no structure, organic odor, trace organics, brick, bottom 5 in. wood	1.5	5	5	5	10	25	50				
					-29.3 13.5		BOTTOM OF EXPLORATION 13.5 FT											

Note:
Borehole was grouted.
Borehole was terminated on wood obstruction. Offset and re-drill as WP-20A.

*- Denotes non-standard split-spoon used.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 13.5
Rock Cored (ft) -
Samples 7S

Boring No. WP-020

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. WP-020A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 15 October 2013
Finish 15 October 2013
Driller M. Mueller
H&A Rep. B. Issac

Elevation -15.4 (est.)
Datum NAVD88
Location See Plan
N 788,430
E 661,456

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5/1.375	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing:
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Rollerbit with 6 in. tri-core with bentonite mud to 10 ft below mudline											
5							Obstruction at 7.5 ft to 8.5 ft below mudline, likely concrete debris and rip-rap. Mud loss during drilling from 8.5 ft to 9 ft, drilled through wood obstruction at 9 ft approximately 8"thick, wood shavings observed on roller bit.											
10	8* 1* WOH* WOH*	S1 2	10.0 12.0				Recovery in spoon tip: wood shavings and piece of concrete with dark gray, silty SAND. No PCBM on spoon											
	WOH* WOH* 2* 1*	S2 0	12.0 14.0				No recovery, except wood shavings. No PCBM on spoon											
15	WOH* WOH* WOH* WOH*	S3 20	14.0 16.0			OL/ OH	Very soft dark gray ORGANIC SOILS (OL/OH), pieces of concrete, gravel, wood shavings, mps 3/4 in., slight petroleum and organic odor. No PCBM on spoon/rods	0.6 0.8		5	10	15	10	60				
	WOH* WOH* 1* WOH*	S4 20	16.0 18.0				Similar to above	0.2 0.5										
					-32.4 17.0	ML	-FILL/RIVER DEPOSIT- Very soft gray sandy SILT (ML) with fine sand layers 1 mm to 2 mm thick, trace organics and shell fragments. No PCBM on rods or spoon	0.5 0.2			10	10	10	70				
20							-MARINE SILT-											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	30
Rock Cored (ft)	-
Samples	8S

Boring No. WP-020A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-020A
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	1* 1* 1* 1*	S5 12	22.0 24.0			ML	Very soft gray sandy SILT (ML), with frequent layers of fine sand and shell fragments 1 mm to 5 mm thick, no odor. No PCBM on rods or spoon				15	10	15	60				
25	WOR* WOR* WOR* WOR*	S6 0	24.0 26.0				No recovery with 2" spoon. No PCBM on rods or spoon. Resampled with 3" spoon, no recovery.											
	WOR* WOR* WOR* WOR*	S7 0	26.0 28.0				No recovery with 3" spoon. No PCBM on spoon											
	WOH* WOH* WOH* WOH*	S8 0	28.0 30.0				No recovery with 3" spoon. No PCBM on rods or spoon											
30					-45.4 30.0		BOTTOM OF EXPLORATION 30.0 FT Note: borehole was grouted *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-020A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-021

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 04 November 2013
Finish 04 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -7.0 (est.)
Datum NAVD88
Location See Plan
N 788,423
E 661,483

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: 6 in./4 in. driven to 10 ft/25 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	1* 4* 8* 11*	S1 0	0.0 2.0	NO WELL INSTALLED			No recovery, likely rip-rap or debris. No PCBM on tools											
	3* 4* 3* 3*	S2 0	3.5 5.5				No recovery. No PCBM on tools, likely concrete debris and gravel in river deposits based in material on spoon -FILL/RIVER DEPOSIT-											
5	23* 6* 3* 2*	S3 6	6.0 8.0			SP	Gray-brown poorly-graded SAND and gravel (SP), pieces of slag, brick, glass, no odor. No PCBM observed on tools			40	20	30	10					
	8* 25/6"	S4 6	8.5 9.0		-15.5 8.5 -16.0 9.0	OL	Pieces of angular gravel, mps 3 in., brick with dark gray, organic silt (OL). No PCBM on tools Bouncing hammer and hard roller bit advance indicates rip-rap. Advanced roller bit 3 in. into the obstruction with approximately 1100 psi pressure on the drill rods. BOTTOM OF EXPLORATION 9.5 FT			80	5	5	5	5				

Notes:
Due to very slow advance with the roller bit thru the rip-rap, the borehole was abandoned at 9.5 ft depth
Borehole grouted with CETCO grout high solids grout mix

*- Denotes non-standard split-spoon used.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	9.5
Rock Cored (ft)	-
Samples	4S

Boring No. WP-021

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-023

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 25 October 2013
Finish 25 October 2013
Driller M. Mueller/P. Dickinson
H&A Rep. B. Issac
Elevation -19.5 (est.)
Datum NAVD88
Location See Plan
N 788,100
E 661,395

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: 6 in./4in. driven to 25 ft/45 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 15	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with trace root fiber, bottom 6 in. silty sand with trace PCBM					10	20	70				
	WOH* WOH* WOH* WOH*	S2 12	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with concrete, brick gravel fragments and PCBM strings throughout the sample											
5	WOH* WOH* WOH* WOR*	S3 24	4.0 6.0			OL/ OH	Gray ORGANIC SOILS (OL/OH), with vegetation fibers (30%) and gravel, oily material observed at the tip of the spoon, with sheen throughout the recovered sample No PCBM was observed											
					-25.5 6.0													
	WOR* WOR* WOR* WOR*	S4 18	8.5 10.5			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with vegetation fibers (30%), trace gravel, oily sheen observed occasionally in the recovery											
10	WOR* WOR* WOR* WOR*	S5 20	10.5 12.5			OL/ OH	-FILL/RIVER DEPOSITS- Similar to above, with trace organics											
					-31.5 12.0	ML	Gray sandy SILT (ML) with shell fragments											
	WOR* WOR* WOR* WOR*	S6 15	12.5 14.5			ML	Gray sandy SILT with clay (ML), fine sand layers (up to 8 in. thick). PCBM observed in sand layers					10	20	70				
15	WOR* WOR* WOR* WOR*	S7 12	14.5 16.5			ML	-MARINE SILT- Similar to above. PCBM observed in some sand layers											
	WOR* WOR* WOR* WOR*	S8 15	16.5 18.5			ML	Similar to above. PCBM observed in one sand layer near the bottom of the sample											
20	WOH* WOH* 1 WOH*	S9 18	18.5 20.5			ML	Similar to above, with shell fragment layers. PCBM observed in shell fragments											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 20.5
Rock Cored (ft) -
Samples 9S

Boring No. WP-023

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-023
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED	-40.0 20.5		BOTTOM OF EXPLORATION 20.5 FT Notes: Borehole grouted with CETCO grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-023

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-024

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 29 October 2013
Finish 29 October 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -20.1 (est.)
Datum NAVD88
Location See Plan
N 788,375
E 661,427

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing: 4.0 in. PUSHED 49 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 30	0.0 4.5	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH). No PCBM observed on drilling tools -FILL/RIVER DEPOSIT-					5	15	80				
5	WOR* WOR* WOR* WOR*	S2 24	4.5 6.5			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic fibers, slight odor. No PCBM observed on drilling tools					10	20	70				
	WOR* WOR* 3* 2*	S3 6	6.5 8.5			OL/ OH	Similar to above except, with a piece of wood at the tip											
10	WOH* WOH* WOH* WOH*	S4 2	8.5 10.5			OL/ OH	Similar to above except with wood fragment and petroleum odor											
	WOR* WOR* PUSH	S5 24	10.5 12.5			OL/ OH	Dark gray ORGANIC SOILS mixed with silt (OL/OH), with slight petroleum odor											
					-32.1 12.0	ML	Gray sandy SILT (ML), with shell fragments. No PCBM on drilling tools					10	20	70				
	WOR* WOR* WOR* WOR*	S6 24	12.5 14.5			ML	Gray sandy SILT with clay (ML), with layers of silty sand and shell fragments. No PCBM observed on drilling tools											
15	WOH* WOH* WOH* WOH*	S7 0	14.5 16.5			ML	No recovery. No PCBM observed on drilling tools -MARINE SILT-											
	WOH* 1* 1* WOH*	S8 24	16.5 18.5			ML	Gray sandy SILT with clay (ML), silty sand layers with shell fragments. No PCBM observed on drilling tools											
20	WOH* WOH* WOH* WOH*	S9 8	18.5 20.5			ML	Similar to above. No PCBM observed on drilling tools											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	22.5
Rock Cored (ft)	-
Samples	10S

Boring No. WP-024

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-024
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20																		
	WOH* WOH* WOH* WOH*	S10 15	20.5 22.5	NO WELL INSTALLED	-42.6	ML	Similar to above. No PCBM observed on drilling rods -MARINE SILT-											
					22.5		BOTTOM OF EXPLORATION 22.5 FT Note: borehole was grouted *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-024

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-025

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -18.8 (est.)
Datum NAVD88
Location See Plan
N 788,087
E 661,383

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing: 6.0/4.0 in. PUSHED 30/46 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 0	0.0 2.0	NO WELL INSTALLED			No recovery, likely very soft material, oily											
	WOR* WOR* WOR* WOR*	S2 15	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with slight petroleum odor. No PCBM observed					10	20	70				
							-FILL/RIVER DEPOSIT-											
5	WOR* WOR* WOR* WOR*	S3 20	4.0 6.0			OL/ OH	Similar to above with fibrous material, likely manmade. No PCBM observed											
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with oily substance											
						OL/ OH	Gray sandy SILT and organic soils with shell fragments. No PCBM observed					10	25	65				
					-26.8 8.0													
	WOR* WOR* WOR* WOR*	S5 15	8.0 10.0			ML	Gray sandy SILT with clay (ML), with thin layers of sand and shell fragments. No PCBM observed											
							-MARINE SILT-											
10	WOR* WOR* WOR* WOR*	S6 24	10.0 12.0			ML	Similar to above. No PCBM observed					10	25	65				
	WOR* WOR* WOR* WOR*	S7 24	12.0 14.0			ML	Similar to above. No PCBM observed											
	WOH* WOH* WOH* WOH*	S8 20	14.0 16.0			ML	Similar to above. No PCBM observed											
15	WOH* WOH* WOH* WOH*	S9 15	16.0 18.0			ML	Similar to above. No PCBM observed											
					-36.8 18.0		BOTTOM OF EXPLORATION 18.0 FT											
							Notes: Borehole was grouted											
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	20.0
Rock Cored (ft)	-
Samples	9S

Boring No. WP-025

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-025
File No. 28612-312
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			*- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-025

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-026

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 02 November 2013
Finish 02 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -10.5 (est.)
Datum NAVD88
Location See Plan
N 788,077
E 661,425

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing:
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 0	0.0 2.0	NO WELL INSTALLED			No recovery. No PCBM observed on drill tools											
	WOR* WOR* WOR* WOR*	S2 18	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic debris in bottom 6 in. No PCBM observed in sample or on drill tools	0.0				10	30	60				
							-FILL/RIVER DEPOSIT-	0.2										
5	WOR* WOR* WOR* WOR*	S3 20	4.0 6.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic debris in the sample. No PCBM observed	0.1										
								0.0										
	WOR* WOR* WOR* WOR*	S4 20	6.0 8.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with sand layers, petroleum odor and sheen at 7 ft. No PCBM observed	10.9										
								15.3										
								0.5										
	WOR* WOR* WOR* WOR*	S5 20	8.0 10.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with slight petroleum odor, trace organics. No PCBM observed	1.3										
								0.2										
10	WOR* WOR* WOR* WOH*	S6 18	10.0 12.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with slight petroleum odor, trace organic matter, plant fibers. No PCBM observed	0.1										
								0.1										
	WOH* 1 1 1	S7 20	12.0 14.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic matter in thin seams, slight petroleum odor, shell fragment in the tip. No PCBM on drill tools	0.5										
								0.0										
	WOH* WOH* WOH* WOH*	S8 24	14.0 16.0			OL/ OH	Similar to above except no shell fragments. No PCBM observed	0.0										
15								0.0										
	WOH* WOH* WOH* WOH*	S9 24	16.0 18.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with seams of organic matter, slight petroleum odor. No PCBM observed	0.0										
								0.0										
	WOH* WOH* WOH* WOH*	S10 18	18.0 20.0		-29.5	OL/ OH	Similar to above. No PCBM observed	0.0										
					19.0	ML	Gray sandy SILT (ML), with shell fragments, no odor. No PCBM observed					5	25	70				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	28.0
Rock Cored (ft)	-
Samples	14S

Boring No. WP-026

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-026
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOH* 1 WOH* 1	S11 24	20.0 22.0	NO WELL INSTALLED		ML	Gray sandy SILT (ML), with sand layers and shell fragments, no odor. No PCBM observed	0.0										
							-MARINE SILT-											
	WOH* WOH* WOH* WOH*	S12 24	22.0 24.0			ML	Gray sandy SILT (ML), with sand layers and shell fragments, trace organics, slight organic odor. No PCBM observed	0.0 0.0										
25	WOH* 1 1 1	S13 20	24.0 26.0			ML	Similar to above. No PCBM observed	0.0 0.0					30	70				
	WOH* WOH* 1 1	S14 18	26.0 28.0			ML	Similar to above. No PCBM observed	0.0 0.0										
					-38.5 28.0		BOTTOM OF EXPLORATION 28.0 FT											

Notes: borehole was grouted

*- Denotes non-standard split-spoon used.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-026

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-027

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 30 October 2013
Finish 30 October 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -21.8 (est.)
Datum NAVD88
Location See Plan
N 788,164
E 661,384

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing: HW PUSHED to 49.0 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 18	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), slight organic odor. No PCBM observed											
							-FILL/RIVER DEPOSIT-											
	WOR* WOR* WOR* WOR*	S2 18	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with sandy layers, slight petroleum odor, fine fibers observed. No PCBM observed											
5	WOR* WOR* WOR* WOR*	S3 18	4.0 6.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with root fibers and oily substance, slight petroleum odor. No PCBM observed											
	WOR* WOR* WOR* WOR*	S4 15	6.0 8.0		-28.8 7.0	OL/ OH	Similar to above											
						ML	Gray sandy SILT (ML), with silty sand layers, no odor . No PCBM observed											
	WOR* WOR* WOR* WOR*	S5 18	8.0 10.0			ML	Gray sandy SILT (ML), with silty sand layers, no odor. No PCBM observed											
10	WOH* WOH* WOH* WOH*	S6 24	10.0 12.0			ML	Similar to above. No PCBM observed											
							-MARINE SILT-											
	WOH* WOH* WOH* WOH*	S7 15	12.0 14.0			ML	Similar to above. No PCBM observed											
	WOH* WOH* WOH* WOH*	S8 20	14.0 16.0			ML	Similar to above. No PCBM observed											
15	WOH* WOH* WOH* WOH*	S9 10	16.0 18.0			ML	Similar to above											
					-39.8 18.0		BOTTOM OF EXPLORATION 18.0 FT											
							Notes: borehole was grouted											
							*- Denotes non-standard split-spoon used.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	18
Rock Cored (ft)	-
Samples	9S

Boring No. WP-027

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-028

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 31 October 2013
Finish 31 October 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -21.8 (est.)
Datum NAVD88
Location See Plan
N 788,333
E 661,414

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	6/4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing:
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 12	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), slight organic odor, trace root fibers. No PCBM observed											
							-FILL/RIVER DEPOSIT-											
	WOR* WOR* WOR* WOR*	S2 10	2.0 4.0			OL/ OH	Similar to above except with concrete fragments. No PCBM observed											
5	WOH* WOH* WOH* WOH*	S3 0	4.0 6.0				No recovery except piece of gravel in the tip. No PCBM on drilling tools											
	WOH* WOH* WOH* WOH*	S4 0	6.0 8.0			OL/ OH	Similar to above. No PCBM on drilling tools											
	10* 15* 15* 15*	S5 15	8.0 10.0				Rock fragments and pieces of concrete. No PCBM in sample or tools											
10	7* 1 1 1	S6 10	10.0 12.0		-32.8 11.0	ML	Rock fragments over dark gray sandy SILT (ML), no odor. No PCBM observed											
	WOH* 1 1 1	S7 20	12.0 14.0				Gray sandy SILT (ML), no odor, with sand layers. No PCBM observed											
							-MARINE SILT-											
15	WOH* 1 WOH* 1	S8 24	14.0 16.0			ML	Similar to above. No PCBM observed											
	WOH* WOH* WOH* WOH*	S9 8	16.0 18.0			ML	Similar to above except with shell fragments. No PCBM observed											
20	WOH* WOH* WOH* WOH*	S10 24	18.0 20.0			ML	Similar to above. No PCBM observed											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	22.0
Rock Cored (ft)	-
Samples	11S

Boring No. WP-028

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-028
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOH* WOH* WOH* WOH*	S11 24	20.0 22.0	NO WELL INSTALLED		ML	Similar to above. No PCBM observed											
					-43.8 22.0		BOTTOM OF EXPLORATION 22.0 FT Notes: borehole was grouted *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-028

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-029

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 05 November 2013
Finish 05 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -19.0 (est.)
Datum NAVD88
Location See Plan
N 788,271
E 661,400

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: 4 in. driven/spun
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOH* WOH* 1* 2*	S1 0	0.0 2.0	NO WELL INSTALLED			No recovery except few pieces of wood											
	4* 5* 6/0 in.*	S2 10	2.0 3.5				Dark gray gravel, brick, concrete, wood debris with organic soils, slight petroleum odor, obstruction at 3.5 ft											
							Drilled through obstruction from 3.5 ft to approximately 5 ft, likely wood											
5	22* 8* 10*	S3 10	4.5 6.0				Brick, wood, concrete, gravel, shell fragments, piece of carpet. No PCBM on tools											
	10* 9* 8* 4*	S4 8	6.5 8.5				Pieces of wood (likely lying horizontal), gravel and brick fragments, difficult casing advance. No PCBM on tools											
	11* 10* 14* 14*	S5 8	8.5 10.5				Wood and brick fragment to 9 ft, dark gray gravel with organic silt. No PCBM on tools											
10							-FILL/RIVER DEPOSIT-											
	8* 9* 6* 4*	S6 0	10.5 12.5				Wood and brick pieces, likely material caught in the casing. Organic soils on the spoon exterior. No PCBM on tools											
	1* 2* 2* 2*	S7 24	12.5 14.5			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with brick and concrete fragments, slight petroleum odor				5	5	30	60				
					-33.0 14.0	ML	Gray sandy SILT (ML), layered. No PCBM observed.					10	20	70				
15	1* WOR* WOR* WOR*	S8 24	14.5 16.5			ML	Gray sandy SILT (ML), layered, trace shell fragments and organic matter. No PCBM on tools											
	WOH* WOH* WOH* WOH*	S9 3	16.5 18.5			ML	Similar to above. Poor recovery. No PCBM on tools											
							-MARINE SILT-											
	1* WOH* 1* 1*	S10 8	18.5 20.5			ML	Similar to above except shell fragments. No PCBM on tools											
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	24.5
Rock Cored (ft)	-
Samples	12S

Boring No. WP-029

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-029
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20																		
	1* 1* WOH* 1*	S11 0	20.5 22.5			ML	No recovery, likely similar to above, based on material on the spoon. No PCBM on tools											
	WOH* WOH* WOH* WOH*	S12 6	22.5 24.5			ML	Gray sandy SILT with clay (ML), shell fragments, layered, sand seams. No PCBM observed											
				NO WELL INSTALLED	-43.5 24.5		-BOTTOM OF EXPLORATION 24.5 FT Note: borehole was grouted *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-029

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-030

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 05 November 2013
Finish 06 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -19.5 (est.)
Datum NAVD88
Location See Plan
N 788,134
E 661,386

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 16.5 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 30	0.0 2.5	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), slight petroleum odor. No PCBM on tools/sample											
	1* 1* WOH* WOH*	S2 18	2.5 4.5			OL/ OH	Similar to above except organic matter, piece of wood. No PCBM on tools/sample											
5	WOR* 6* 3* 1*	S3 18	4.5 6.5			OL/ OH	Similar to above except wood in bottom 9", trace sheen on the sample											
	WOH* WOH* WOH* WOH*	S4 20	6.5 8.5			OL/ OH	Similar to above -FILL/RIVER DEPOSIT-											
					-27.5 8.0	ML	Gray sandy SILT (ML), with fine sand layers. No PCBM in tools/sample -MARINE SILT-											
10	WOR* WOR* WOR* WOR*	S5 18	8.5 10.5															
	WOR* WOR* WOR* WOR*	S6 24	10.5 12.5			ML	Gray sandy SILT with clay (ML), fine sand layers. No PCBM in tools/sample											
	WOR* WOR* WOR* WOR*	S7 18	12.5 14.5			ML	Similar to above. No PCBM in tools/sample											
15	WOR* WOR* WOH* WOH*	S8 20	14.5 16.5			ML	Similar to above. No PCBM in tools/sample											
	WOH* WOH* WOH* WOH*	S9 18	16.5 18.5			ML	Gray sandy SILT with clay (ML), coarse sand and shell fragment layers Trace PCBM observed at 17ft within a shell fragment layer											
					-38.0 18.5		BOTTOM OF EXPLORATION 18.5 FT Note: borehole was grouted											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	18.5
Rock Cored (ft)	-
Samples	9S

Boring No. WP-030

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-030
File No. 28612-312
Sheet No. 2 of 1

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED			*- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-030

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-031

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 06 November 2013
Finish 06 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -18.3 (est.)
Datum NAVD88
Location See Plan
N 788,402
E 661,443

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 8 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 24	0.0 2.5	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic fibers. No PCBM on tools/sample -FILL/RIVER DEPOSIT-											
	WOR* WOR* WOR* WOR*	S2 18	2.5 4.5			OL/ OH	Similar to above. No PCBM on tools/sample											
5	WOR* WOR* WOR* WOR*	S3 20	4.5 6.5			OL/ OH	Similar to above except with layers of organic matter. No PCBM on tools/sample											
	WOR* WOR* 8* 50*/5	S4 15	6.5 8.5			OL/ OH	Similar to above Wood pieces. No PCBM on tools/sample											
10	8* 50*/1	S5 6	8.5 10.5				Wood pieces, sandy gravel at the bottom, petroleum odor, sheen in the sample. No PCBM on tools/sample Hard drilling 9.5 ft to 12 ft, based on drill action the obstruction is likely reinforced concrete											
					-30.3 12.0		BOTTOM OF EXPLORATION 12.0 FT Notes: Conditions (reinforced concrete and unstable deck) are unfavorable for drilling with a core barrel through the obstruction. Borehole was grouted. *- Denotes non-standard split-spoon used.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12
Rock Cored (ft)	-
Samples	5S

Boring No. WP-031

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-032

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 06 November 2013
Finish 06 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -19.8 (est.)
Datum NAVD88
Location See Plan
N 788,357
E 661,424

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 20 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 20	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic fibers. No PCBM on tools/sample											
	WOR* WOR* WOR* WOR*	S2 12	2.0 4.0			OL/ OH	Similar to above. No PCBM on tools/sample											
5	2* 3* 4* 2*	S3 10	4.0 6.0				Dark gray gravel and sand mixed in an adhesive medium, sheen on the water in spoon, petroleum odor											
	5* 3* 1* 1*	S4	6.0 8.0				Similar to above Poorly-graded sand with sheen and odor											
	3* 5* 5* 5*	S5 8	8.0 10.0			OL/ OH OL/ OH	ORGANIC SOILS (OL/OH), slight organic odor Pieces of rip-rap, mica schist with ORGANIC SOILS (OL/OH). No PCBM observed -FILL/RIVER DEPOSIT-											
10	11* 8* 5* 3*	S6 6	10.0 12.0				Pieces of rip-rap caught in the tip of the spoon. No PCBM observed											
	5* 2* 1* 1*	S7 10	12.0 14.0				Dark gray ORGANIC SOILS and coarse gravel (OL/OH). No PCBM observed											
					-33.8													
	WOH* WOH* WOH* WOH*	S8 2	14.0 16.0		14.0	ML	Poor recovery Gray sandy SILT (ML) at the tip with shell fragments. No PCBM on the tools/sample											
15					-35.8													
	2* 1* 1* 1*	S9 24	16.0 18.0		16.0	ML	Gray sandy SILT with clay (ML), shell fragments, gravel. No PCBM on the tools/sample -MARINE SILT-											
20	3* 2* 3* 3*	S10	18.0 20.0															

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	22.5
Rock Cored (ft)	-
Samples	10S

Boring No. WP-032

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-032
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED	-42.3													
					22.5		BOTTOM OF EXPLORATION 22.5 FT Note: borehole was grouted *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-032

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-033

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 07 November 2013
Finish 07 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -20.0 (est.)
Datum NAVD88
Location See Plan
N 788,110
E 661,383

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 11 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 18	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with organic matter, slight odor. No PCBM	0.0										
								0.0										
	WOR* WOR* WOR* WOR*	S2 24	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with seam of organic fibers, petroleum odor, trace sheen. No PCBM	1.3										
								2.4										
5	WOR* WOR* WOR* WOR*	S3 24	4.0 6.0				Organic matter with petroleum odor, sheen, with organic soils. Trace PCBM	4.4 4.8										
							-FILL/RIVER DEPOSIT-											
	WOR* WOR* WOR* WOR*	S4 20	6.0 8.0				Similar to above. Trace PCBM	1.1										
					-27.0													
	10* 8* 6* 9*	S5 24	8.0 10.0		7.0	OL/ OH	Gray ORGANIC SOILS (OL/OH), slight odor, seams of organic matter. No PCBM below 7 ft	0.9										
							Piece of wood, vertical grain, likely upright pile, difficulty pulling the spoon out. No PCBM											
10	P U S H	S6 0	10.0 12.0				No Recovery - difficult pulling the spoon out. No PCBM											
					-32.0													
					12.0		BOTTOM OF EXPLORATION 12.0 FT											

Notes:
Borehole abandoned due to probable timber pile obstruction.
Borehole was grouted.
Boring offset and re-drilled at WP-033A.

*- Denotes non-standard split-spoon used.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	12
Rock Cored (ft)	-
Samples	6S

Boring No. WP-033

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-033A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 07 November 2013
Finish 07 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -19.8 (est.)
Datum NAVD88
Location See Plan
N 788,110
E 661,381

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 21 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Drilled to 6 ft below mudline before sampling											
	8* 3* 3* 4*	S1 18	6.0 8.0		-25.8 6.0		Wood pieces, horizontal grains											
	2* 4* 1* 1*	S2 4	8.0 10.0		-27.3 7.5		Dark gray ORGANIC SOILS with sand and gravel. No PCBM Pieces of wood. No PCBM -FILL/RIVER DEPOSITS-											
10	1* 1* WOH* WOH*	S3 2	10.0 12.0		-30.8 11.0	OL/ OH	ORGANIC SOILS (OL/OH). No PCBM											
	1* WOH* WOH* WOH*	S4 12	12.0 14.0			ML	Gray sandy SILT (ML), trace shell fragments, wood pieces. No PCBM											
	WOR* WOR* WOR* WOR*	S5 24	14.0 16.0			ML	Gray sandy SILT (ML) with clay and sand layers. No PCBM											
15	WOR* WOR* WOR* WOR*	S6 24	16.0 18.0			ML	Gray sandy SILT (ML), sand layers, shell fragments. No PCBM -MARINE SILT-											
	WOH* 2* 3* 2*	S7 24	18.0 20.0			ML	Similar to above. No PCBM											
						ML	Similar to above with significant shell fragments in sample. No PCBM											
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	22
Rock Cored (ft)	-
Samples	8S

Boring No. WP-033A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-033A
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	3* 2* WOR* WOR*	S8 18	20.0 22.0	NO WELL INSTALLED		ML	Gray sandy SILT (ML), sand layers and shell fragments											
					-41.8 22.0		BOTTOM OF EXPLORATION 22.0 FT Notes: Borehole grouted with CETCO high solids grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-033A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-034

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 08 November 2013
Finish 08 November 2013
Driller M. Mueller
H&A Rep. B. Issac
Elevation -16.8 (est.)
Datum NAVD88
Location See Plan
N 788,086
E 661,402

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 22 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOH* WOR* WOR* WOR*	S1 0	0.0 2.0	NO WELL INSTALLED			No Recovery - slight petroleum odor											
	WOR* WOR* WOR* WOR*	S2 24	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with organic matter, fibers, slight petroleum odor. No PCBM	0.3										
								0.3										
5	WOR* WOR* WOR* WOR*	S3 24	4.0 6.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with fibrous matter, petroleum odor. No PCBM	0.2										
								7.1										
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), trace organic fibers. No PCBM	0.1				5	30	70				
							-FILL/RIVER DEPOSIT-	0.1										
	WOR* WOR* WOR* WOR*	S5 24	8.0 10.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), thin layer of fibrous matter, slight odor. No PCBM	0.1										
10	WOH* WOH* WOH* WOH*	S6 24	10.0 12.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), trace shells. No PCBM	0.0										
								0.0										
	WOH* 1* WOH* 1*	S7 24	12.0 14.0			OL/ OH	Similar to above, gray sandy silt (ML) at the tip. No PCBM	0.0 0.0										
	WOR* WOR* WOH* WOH*	S8 24	14.0 16.0		-30.8 14.0	ML	Gray sandy SILT (ML) with fine sand layers. No PCBM	0.0										
15							-MARINE SILT-											
	WOH* WOH* WOH* WOH*	S9 20	16.0 18.0			ML	Similar to above. No PCBM	0.0										
	3* 2* 1* 1*	S10 8	18.0 20.0			ML	Similar to above. No PCBM	0.0										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 24
Rock Cored (ft) -
Samples 12S

Boring No. WP-034

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-034
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	2* WOR* WOR* WOH*	S11 24	20.0 22.0	NO WELL INSTALLED		ML	Similar to above with shell pieces and gravel on top. No PCBM -MARINE SILT-	0.0										
	WOH* WOH* WOH* 2*	S12 ?	22.0 24.0			ML	Similar to above with layers of shell fragments with sand. No PCBM	0.0										
					-40.8 24.0		BOTTOM OF EXPLORATION 24.0 FT Note: Borehole grouted with CETCO high solid grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-034

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-035

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 08 November 2013
Finish 08 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -18.3 (est.)
Datum NAVD88
Location See Plan
N 788,225
E 661,392

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 22 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 0	0.0 2.0	NO WELL INSTALLED			No recovery. No PCBM on rods/spoon											
	WOR* WOR* WOR* WOH*	S2 0	2.0 4.0				No recovery. No PCBM on rods/spoon											
5	6* 2* WOH* WOH*	S3 15	4.0 6.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with concrete, brick, debris, slight organic odor. No PCBM on tools	1.2 0.4										
	2* 1* 1* 2*	S4 0	6.0 8.0				No recovery. No PCBM on tools -FILL/RIVER DEPOSIT-											
10	WOR* WOR* WOR* WOR*	S5 24	8.0 10.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with fibrous organic matter, slight odor. No PCBM	4.5 1.2										
	WOR* 2* 2* 2*	S6 3	10.0 12.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), slight petroleum odor. No PCBM on tools											
	3* 1* 2* 1*	S7 6	12.0 14.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), slight petroleum odor. Trace PCBM	5.7										
15	WOR* WOR* WOR* WOR*	S8 24	14.0 16.0		-32.3 14.0	ML	Gray sandy SILT (ML), sand and shell layers, no odor. No PCBM	0.0 0.0										
	3* 2* 1* 1*	S9 3	16.0 18.0			ML	Gray sandy SILT (ML), slight petroleum odor. No PCBM observed -MARINE SILT-	0.0										
20	WOR* WOR* WOR* 1*	S10 24	18.0 20.0			ML	Gray sandy SILT (ML), sand layers, shell fragments. No PCBM	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 24
Rock Cored (ft) -
Samples 12S

Boring No. WP-035

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-035
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	3* 2* 1* 2*	S11 4	20.0 22.0	NO WELL INSTALLED		ML	Gray sandy SILT (ML) with shell fragments. No PCBM	0.0										
	8* 2* 3* 2*	S12 0	22.0 24.0				No recovery											
					-42.3 24.0		BOTTOM OF EXPLORATION 24.0 FT											

Notes:
Borehole grouted with CETCO high solids grout.

*- Denotes non-standard split-spoon used.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-035

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-036

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 09 November 2013
Finish 09 November 2013
Driller P. Dickinson
H&A Rep. J.L. Locsin
Elevation -17.8 (est.)
Datum NAVD88
Location See Plan
N 788,254
E 661,397

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 8 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel %	Sand %	Fines %	Field Test
0	2* 2* 2* 4*	S1 5	0.0 2.0	NO WELL INSTALLED			Dark gray ORGANIC SOILS (OL/OH) with shell fragments, no odor. No PCBM	0.0				
	4* 8* 12* 9*	S2 6	2.0 4.0				Debris, shells, concrete pieces (2 in.), slight petroleum odor, sheen. No PCBM -FILL/RIVER DEPOSIT-	0.0				
5	15/9"	S3 0	4.0 6.0				Debris, shells, concrete pieces, petroleum odor, sheen. No PCBM	0.0				
	WOH* WOH* WOH* WOH*	S4 0	6.0 8.0				Debris, shell fragments, brick pieces, petroleum odor, sheen, rubber-like membrane. No PCBM	0.0				
					-25.8 8.0		Obstruction, likely steel based on drilling action BOTTOM OF EXPLORATION 8.0 FT					

Notes:
Borehole abandoned due to possible steel obstruction.
Offset to WP-36A and continue exploration.

*- Denotes non-standard split-spoon used.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	8
Rock Cored (ft)	-
Samples	4S

Boring No. WP-036

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-036A

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 09 November 2013
Finish 09 November 2013
Driller P. Dickinson
H&A Rep. J.L. Locsin
Elevation -17.8 (est.)
Datum NAVD88
Location See Plan
N 788,246
E 66,195

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 14 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Begin sampling at 8 ft											
5																		
	WOR* WOR* WOR* WOR*	S1 6	8.0 10.0	NO WELL INSTALLED		OL/ OH	Very soft dark gray ORGANIC SOILS (OL/OH) with shells, petroleum odor, piece of metal. No PCBM	0.0										
10	WOR* WOR* 1* WOR*	S2 8	10.0 12.0			OL/ OH	Same as above, with trace shells, wood piece, root fibers, petroleum odor. No PCBM	2.4										
							-FILL/RIVER DEPOSIT-											
	25/5"	S3 5	12.0 14.0			OL/ OH	Similar to above. No PCBM	4.3										
					-31.8 14.0		At 14 ft, rollerbit/rig chatter indicates concrete or rock-like obstruction (approximately 1 ft), unable to advance casing											
							BOTTOM OF EXPLORATION 14.0 FT											

Notes:
Abandoned hole - casing refusal at 14 ft

*- Denotes non-standard split-spoon used.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14
Rock Cored (ft)	-
Samples	3S

Boring No. WP-036A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-036B

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 09 November 2013
Finish 09 November 2013
Driller P. Dickinson
H&A Rep. J.L. Locsin
Elevation -21.5 (est.)
Datum NAVD88
Location See Plan
N 788,261
E 661,396

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Casing could not be advanced past 5 ft. Rig chatter and drilling action indicates probable concrete obstruction.											
5				NO WELL INSTALLED	-26.5 / 5.0		BOTTOM OF EXPLORATION AT 5.0 FT Note: Abandoned hole at 5.0 ft.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 5
Rock Cored (ft) -
Samples 0S

Boring No. WP-036B

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-037

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 11 November 2013
Finish 11 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -18.3 (est.)
Datum NAVD88
Location See Plan
N 788,393
E 661,437

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 21 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 18	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), trace organic fibers. No PCBM on tools/sample	0.0				5	30	65				
	WOR* WOR* WOR* WOR*	S2 12	2.0 4.0			OL/ OH	Similar to above. No PCBM	0.0										
							-FILL/RIVER DEPOSIT-											
5	WOR* WOR* WOR* WOR*	S3 20	4.0 6.0			OL/ OH	Similar to above, thin layer of organic debris. No PCBM	0.0										
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Similar to above, sand and gravel at the tip. No PCBM on tools/sample	0.0										
					-26.3 8.0													
	WOR* WOR* 12* 10*	S5 15	8.0 10.0				Dark gray SAND and GRAVEL, concrete fragment, petroleum odor, semi-solid PCBM lumps observed in sample. No PCBM on tools	9.1 70.2										
10	18 25/3"	S6 9	10.0 12.0				Concrete fragments with a lump of solid malleable matter with wood pieces, petroleum odor	38.5 7.9										
							Drilled through obstruction from 11 to 13.5 ft, likely concrete											
					-31.8													
	WOR* WOR* 1* 2*	S7 24	13.5 15.5		13.5 -32.3 14.0	OL/ OH	Dark gray ORGANIC SOILS to sandy SILT (OL/OH)	0.0										
15						ML	Gray sandy SILT (ML) with sand and shell fragment layers. No PCBM on tools/sample	0.0										
	1* 1* 1* 1*	S8 12	15.5 17.5			ML	Gray sandy SILT (ML) with sand layers and shell fragments. No PCBM on tools/sample	0.0				50	30	20				
							-MARINE SILT-											
	WOH* WOH* WOH* WOH*	S9 18	17.5 19.5			ML	Similar to above. No PCBM on tools/sample	0.0										
20	WOR*	S10	19.5			ML	Similar to above. No PCBM on tools/sample	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	23.5
Rock Cored (ft)	-
Samples	11S

Boring No. WP-037

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-037
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOR* 1* 2*	24	21.5	NO WELL INSTALLED			-MARINE SILT-											
	3* 1* WOH* WOH*	S11 20	21.5 23.5			ML	Gray sandy SILT (ML) with 30% shell fragments. No PCBM on tools/sample	0.0										
					-41.8 23.5		BOTTOM OF EXPLORATION 23.5 FT Notes: Borehole grouted with CETCO high solids grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-037

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-038

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 13 November 2013
Finish 13 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -21.3 (est.)
Datum NAVD88
Location See Plan
N 788,403
E 661,423

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 18 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 24	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with trace fibrous organic matter. No PCBM on tools/sample	0.0										
	WOR* WOR* WOR* WOR*	S2 24	2.0 4.0			OL/ OH	Similar to above. No PCBM on tools/sample	0.0										
5	WOR* WOR* WOR* WOR*	S3 0	4.0 6.0				No Recovery. No PCBM on tools/sample -FILL/RIVER DEPOSIT-											
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with fibrous organic matter, brick, particles and plastic	0.0										
	WOR* WOR* WOR* WOR*	S5 24	8.0 10.0		-30.3 9.0	OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with sand layers, shell fragments. No PCBM on tools/sample	0.0										
						ML	Dark gray sandy SILT (ML)											
10	WOR* WOR* WOR* WOR*	S6 10	10.0 12.0			ML	Gray sandy SILT (ML) with sand layers. No PCBM on tools/sample	0.0										
	WOR* WOR* WOR* WOR*	S7 18	12.0 14.0			ML	Similar to above. No PCBM on tools/sample -MARINE SILT-	0.0										
15	WOR* WOR* WOR* WOR*	S8 15	14.0 16.0			ML	Similar to above. No PCBM on tools/sample	0.0										
	WOR* WOR* WOR* WOR*	S9 24	16.0 18.0			ML	Similar to above. No PCBM on tools/sample	0.0										
20	WOR* WOR* WOR* WOR*	S10 8	18.0 20.0			ML	Gray sandy SILT (ML) with a pocket of shells. No PCBM on tools/sample	0.0										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 20
Rock Cored (ft) -
Samples 10S

Boring No. WP-038

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-038
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	-41.3 20.0		BOTTOM OF EXPLORATION 20.0 FT Notes: Borehole grouted with CETCO high solids bentonite grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-038

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-039

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 14 November 2013
Finish 14 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -19.3 (est.)
Datum NAVD88
Location See Plan
N 788,404
E 661,437

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun/pushed
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 18	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with shells and leaves, strong organic odor. No PCBM on tools/samples	7.6 5.2										
	WOR* WOR* WOR* WOR*	S2 20	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with trace plastics, slight organic odor. No PCBM on tool/sample	6.2										
5	WOR* WOR* WOR* WOR*	S3 24	4.0 6.0			OL/ OH	Similar to above, slight petroleum odor. No PCBM on tools/sample	7.1										
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Similar to above, slight petroleum odor. No PCBM on tools/sample	10.4 8.4										
	WOR* WOR* WOR* WOR*	S5 8	8.0 10.0			OL/ OH	Similar to above, piece of brick at tip. No PCBM on tools/sample	6.2										
							-FILL/RIVER DEPOSIT-											
10	WOR* WOR* WOR* WOR*	S6 8	10.0 12.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), trace shell fragments, petroleum odor. Trace PCBM may be present in sample	6.0 7.8										
	13* 1* 2* 1*	S7 18	12.0 14.0		-31.8 12.5	OL/ OH / ML	Gray sandy SILT (ML) with sand and shell layers, shell pieces, slight petroleum odor. No PCBM on tools/sample	9.5 11.1										
	WOR* WOR* WOR* WOR*	S8 20	14.0 16.0			ML	Gray sandy SILT (ML) with sand layers. No PCBM on tools/sample	7.2 8.3										
15							-MARINE SILT-											
	WOR* WOR* WOR* WOR*	S9 24	16.0 18.0			ML	Gray sandy SILT (ML) with sand and shell layers. No PCBM on tools/sample	6.2 6.2										
	5* 2* 1* 1*	S10 24	18.0 20.0			ML	Gray sandy SILT (ML) with sand layers, pockets of coarse to medium sand and shell fragments, slight organic odor. No PCBM on tools/sample	9.3										
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	22
Rock Cored (ft)	-
Samples	11S

Boring No. WP-039

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-039
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOR* WOR* WOR* WOR*	S11 ?	20.0 22.0	NO WELL INSTALLED	-41.3	ML	Gray sandy SILT (ML) with sand and shell fragment layers. No PCBM on tools/sample											
					22.0		BOTTOM OF EXPLORATION 22.0 FT Notes: Borehole grouted with CETCO high solids bentonite grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-039

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-040

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 1
Start 14 November 2013
Finish 14 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -20.8 (est.)
Datum NAVD88
Location See Plan
N 788,300
E 661,407

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	6* 8* 12* 25/3"*	S1 8	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with cobbles, shells, gravel and sand. No PCBM on tools/sample											
	50* 25* 5* 2*	S2 12	2.0 4.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with concrete pieces/fragments, strong petroleum odor. No PCBM on tools/sample	6.2										
5	25* 13* 5* 8*	S3 15	4.0 6.0			OL/ OH	Dark gray concrete fragments with oily sheen, petroleum odor -FILL/RIVER DEPOSIT-											
	13* 25* 20/0"*	S4 0	6.0 8.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic matter, wood, pieces of gravel and cobble, slight petroleum odor. No PCBM on tools/sample Drilled through 8" thick obstruction											
	25/3"*	S5 1	8.0 8.3				3" piece of rock/cobble. No PCBM on tools/sample. Drilled throu obstruction with rollerbit, approximately 12" thick											
					-29.8 9.0													
10	7* 6* 8* 8*	S6 10	9.0 11.0				Dark gray concrete fragments, brick pieces, rock fragments with sand, small lump of rubber-like material observed, hardened/non adhesive											
					-31.8 11.0													
	2* 2* 3* 3*	S7 0	11.0 13.0				No Recovery - gray SILT on spoon. No PCBM observed	7.2										
	1* 1* WOH* WOH*	S8 18	13.0 15.0			ML	Gray sandy SILT (ML), slight petroleum odor at top, sand layers and shell fragments. No PCBM on tools/sample -MARINE SILT-	3.2										
15					-35.8 15.0		BOTTOM OF EXPLORATION 15.0 FT											

Notes:
Borehole grouted with CETCO high solids bentonite grout.

*- Denotes non-standard split-spoon used.

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	15
Rock Cored (ft)	-
Samples	8S

Boring No. WP-040

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-041

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 15 November 2013
Finish 15 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation -20.8 (est.)
Datum NAVD88
Location See Plan
N 788,196
E 661,386

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 18 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 24	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH) with organic fibers, shell fragments, petroleum-like odor, organic odor. No PCBM on tools/sample											
	WOR* WOR* WOR* WOR*	S2 20	2.0 4.0			OL/ OH	Similar to above. No PCBM on tools/sample											
5	WOR* WOR* WOR* WOR*	S3 24	4.0 6.0			OL/ OH	Similar to above, trace gravel and concrete fragments. No PCBM on tools/sample											
							-FILL/RIVER DEPOSIT-											
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Similar to above, trace gravel, slight petroleum odor. No PCBM on tools/sample											
	WOR* WOR* WOR* WOR*	S5 24	8.0 10.0			OL/ OH	Similar to above. No PCBM on tools/sample											
					-30.3 9.5	ML	Gray sandy SILT (ML) with sand layers. No PCBM											
10	WOR* WOR* WOR* WOR*	S6 18	10.0 12.0			ML	Gray sandy SILT (ML) with sand and shell fragment layers, slight petroleum odor. No PCBM on tools/sample											
	WOR* WOR* WOR* WOR*	S7 24	12.0 14.0			ML	Gray sandy SILT (ML) with sand layers, shell fragments. No PCBM on tools/sample											
15	WOR* WOR* WOR* WOR*	S8 24	14.0 16.0			ML	Similar to above, slight organic odor. No PCBM on tools/sample											
							-MARINE SILT-											
	WOR* WOR* WOR* WOR*	S9 24	16.0 18.0			ML	Similar to above, layers of shell fragments. No PCBM on tools/sample											
	3* 1* WOR* 4*	S10	18.0 20.0			ML	Similar to above, frequent sand and shell fragment layers. No PCBM on tools/sample											
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	20
Rock Cored (ft)	-
Samples	10S

Boring No. WP-041

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-041
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	-40.8 20.0		BOTTOM OF EXPLORATION 20.0 FT Notes: Borehole grouted with CETCO high solids bentonite grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-041

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. WP-042

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 2
Start 15 November 2013
Finish 15 November 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation
Datum NAVD88
Location See Plan
N 788,304
E 661,395

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	-	Rig Make & Model: Diedrich D50/Skid/Barge Mount
Inside Diameter (in.)	4	2.5	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: HW spun to 18 ft
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	WOR* WOR* WOR* WOR*	S1 24	0.0 2.0	NO WELL INSTALLED		OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic fibers, organic odor, concrete fragment on top, petroleum odor at the tip. No PCBM on tools/sample.											
	WOR* 3* 1* WOR*	S2 20	2.0 4.0			OL/ OH	Similar to above. No PCBM on tools/sample.											
5	WOR* 4* 3* 1*	S3 24	4.0 6.0			OL/ OH	Similar to above. No PCBM on tools/sample.											
	WOR* WOR* WOR* WOR*	S4 24	6.0 8.0			OL/ OH	Similar to above with trace debris, petroleum odor. 6.5-7 ft: organic fibers with organic soils. Gray sandy SILT (ML), sand varves at bottom											
	WOR* WOR* WOR* WOR*	S5 20	8.0 10.0			OL/ OH	Dark gray ORGANIC SOILS (OL/OH), with organic fibers, oil substance, petroleum odor, shell fragments. No PCBM on tools/sample											
10	WOH* 1* WOR* WOH*	S6 24	10.0 12.0		10.0	ML	-FILL/RIVER DEPOSIT- Gray sandy SILT (ML), with organic soils and gravel, shell fragments, sand and shell layers. No PCBM on tools/sample											
	3* 2* WOR* 1*	S7 24	12.0 14.0			ML	Gray sandy SILT (ML), with frequent sand and shell fragment layers. No PCBM on tools/sample											
15	6* 4* 1* 2*	S8 24	14.0 16.0			ML	Gray sandy SILT (ML), with a 1 ft seam of shell fragments, and sand layers. No PCBM on tools/sample											
	WOR* WOR* WOR* WOR*	S9 24	16.0 18.0			ML	Gray sandy SILT (ML), with sand layers, shell fragments, organic odor. No PCBM on tools/sample											
20	WOR* WOR* WOR* WOR*	S10	18.0 20.0			ML	Similar to above. No PCBM on tools/sample -MARINE SILT-											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	20
Rock Cored (ft)	-
Samples	10S

Boring No. WP-042

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. WP-042
File No. 28612-312
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	20.0		BOTTOM OF EXPLORATION 20.0 FT Notes: Borehole grouted with CETCO high solids bentonite grout. *- Denotes non-standard split-spoon used.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. WP-042

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_4 - D_LS2.GPJ 6 Aug 15

VIBRACORE REPORTS

SEDIMENT DESCRIPTIONS

1.Dark grey to brown silt (MH), mps= X" shell, no structure organic odor, wet, trace organics and shells

2.Grey clayey silt (MH/OH), mps= 1.5" shell, no structure, organic odor, wet, trace organics and shells, occasional sand seams

VIBRACORE REPORT

Probe No. VC-1A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps 1 in. (shell), no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
10	0.0		
	0.0		Sand seam from 11 to 12 ft.
	0.0		Increased silt content from 12 to 19 ft.
	0.0		
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		
	0.0		BOTTOM OF EXPLORATION 19.0 FT
20			

Recovery

Section	Tube Length	Sample Length	Total Weight
--	19'	10.8'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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VIBRACORE REPORT

Probe No. VC-2B

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps < 1 mm, no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		Increased silt content from 6 ft.
	0.0		
	0.0		
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		
	0.0		BOTTOM OF EXPLORATION 19.2 FT
20			

Recovery

Section	Tube Length	Sample Length	Total Weight
--	19.2'	11.9'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-3A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore
File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps 0.5 in. (gravel), no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		Increased silt content from 4.5 ft.
5	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
10	0.0		
	0.0		2 in. sand seam between 11 ft and 12 ft.
	0.0		
	0.7		
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		
	0.0		
20	0.0		BOTTOM OF EXPLORATION 20.0 FT

Recovery

Section	Tube Length	Sample Length	Total Weight
--	20'	10.8'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-4A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps 2 in. (rock), no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		Trace shells from 2 to 5 ft.
	0.0		
	0.0		
5	0.0		Increased silt content from 4.5 ft.
	0.0		
	0.0		
	0.0		
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		
	0.0		
20	0.0		BOTTOM OF EXPLORATION 19.0 FT

Recovery

Section	Tube Length	Sample Length	Total Weight
--	19'	11.7'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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VIBRACORE REPORT

Probe No. VC-5A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps < 1 mm, no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		
	0.0		
	0.0		Increased silt content from 8 ft.
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		
20	0.0		BOTTOM OF EXPLORATION 20.0 FT

Recovery

Section	Tube Length	Sample Length	Total Weight
--	20'	11.5'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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VIBRACORE REPORT

Probe No. VC-6A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps < 1 mm, no structure, light organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		
	0.0		
	0.0		Increased silt content from 8 ft.
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		
	0.0		
20	0.0		BOTTOM OF EXPLORATION 20.0 FT

Recovery

Section	Tube Length	Sample Length	Total Weight
--	20'	12.8'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-7A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	29 Oct 15

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps < 1 mm (organic sediment), no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		Increasing silt content between 7 and 15 ft.
	0.0		
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
15	0.0		BOTTOM OF EXPLORATION 15.0 FT
20			

Recovery

Section	Tube Length	Sample Length	Total Weight
--	15'	8.8'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-8A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	29 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps 0.25 in. (shell), no structure, organic odor, wet, trace organics and shells.
	0.0		
	0.0		
	0.1		
	0.0		
	0.0		
5	0.0		
	0.0		Trace wood between 6 and 7 ft.
	0.0		
	0.0		Increasing silt content from 8 to 15 ft.
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
15	0.0		BOTTOM OF EXPLORATION 15.0 FT
20			

Recovery

Section	Tube Length	Sample Length	Total Weight
--	15'	8.6'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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VIBRACORE REPORT

Probe No. VC-9A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps < 1 mm, no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
10	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
			Sand seam at 12.5 ft.
	0.0		
	0.0		
15	0.0		BOTTOM OF EXPLORATION 15.0 FT
20			

Recovery

Section	Tube Length	Sample Length	Total Weight
--	15'	8.3'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

No PCBM observed.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-311A

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	30 Oct 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description
0	0.0	OL/ OH	Dark gray ORGANIC SOIL (OL/OH), mps 4 in. (cobble), no structure, organic odor, wet, trace organics.
	0.0		
	0.0		
	0.0		
	0.0		
	0.0		
5	0.0		
	0.0		Increased silt content from 6 ft.
	0.0		
	0.0		Occasional sand layer between 8 and 13 ft. PCBM observed at 8 ft.
	0.0		
10	0.0		
	0.0		
	0.0		
	0.0		3 in. sand layer between 13 and 14 ft.
	0.0		
15	0.0		-MARINE DEPOSITS- (Marine Silt)
	0.0		
	0.0		
	0.0		BOTTOM OF EXPLORATION 18.0 FT
20			

Recovery

Section	Tube Length	Sample Length	Total Weight
--	18'	10.4'	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

PCBM observed at 8 ft.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-311B

Project	**Former Anaconda Wire and Cable**
Location	Hastings-on-Hudson, New York
Client	Atlantic Richfield Company
Contractor	CR Environmental
Equipment	Vibracore

File No.	28612-333
H&A Rep	S. Brousseau
Date	10 Sep 14

Depth (ft)	PID (ppm)	USCS Symbol	Visual Description	Recovery Section	Tube Length	Sample Length	Total Weight
					9'	6.3'	NA
0	0.5		Dark gray ORGANIC SOIL (OL/OH), no structure, organic odor, wet, trace slag.				
	0.4						
	0.2		-MARINE DEPOSITS- (Marine Silt)				
	0.9						
	0.5						
5	0.5		Trace semi-solid PCBM from 5 to 6 ft.				
	0.1		BOTTOM OF EXPLORATION 6.0 FT				

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich

Remarks:

PCBM observed from 5 to 6 ft.

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SECTION 3.5

VIBRACORE REPORTS

SEDIMENT DESCRIPTIONS

1.Dark grey to brown silt (MH), mps= X" shell, no structure organic odor, wet, trace organics and shells

2.Grey clayey silt (MH/OH), mps= 1.5" shell, no structure, organic odor, wet, trace organics and shells, occasional sand seams

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-101

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 20 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1600 MS/MSD A	0 – 0.5		①
1605 A	0.0 – 1		
1610 DUP "0002" A	0.0 – 2		
1615 A	0.0 – 3		
1620 A	0.0 – 4		
	4.5		②
1625 A	0.0 – 5		
	6		— MARINE DEPOSITS — (MARINE SILT) —
1630 A	0.0 – 7		
	8		
	9		
	10		
	10.0		Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.7'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 0 to 0.5 ft.

DUP "0002" TAKEN @ 1 to 2 ft.

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-101A

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		(1) except mps = 1 in. (shell).
0.0		~5 in. silty SAND layer at 4.0 ft.
0.5		
1355 FD0004		
0.0		
H 1400 MS/MSD	1	
0.0		
H 1405	2	
0.0		
H 1410	3	
0.0		
H 1415	4	
0.0	4.5	(2) except mps = ¼ in. (shell).
	5	
H 1420	6	
0.0		
	7	- MARINE DEPOSITS - (MARINE SILT) -
H	8	
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP TAKEN @ 0.5 - 1 FT ("0004")

MS/MSD TAKEN @ 1'-2 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-161B

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
0.0		
1315 H 0.5		
0.9		
1320 H 1		
0.0		
1325 H 2		
0.0		
1330 H 3		
0.0		
1335 H 4		
0.0 4.5		(1) w/ in. silty SAND layer at 4.0 ft.
5		(2) except mps = 1/4 in (shell). hydrogen sulfide odor.
1340 H 6		
0.0		
7		- MARINE DEPOSITS - - (MARINE SILT) -
H 8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-101C

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		①
0.0		
1430	0.5	
0.0		
H 1435	1	
0.0		
H 1440	2	
0.0		
H 1445	3	
0.0		
H 1450	4 4.0	
0.0		② except trace wood.
	5	~1in silty SAND layer at 4.0 ft.
H 1455	6	
0.0		
	7	- MARINE DEPOSITS -
H	8	- (MARINE SILT) -
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB TAKEN @ 1500

"4441-082814-0005"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-102 @1324

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 20 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
1700 0.0 A — 0.5		①
1705 0.0 A — 1		
1710 0.0 A — 2		
1715 0.0 A — 3		
1720 0.0 A — 4 — 4.0		②
1725 0.0 — 5		
A — 6		— MARINE DEPOSITS — (MARINE SILT) —
1730 0.0 — 7		
DUP "0003" A — 8		
9		
10		Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	9.5	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0003" TAKEN @ 6 to 8 ft.
EB @ 1830
"4441-082014-1830"

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-102A

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
0.0		
0905 DUP "0002" H 0910	0.5	(1) N Lt. SAND and SHELL layer at 3.5 Ft.
0.0		
MS/MSD	1	
0.0		
H 0915	2	
0.0		
H 0920	3	
0.0		
H 0925	4	4.0
0.0		(2) N Lt. SAND and SHELL layer at 6.5 Ft.
	5	
H 0930	6	
0.0		- MARINE DEPOSITS - (MARINE SILT)
	7	
H	8	
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		9.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800 "4441-082814-0001"

DUP "0002" TAKEN @ 0.5-1.0 ft.

MS/MSD TAKEN @ 1-2 ft.

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-102B

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
	0		(1) except MPS = 1.5 in. (Shell).
	0.0		
0940	0.5		
	0.0		
H 0945	1		
	0.0		
H 0950	2		
	0.0		
H 0955	3		
	0.0		
H 1000	4		
	4.0		(2) ~ 1 in. SAND and shell layer at 7.0 Ft.
	0.0		
	5		
H 1005	6		
	0.0		- MARINE DEPOSITS - (MARINE SILT) -
	7		
H	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-102C

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

DIR (PPM)	Depth (ft)	Sketch	Visual Description
	0		
	0.0		
1015	0.5		
	0.0		
H 1020	1		
FD "0003"	0.0		
H 1025	2		
	0.0		
H 1030	3	3.0	
	0.0		
H 1035	4		
	0.0		
	5		
H 1040	6		
	0.0		
	7		
H	8		
	9		
	10		

① except MPS = 1.5 in (shell).
Silty SAND, trace wood From 2 to 3 Ft.

② except MPS = 1/4 in. (shell).

- MARINE DEPOSITS -
- (MARINE SILT) -

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.1	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Dup "0003" taken @ 1-2 FT

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VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-103 · 20944

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 20 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1130 DUP 0001" A	0 0.0	OL/OH	①
	0.5		
1140 A	0.0 1		MPS = 3/4 in. (shell), no structure, organic odor, wet, trace shells and organics.
1150 A	0.0 2		
1155 A	0.0 3		
1200 A	0.0 4		
	4.0		② Gray SILT (ML), MPS = 3/4 in (shell), no structure, no odor, wet, trace shells, occasional layer of shells and sand.
1205	0.0 5		
A	6		
	0.0		— MARINE DEPOSITS — (MARINE SILT) —
1210	7		
A	8		
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	9.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800 "4441-082014-0800"

DUP "0001" TAKEN OF 0 to 0.5 ft.

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-103A @1014

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 20 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		①
0.5		
1300 H 0.0		
1		
1305 H 0.0		
2		
0.0		
1310 H		
3		
0.0		
1315 H		
4		
0.0		
5		
1320 H		
5.5		②
6		
0.0		- MARINE DEPOSITS -
7		- (MARINE SILT) -
1325 H		
8		
9		
10		
10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	7.7'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. JC-103B

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 20 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
	0		
	0.5		① with trace wood.
1445 H	0.0 1		
1450 H	0.0 2		
1455 H	0.0 3		
1500 H	0.0 4		
1505	0.0 4.5		②
	5		— MARINE DEPOSITS - (MARINE SILT) -
1510 H	0.0 6		
	7		
H	8		
	9		
	10		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	8.7'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-103C

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		① except mps = 1 in. (shell).
0.5		
1805 H 1810 — 1		
1		
H 1815 — 2		
2		
H 1820 — 3	3.0	
3		②
H 1825 — 4		
4		
5		
H 1830 — 6		
6		
7		- MARINE DEPOSIT -
		- (MARINE SILT) -
H — 8		
8		
9		
10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 1700

"44441-082114-1700"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-104 81"

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08/27/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

1300

A 1305 DUP "0003" A 1310

A 1315

A 1320 MS/MSD

A 1325

H 1330

H

Depth (ft)	Sketch	Visual Description
0		
0.5		① except with 3-in. layer silty SAND at 2.5 ft.
1		
2		
3.0		②
3		
4		
5		
6		
7		
8		
9		
10		

— MARINE DEPOSITS —
— (MARINE SILT) —

Recovery

Section	Tube Length	Sample Length	Total Weight
		6.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0003" TAKEN @ 0.5-1.0 Ft.

MS/MSD TAKEN @ 3-4 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. Vc-105

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1600	0		①
	0.4		
A 1605	0.5		except sandy ORGANIC soil with gravel (coal and shells) from 2 to 3.5 ft.
DUP "0003" A 1610	0.0		
	1		
	0.0		
A 1615	2		
MS/MSD	0.0		
A 1620	3		
	0.0		
	3.5		
A 1625	4		②
	0.0		N1 in. SAND and SHELL layer at 4.5 ft.
	5		N2 in. SAND and SHELL layer at 5.5 ft and at 6.5 ft.
H 1630	6		
	0.0		
	7		
H	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0003" TAKEN @ 0.5-1.0'

MS/MSD TAKEN @ 2-3 ft.

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-106Z

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1430	0		① except MPS = 1 in. (Shell)
A 1435	0.0 – 0.5		3 in. silty SAND layer at 3.5 Ft.
A 1440	0.0 – 1		
0.0			
A 1445	0.0 – 2		
0.0			
A 1450	0.0 – 3		
DUP "0004" 0.0			
A 1455	0.0 – 4		
4.5			② except MPS = 1/4 in. (Shell).
0.0	5		
H 1500	6		– MARINE DEPOSITS – – COARSE (LT) –
	7		
H	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 2-3 ~~1-2~~ FT.

DUP "0004" TAKEN @ 3-4 FT.

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-107

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPm)

Depth (ft)	Sketch	Visual Description
0		① except
0915 2.8		dark gray silty SAND, trace wo
A 0920	0.5	From 4 to 5 Ft.
A 0925 1.2		
DUP "0002"		
A 0930 2		
1.3		
MS/MSD		
A 0935 3		
1.6		
A 0940 4		
1.4		
5 5.0		② except MPS = ¼ in (shell).
1.3		
H 0945 6		
1.3		
7		— MARINE DEPOSITS —
		— (MARINE SILT) —
H 8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800

"4441-082714-0001

DUP "0002" TAKEN @ 1-2 Ft.

MS/MSD TAKEN @ 2-3 Ft.

* NOTE:

PROCESSED ON 27 AUG 2014

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-108

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

(PID (PPM))

Depth (ft)	Sketch	Visual Description
0		① except mps = 2 in. (slag), trace wood
0.5		bin. layer silty SAND, trace slag and wood at 2.5 Ft.
1		
2		
3		
4		
4.0		② except mps = 1/4 in. (shell)
5		
6		
7		— MARINE DEPOSITS — (MARINE SILT) —
8		
9		
10		

1545 A
1550 A
1555 A
DUP "0005"
1600 A
1605 A
MS/MSD
1610 A
1615 H
H

Recovery

Section	Tube Length	Sample Length	Total Weight
		6.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0005" TAKEN @ 1-2 FT

MS/MSD TAKEN @ 3-4FT.

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-109

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 25 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1400	0		①
A 1405 DUP "0002"	0.0 – 0.5		
A 1410	0.0 – 1		
A 1415	0.0 – 2		
A 1420 MS/MSD	0.0 – 3		
A 1425	0.0 – 4 – 4.0		② with SAND layer at ~ 5.8 ft.
H 1430	0.0 – 5 – 6		
	7		– MARINE DEPOSITS – (MARINE SILT) –
H	8 – 8.0		Bottom of Exploration at 8.0 ft.
	9		
	10 – 10.0		Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.0'	7.4'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 1300

"4441-082514-0001"

DUP "0002" TAKEN @ 0.5-1.0 ft.

MS/MSD TAKEN @ 3-4 ft.

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-110

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 25 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		①
0.5		
1		
2		
2.5		② except MPS = 1.5 in. (Shell)
3		
4		
5		
6		
7		— MARINE DEPOSITS — (MARINE SILT) —
8		Bottom of Exploration at 8.0 ft.
9		
10		Bottom of Exploration at 10.0 ft.

1500 0.1 — A 1505 0.1 — A 1510 0.1 — A 1515 0.0 — A 1520 0.0 — A 1525 0.0 — H 1530 0.0 — H

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.0'	7.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-111

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 25 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
1630 A 1635 — 0.1		(1)
0.5		
0.1		
1		
1640 A Dup "0003" — 0.1		
2		
1645 A — 0.0		
3		
1650 A — 0.0		
4 — 4.0		(2) Except MAS = 1.5 in (Shell)
1655 A — 0.0		
5		
1700 H — 0.0		
6		
7		— MARINE DEPOSITS — (MARINE SILT) —
H 8 — 8.0		Bottom OF Exploration at 8.0 ft.
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.0	7.6	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Dup "0003" TAKEN @ 2-3 ft.

Form 2025

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-112

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0930 DUP "0002" A 0935 — 0-0.5		(1) except mps = 0.5 in. (shell)
1 — 0940 MS/MSD — 0.0		
2 — A 0945 — 0.0		
3 — A 0950 — 0.0		
4 — A 0955 — 4.0		(2)
5 — 0.0		
6 — H 1000		— MARINE DEPOSITS — (MARINE SILT) —
7		
8 — H — 8.0		Bottom of Exploration at 8.0 Ft.
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.0'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800

"4444/-082614-0001"

DUP "0002"

TAKEN @ 0-0.5 Ft.

MS/MSD TAKEN @ 1 to 2 Ft.

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-113

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		①
1015		
0.2		
A 1020		
0.5		
0.1		
A 1025		
1		
0.1		
A 1030		
2		
0.0		
A 1035		
3		
0.0		
3.5		② except mps = 1.5 in. (Shell).
A 1040		
4		
0.0		
5		
H 1045		
6		
0.0		- MARINE DEPOSITS - (MARINE SILT) -
7		
H		
8		
9		
10		
10.0		Bottom of Exploration at 10.0 Ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.0'	9.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-114

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08/25/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
710 A 1715	0 – 0.3		(1)
A 1720	0.5 – 1.0		
1 A 1725	2		
DUP "0004" A 1730	3		~ 40% Shells From 3 to 4 ft.
MS/MSD A 1735	4 – 4.0		(2)
H 1740	5 – 6		
H	7 – 8 – 8.0		– MARINE DEPOSITS – – (MARINE SILT) – Bottom of Exploration at 8.0 ft.
	9 – 10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.0'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" TAKEN @ 2-3 ft.

MS/MSD TAKEN @ 3-4 ft.

EB @ 1800

"4441-082514E0005

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HALEY ALDRICH

VIBRACORE REPORT

Probe No. UC-115

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		① Except mps = 1/2 in. (shell)
0.5		
1		
2		
3.0		② Except mps = 1/4 in. (shell), Hydrogen sulfide odor,
4		
5		
6		
7		— MARINE DEPOSITS — (MARINE SILT) —
8		
9		
10		Bottom of Exploration at 10.0 Ft.

1000 A 1005 DUP 10001" A 1010 A 1015 A 1020 A 1025 MS/MSD A 1030 A

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.4'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800 "4441-082214-0005"

DUP "0001" TAKEN @ 0.5-1.0 Ft.

MS/MSD TAKEN @ 4-6 Ft.

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-116

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1145	0		
	0.6		(1)
A 1150	0.5		
	0.6		
A 1155	1 1.0		(2) Except MPS = 1/4 in (Shell)
	0.5		
A 1200	2		
	0.4		
A 1205	3		
	0.2		
A 1210	4		
	0.2		
DUP "0002"	5		
A 1215	6		
	0.2		
	7		- MARINE DEPOSITS - (MARINE SILT) -
A	8		
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0002" TAKEN @ 4-6 Ft.

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-117

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08/21/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		①
0.5		
1		
2		
3		
3.0		②
4		
5		
6		
7		– MARINE DEPOSITS – (MARINE SILT) –
8		
9		
10		Bottom of Exploration at 10.0 Ft.
10.0		

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0005" TAKEN @ 0-0.5 Ft.

MS/MSD TAKEN @ 2-3 Ft.

DUP "0006" TAKEN @ 6-8 Ft.

1730 DUP 0005" A 1735 A 1740 A 1745 MS/MSD A 1750 A 1755 A 1800 DUP "0006" A

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-118

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1220	0		(1) Except mps = 1.5 in. (shell).
A 1225	0.0 – 0.5		
A 1230	0.0 – 1		
A 1235	0.0 – 2		
DUP 0003"	0.0		
A 1240	0.0 – 3		
A 1245	0.0 – 4		
	0.0 – 5		(2) Except mps = 1/4 in. (shell) Hydrogen Sulfide odor.
A 1250	0.0 – 6		
	7		– MARINE DEPOSITS – – (MARINE SILT) –
A	8		
	9		
	10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Dup "0003" Taken @ 2-3 ft.

Form 2025

HALEY & ALDRICH — VIBRACORE REPORT

Probe No. VC-119

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1300	0		① Except mps = 1.5 in. (wood)
A 1305	0.5		
A 1310	1		
A 1315	2		
A 1320 DUP "0004"	3		
A 1325	4		
	5		② Except mps = 1/4 in. (shell)
A 1330 MS/MSD	6		
	7		
A	8		
	9		
	10		Bottom of Exploration at 10.0 Ft.
	5.0		
	10.0		

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" TAKEN @ 3-4 Ft.

MS / MSD TAKEN @ 6-8 Ft.

EB @ 1500 "4441-082214-0006"

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-120

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1100	0		
A 1105	0.0 – 0.5		(1) Except mps = 1.0 in. (shell)
A 1110	0.0 – 1		
A 1115	0.0 – 2		
A 1120	0.0 – 3		
A 1125	0.0 – 4.0		(2) Except mps = 1/2 in (shell), Hydrogen sulfide odor.
	5		
A 1130	0.0 – 6		
	7		– MARINE DEPOSITS – (MARINE SILT) –
A	8		
	9		
	10		Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-121

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		① except trace wood
1630		
0.3		
A 0.5		
A 1635 0.0		
1		
1640 0.0		
A 2 2.0		② except MPS = 2.0 in. (shell).
1645 0.0		
A 3		
1650 0.0		
A 4		
1655 0.0		
5		
DUP "0004"		
A 6		
0.0		
1700		
7		- MARINE DEPOSITS -
MS/MSD		- (MARINE SILT) -
A 8		
9		
10		Bottom of Exploration 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.8'	

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" TAKEN @ 4-6 Ft.

MS/MSD TAKEN @ 6-8 Ft.

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-122 @0901

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1015	0		① except mps = 1:n. (shell)
	0.0		
A 1020	0.5		
A 1025	0.0 1		
	0.2		
A 1030	2		
	0.2 2.5		② except with few organics and hydrogen sulfide odor
A 1035	3		
	0.0		
A 1040	4		
	0.0		
	5		- MARINE DEPOSITS - - (MARINE SILT) -
A 1045	6		
	7		
A	8		
	9		
	10 10.0		BOTTOM OF Exploration at 10.0ft

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800

"4441-082114-0800"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-123

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	↓ Depth (ft)	Sketch	Visual Description
1100	0		①
A 1105	0.0 – 0.5		
A 1110	0.0 – 1		
A 1115	0.0 – 2		
A 1120	0.0 – 3		
A 1125	0.0 – 4.0		②
	0.0 – 5		
A 1130	0.0 – 6		MARINE DEPOSITS - (MARINE SILT) -
	0.0 – 7		
A	8		
	9		
	10 – 10.0		Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 1200

"4444-082114-1200"

Form 2025

HALEY & ALDRICH — VIBRACORE REPORT

Probe No.: VC-124

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0.0		
0.5		
0.1		
1		
0.1		
2		
0.0		
3		
0.0		
4		
0.0		
5		
6		
6.0		
0.0		
7		
8		
9		
10		
10.0		

1300 A 1305 A 1310 A 1315 A 1320 A 1325 DUP "0001" A 1330

① except mps = 1/2 in. (shell), trace. wood.

② except mps = 1/2 in. (shell).

— MARINE DEPOSITS —
— (MARINE SILT) —

Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	7.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0001" TAKEN @ 4-6'

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. Vc-125

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1340 A 0.0 – 0.5'		① except mps = 1-½ in. (glass)
1345 A 0.0 – 1		
1350 A 0.0 – 2		
1355 A DUP "0002" 0.0 – 3		
1400 A 0.0 – 4		
1405 A MS/MSD 0.0 – 5		
1410 A 6.0 – 6		②
0.0 – 7		- MARINE DEPOSITS - (MARINE SILT) -
A 8		
9		
10 – 10.0		Bottom of Exploration @ 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 4-6'

DUP "0002" TAKEN @ 2-3'

Form 2025

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-126

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 21 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		(1)
0.5		
3.0		(2) except MPS = 2 in. (wood)
		— MARINE DEPOSITS —
		— (MARINE SILT) —
10.0		Bottom of Exploration at 10.0 Ft.

1500
A 1505 0.0–0.5 DUP 0003" A 1510 0.0–1.0 MS/MSD
A 1515 1.0–2.0
A 1520 2.0–3.0
A 1525 3.0–4.0
A 1530 5.0–6.0
A 7.0–8.0

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0003" TAKEN @ 0.5 - 1.0 Ft.

MS/MSD TAKEN @ 1 - 2 Ft.

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-127 (94')

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① except mps = 1.0 in. (shell).
0.0		
0.5		
1		
2		
3		
4		
4.5		②
5		
6		
7		-MARINE DEPOSITS- (MARINE SILT)-
8		
9		
10		

1145 H 1150 H 1155 H 1200 H 1205 H 1210 H 1215

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-128

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1630		
0.5		(1) except mps=1/2 in. (shell). 6 in. silty SAND layer at 2.5 ft.
1635		
1		
1640		
2		
1645		
3		
3.0		(2) except mps=1.5 in. (shell).
1650		
4		
1655		
5		
6		
1700		
7		-MARINE DEPOSITS- -(MARINE SILT)-
8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 1900

"4441-082714-0006"

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-129

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		(1)
0.5		
1		
2		
3		
4		
4.0		(2) except mps = 1/4 in. (Shell)
5		
6		
7		— MARINE DEPOSITS — (MARINE SILT) —
8		
9		
10		

1510 H 1515 H 1520 H 1525 H 1530 H 1535 H 1540 H

Recovery			
Section	Tube Length	Sample Length	Total Weight
		6.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-106

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
0.1		①
0.5		
6.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
4.0		②
0.0		
5		
0.0		
6		
0.0		
7		- MARINE DEPOSITS - (MARINE SILT) -
8		
9		
10		

1640 A 1645 A 1650 DUP "0004" A 1655 A 1700 A 1705 H 1710 H

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" TAKEN @ 1-2 FT.

EB @ 1830

"4441-082614-0005"

Form 2025

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-131

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		(1)
0.5		
3.0		(2) ~2 in SAND and SHELL layer at 5.5 ft.
		– MARINE DEPOSITS –
		– (MARINE SILT) –
9.5		Bottom of Exploration at 9.5 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.5	9.0	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

1330 H 1335 H 1340 H 1345 H 1350 H 1355 H 1400

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-132

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08/ 26 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1000	0		
H 1005	0.6		① except dark gray silty SAND from 4 to 5 Ft.
	0.5		
H 1010	1		
	1.3		
H 1015	2		
	1.2		
H 1020	3		
	0.9		
H 1025	4		
	1.1		
	5		
	5.0		② except mps = ¼ in. (shell).
	1.3		
H 1030	6		
	7		— MARINE DEPOSITS — (MARINE SILT) —
H	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

*NOTE: PROCESSED ON 27 AUG 2014

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-133

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

NOT TAKEN 1145 A 1150

A 1155 "0005" 1200

A 1205

H 1210

Depth (ft)	Sketch	Visual Description
0		
PID NOT WORKING — 0.5		① trace wood
1		
2		
2.2		② amps = lin. (Shell).
3		
4		
5		
6		
7		— MARINE DEPOSITS — (MARINE SILT)
8		
9		
10 — 10.0		Bottom of Exploration at 10.0ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	8'8"	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" taken @ 2-3FT

*0-0.5 Ft. Not Taken.

Form 2025

4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-134

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

NOT TAKEN — PID NOT WORKING

1250 A 1255

1300 A 1300 MS MSD

1305 A 1305

1310 A 1310

1315 H 1315

H

Depth (ft)	Sketch	Visual Description
0		
1		① MPS = 1 in. (shell), trace slag 3 to 4 Ft.
2		
3		
4		
5		
5.5		② MPS = 1/2 in. (shell).
6		
7		- MARINE DEPOSITS - (MARINE SILT) -
8		
8.5		Bottom of Exploration at 8.5 Ft.
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.5'	7.1	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0006" taken @ 1230

MS/MSD taken @ 2-3 FT

* 0-0.5 NOT TAKEN.

Form 2025

5

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-135

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
NOT TAKEN	0		① mps = 3/4 in (shell).
PID NOT WORKING			
1415			
1420	1		
0007			
1425	2		
	3		
1430			
	4		
1435			
	5		
	6		
1440			
	7	7.0	② mps = 1 in. (shell).
	8		– MARINE DEPOSITS – (MARINE SILT) –
	9		
	10	10.0	Bottom of Exploration 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	7.4'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0007" taken @ 1-2 FT

* 0-0.5' NOT TAKEN.

Form 2025

6

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-136

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
NOT TAKEN	0		① except 1/2 in. (shell). slight hydro carbon odor.
1050	PID NOT WORKING		
A 1055	1		
A 1100	2		
A 1105	3 — 3.0		②
A 1110	4		
	5		
H 1115	6		- MARINE DEPOSITS - - (MARINE SILT) -
	7		
H	8		
	9		
	10 — 10.0		Bottom of Exploration at 10.0ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.4'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0004" taken @ 1030

MS/MSD taken @ 3-4FT

* 0-0.5 NOT TAKEN.

Form 2025

3

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-137

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 12 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
900		
0.5		
905 A		
1		① MPS = 3/4 in. (Slag), no structure, organic odor, wet, trace slag, organics, and shells.
910 A		
FD "0002"		
2		
915 A		
3		
920 A		
4		
925 A		
5		
6		
6.0		
935 H		② Gray CLAY (CH), MPS = 1/2 in. (Shell), No structure, organic odor, wet, occasional sand and shell layers and seams, trace shells and organics.
7		
H		
8		
9		
10		
10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 800 PCBs ONLY

FD "0002" taken @ 1-2 FT

Form 2025

(1)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-138

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		① except mps = 3/4 in (slag), trace slag and coal.
1		
2		
3		
4		
4.0		② except mps = 1/2 in. (shell).
5		
6		— MARINE DEPOSITS - (MARINE SILT) -
7		
8		
9		
9.5		Bottom of Exploration at 9.5 Ft.
10		

PID (PPM): NOT TAKEN 0950; A 0955; 1.1; 1.1; A 1000; 10003"; 1.1; A 1005; 1.1; A 1010; 1.1; H 1015; 1.1; H

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.5'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" taken @ 2-3 FT

* 0-0.5' NOT TAKEN.

Form 2025

VIBRACORE REPORT

Probe No. VC-139

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 12 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0.0		
0945 A		
0.5		(1) no slag
0.0		
0955 A		
1		
1000 A		
0.0		
FD "0003" A		
2		
1005 MS		
0.0		
MSD A		
3		
1010		~3 in layer of SAND and shells at 3.5 Ft.
0.0		
A		
4		
4.0		(2)
1015		
0.0		
5		
H		
6		
1025		~2 in layer of SAND and SHELLS at 6.5 ft.
0.0		
7		
H		
8		
9		
10		
10.0		Bottom of Exploration at 10.0 ft

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD taken @ 2-3 FT

FD "0003" taken @ 1-2 FT

Form 2025

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-140

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 12 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① mps = 3/4" (shell)
0.5		
1		
2		
3		
4		
5		
6		
7		②
7.0		
8		
9		
10		Bottom of Exploration at 10.0 ft.
10.0		

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	7.4'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" taken @ 0-0.5

EB 0004 taken @ 11:00

MS/MSD taken @ 1-2 FT

Form 2025

(3) 24

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-141

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

NOT TAKEN 0905

A 0910 0002"

A 0915

A 0920 MS MSD

A 0925

H 0930

Depth (ft)	Sketch	Visual Description
0		
0.5		
1		
2		
3		
3.0		
4		
5		
6		
7		
8		
9		
9.7		
10		

① MPS = 3/4 in. (Shell), No structure, organic odor, wet.

② Gray CLAY (CH), MPS = 1/4 in. (Shell) No structure, organic odor, wet, Frequent sand and shell seams and layers, trace shells.

– MARINE DEPOSITS –
– (MARINE SILT) –

Bottom of Exploration at 9.7 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.7'	8.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 8:00

FD "0002" taken @ 1-2 FT

MS/MSD Taken @ 3-4 FT

* 0-0.5 FT NOT TAKEN.

Form 2025

1

SECTION 3.6

VIBRACORE REPORTS

SEDIMENT DESCRIPTIONS

1.Dark grey to brown silt (MH), mps= X" shell, no structure organic odor, wet, trace organics and shells

2.Grey clayey silt (MH/OH), mps= 1.5" shell, no structure, organic odor, wet, trace organics and shells, occasional sand seams

NORTHWEST AREA VIBRACORE REPORTS

HALEY ALDRICH

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-301

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm) –

Depth (ft)	Sketch	Visual Description
0		
1715 A 0.5		① mps- lin. (shell)
1720 A		
1725 FD "0010" A		
1730 A		
1735 A		
H 4 4.0		Bottom of Exploration at 4.0 ft.
5		
6		
7		
8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	4.0	3.3	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0010" @ 1-2'

EB "0011" PCB ONLY @ 1800

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-302

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 08 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

PID (PPM)	Depth (ft)	Sketch	Visual Description
1430	0		①
A 1435	0.1 / 0.5		
A 1440	0.0 / 1		
FD "0002"	0.1		
A 1445	2		
MS/MSD	0.2		
A 1450	3		
	0.2		
H 1455	4		
	4.5 / 0.1		②
H 1500	5		
	0.1		
H 1505	6		
	0.1		
	7		
H	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0	6.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" @ 1200

FD "0002" @ 1-2 Ft.

MS/MSD @ 2-3 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-303

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 8 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
0.1		①
0.5		
0.1		
1		
0.1		
2		
0.3		
3	3.0	
		②
0.3		
4		
0.1	4.5	②
5		
0.1		
6		
0.1		
7		
8		
9		
10		

1605 A 1610 A 1615 A 1620 FD "0003" A 1625 H 1630 H 1635 H 1640 H

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	9.0	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" taken @ 2-3 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-304

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 8 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1656	0		①
	0.1		
A 1655	0.5		
	0.1		
A 1700	1		
MS MSD	0.1		
A 1705	2		
FD "0005"	0.3		
A 1710	3		
	1.7		* Trace semi-solid PCBM with trace slag, wood, organics and shells from 3 to 4 Ft.
H 1715	4		
	3.1		
	4.5		②
H 1720	5		
	0.7		
H 1725	6		
	0.2		
	7		
H	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.5	8.3	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD taken @ 1-2 FT

FD "0004" 2-3 Ft

EB "0005" @ 1830.

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-305

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① MPS = 1 in. (Shell) trace slag
0.1		
0.5		
0.1		
1		
0.2		
2		* Trace hard PCBM From 2 to 3
1.2		
3		* Trace putty-like PCBM From 3-5 ft.
2.3		② MPS = 1/4 in. (Shell)
4		
0.7		
5		
0.6		
6		
0.1		
7		
8		
9		
10		

1630 1000ppm FD 1635 1640 1645 MS MSD 1650 1655 1700 1705

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	7.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0008" taken @ 1625

FD "0009" taken @ 0-0.5 FT

MS/MSD taken @ 2-3 FT

Form 2025

7

56 5 FD
4 EB
3 MS/MSD

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-306

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 09 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
0945	0		① except MPS = 2.5 in. (wood) at 1.5 Ft.
A 0950	0.6 — 0.5		
	0.0		
A 0955	1		
FD "0003"	0.0		
A 1000	2		* Trace semi Solid PCBM with trace wood From 2 to 3 Ft.
	0.0		
A 1005	3 — 3.0		② except MPS = 1/2 in (shell) and occasional sand and shell seams and layers
	0.0		
H 1010	4		* trace semi Solid PCBM From 4 to 5 Ft.
	0.0		
H 1015	5		
	0.1		
H 1020	6		
	0.0		
	7		
H	8		
	9		
	10 — 10.0		Bottom of Exploration at 10.0 ft.

Recovery			
Section	Tube Length (10.0')	Sample Length 7.0'	Total Weight NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" @ 1-2'

Form 2025

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-307

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 09 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① except MPS = 1/2 in. (Shell)
0.1		
0.5		
0.1		
1		* Trace semi solid PCBM with trace coal ash Fill
0.1		
2		Stiffer at 2 Ft.
0.1		
3		
0.1		
4		② except MPS 3/4 in. (Shell).
4.0		
0.1		
5		
0.1		
6		
0.1		
7		
8		
9		
10		

1300 DUP 0004"
1305
1310
1315 MS/MSD
1320
1325
1330
1335

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	7.4'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" @ 0-0.5'

MS/MSD @ 2-3'

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-308

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 09 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0900 A 0.2		① Dark gray ORGANIC SOIL (OL/OH), MPS = 2 in. (wood), no structure, organic odor, wet, trace slag, wood, shells, and organics
0.5		
0905 FD "0002" A 0.1		
1		
0910 MS/MSD 0.2		with sand and gravel from 0 to 2 ft.
A 2		
0915 0.2		
A 3		
0920 0.1		
H 4		
4.0		
0925 0.2		② Gray CLAY (CH), MPS = 1½ in. (shell), no structure, organic odor, wet, trace shells and organics, frequent sand and shell seams and layers.
H 5		
0930 0.2		
H 6		~1.5 in. sand and shell layer at 5.5 ft.
0935 0.1		
7		
H 8		
9		
9.0		Bottom of Exploration at 9.0 ft.
10		

Recovery			
Section	Tube Length 9.0'	Sample Length 7.9'	Total Weight NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" @ 0800

FD "0002" @ 0.5-1.0'

MS/MSD @ 1-2'

Form 2025

(1)

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-309

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1145	0		(1) except with sand and gravel From 1 to 6 Ft.
A 1150	0.0 – 0.5		* oily soil with sheen and hydro carbon odor From 1 to 2 Ft.
A 1155	0.2 1 – 1.2		* Trace semi-solid PCBM with trace wood From 2-3 Ft.
A 1200	2		* Trace semi-solid PCBM with trace rubber band From 3 to 4 Ft.
FD "0004" A 1205	0.4 3 – 1.8		* Trace semi-solid PCBM with trace coal From 4 to 6'
H 1210	4 – 4.1		(2)
H 1215	5 – 0.2		
H 1220	6 – 6.0		
	0.1 7		
H	8		
	9		
	10 – 10.0		Bottom of Exploration at 10.0 ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB-"0003" @ 1125 PCBs ONLY

FD-"0004" @ 2-3'

(2) 2 Dups / 1 MS/D

Form 2025

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-310

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		① except MPS = 3/4 in (shell) trace wood
0.5		
4.0		② MPS = 1/4 in. (shell)
9.5		Bottom of Exploration at 9.5 ft.
10		

1415 DUP "0005" A 1420 — 0.1 / 0.5

A 1425 — 0.1 / 1

A 1430 — 0.1 / 2

A 1435 — 0.0 / 3

H 1440 — 0.0 / 4

H 1445 — 0.0 / 5

H 1450 — 0.0 / 6

H — 0.0 / 7 / 8 / 9

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.5	8.6	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" @ 0-0.5'

Form 2025

2EB 3D 2 MS/D

(4) 32

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-311

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
1545		
0.2		
0.5		① trace slag.
1550		
0.5		
1		
1555		
0.4		
2		
1600		
0.2		
3		
1605		
0.9		
4		
1610		
0.5		
5		* Trace semi-solid PCBM From 5-6 Ft.
1615		
5.5		
0.5		②
6		
1620		
0.1		
7		
8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0	6.3"	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Form 2025

6 48 4D 3EB 2ms/msn

8.3"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-312

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 09 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1345	0		(1) except MPS = 1.5 in. (coal)
	0.1		
A 1350	0.5		
	0.1		
A 1355	1		
	0.5		
A 1400	2		
	0.5		
A 1405	3		
	0.0		
H 1410	4		
	0.0		
H 1415	5		(2) except MPS = 1/4 in. Shell
	0.1		
H 1420	6		
	0.2		
	7		
H	8		
	9		
	10		Bottom of Exploration at 10.0 ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.0	7.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-313

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① except mps = 1 in. (gravel) trace coal
0.0		
0.5		
0.0		
1		
0.0		
2		
0.1		
3		
3.0		② mps = 1/2 in. (shell)
0.1		
4		
0.0		
5		
0.0		
6		
0.0		
7		
8		
9		
9.0		Bottom of Exploration at 9.0 ft.
10		

PID (ppm):
A 1330
A 1335
A 1340
A 1345
MS/MSD
A 1350
H 1355
H 1400
H 1405
H

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0	8.7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD @ 2-3 ft.

(3) Form 2025

2 EB
2 D
2 MSD
24

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-314

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
0.1		① mps = 1/2 in (shell)
0.5		
1		
2.0		
2		② mps = 1 in. (gravel) Frequent dark gray pockets with organics.
3		
4		
5		
6		
7		
8		
9		
10		

1341 A 1346 A 1351 FD 11000-1 A 1356 MS/MSD A 1401 M 1406 M 1411 M 1416 M

Recovery

Section	Tube Length	Sample Length	Total Weight
		9.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD 11000-1 taken @ 1-2 FT

MS/MSD Taken @ 2-3 FT

Form 2025

5

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-315

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
14426 A 0-3		① mps = 2 in. (wood)
0.5		
1431 A 0.0		
1		
1436 A 0.0		
2		~10% wood From 2 to 3 ft.
1441 A 0.0		
3		Dark gray S: Lty SAND, ~10% organics, trace wood and string from 3 to 4 ft.
1446 A 2.0		Black staining and hydrocarbon odor From 3.5 to 4.5 ft.
4		
1451 A 2.0		
5		② mps = 1/4 in. (shell).
5.0		
1456 A 0.0		
6		
1501 A 0.0		
7		
8 A		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Form 2025

6

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-316

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0.0		
0.5		(1) MPS = 1 in. (wood)
0.0		
1		
0.0		
2		
0.0		
3		
3.0		(2) MPS = 2 in. (wood) trace wood. Frequent dark gray pockets with organics from 3 to 7 ft.
0.0		
4		
0.0		
5		
0.0		
6		~10% wood from 6-7 ft.
0.0		
7		Note: Refusal at 7.0 ft.
7.0		Bottom of Exploration at 7.0 ft.
8		
9		
10		

Sample	Section	Tube Length	Sample Length	Total Weight
A 1546			5.0'	NA
A 1551				
A 1556				
A 1601				
A 1606				
A 1611				
A 1616				
A 1621				
A				

Recovery

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0008" taken @ 15:30

Form 2025

7

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-317

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1045	0		
A 1050	0.0		
A 1055	0.5		① Dark gray ORGANIC SOIL (OL/OH), MPS = 1.0 in. (shell), No structure, organic odor, wet, trace shells and organics.
DUP "0002"	1		
A 1100	0.0		
MS/MSD	2		
A 1105	0.0		
	3		
A 1110	0.0		
	4		
A 1115	4.5		② Gray CLAY (CL), MPS = 1/4 in. (shell), No structure, organic odor, wet, trace shells and organics, frequent SAND and SHELL seams and layers.
A 1120	0.0		
	5		
	0.0		
	6		
	0.0		
	7		
A	8		
	9		
	10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" @ 0800 PCBs & METALS

FD "0002" @ 1-2'

MS/MSD @ 2-3'

Form 2025

(1)

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-318

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 10 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	PID (ppm)	Sketch	Visual Description
0	1500		① trace slag
0.0			
0.5	1505		
0.0			
1	1510		
	"0007" FD		
0.1			
2	1515		
0.0			
3	1520		② MPS = Lin. (Shell)
3.0			* Trace semi solid PCBM From 3 to 4 Ft.
0.0			
4	1525		
0.0			
5	1530		* Trace semi solid PCBM in sand and shell layers From 5 to 8 Ft.
5.2			
6	1535		
0.3			
7			
8			
9			
10			
10.0			Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0006" taken @ 1455

FD "0007" taken @ 1-2 FT

Form 2025

4D
3EB
2 MS MSD

5

40

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-319

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
0930		
0.5		① Dark gray ORGANIC SOIL (OL/OH), MPS = 1/2 in. (Shell), No Structure, organic odor, wet, trace shells, organics, and wood.
0935 FD "0002"		
1		
0940		
2		
0945	2.0	
MS/MSD		② Gray lean CLAY (CL), MPS = 1 in. (Shell), No Structure, organic odor, wet, trace shells, organics, and wood, frequent sand and shell layers.
3		
0950		~2 in. sand and shell layer at 3.5 Ft.
4		
0955		
5		
1000		
6		
1005		
7		
8		
9		
10		

Recovery			
Section	Tube Length	Sample Length	Total Weight
		8.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

PCBs + METALS

EB @ 8:00

FD "0002" taken @ 0.5 - 1 FT

MS/MSD Taken @ 2-3 FT

HALEY ALDRICH

VIBRACORE REPORT

Probe No. UC-320

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		Similar to UC-319 except no wood, MPS = 1.5 in. Shell in (1)
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		~3 in. sand & shell layer at 3 ft.
0.0		
4		
0.0		
5		~2 in. sand and shell layer at 5.5 ft.
0.0		
6		
0.0		
7		
8		
9		
10		

1030 A 1035 A 1040 FD 110003" A 1045 A 1050 H 1055 H 1100 H 1105 H

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD 110003" taken @ 1-2 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-321

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0.7		① mps = 3/4 in. (Shell), no wood
1130		
A 1135		
0.0		
0.5		
A 1140		
MS/MSD		
0.0		
1		
A 1145		
2		② mps = 3 in. (Shell)
2.0		
FD "0005"		
0.0		
A 1150		
3		~4 in. SAND and SHELL layer at 3 Ft.
0.0		
H 1155		
4		
0.0		
H 1200		
5		~5 in. SAND and SHELL (Shell) layer at 5 Ft.
6.0		
H 1205		
6		
0.0		
7		
0.0		
H		
8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD Taken @ 1-2 FT

FD "0005" taken @ 2-3 FT

EB "0004" taken @ 1125

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-322

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
1245 FD "0006" 0.0		
0.5		
A 1250 0.0		
A 1255 1		① mps = 3/4 in. (shell). No wood, trace slag.
0.3		
A 1300 2		
0.3		
A 1305 3	3.0	
0.2		② mps = 1 in. (shell), hydrogen sulfide odor
H 1310 4		6 in. SAND & SHELL LAYER @ 4FT.
0.2		
H 1315 5		
0.0		
H 1320 6		
0.0		
7		6 inch SAND & Shell layer @ ~ 7ft.
H 8		
9		
10		

Recovery			
Section	Tube Length	Sample Length	Total Weight
		8.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0006" taken @ 0-0.5ft

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-323

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
1400		
A 1405 "0006"		
0.5		
A 1410		
1		
1.5		① MPS = 3/4 in. (shell). No wood.
A 1415 MS MSD	2	② MPS = 1 in. shell. Hydrogen sulfide odor
		~2 in. SAND and SHELL layers at 2.5 ft. and at 3 ft.
A 1420	3	
H 1425	4	
H 1430	5	
H 1435	6	
	7	
H	8	
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		Ca. 7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0007" taken @ 1350

FD "0008" taken @ 0.5-1 FT

MS MSD taken @ 2-3 FT

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-324

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
2.7		① MPS = 1/2 in. (shell). no wood.
0.5		
0.0		
1		
0.0		
2		
2.0		
		② MPS = 1.0 in. (shell).
0.0		
3		
0.0		
4		
0.0		~ 2 in. SAND and shell layers at 2.5 and 4 Ft.
5		
0.0		
6		
0.0		
7		
8		
9		
10		

1530 A 1535 A 1540 A 1545 FD 110009" A 1550 H 1555 H 1600 H 1605 H

Recovery

Section	Tube Length	Sample Length	Total Weight
		8.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0009" taken @ 2-3 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-325

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1615	0		
	1.1		① mps = 1/2 in. (shell) No wood
A 1620	0.5		
	0.0		
A 1625	1		
	0.0		
A 1630	2	2.0	② mps = 1 in. (shell) Hydrogen sulfide odor.
	0.0		
A 1635	3		
	0.0		
H 1640	4		~2 in. SAND and SHELL layer at 4 Ft.
	0.0		
H 1645	5		~4 in. SAND and SHELL layer at 5 Ft.
	0.0		
H 1650	6		
	0.0		
	7		
H	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC - 326

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

0936 FD "0002" A 0941 — 1.4 — 0.5 — 0.0

A 0946 — 1 — 0.0 — MS/MSD

A 0951 — 2 — 0.0

A 0956 — 3 — 0.0

A 1001 — 4 — 0.0

A 1006 — 5 — 5.0

0.0

A 1011 — 6

7

A — 8

9

10

Depth (ft)	Sketch	Visual Description
0 to 5.0		(1) MPS = 3/4 in. (Shell)
5.0 to 10		(2) MPS = 1/2 in. (Shell) ~4 in. SAND and Shell layer at 5 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 08:00

FD "0002" taken @ 0-0.5 FT

MS/MSD Taken @ 1-2 FT

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-327

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
0.0		
0.5		① mps = 1 in. (shell), trace coal
0.0		
1		
0.0		
2		* ~ 4 in layer with trace semi-solid PCBM with trace coal ash fill, at 2.1 ft.
0.3		
3.0		② Dark gray From 3 to 6 Ft.
0.3		
4		
0.0		
5		
0.0		
6		~ 6 in layer SAND and SHELLS at 6 Ft.
0.0		
7		
8		
9		
10		

1236 A 1241 A 1246 FD "0005" 1100 A 1251 A 1256 A 1301 A 1306 A 1311 A

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0005" taken @ 1230

FD "0006" taken @ 1-2 FT

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-328

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1026 A 0.0		
0.5		(1) mps = 3/4 in. (shell). No wood
1031 A 0.0		
1		
1036 A 0.0		
2		
1041 A 0.0		
3		
1046 A 0.0		
4		
1051 A 1.8		
5		* ~4 in. layer with trace semi-solid PCBM at 5.0 ft. with trace rubber bands and coal ash fill.
1056 A 5.2		
5.5		(2) mps = 1/4 in (shell).
6		
1101 A 0.0		
7		
8		
A		
9		
10		

Recovery			
Section	Tube Length	Sample Length	Total Weight
		8.2'	

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "10003" taken @ 2-3FT

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-329

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 04 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
0.4 (1121 MS/MSD A)		① mps = 3/4 in. (shell)
0.5 (1126 A)		
0.3		
1 (1131 A)		
0.1		
2 (1136 A, FD 0004")		
0.0		
3 (1141 A)		
0.0		
4 (1146 A)		
0.0		
4.5		② mps = 1/4 in. (shell)
5 (1151 A)		
0.2		
6 (1156 A)		
0.0		
7		~2 in. SAND and SHELL layer at 7.0 FT.
0.0		
8 (A)		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.3'	

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" taken @ 2-3FT

MS/MSD @ 0-0.5FT

Form 2025

2

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VIBRACORE REPORT

Probe No. VC-330

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 05 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
1345 A 0.0 – 0.4		Dark gray silty SAND with gravel (sm), MPS = 3/4 in. (coal), no structure, organic odor, wet, trace coal, slag, organics, and shells.
1350 A 0.5 – 1		
1355 FD 0000 A 1 – 2.0		
1400 MS/MSD A 0.6 – 3		(1) MPS = 1/2 in. (slag), trace slag, wire, coal and glass, ~10% organics.
1405 H 0.6 – 4.0		
1410 H 0.9 – 5		(2) Dark gray to gray trace fabric, shells, wood, organics, and metal
1415 H 0.9 – 6		
1420 H 3.3 – 7		
H 8		
9		
10 – 10.8		Bottom of Exploration at 10.8 ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.8'	6.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" taken @ 1-2 FT

MS/MSD Taken @ 2-3 FT

EB "0005" TAKEN @ 1530

HALEY ALDRICH

VIBRACORE REPORT

Probe No. UC-331

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 05 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
0945	0		(1) mps = 3/4 in. (coal), trace coal and slag.
	0.1		
A 0950	0.5		
	0.1		
A 0955 FD "0002"	1		
	0.0		
A 1000 MS/MSD	2		
	2.0		
	0.0		
A 1005	3		
	0.0		
H 1010	4		
	0.0		
H 1015	5		
	0.0		
H 1020	6		
	0.0		
	7		
H	8		
	9		
	10		

Sediment at 2.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" @ 0900

FD "0002" @ 1-2 Ft.

MS/MSD @ 2-3 Ft.

(1)

HALEY & ALDRICH — VIBRACORE REPORT

Probe No. VC-332

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 05 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
0.6		Dark gray silty SAND (SM), MPS=1.0 in. (coal), no structure, organic odor, wet, ~60% coal ash Fill, tr slag, shells, and organics, occasional silt layer.
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
3.0		
0.0		(2) Dark gray to gray, no s MPS= 1/2 in. (slag),
4		
0.0		
5		
1.5		
6		
3.9		
7		Note: Refusal a 0.0 Ft.
7.0		Bottom of Exploration at 7.0
8		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	7.0'	5.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD 110003 taken @ 0-0.5 FT

Form 2025

(2)

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-334

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① MPS = 3/4 in. (shell).
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.0		
5		
5.0		② MPS = 1 in. (shell), organic odor, occasional sand and shell seams and layers.
0.0		
6		
0.0		5 in. sand and shell layer at 6 to 8 Ft.
7		
8		- MARINE DEPOSITS - (MARINE SILT) -
9		
10		
10.0		Bottom of Exploration at 10.0 Ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.0'	9.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0013" TAKEN @ 2-3 Ft.

1805 H 1810 H 1815 H 1820 FD 0013" A 1825 H 1830 H 1835 H 1840 H

Form 2025

10

80T

EB = 4
FD = 8
MS = 4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-336

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1725	0		① mps = 1 in. (gravel), trace wood,
H 1730	0.0 0.5		
H 1735	0.0 1		PCBM-like odor From 0.5 to 3 Ft.
H 1740	0.3 2 2.0		② mps = ½ in. (Shell), trace organics. organic odor Frequent sand and shell seams and layers.
DUP 0012 A 1745	0.3 3		
H 1750	0.5 4		
H 1755	0.5 5		
H 1800	0.0 6		
H	0.0 7		
H	8		
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

-MARINE DEPOSITS-
-(MARINE SILT)-

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.0'	10.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0012" TAKEN @ 2-3 Ft.

(9) Form 2025

72T

EB=4
FD=7
MS=4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-343

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① mps = 1 in. (shell).
0.5		
1		
2		
3		
4 (4.0)		
5		② mps = 3/4 in. (shell). Hydrogen sulfide odor. Frequent sand and shell seams and layers.
6		PCBM-like odor from 6-8ft.
7		
8		– MARINE DEPOSITS – (MARINE SILT) –
9		
10 (10.0)		Bottom of Exploration at 10.0ft.

1645 H 1650 H 1655 H 1700 H 1705 H 1710 (0.4) H 1715 (2.8) MS/MSD A 1720 H

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0011" @ 1640 PCBs ONLY

MS/MSD TAKEN @ 5-6'

Form 2025

0-6 BENCH

64T

EB=4
FD=6
MS=4

(B)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-344

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		(1) mps = 1 in. (gravel)
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.6		
5	5.0	(2) mps = 1/2 in. (shell), trace organics
0.6		
6		
0.0		
7		
8		– MARINE DEPOSITS – (MARINE SILT) –
9		
10	10.0	Bottom of Exploration at 10.0 Ft.

1500 H 1505 H 1510 H 1515 H 1520 A 1525 H 1530 H 1535 H

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0008" taken @ 1st SIT

Form 2025

0-4 BENCH

EB = 3
FD = 5
MS = 3

48

(6)

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VIBRACORE REPORT

Probe No. VC-351

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

1010

1015

1020

1025

1030

1035

1040

1045

Depth (ft)	Sketch	Visual Description
0		
0.0		(1) Dark gray ORGANIC SOIL (OL/OH), MPS= 3/4 in. (Shell), No structure, organic odor, wet, trace shells and organics.
0.0		
1		
0.0	1.5	
2		(2) Gray CLAY (CL), MPS= 1/4 in. (Shell), No structure, no odor, wet, trace shells.
0.0		
3		1 in. sand and shell layer 3 to 4 Ft.
0.0		
4		3 in. sand and shell layer 4 to 5 Ft.
0.0		
5		
0.0		
6		two 2 in. sand and shell layers From 6 to 8 ft.
0.0		
7		
8		
9		
10		

1100 3" FD

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.5'	7.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" taken @ 2-3 FT

0-0.5' NOT TAKEN

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-352

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		(1)
0.0		
0.0		
1		
0.0	1.5	(2) Hydrogen Sulfide odor
2		
0.1		
3		
0.1		
4		
0.0		
5		
0.0		
6		
0.0		Frequent to occasional sand and shell layers from 2 to 8 Ft.
7		
		- MARINE DEPOSITS - (MARINE SILT) -
8		
9		
10	10.0	Bottom of Exploration at 10.0 Ft.

1110
1115
1120
0005"
1125
MS/MSD
1130
1135
1140
1145

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	9.7'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0004" taken @ 11:00 PCBs ONLY.

FD "0005" taken @ 1-2 FT

MS/MSD taken @ 2-3 FT

Form 2025

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-353

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
1305 0.0		① MPS = 1/2 in. Shell, hydrogen sulfide odor
1310 0.0		
FD 0006 1		
1315 0.0		
FD 0007 MS/MSD		
1320 2 2.0		
0.0		② MPS = 1.50 in. (Shell). Hydrogen sulfide odor. 3 in. sand and shell layer at 2-3 Ft.
1325 3		
0.0		Frequent shell layers and seams from 3 to 8 Ft.
4		
1330 0.0		
5		
1335 0.0		
6		
1340 0.1		
7		
0.1		
8		- MARINE DEPOSITS - (MARINE SILT) -
9		
10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.5'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0006" taken @ 0.5-1.0 FT

FD "0007" taken @ 1-2 Ft.

MS/MSD taken @ 1-2 Ft.

Form 2025

32 TOTAL

EB = 2
FD = 4
MS = 2

(4)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-354

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		
1400 0.0		(1) mps = 1.5 in. (gravel), trace wood, hydrogen sulfide odor.
1410 0.0		
FD 0009 1415 1		
MS/MSD 0.0		
1420 2 2.0		(2) mps = 1/2 in. (gravel), hydrogen sulfide odor
0.0		
1425 3		Frequent Shell layers From 3 to 5 Ft.
0.0		
1430 4		
0.0		
1435 5		trace organics 5 to 6 Ft.
0.0		
1440 6		
0.0		
7		occasional m-F sand layers. 5 to 8 Ft.
8		- MARINE DEPOSITS -
9		
10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0008" taken @ 1400 PCB ONLY

FD "0009" taken 0.5-1.0 ft.

MS/MSD taken @ 1-2 Ft.

Form 2025

(5)

total 40 = ~~3 MS/MSD~~ ~~3 EB~~ ~~4 FD~~ EB = 3, FD = 5, MS = 3

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-335

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① 3/4 in. (shell)
1		
2		
3 — 3.0		② mps = 3/4 in (shell), hydrogen sulfide odor.
4		
5		
6		
7		— MARINE DEPOSITS — (MARINE SILT) —
8		
9		
10 — 10.0		Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0009" taken @ 1050

FD "0010" taken @ 2-3 FT

MS/MSD taken @ 3-4 FT

Form 2025

56T

EB = 3
FD = 6
MS = 3

7

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-356

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① MPS = 3/4 in. (Shell)
0.0		
0.5		
0905 0.0		
1		
0910 FD 0002 0.0		
2		
0915 MS/MSD 0.0		
3		
0920 0.0		
4		
0925 0.0		→ 4-5' NOT COLLECTED
5		
0930 0.0		
6		
0935 0.0		
7 7.0		② Gray CLAY (CL), MPS = 1 in. (Shell), no structure, organic odor, wet, trace shells, with frequent sand and shell seams. – MARINE DEPOSITS – – (MARINE SILT) –
8		
9		
10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

WD = 29'

Remarks:

EB "0001" TAKEN @ 0800 PCBs & METALS

FD "0002" TAKEN @ 1-2'

MS/MSD TAKEN @ 2-3'

Form 2025

10.5"

(1)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-359

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0 (PID 0.0)		① Darth gray Organic soil (ol/OH) MS ϕ 0.2 mm, No structur, organic odor, wet, trace organics and shells
1 — 0.0		
2 — 0.0		
3 — 0.0		Trace PCBIN observed, light odor 3.5-4.0
4 — 0.0		② Gray Clay (CL), mps = 0.1 mm, No Structur, organic odor, wet Trace organics and sbells, Occasional sand and shell layers and seams Sand layer @ 5-6, Organic odor
5 — 0.0		
6 — 0.0		
7 — 0.0		
8 — 0.0		
9		
10		Botton of exploration @ 10 ft

1030 1035 1040 1045 050 MS/MSD 1055 1100 1105

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	7.33	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD collected @ 3-4

WD 14 Per 10 Oct 14

9:25

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-360

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

1345
1350
1355
400
0004
1405
1410
1415
1420

Depth (ft)	Sketch	Visual Description
0		① MPS 1.5 (Shale)
1		
2		
3		
4		
5		
6		Trace SCMs
7		
8		② MPS-1 (Gravel)
9		
10		Bottom of exploration @ 10ft

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	8.83	NA

Top:

Bottom:

Notes:

Soil Identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD collected @ 2-3

Form 2025

WP-72
Pen 10
Dec 5.10

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-361

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
1430 0.0 (0)		① MPS= 2inch CShell
1435		
440 MS/MSD 0.0 1		Trace gravel and wood
1445 0.0 2		
1450 0.0 3		
1455 0.0 4		
0.0 5		② MPS= Layers of shells (MPS= 1/4 inch)
1505 0.0 6		
0.0 7		
0.0 8		
0.0 9		
0.0 10		Bottom of exploration @ 10ft

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	9.83	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:
MS/MSD collected @ 1-2

WP 35 Pen 10 Rec 9'10" 11.5

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-365

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
1515 0.0 0		① MPS - 2' (Shells
1520		
1525 0.01		
002		
1535 003		
← 0006		
0.04 1640		② Layers of shells MPS 1 inch (Shells)
1645 0.05		
1550 006		
007		
008		
0.09		
0.10		Bottom of exploration @ 0 ft

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	8.75	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD Collected @ 3-4

WD 31 PEN 10 Rec 89 1025

Form 2025

NEARSHORE AREA VIBRACORE REPORTS

HALEY ALDRICH

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-401

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	6/8/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		Dark gray ORGANIC, MPS: ¼ in. (wood), no structure, organic odor, wet, occasional silty sand layers from 3.5 to 5.0 Ft.
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.0		
5		
0.0		
6		
0.0		
7		
8		
9		
10		

1510 FD 0006 A 1515 A 1520 MS/MSD A 1525 A 1530 A 1535 A 1540 A 1545 A

– MARINE DEPOSITS –
– (MARINE SILT) –

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0006" taken @ 0-0.5 FT

MS/MSD TAKEN @ 1-2 FT

EB @ 1505 "~~4444~~-082814-0007" * w/ metals

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-402

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1000 DUP "0002" A 1005	0		① MPS = 1.5 in. (shell) at 0 - 0.5 Ft.
0.9	0.5		MPS = 1/2 in (shells) at 0.5 to 3.0 Ft.
0.1 A 1010	1		occasional sand seams from 3 to 5 Ft.
0.1 A 1015	2		
0.1 A 1020	3		
0.1 A 1025	4		
0.1 A 1030	5	5.0	Rubberband observed at ~5.5 Ft. material stiffer From 5 - 8 Ft.
0.1 A 1035 MS/MSD	6		
0.2	7		
A	8		- MARINE DEPOSITS - (MARINE SILT) -
	9	9.0	Bottom of Exploration at 9.0 Ft.
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	7.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800

"4441-082914-0001" * W/ METALS

DUP "0002" TAKEN @ 0-0.5 Ft.

MS/MSD TAKEN @ 6-8 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-403

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1045	0		① MPS = 1in. Cshell(), trace slag 0-0.5 Ft.
A 1050	0.0 0.5		MPS = ½ in (Shells) From 0.5 to 3.0 Ft.
A 1055	0.0 1		
A 1100	0.0 2		
A 1105	0.0 3 3.0		Stiffer from 5 to 8 ft.
A 1110	0.0 4		
DUP "0003"	0.0		
A 1115	5		
A 1120	0.2 6		
	0.2 7		-MARINE DEPOSITS- -(MARINE SILT)-
A	8		
	9 9.0		Bottom of Exploration at 9.0 Ft.
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0003" TAKEN @ 4-5 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-404

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1406	0		① mps = 3/4 in. (shell), trace wood from 0-3 ft.
	0.1		
A 1405	0.5		
	0.0		
A 1410	1		
	0.0		
A 1415	2		
DUP "0004"	0.0		
A 1420	3		
	3.0		② material stiffer from 3.0 to 8.0 ft.
	0.0		
A 1425	4		
	0.0		
A 1430	5		
	0.0		
A 1435	6		
	0.0		
MS/MSD	7		
A	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" TAKEN @ 2-3 FT

MS/MSD TAKEN @ 0-8 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-405

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1445	0 – 0.2		① mps = 1/2 in. (shell), trace shells from 0-2 Ft. trace plastic From 2-3 Ft.
A 1450	0.5 – 0.0		
A 1455	1 – 0.0		
A 1500	2 – 0.0		
FD 110005" A 1505	3 – 0.0		
A 1510	4 – 4.0		Material stiffer from 4 - 8 Ft.
A 1515	5 – 0.0		
A 1520	6 – 0.0		
	7		
A	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "D005" TAKEN @ 2-3 FT

EB @ 1600

"4444-082914-0006"

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-406

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 09 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1800	0		①
	0.2		
A 1805	0.5		
A 1810	1		
DUP 0005"			
A 1815	2		
	2.0		Dark gray silty SAND, with gravel (SM), MPS = 1.5 in. (coal), no structure, no odor, wet, ~ 90% coal ash Fill, ~ 7 in. layer of silt @ 5.5 ft.
A 1820	3		
A 1825	4		
A 1830	5		
A 1835	6		
	7		
A	8		
	8.5		Bottom of Exploration at 8.5 ft.
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.5'	6.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0005" @ 1-2'

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-407

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 02 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1430 A		
0.5		(1) mps = 1/4 in. (shell). trace wood.
1435 A		
1		
1440 A		
2		
2.0		
1445 A FD 0003		(2) gray, Frequent m-F sand seams with coal. mps = 1/2 in. (slag). and organic seams with leaves.
3		
1450 A		
4		
1455 A		
5		
1500 A		
6		
1505 A		
7		
8		
A		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		6.7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" taken @ 2-3 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-408

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 02 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		①
0.5		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

1525
A 1530
A 1535
A 1540 MS MSD
A 1545 FD 0004
A 1550
A 1555
A 1600
A

Recovery

Section	Tube Length	Sample Length	Total Weight
		8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD taken @ 2-3 FT

FD "0004" taken @ 3-4 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-409

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 02 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1330		(1) MPS = 3/4 in (shell) trace wood
A 1335	0.5	
A 1340 FD 0002	1	
A 1345	2	
A 1350	3	3.0
		(2) Gray MPS = 1/2 in. (slag)
A 1355 MS MSD	4	
A 1400	5	
A 1405	6	
	7	
A	8	
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		6.7'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

PCBs and metals

EB "0001" taken @ 11:00

FD "0002" taken @ 1-2 FT

MS/MSD Taken @ 4-5 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-410

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09/09/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	PID (PPM)	Sketch	Visual Description
0	1845		(1) except mps = 1.5 in. (gravel), trace slag and wood with sand from 0 – 4 Ft.
0.5	0.0		
	A 1850		
	DUP "0006" A 1855		
1	0.0		
	A 1900		
2	MS/MSD 0.0		
	A 1905		
3	0.0		
	A 1910		
4	0.0		
	A 1915		
5	0.0		
	A 1920		
6	0.0		Stiffer at 6.0 Ft
7			
	A		
8			
9	9.0		Bottom of Exploration at 9.0 Ft.
10			

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	5.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Dup "0006" @ 0.5 - 1.0 Ft

MS/MSD @ 2-3 Ft

EB - "0007" @ 1900 PCB & METALS.

(6)

Form 2025

7.8"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-411

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		① Dark gray ORGANIC MPS = 3/4 in. (shell), no structure, organic odor, wet, trace organics and shells.
0930		
0.0		
A 0935		
0.5		
0.1		
A 0940	1	
0.1		
A 0945	2	
DUP "0002"		
0.0		
A 0950	3	material stiffer from 3 to 8 ft. and no shells
0.5		
A 0955	4	
0.5		
A 1000	5	
0.0		
A 1005	6	
0.0		
	7	
A	8	
	9	
	10	Bottom of Exploration at 10.0 ft.
	10.0	

- MARINE DEPOSITS -
- (MARINE SILT) -

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	9.2	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 8:00 (PCBs + metals)

FD "0002" TAKEN @ 2-3 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-412

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1020 A	0		① trace slag to 3 Ft.
1025	0.0		
A 1030	1		
MS/MSD	0.0		
A 1035	2		
	0.0		
A 1040	3		material stiffer from 3 to 8 Ft. and no shells
	0.0		
A 1045 FD "0003"	4		
	0.0		
A 1050	5		
	0.0		
A 1055	6		
	0.0		
	7		
A	8		-MARINE DEPOSITS- -(MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	9.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 1 to 2 Ft.

FD "0003" TAKEN @ 4 to 5 Ft.

Form 2025

16T

EB = 1
FD = 2
MS = 1

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-113

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1115	0		① MPS = 1/2 in. shell.
A 1120	0.0		
A 1125	0.0 1		
	0.0		
A 1130	2		
	0.0		
A 1135	3		
	0.0		
A 1140	4		
	0.0		
A 1145	5		
MS/MSD	0.0		
A 1150	6		
	0.0		
	7		
A	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	8.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN AT 5 to 6 Ft.

Form 2025

24T

EB = 1
FD = 2
MS = 2

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-414

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1205	0		① mps = 1/2 in. (shell / gravel).
A 1210	0.0		
A 1215	0.0 1		
FD "0004"	0.0		
A 1220	2		
	0.0		
A 1225	3		
	0.0		
A 1230	4		
	0.0		
A 1235	5		
	0.0		
A 1240	6		
	0.4		
	7		
	1.3		
A	8		-MARINE DEPOSITS- (MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" TAKEN AT 1 to 2 Ft.

Form 2025

32T

EB=1
FD=3
MS=2

4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-415

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1300	0		① MPS = ½ in. (Shell, coal)
A 1305	0.0		
A 1310	1		trace coal and slag from 1 to 2 Ft.
	0.0		
A 1315	2		
	0.0		
A 1320	3		Material Stuffer From 3 to 8 Ft.
FD "0005"	0.0		
A 1325	4		
	0.0		
A 1330	5		
	0.0		
H 1335	6		
	0.0		
	7		
H	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" TAKEN AT 3 to 4 Ft.

EB "0006" TAKEN AT 1400.

Form 2025

40T

EB = 2
FD = 4
MS = 2

(5)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-412

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1020 A	0		① trace slag to 3 Ft.
1025	0.0		
A 1030	1		
MS/MSD	0.0		
A 1035	2		
	0.0		
A 1040	3		material stiffer from 3 to 8 Ft. and no shells
	0.0		
A 1045 FD "0003"	4		
	0.0		
A 1050	5		
	0.0		
A 1055	6		
	0.0		
	7		
A	8		-MARINE DEPOSITS- -(MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	9.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 1 to 2 Ft.

FD "0003" TAKEN @ 4 to 5 Ft.

Form 2025

16T

EB = 1
FD = 2
MS = 1

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-113

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1115	0		① MPS = 1/2 in. shell.
A 1120	0.0		
A 1125	0.0 1		
	0.0		
A 1130	2		
	0.0		
A 1135	3		
	0.0		
A 1140	4		
	0.0		
A 1145	5		
MS/MSD	0.0		
A 1150	6		
	0.0		
	7		
A	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	8.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN AT 5 to 6 Ft.

Form 2025

24T

EB = 1
FD = 2
MS = 2

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-414

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1205	0		① mps = 1/2 in. (shell / gravel).
A 1210	0.0		
A 1215	0.0 1		
FD "0004"	0.0		
A 1220	2		
	0.0		
A 1225	3		
	0.0		
A 1230	4		
	0.0		
A 1235	5		
	0.0		
A 1240	6		
	0.4		
	7		
	1.3		
A	8		-MARINE DEPOSITS- (MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" TAKEN AT 1 to 2 Ft.

Form 2025

32T

EB=1
FD=3
MS=2

4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-415

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1300	0		① MPS = ½ in. (Shell, coal)
A 1305	0.0		
A 1310	1		trace coal and slag from 1 to 2 Ft.
	0.0		
A 1315	2		
	0.0		
A 1320	3		Material Stuffer From 3 to 8 Ft.
FD "0005"	0.0		
A 1325	4		
	0.0		
A 1330	5		
	0.0		
H 1335	6		
	0.0		
	7		
H	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" TAKEN AT 3 to 4 Ft.

EB "0006" TAKEN AT 1400.

Form 2025

40T

EB = 2
FD = 4
MS = 2

(5)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-419

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		(1) mps = 1.5 in. (Glass) trace glass From 7 to 8 ft.
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.0		
5		
0.0		
6		
0.0		
7		
		- MARINE DEPOSITS - -(MARINE SILT)-
8		
9		
10		
10.0		Bottom of Exploration at 10.0 Ft.

1020 A 1025 A 1030 A 1035 A 1040 FD 0004 A 1045 MS/MSD A 1050 H 1055 H

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	7.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

WD = 13'

Remarks:

FD "0004" TAKEN @ 3-4'

MS/MSD TAKEN @ 4-5'

EB "0005" TAKEN @ 1100

Form 2025

24T

EB = 2
FD = 3
MS = 2

9.5"

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-422

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
0940	0		① MPSz 1.5 FT. (wood), trace wood
A 0945 FD 0003	0.0 – 0.5		
A 0950 FD 0003	0.0 – 1		
A 0955	0.0 – 2		
A 1000	0.0 – 3		
A 1005	0.0 – 4		
A 1010	0.0 – 5		
H 1015	0.0 – 6		
	7		– MARINE DEPOSITS – (MARINE SILT) –
H	8		
	9		
	10 – 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

WD = 14'

Remarks:

FD "0003" TAKEN @ ~~0.5 ft~~ 1-2'

Form 2025

911

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-423

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	
CONTRACTOR	CR Environmental	DATE	10 / 08 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		① MPS = 1-inch Cobbles
1		
2		
3		
4		
5		
6		
7		
8		No Brake
9		
10		Bottom of Exploration @ 10ft

1635
1640
1643
1646
1649
1651
1654
1657

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10	7.63	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:
FD Collected @ 1-2

WD- 16 Pen 10 Rec 7' 10' 9.3

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-401

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	6/8/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		Dark gray ORGANIC, MPS: ¼ in. (wood), no structure, organic odor, wet, occasional silty sand layers from 3.5 to 5.0 Ft.
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.0		
5		
0.0		
6		
0.0		
7		
8		
9		
10		

1510 FD 0006 A 1515 A 1520 MS/MSD A 1525 A 1530 A 1535 A 1540 A 1545 A

– MARINE DEPOSITS –
– (MARINE SILT) –

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0006" taken @ 0-0.5 FT

MS/MSD TAKEN @ 1-2 FT

EB @ 1505 "~~4444~~-082814-0007" * w/ metals

HALEY ALDRICH

VIBRACORE REPORT

Probe No. VC-402

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1000 DUP "0002" A 1005	0		① MPS = 1.5 in. (shell) at 0 - 0.5 Ft.
0.9	0.5		MPS = 1/2 in (shells) at 0.5 to 3.0 Ft.
0.1 A 1010	1		occasional sand seams from 3 to 5 Ft.
0.1 A 1015	2		
0.1 A 1020	3		
0.1 A 1025	4		
0.1 A 1030	5	5.0	Rubberband observed at ~5.5 Ft. material stiffer From 5 - 8 Ft.
0.1 A 1035 MS/MSD	6		
0.2	7		
A	8		- MARINE DEPOSITS - (MARINE SILT) -
	9	9.0	Bottom of Exploration at 9.0 Ft.
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	7.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB @ 0800

"4441-082914-0001" * W/ METALS

DUP "0002" TAKEN @ 0-0.5 Ft.

MS/MSD TAKEN @ 6-8 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-403

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1045	0		① MPS = 1in. Cshell(), trace slag 0-0.5 Ft.
A 1050	0.0 0.5		MPS = ½ in (Shells) From 0.5 to 3.0 Ft.
A 1055	0.0 1		
A 1100	0.0 2		
A 1105	0.0 3 3.0		Stiffer from 5 to 8 ft.
A 1110	0.0 4		
DUP "0003"	0.0		
A 1115	5		
A 1120	0.2 6		
	0.2 7		-MARINE DEPOSITS- -(MARINE SILT)-
A	8		
	9 9.0		Bottom of Exploration at 9.0 Ft.
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0003" TAKEN @ 4-5 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-404

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1406	0		① mps = 3/4 in. (shell), trace wood from 0-3 ft.
	0.1		
A 1405	0.5		
	0.0		
A 1410	1		
	0.0		
A 1415	2		
DUP "0004"	0.0		
A 1420	3		
	3.0		② material stiffer from 3.0 to 8.0 ft.
	0.0		
A 1425	4		
	0.0		
A 1430	5		
	0.0		
A 1435	6		
	0.0		
MS/MSD	7		
A	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0004" TAKEN @ 2-3 FT

MS/MSD TAKEN @ 0-8 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-405

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	08 / 29 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1445	0 – 0.2		① mps = 1/2 in. (shell), trace shells from 0-2 Ft. trace plastic From 2-3 Ft.
A 1450	0.5 – 0.0		
A 1455	1 – 0.0		
A 1500	2 – 0.0		
FD 110005" A 1505	3 – 0.0		
A 1510	4 – 4.0		Material stiffer from 4 - 8 Ft.
A 1515	5 – 0.0		
A 1520	6 – 0.0		
	7		
A	8		
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		7.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "D005" TAKEN @ 2-3 FT

EB @ 1600

"4444-082914-0006"

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-406

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 09 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)	Depth (ft)	Sketch	Visual Description
1800	0		①
	0.2		
A 1805	0.5		
A 1810	1		
DUP 0005"			
A 1815	2		
	2.0		Dark gray silty SAND, with gravel (SM), MPS = 1.5 in. (coal), no structure, no odor, wet, ~ 90% coal ash Fill, ~ 7 in. layer of silt @ 5.5 ft.
A 1820	3		
A 1825	4		
A 1830	5		
A 1835	6		
	7		
A	8		
	8.5		Bottom of Exploration at 8.5 ft.
	9		
	10		

Recovery

Section	Tube Length	Sample Length	Total Weight
	8.5'	6.0'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

DUP "0005" @ 1-2'

VIBRACORE REPORT

HALEY & ALDRICH

Probe No. VC-407

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 02 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1430 A		
0.5		(1) mps = 1/4 in. (shell). trace wood.
1435 A		
1		
1440 A		
2		
2.0		
1445 A FD 0003		(2) gray, Frequent m-F sand seams with coal. mps = 1/2 in. (slag). and organic seams with leaves.
3		
1450 A		
4		
1455 A		
5		
1500 A		
6		
1505 A		
7		
8		
A		
9		
10		

Recovery

Section	Tube Length	Sample Length	Total Weight
		6.7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" taken @ 2-3 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-408

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 02 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1525		
A 1530	0.5	
A 1535	1	
A 1540 MS MSD	2	
A 1545 FD 0004	3	
A 1550	4	
A 1555	5	
A 1600	6	
	7	
A	8	
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD taken @ 2-3 FT

FD "0004" taken @ 3-4 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-409

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 02 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		
1330		(1) MPS = 3/4 in (shell) trace wood
A 1335	0.5	
A 1340 FD 0002	1	
A 1345	2	
A 1350	3	3.0
		(2) Gray MPS = 1/2 in. (slag)
A 1355 MS MSD	4	
A 1400	5	
A 1405	6	
	7	
A	8	
	9	
	10	

Recovery

Section	Tube Length	Sample Length	Total Weight
		6.7'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

PCBs and metals

EB "0001" taken @ 11:00

FD "0002" taken @ 1-2 FT

MS/MSD Taken @ 4-5 FT

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-410

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09/09/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	PID (PPM)	Sketch	Visual Description
0	1845		(1) except mps = 1.5 in. (gravel), trace slag and wood with sand from 0 – 4 Ft.
0.5	0.0		
	A 1850		
	DUP "0006" A 1855		
1	0.0		
	A 1900		
2	MS/MSD 0.0		
	A 1905		
3	0.0		
	A 1910		
4	0.0		
	A 1915		
5	0.0		
	A 1920		
6	0.0		Stiffer at 6.0 Ft
7			
	A		
8			
9	9.0		Bottom of Exploration at 9.0 Ft.
10			

Recovery

Section	Tube Length	Sample Length	Total Weight
	9.0'	5.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

Dup "0006" @ 0.5 - 1.0 Ft

MS/MSD @ 2-3 Ft

EB - "0007" @ 1900 PCB & METALS.

(6)

Form 2025

7.8"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-411

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		① Dark gray ORGANIC MPS = 3/4 in. (shell), no structure, organic odor, wet, trace organics and shells.
0930		
0.0		
A 0935		
0.5		
0.1		
A 0940	1	
0.1		
A 0945	2	
DUP "0002"		
0.0		
A 0950	3	material stiffer from 3 to 8 ft. and no shells
0.5		
A 0955	4	
0.5		
A 1000	5	
0.0		
A 1005	6	
0.0		
	7	
A	8	
	9	
	10	Bottom of Exploration at 10.0 ft.
	10.0	

- MARINE DEPOSITS -
- (MARINE SILT) -

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	9.2	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 8:00 (PCBs + metals)

FD "0002" TAKEN @ 2-3 Ft.

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-412

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1020 A	0		① trace slag to 3 Ft.
1025	0.0		
A 1030	1		
MS/MSD	0.0		
A 1035	2		
	0.0		
A 1040	3		material stiffer from 3 to 8 Ft. and no shells
	0.0		
A 1045 FD "0003"	4		
	0.0		
A 1050	5		
	0.0		
A 1055	6		
	0.0		
	7		
A	8		-MARINE DEPOSITS- -(MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	9.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 1 to 2 Ft.

FD "0003" TAKEN @ 4 to 5 Ft.

Form 2025

16T

EB = 1
FD = 2
MS = 1

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-113

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1115	0		① MPS = 1/2 in. shell.
A 1120	0.0		
A 1125	0.0 1		
	0.0		
A 1130	2		
	0.0		
A 1135	3		
	0.0		
A 1140	4		
	0.0		
A 1145	5		
MS/MSD	0.0		
A 1150	6		
	0.0		
	7		
A	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	8.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN AT 5 to 6 Ft.

Form 2025

24T

EB = 1
FD = 2
MS = 2

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-414

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1205	0		① mps = 1/2 in. (shell / gravel).
A 1210	0.0		
A 1215	0.0 1		
FD "0004"	0.0		
A 1220	2		
	0.0		
A 1225	3		
	0.0		
A 1230	4		
	0.0		
A 1235	5		
	0.0		
A 1240	6		
	0.4		
	7		
	1.3		
A	8		-MARINE DEPOSITS- (MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" TAKEN AT 1 to 2 Ft.

Form 2025

32T

EB=1
FD=3
MS=2

4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-415

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1300	0		① MPS = ½ in. (Shell, coal)
A 1305	0.0		
A 1310	1		trace coal and slag from 1 to 2 Ft.
	0.0		
A 1315	2		
	0.0		
A 1320	3		Material Stuffer From 3 to 8 Ft.
FD "0005"	0.0		
A 1325	4		
	0.0		
A 1330	5		
	0.0		
H 1335	6		
	0.0		
	7		
H	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" TAKEN AT 3 to 4 Ft.

EB "0006" TAKEN AT 1400.

Form 2025

40T

EB = 2
FD = 4
MS = 2

(5)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. UC-412

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1020 A	0		① trace slag to 3 Ft.
1025	0.0		
A 1030	1		
MS/MSD	0.0		
A 1035	2		
	0.0		
A 1040	3		material stiffer from 3 to 8 Ft. and no shells
	0.0		
A 1045 FD "0003"	4		
	0.0		
A 1050	5		
	0.0		
A 1055	6		
	0.0		
	7		
A	8		-MARINE DEPOSITS- -(MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	9.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN @ 1 to 2 Ft.

FD "0003" TAKEN @ 4 to 5 Ft.

Form 2025

16T

EB = 1
FD = 2
MS = 1

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-113

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1115	0		① MPS = 1/2 in. shell.
A 1120	0.0		
A 1125	0.0 1		
	0.0		
A 1130	2		
	0.0		
A 1135	3		
	0.0		
A 1140	4		
	0.0		
A 1145	5		
MS/MSD	0.0		
A 1150	6		
	0.0		
	7		
A	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	8.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD TAKEN AT 5 to 6 Ft.

Form 2025

24T

EB = 1
FD = 2
MS = 2

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-414

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1205	0		① mps = 1/2 in. (shell / gravel).
A 1210	0.0		
A 1215	0.0 1		
FD "0004"	0.0		
A 1220	2		
	0.0		
A 1225	3		
	0.0		
A 1230	4		
	0.0		
A 1235	5		
	0.0		
A 1240	6		
	0.4		
	7		
	1.3		
A	8		-MARINE DEPOSITS- (MARINE SILT)-
	9		
	10	10.0	Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" TAKEN AT 1 to 2 Ft.

Form 2025

32T

EB=1
FD=3
MS=2

4

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-415

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 03 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
1300	0		① MPS = ½ in. (Shell, coal)
A 1305	0.0		
A 1310	1		trace coal and slag from 1 to 2 Ft.
	0.0		
A 1315	2		
	0.0		
A 1320	3		Material Stuffer From 3 to 8 Ft.
FD "0005"	0.0		
A 1325	4		
	0.0		
A 1330	5		
	0.0		
H 1335	6		
	0.0		
	7		
H	8		- MARINE DEPOSITS - (MARINE SILT) -
	9		
	10	10.0	Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	8.2'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0005" TAKEN AT 3 to 4 Ft.

EB "0006" TAKEN AT 1400.

Form 2025

40T

EB = 2
FD = 4
MS = 2

(5)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-419

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		(1) mps = 1.5 in. (Glass) trace glass From 7 to 8 ft.
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.0		
5		
0.0		
6		
0.0		
7		
		- MARINE DEPOSITS - -(MARINE SILT)-
8		
9		
10		
10.0		Bottom of Exploration at 10.0 Ft.

1020 A 1025 A 1030 A 1035 A 1040 FD 0004 A 1045 MS/MSD A 1050 H 1055 H

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	7.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

WD = 13'

Remarks:

FD "0004" TAKEN @ 3-4'

MS/MSD TAKEN @ 4-5'

EB "0005" TAKEN @ 1100

Form 2025

24T

EB = 2
FD = 3
MS = 2

9.5"

(3)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-422

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
0940	0		① MPSz 1.5 FT. (wood), trace wood
A 0945 FD 0003	0.0 – 0.5		
A 0950 FD 0003	0.0 – 1		
A 0955	0.0 – 2		
A 1000	0.0 – 3		
A 1005	0.0 – 4		
A 1010	0.0 – 5		
H 1015	0.0 – 6		
	7		– MARINE DEPOSITS – (MARINE SILT) –
H	8		
	9		
	10 – 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

WD = 14'

Remarks:

FD "0003" TAKEN @ ~~0.5 ft~~ 1-2'

Form 2025

911

(2)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-423

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	
CONTRACTOR	CR Environmental	DATE	10 / 08 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
0		① MPS = 1-inch Cobbles
1		
2		
3		
4		
5		
6		
7		
8		No Brake
9		
10		Bottom of Exploration @ 10ft

1635
1640
1643
1646
1649
1651
1654
1657

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10	7.63	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:
FD Collected @ 1-2

WD- 16 Pen 10 Rec 7' 10' 9.3

Form 2025

BACKWATER AREA VIBRACORE REPORTS

HALEY ALDRICH

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-501

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 11 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		①
0.5		
1		
2		
3		
4		
5		
6		~2 in SAND and SHELL layer at 6 Ft.
7		
8		Occasional Fine sand layer From 8 to 10 Ft.
9		
10	10.0	Bottom of Exploration at 10.0 ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	10.0	7.7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0003" taken @ 6-8 FB "

0930 7.7
A 0935 0.0
A 0940 0.0
A 0945 0.0
A 0950 0.0
A 0955 0.0
A 1000 0.0
A 1005 0.0
FD 110003"
A 1010 0.0
H

Form 2025

(2)

10

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-502

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09/30/2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
PID NOT WORKING		① MPS = 1/2 in. (wood 3 to 4 ft.), no shells
0.5		
1710		
A 1		
1715		
A 2		
1720		
A 3		
1725		
A 4		
1730		
A 5		
1735		
A 6		
1740		
7		— MARINE DEPOSITS — (MARINE SILT) —
A 8		
1745		
8.5		② Gray CLAY (CL), no structure, organic odor, wet, occasional sand and shell seams.
9		
H 10		Bottom of Exploration at 10.0 ft.
10.0		

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	7.6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB-"0011" PCBs and METALS @ 1800.

* 0-0.5' NOT TAKEN

NOT TAKEN

1710 A 1715 A 1720 A 1725 A 1730 A 1735 A 1740 A 1745 H

Form 2025

10

TOTAL = 69

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-503

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM) | Depth (ft) | Sketch | Visual Description

PID NOT TAKEN — NOT WORKING

1510 — 0

A 1515 — 1

A 1520 — 2 — "0008"

A 1525 — 3

A 1530 — 4

A 1535 — 5

A 1540 — 6

7

A 1545 — 8

9

A — 10 — 10.0

① Dark gray ORGANIC SOIL (OL/OH), mps = ½ in (Shell at 0.5 to 1.0 Ft.), no structure, organic odor, wet, trace organics, trace shells from 0 to 1 Ft.

- MARINE DEPOSITS -
- (MARINE SILT) -

Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	9.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0008" taken @ 2-3FT

*0-0.5 Ft. NOT TAKEN

Form 2025

TOTAL 045 samples - 3 EBs
5 FD
3 MS/MSDs

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-504

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 11 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm) –

Depth (ft)	Sketch	Visual Description
0		(1)
0.0		
0.5		
0.0		
1		
0.0		
2		
0.0		
3		
0.0		
4		
0.0		
5		
0.0		
6		~ ½ in fine sand layer at 6 ft.
0.0		
7		
8		rubber band at 8 to 10 ft.
9		
10		

1020 A 1025 A 1030 FD 1100 EB A 1035 A 1040 A 1045 MS MSD A 1050 A 1055 A 1100 H

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	6.9'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0004" taken @ 1-2 FT

MS/MSD taken @ 4-5 FT

EB "0005" taken @ 1200

Form 2025

(3) ~~2~~ 2 FD 1 MS/MSD 1 EB

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-506

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
NOT TAKEN	0 PID NOT WORKING		(1) trace shells From 0 to 5 Ft.
	0.5		
1550 A 1555 FD 0009	1		
A 1600	2		
A 1605	3		
A 1610	4		
A 1615	5		
A 1620	6		
	7		- MARINE DEPOSITS - (MARINE SILT) -
A 1625	8		
	9		
H	10		Bottom of Exploration at 10.0 ft.
	10.0		

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	7.1'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0009" TAKEN @ 1-2'

Form 2025

B TOTAL = 53 6 DUPS

VIBRACORE REPORT

Probe No. VC-508

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	9 / 11 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm) –

Depth (ft)	Sketch	Visual Description
0		① Dark gray ORGANIC , mps= ½ in. (shell), no structure, organic odor, wet, trace organics, wood, and shells.
0845 5.5		
A 0850		
0.5		
0.0		
A 0855 1		
FD "0002" 6.6		
A 0900 2		
MS/MSD 0.0		
A 0905 3		
0.0		
A 0910 4		
0.0		
A 0915 5		
0.0		
A 0920 6		
0.0		
7		
A 0925 8		
0.0		
9		
H 10 10.0		Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0	7.7	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 8:00 (1PCBs, Tmetal)
FD "0002" taken @ 1-2 FT
MS/MSD taken @ 2-3 FT

Form 2025

0-6' BENCH

① G

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-510

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	09 / 30 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
NOT TAKEN	0 PID NOT WORKING		
1630	0.5'		
A 1635	1		
A 1640	2		
A 1645	3		
A 1650	4		
A 1655 DUP 0010	5		
A 1700 MS/MSD	6		
	7		
A 1705	8		
	9		
H	10	10.0	

@5-6 Ft.

① MPS = 1/4 in. (wood), trace Shells 3 to 5 Ft.

– MARINE DEPOSITS –
– (MARINE SILT) –

Bottom of Exploration at 10.0 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10.0'	6.8'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0010" TAKEN @ 5-6'

MS/MSD @ 6-8 FT.

Form 2025

9 TOTAL = 61

3 EBs
7 DUPS
4 MS/MSDs

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-511

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 01 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm) | Depth (ft) | Sketch | Visual Description

NOT TAKEN

0920 A 0925 — 0.0 to 1.0

① Dark gray ORGANIC (OL/OH), MPS= 1 in. (shell), no structure, organic odor, wet, trace organics, trace shells

"0002" 0930 A — 0.0 to 2.0

MS MSD 0935 A — 0.0 to 3.0

0940 A — 0.0 to 4.0

0945 A — 0.0 to 5.0

0950 A — 0.0 to 6.0

0.0 to 7.0

0955 A — 0.1 to 8.0

Trace shells from 8 to 10 ft.
-MARINE DEPOSITS-
-(MARINE SILT)-

0.2 to 9.0

0.2 to 10.0

H — 10.0

Bottom of Exploration at 10.0 ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10'	6'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

EB "0001" taken @ 08:00 (metals + PCBs)

FD "0002" taken @ 1-2

MS/MSD taken @ 2-3 FT

0-0.5' NOT TAKEN

Form 2025

(1)

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-601

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 22 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)

Depth (ft)	Sketch	Visual Description
0		
1230		
A 1235	0.5	(1) Dark gray poorly graded SAND, (SP), MPS = 1 in. (asphalt), no structure, ~~no~~ no odor, wet, trace asphalt.
A 1240	1	
A 1245	2 2.0	(2) Dark gray ORGANIC SOIL (OL/OH), MPS = ½ in. (asphalt), no structure, organic odor, wet, trace asphalt and organics.
A 1250	3	
A 1255	4	
A 1300	5	
A 1305	6	
DUP "0006"	7	- MARINE DEPOSITS - (MARINE SILT) -
A 1310	8	
	9	
	9.3	* Note: Refusal at 9.3 Ft
H	10	Bottom of Exploration at 9.3 Ft.

Recovery			
Section	Tube Length	Sample Length	Total Weight
	9.3'	7.3'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD "0006" TAKEN @ 6-8'

Form 2025

33T

EB=2
FD=4
MS=2

9.5"

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-604

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

Depth (ft)	Sketch	Visual Description
1555 00 0		(1) Dark gray organic soil (OH) MPS-0.2mm MPS - 0.2 mm organics), no structure organic odor, wet, trace organics.
1600		
1605 00 1		
1610 00 2		
00 3		
615 MS/MSD		
1620 00 4		
00 5		
1625		
1630 00 6		
00 7		
00 8		(No Brake)
9		
10		Bottom of exploration @ 10 ft

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	7.25	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:
MS/MSD collected at 3-4

WD- 5'6 Pen 10 Rec 7.3" 8.7

Form 2025

HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-701

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		①
14:10 — 0.5		
14:15		
1 — 14:20		
000 2		
2 — 14:25		
MS/MSD		
3 — 14:30		
4 — 14:35		
5 — 14:40		
		② Gray Clay (CL), mps- 1.75 (shell) no Structure, Organic Odor, wet trace organics and shells.
6 — 14:45		
7		
		- MARINE DEPOSITS - (MARINE SILT) -
8		
9		
10		Bottom of Exploration at Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
A	10'	7'5	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

WD- 4'10"
Pen. 10'
Rec- 7.5

FD collected at 1-2

MS/MSD collected at 2-3

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HALEY & ALDRICH

VIBRACORE REPORT

Probe No. VC-702

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0.0 0		① MPS=0.1mm
0.5		
00 1		
00 2		
00 3		
00 4		② MPS.0.2mm
00 5		
00 6		
00 7		- MARINE DEPOSITS - (MARINE SILT) -
00 8		
9		
10		Bottom of Exploration at Ft.

15:55
16:00
16:05
16:10
16:15
0003
16:20
16:25
16:30

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	7.33'	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD-0003 Collected @ 3-4

Form 2025

WD 4
Pen 10
Rec 7'41

8.8

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VIBRACORE REPORT

Probe No. VC-703

Page 1 of

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	28612-
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 27 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		① MPS 1/4"
0.5		
1		
2		
3		
MS/MSD		② MPS-3/4"
4		
5		
6		
7		
8		- MARINE DEPOSITS - (MARINE SILT) -
9		
10		Bottom of Exploration at Ft.

Recovery			
Section	Tube Length 10'	Sample Length 6.25'	Total Weight NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

MS/MSD 3-4

Form 2025

wp 5 Rec-6.25
Pan 10

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VIBRACORE REPORT

Probe No. VC-704

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	~~28613~~
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (PPM)	Depth (ft)	Sketch	Visual Description
0905 A	0		① MPS 0.1mm
0910 A	0.5		
0915 0002 A	1		
0920 MS/MSD A	2		
0925 A	3		
0930 H	4		
0935 H	5		② MPS 0.1mm
0940 H	6		
	7		- MARINE DEPOSITS - -(MARINE SILT)-
	8		
	9		
	10		Bottom of Exploration at 10 Ft.

Recovery

Section	Tube Length	Sample Length	Total Weight
	10	6.6	NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

FD collected @ 1-2

MS/MSD collected @ 2-3

MD - 4.1'

P=n - 10'

Rec - 6.6

7.4 -

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VIBRACORE REPORT

Probe No. VC-705

Page 1 of 1

PROJECT	Former Anaconda Wire & Cable	H&A FILE NO.	[redacted]
LOCATION	Hastings on Hudson, New York	PROJECT MGR.	R. Scott
CLIENT	Atlantic Richfield Company	GEOLOGIST	S. Brousseau
CONTRACTOR	CR Environmental	DATE	10 / 28 / 2014
EQUIPMENT	Ponar and vibracore	CHECKED BY	

PID (ppm)

Depth (ft)	Sketch	Visual Description
0		(1)
0.5		
1		
2		
3		
4		
5		
6		(2)
7		- MARINE DEPOSITS - -(MARINE SILT)-
8		
9		
10		Bottom of Exploration at 10 ft.

445 A
950 A
955 A
1000 3003 A
1010 A
1015 H
1020 H
1025 H

Recovery

Section	Tube Length	Sample Length	Total Weight
			NA

Top:

Bottom:

Notes:

Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Remarks:

WD 4'6
Pen 10
Rec 6.6ft

Form 2025

SECTION 3.7

Boring Reports (River)

Boring Reports (Land)

Test Pit Logs

HALEY ALDRICH

BORING REPORTS-RIVER

TEST BORING REPORT

Boring No. PD2-GR-001

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 6
Start 24 June 2014
Finish 02 July 2014
Driller M. Mueller
H&A Rep. S. Brousseau
Elevation -10.9 (est.)
Datum NAVD88
Location See Plan
N 788,055
E 661,437

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW/NQ	S/U	NQ	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0/3.0	1 3/8 / 2 7/8	1 7/8	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Push/Drive/Spun
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 23 ft to mudline from deck, advance 4 in. casing by push.											
5	WOR WOR WOR WOR	S1 18	5.5 7.5			OL	Very soft dark gray ORGANIC SILT (OL), no structure, slight hydro carbon odor, organic odor, wet, ~10% organics	0.0					20	80	S			
10	P U S H	U1 17	10.5 12.5			MH	Direct push tube sample taken (drill head used). Gray elastic SILT (MH)					1	6	93				
							-MARINE DEPOSITS- (MARINE SILT)											
15	WOR WOR WOR WOH	S2 19	15.5 17.5			OL	Very soft dark gray ORGANIC SILT (OL), no structure, organic odor, wet, ~15% organics, trace shells	0.0					20	80	S			
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 120
Rock Cored (ft) 5
Samples 18S, 5U, 1C

Boring No. PD2-GR-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-001
File No. 28612-329
Sheet No. 2 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	PUSH	U2 0	20.5 22.5				Direct push tube sample taken (drill head used) No recovery Note: Drum drill water and cuttings from mud tub at 20.5 ft											
25	PUSH	U3 24	25.5 27.5				Direct push tube sample taken (drill head used). Gray SILT (ML), with shells						7	93				
30	1 WOH WOH WOH	S3 17	30.5 32.5		-40.9 30.0	CH	Very soft gray fat CLAY (CH), no structure, organic odor, wet, frequent fine sand partings, and clay laminae						10	90	S	M	H	V
					-42.4 31.5	CH	Very soft gray sandy fat CLAY (CH), mps 1/2 in., no structure, organic odor, wet, ~10% shells	0.0		5	5	10	20	60				
35	PUSH	U4 22	35.5 37.5			CH	Direct push tube sample taken (drill head used). Gray, sandy fat CLAY (CH), with shells. Layer of shells observed at bottom of tube					19	14	67				
40	WOH WOH 1 2	S4 20	40.5 42.5		-51.4 40.5	CL	Very soft, gray sandy lean CLAY (CL), mps 1 in., no structure, no odor, wet, frequent layers of interbedded silt and clay, trace shells -MARINE DEPOSITS- (MARINE SILT)	0.0	5	5	5	25	10	50				
45	PUSH	U5 23	45.5 47.5			CL	Direct push tube sample taken (drill head used). Gray sandy lean CLAY (CL), with shells				1	4	28	67				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-001
File No. 28612-329
Sheet No. 3 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED														
	6 3 2 1	S5 16	50.5 52.5			SM	Loose gray silty SAND (SM), mps 1/2 in., no structure, no odor, wet, interbedded silt and clay seams with frequent sand partings, trace shells Note: Advance casing by push	0.0			5	35	25	35				
55					-66.4 55.5													
	1 WOH 1 WOH	S6 23	55.5 57.5			CH	Very soft gray fat CLAY with sand (CH), mps 1/8 in., no structure, no odor, wet, interbedded silt and partings, trace shells Note: Advance casing by push	0.0				5	20	75	S	M	M	V
60					-71.4 60.5													
	1 WOH WOH WOH	S7 21	60.5 62.5			SM	Very loose gray silty SAND (SM), mps 1/2 in., no structure, no odor, wet, occasional layer of interbedded silt and clay, trace shells Note: Advance casing by push to 64.5 ft, advance casing with 300 lb. hammer to 65.5 ft	0.0				20	35	45				
65					-75.4 64.5													
	50/3	S8 3	65.5 65.8			SM	Similar to S7 except very dense Note: Advance ahead of casing with mud. Drill action indicates coarse material from 65.5 to 70.5 ft, drill through two 11 in. cobbles at 65.5 ft and 68 ft, spin 3 in. casing to 71 ft -MARINE DEPOSITS- (BASAL SAND)	0.0											
70																		
	44 30 11 23	S9 3	71.0 73.0			SM	Dense gray silty SAND (SM), mps 1/2 in., no structure, no odor, wet, pieces of rock and steel from drive shoe. Poor recovery (Piece of rock stuck at the tip)	69		15	15	25	15	30				
								71										
					-84.9 74.0													
75	37 23 14 13	S10 13	74.0 76.0			ML	Hard gray to red brown SILT (ML), mps 1 in., no structure, no odor, wet, occasional gray, medium fine, sand layer Note: Advance ahead of casing with mud. Drill action indicates coarse material from 74 to 75 ft.	0.0	5	5	5	10	10	65	S	M	M	H

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-001

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TEST BORING REPORT

Boring No. PD2-GR-001
File No. 28612-329
Sheet No. 4 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80	5 6 6 8	S11 0	79.0 81.0	NO WELL INSTALLED			No recovery	NA										
85	9 14 18 21	S12 0	84.0 86.0				No recovery. 1 3/4 in. gravel fragment with spin shoe mark lodged in spoon tip, 1 in. of material in spoon, red brown SILT	0.0				5	5	90				
					-99.9													
90	4 7 13 16	S13 21	89.0 91.0		89.0	SM	Medium dense red brown silty SAND (SM), mps 0.5 mm, no structure, no odor, wet, occasional pocket of silt Note: Spin casing to 94 ft	0.0		13		1	68	18				
					-104.9													
95	3 6 12 16	S14 20	94.0 96.0		94.0	CL	Very stiff red brown sandy lean CLAY (CL), no structure, no odor, wet, occasional medium fine sand seam	0.0				1	29	70	R	L	L	H
					-109.9													
100	7 9 10 17	S15 18	99.0 101.0		99.0	SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet, occasional silt layer -MARINE DEPOSITS-	0.0				5	50	45				
105	7 12 15 19	S16 18	104.0 106.0			SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet, occasional layer of interbedded silt and clay.	0.0					55	45				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-001
File No. 28612-329
Sheet No. 5 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
110	7 5 6 10	S17 16	109.0 111.0	NO WELL INSTALLED	-119.9 109.0	SM	Medium dense red brown silty SAND (SM), mps 1/4 in., no structure, no odor, wet, occasional medium fine sand seam, occasional silt layer Note: Spin casing to 114 ft Loose ~25 gallons mud	0.0				5	50	45				
					-124.9													
115	19 25 21 27	S18 15	114.0 116.0		114.0 -125.9	SP	Dense gray poorly graded SAND (SP), mps 1/4 in., no structure, no odor, wet	0.0			5	55	35	5				
					115.0	SM	Dense red brown silty SAND (SM), mps 1 in., no structure, no odor, wet Note: Spin casing to refusal at 116.8 ft, rollerbit to 120 ft, hard at 119 ft	0.0			5	10	45	40				
120					-130.9 120.0		See Core Boring Report for rock details											
125																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-001

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HALEY ALDRICH

CORE BORING REPORT

Boring No. **PD2-GR-001**
File No. 28612-329
Sheet No. 6 of 6

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
								TOP OF BEDROCK 119.0 FT
120	4.0	C1	120.0	44	73		-130.9 120.0	C1: Very hard to hard, fresh, gray to black, fine grained GNEISS. Folliation is moderately dIpping to high angle, extremely close. Primary joint set low angle, wide, rough, underlating, fresh to discolored, open.
	2.5		125.0	39	65			
	1.5							
	2.5							
	2.0							
125							-135.9 125.0	BOTTOM OF EXPLORATION 125.0 FT
								Note: Borehole grouted upon completion.
130								
135								
140								
145								

H+A_CORE+WELL07-1 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-002

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 2
Start 23 June 2014
Finish 23 June 2014
Driller M. Mueller
H&A Rep. S. Brousseau
Elevation -22.5 (est.)
Datum NAVD88
Location See Plan
N 788,149
E 661,385

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/U	-	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Note: 35.5 ft to mudline from deck, advanced 4 in. casing by push	0.1										
	WOR WOR WOR WOR	S1 10	3.0 5.0	NO WELL INSTALLED	-25.5 3.0	OL/ OH	Very soft dark gray ORGANIC SOIL (OH/OH), mps 1/2 in., no structure, slight hydro carbon odor, organic odor, trace organics, wood, slag, and coal					5	15	80				
5							-MARINE DEPOSITS- -MARINE SILT-											
10	P U S H	U1 20	11.0 13.0				Direct push sample taken. (drillhead used). Trace semi-solid PCBM observed in sand seam at bottom of tube.											
15																		
20	2 WOH	S2 1	19.0 21.0			ML	Very soft gray SILT (ML), mps 1/4 in., no structure, organic odor, trace organics and shells	0.0		5	5	5	10	75				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 29
Rock Cored (ft) -
Samples 2S, 2U

Boring No. PD2-GR-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PD2-GR-002
File No. 28612-329
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOH WOH			NO WELL INSTALLED														
25	P U S H	U2 19	27.0 29.0				Direct push tube sample taken, (drill head used) Note: Trace semi-solid PCBM observed in sand pocket at bottom of tube											
					-51.5 29.0		-BOTTOM OF EXPLORATION 29.0 FT Note: Borehole grouted upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-002

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-002A

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 4
Start 14 July 2014
Finish
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation -24.3 (est.)
Datum NAVD88
Location See Plan
N 788,149
E 661,372

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/U	-	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 39.5 ft to mudline from deck, advance 4 in. casing by push											
	53 22 5 4	S1 6	1.0 3.0			SM	Wood, kerosote odor, wet Note: Advance ahead of casing with roller bit through ~12 in. of wood. Advance casing with 300 lb. hammer Very loose dark gray silty SAND (SM), mps 1/2 in., no structure, creosote odor, wet, ~25% wood and organics, trace shells	0.1 1.0	5	5	10	15	25	40				
5	1/18 1	S2 6	6.0 8.0				Note: Advance casing by push -MARINE DEPOSITS- (MARINE SILT)											
10	PUSH	U1 0	11.0 13.0				Note: Direct push tube sample taken (drill head used). No recovery Note: Advance casing by push											
15	PUSH	U2 0	16.0 18.0				Note: Direct push tube sample taken (drill head used). No recovery Note: Advance casing by push											
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 98
Rock Cored (ft) -
Samples 13S, 7U

Boring No. PD2-GR-002A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-002A
File No. 28612-329
Sheet No. 2 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	PUSH	U30	21.0 23.0				Note: Hydraulic tube sample attempted, tube did not extend. Direct push tube sample taken. No recovery Note: Advance casing by push											
25					-50.3 26.0													
	1/24	S3 19	26.0 28.0			CH	Very soft gray fat CLAY (CH), mps 1/8 in., no structure, no odor, wet, frequent fine sand seams, trace shells and organics	0.0					10	90	S	M	H	
30																		
	PUSH	U40	31.0 33.0				Direct push tube sample taken (drill head used) No recovery											
35																		
	PUSH	U5 24	36.0 38.0			CL	Hydraulic tube sample taken. Observed rope net-like material with metal at top of tube. Gray sandy lean CLAY (CL), trace shells.				4	4	21	71				
40																		
	2 1/18	S4 23	41.0 43.0			CL	Very soft gray sandy lean CLAY (CL), mps 1/4 in., no structure, organic odor, wet, occasional silty medium fine sand layer, frequent silty layers, ~5% shells, trace organics	0.0				10	20	70				
45																		
	PUSH	U6 9	46.0 48.0				Hydraulic tube sample taken Note: 5 in. missing from bottom of tube											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-002A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-002A
File No. 28612-329
Sheet No. 3 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED	-75.3													
	WOR WOR WOR WOR	S5 24	51.0 53.0		51.0	OL/ OH	Very soft dark gray ORGANIC SOIL (OL/OH), mps 1/4 in., no structure, organic odor, wet, frequent fine sand partings with shells, trace shells -MARINE DEPOSITS- (MARINE SILT)						10	90	S	M	H	
55	P U S H	U7 24	56.0 58.0			CL	Direct push tube sample taken (drill head used). Gray sandy lean CLAY (CL) Note: Bottom of tube slightly bent Note: Advance casing by push to 58.5 ft, advance casing by 300 lb hammer from 58.5 to 68 ft			2	2	7	25	64				
60	13 13 7 18	S6 6	61.0 63.0		-86.3 62.0	SM	Medium dense gray silty SAND (SM), mps 1 1/4 in., no structure, no odor, wet, trace shells, gravel lodged in spoon tip Note: Advance casing with 300 lb. hammer, drill action indicates coarse material -MARINE DEPOSITS- (BASAL SAND)	0.0	5	0	40	25	15	15				
65	28 24 50/	S7 6	66.0 67.4			SM	Very dense gray silty SAND (SM), mps 1 in. no structure, no odor, wet		5	5	15	35	25	15				
70							Note: Drill action indicates coarse material.											
	16 13 19 21	S8 12	71.0 73.0			CL-ML	Hard red brown silty CLAY (CL-ML) with sand, no structure, no odor, wet, frequent gray silt laminae	0.0					27	73	R	L	L	
75	11 11 11 11	S9 16	76.0 78.0			SP-SM	Medium dense red brown poorly graded SAND with silt (SP-SM), no structure, no odor, wet Note: Advance casing with 300 lb. hammer.	0.0				10	80	10				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-002A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-002A
File No. 28612-329
Sheet No. 4 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80				NO WELL INSTALLED														
	16 13 15 12	S10 20	81.0 83.0			SP- SM	Medium dense red brown poorly graded SAND with silt (SP-SM), no structure, no odor, wet	0.0				8	83	9				
85																		
	14 15 18 20	S11 16	86.0 88.0			SM	Dense red brown silty SAND (SM), no structure, no odor, wet -MARINE DEPOSITS- (BASAL SAND)	0.0					75	25				
90																		
	13 9 9 8	S12 17	91.0 93.0			SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet	0.0					55	45				
95																		
	17 18 23 29	S13 20	96.0 98.0			SM	Similar to S12 except dense											
					-122.3 98.0		BOTTOM OF EXPLORATION 98.0 FT Note: Borehole grouted upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-002A

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GR-003

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 6
Start 07 July 2014
Finish 14 July 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation -27.7 (est.)
Datum NAVD88
Location See Plan
N 788,320
E 661,395

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW/NQ	S/U	NQ	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0/3.0	1 3/8 / 2 7/8	1 7/8	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	24	30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 40.5 ft to mudline from deck, advance 4.0 in. casing by push.											
	WOR WOR 3 2	S1 10	2.5 4.5			OH	Soft dark gray organic CLAY (OH), mps 3/4 in., no structure, organic odor, wet, trace organics and slag fragments	0.0					10	90				
5							Note: Advance casing with 300 lb. hamer from 3.5 ft to 6.5 ft. Observed wood and organics in wash with creosote-like odor.											
	PUSH	U1 0	7.5 9.5				Direct push tube sample taken. No recovery, tube slightly dented at bottom. Note: Advance casing by push. Observed piece of rubber in wash.											
10							-MARINE DEPOSITS- (MARINE SILT)											
	PUSH	U2 18	12.5 14.5			OH	Direct push tube sample taken (drill head used). Gray sandy ORGANIC CLAY (OH). Note: Observed 3 in. void and slight dent at bottom of tube.						31	69				
15							Note: Advance casing by push.											
	1/24	S2 10	17.5 19.5		-45.2 17.5	CH	Very soft gray fat CLAY (CH), no stucture, no odor, wet	0.0					5	95	S	M	H	V
20							Note: Advance casing by push.											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	112
Rock Cored (ft)	5
Samples	17S, 5U, 1C

Boring No. PD2-GR-003

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-003
File No. 28612-329
Sheet No. 2 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	P U S H	U3 18	22.5 24.5			CH	Direct push tube sample taken (drill head used). Gray fat CLAY with sand (CH), with shells. Note: Observed 5 in. void while cleaning out bottom of tube.						17	83				
25					-55.2													
	1 1 WOH 1	S3 19	27.5 29.5		27.5	SM	Very loose silty SAND (SM), mps 1/4 in., no structure, no odor, wet, with frequent silt layers, ~10% shells	0.0				30	35	35				
30							-MARINE DEPOSITS- (MARINE SILT)											
	P U S H	U4 4	32.5 34.5				Direct push tube sample taken (drill head used). Note: 4 in. recovery observed silty sand, trace shells. Tube emptied and cleaned for re-use. Note: Advance casing by push. Drill action indicates hard material from 35.5 ft to 37.5 ft.											
35																		
	1/24	S4 22	37.5 39.5			CH	Very soft gray sandy fat CLAY (CH), mps 1/4 in., no structure, no odor, wet, trace organics and shells, occasional silty medium fine sand layer with shells Note: Advance casing with 300 lb. hammer.	0.0				10	25	65	S	M	M	N-H
40																		
	WOR WOH WOH WOH	S5 24	42.5 44.5			ML	Very soft gray sandy SILT (ML), mps 1/2 in., no structure, organic/sulfur odor, wet, frequent silty medium fine sand partings, layers and seams, trace organics and shells Note: Advance casing by push.	0.0					35	65				
45																		
	P U S H	U5 23	47.5 49.5			ML	Direct push tube sample taken (drill head used). Gray sandy SILT (ML) Note: Observed a 1.5 in. rounded gravel cleaning out top of spoon. Bottom 20 in. of tube had multiple dents, silty sand with shells and organics at bottom of tube.					4	39	57				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-003

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-003
File No. 28612-329
Sheet No. 3 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED				0.0										
	WOR WOR WOR WOR	S6 19	52.5 54.5			ML	Very soft gray sandy SILT (ML), mps 1/4 in., no structure, organic/sulfur odor, wet, occasional silty clay layer, trace shells and organics					15	25	60				
55					-83.2 55.5		Note: Advance casing by push to 55.5 ft. Advance casing with 300 lb. hammer from 5.5 ft to 57.5 ft. Drill action indicates coarse material from 55.5 ft to 57.5 ft.											
	31 75/5	S7 5	57.5 58.4			SM	Very dense gray silty SAND (SM), mps 3/4 in., no structure, no odor, wet	0.0		5	5	35	40	15				
60							Note: Drill action indicates coarse material to 62.5 ft and a 7 in. cobble at 60 ft. Advance casing with 300 lb. hammer.											
	14 9 10 11	S8 13	62.5 64.5			SM	Medium dense gray to browm silty SAND (SM), mps 3/4 in., no structure, no odor, wet, occasional silty clay pocket	0.0				10	75	15				
65							-MARINE DEPOSITS- (BASAL SAND)											
	10 11 13 16	S9 14	67.5 69.5			SP-SM	Medium dense red brown poorly graded SAND with silt (SP-SM), no structure, no odor, wet	0.0					90	10				
70																		
	11 14 22 21	S10 16	72.5 74.5			SM	Dense red brown silty SAND (SM), no structure, no odor, wet	0.0					75	25				
75																		
	10 9 14 19	S11 21	77.5 79.5			SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet, occasional gray clayey silt layer	0.0					60	40				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-003

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-003
File No. 28612-329
Sheet No. 4 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80				NO WELL INSTALLED														
	9 11 18 25	S12 21	82.5 84.5			SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet, occasional silty layer	0.0					70	30				
85																		
	15 17 18 20	S13 18	87.5 89.5			SP-SM	Dense red rown poorly graded SAND with silt (SP-SM), no structure, no odor, wet	0.0				25	65	10				
90																		
					-120.2 92.5													
	9 12 15 21	S14 19	92.5 94.5			CL-ML	Very stiff red brown silty CLAY with sand (CL-ML), no structure, no odor, wet	0.0					18	82	R	M	M	H
95																		
					-125.2 97.5													
	4 6 13 18	S15 21	97.5 99.5			SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet, occasional silt layers	0.0										
100																		
					-130.2 102.5													
	13 11 14 20	S16 18	102.5 104.5			ML	Very stiff red brown SILT (ML), no structure, no odor, wet, occasional medium fine sand layers	0.0					10	90	R	M	L	H
105																		
	10 11 15 22	S17 20	107.5 109.5			ML	Very stiff red brown SILT (ML), no structure, no odor, wet, occasional silty sand layers						10	90	R	M	L	H

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-003

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-003
File No. 28612-329
Sheet No. 5 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
110				NO WELL INSTALLED	-139.7 112.0		See Core Boring Report for rock details Note: Advance ahead of casing with mud to 112 ft. Drill action indicates probable bedrock from 111 ft to 112 ft Advance 3 in. casing to 112 ft											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-003

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

HALEY ALDRICH

CORE BORING REPORT

Boring No. PD2-GR-003
File No. 28612-329
Sheet No. 6 of 6

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
								TOP OF BEDROCK 111.0 FT
							-139.7	
		C1	112.0 117.0	55 57	92 95		112.0	C1: Very hard to hard, gray to black, fine grained GNEISS. Folliation is moderately dIpping to high angle, extremely close to close. Primary joint set moderately dipping, moderately spaced, rough, undulating, fresh to discolored, open. Secondary joint set low angle, moderately spaced, rough, undulating, fresh to discolored, open. -BEDROCK-
115								
							-144.7	
							117.0	BOTTOM OF EXPLORATION 117.0 FT
								Note: Borehole grouted upon completion.
120	3.75							
	3.25							
	3.25							
	3.00							
	3.75							
125								
130								
135								
140								

H+A_CORE+WELL07-1 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-004

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 6
Start 18 July 2014
Finish 25 July 2014
Driller P. Dickinson/M. Mueller
H&A Rep. S. Brousseau
Elevation -9.8 (est.)
Datum NAVD88
Location See Plan
N 788,320
E 661,395

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW/NQ	S/U	NQ	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0/3.0	1 3/8 / 2 7/8	1 7/8	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	24	30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 20.5 ft to mudline from deck. Advance 4.0 in. casing by push.											
	WOR WOR WOR WOR	S1 12	3.0 5.0			OH	Very soft dark gray ORGANIC CLAY (OH), no structure, organic odor, wet, trace organics	0.0					5	95	S	M	H	H-V
5							-MARINE DEPOSITS- (MARINE SILT)											
	PUSH	U1 22	8.0 10.0			CH	Direct push tube sample taken (drill head used). Gray fat CLAY (CH)						4	96				
10																		
	WOR WOR WOR WOR	S2 16	13.0 15.0			OL/ OH	Similar to S1	0.0										
15																		
	PUSH	U2 23	18.0 20.0			CH	Direct push tube sample taken (drill head used). Gray fat CLAY (CH)					1	14	85				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 120
Rock Cored (ft) 5
Samples 18S, 6U, 1C

Boring No. PD2-GR-004

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PD2-GR-004
File No. 28612-329
Sheet No. 2 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	WOR WOR WOR WOR	S3 6	23.0 25.0			OL/ OH	Similar to S1 except, with frequent fine sand partings with shells	0.0										
25																		
	P U S H	U3 23	28.0 30.0			CH	Direct push tube sample taken (drill head used). Gray fat CLAY with sand (CH)					7	15	78				
30																		
	WOH WOH WOH WOH	S4 0	33.0 35.0				No recovery											
35																		
	P U S H	U4 0	38.0 40.0				Direct push tube sample taken (drill head used). No recovery											
40																		
	P U S H	U5 17	43.0 45.0			SP-SC	Hydraulic tube sample taken. Gray poorly graded SAND with clay (SP-SC), with shells Note: Observed 7 in. void at bottom of tube.				2	10	77	11				
45																		
	3 2 2 2	S5 12	48.0 50.0		-57.8 48.0	SM	Very loose gray silty SAND (SM), mps 1/2 in., no structure, organic odor, wet, ~5% shells	0.0		5	5	20	35	35				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-004

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GR-004
File No. 28612-329
Sheet No. 3 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED														
	P U S H	U6 24	53.0 55.0			CL	Hydraulic tube sample taken. Gray lean CLAY with sand (CL), trace shells					1	17	82				
55					-67.8 58.0	CL	Very soft gray lean CLAY (CL), mps 1/8 in., no structure, organic odor, frequent silty medium to fine sand seams and partings with shells.	0.1					10	90				
	WOR WOR WOR WOR	S6 23	58.0 60.0															
60	WOR WOR WOR WOR	S7 18	63.0 65.0			ML	Very soft gray fat CLAY (CH), mps 1/8 in., no structure, organic odor, wet, trace shells -MARINE DEPOSITS- (MARINE SILT) Note: Advance casing with 300 lb. hammer from 67.5 ft to 68.0 ft.	0.0					10	90	S	M	M	H-V
65					-77.3 67.5	SM	Dense gray silty SAND with gravel (SM), mps 1 in., no structure, no odor, wet	0.0	10	10	25	25	15	15				
	22 14 24 24	S8 12	68.0 70.0		-78.8 69.0	ML	Hard gray brown to red brown SILT (ML), no structure, no odor, wet	0.0					5	95				
70	16 10 10 11	S9 12	73.0 75.0			ML	Very stiff red brown SILT (ML), no structure, no odor, wet	0.0					5	95	R	M	L	H
75					-86.3 76.5													
	17 16 17	S10 12	78.0 80.0			SM	Dense red brown silty SAND (SM), no structure, no odor, wet	0.0					55	45				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-004
File No. 28612-329
Sheet No. 4 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
	20																	
80							-MARINE DEPOSITS- (BASAL SAND)											
	13 12 14 19	S11 16	83.0 85.0			SM	Dense red brown silty SAND (SM), mps 1/2 in., no structure, no odor, wet	0.0					55	45				
85																		
					-97.8 88.0													
	8 8 11 15	S12 17	88.0 90.0			ML	Very stiff red brown SILT (ML), no structure, no odor, wet	0.0					40	60	R	L	L	M
90				NO WELL INSTALLED														
	8 9 11 17	S13 20	93.0 95.0			ML	Very stiff red brown SILT (ML), no structure, no odor, wet	0.0					10	90	R			
95																		
	9 9 13 14	S14 20	98.0 100.0			ML	Similar to S13 except, with occasional medium fine sand layers.	0.0					10	90	R	L	L	H
100							-MARINE DEPOSITS- (BASAL SAND)											
	6 7 9 13	S15 21	103.0 105.0			ML	Very stiff red brown SILT (ML), no structure, no odor, wet, occasional silty fine sand layers	0.0					10	90				
105																		
					-117.8 108.0													
	18 18	S16 16	108.0 110.0			SM	Dense red brown silty SAND (SM), no structure, no odor, wet, occasional fine sand, silt layer	0.0				20	65	15				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-004

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-004
File No. 28612-329
Sheet No. 5 of 6

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
	23 20																	
110							Drill action indicates coarse material at 112.7 ft.											
					-122.5 112.7	SP-SM	Very dense brown poorly graded SAND with silt (SP-SM), mps 5/8 in., no structure, no odor, wet	0.0		5	10	60	15	10				
	26 26 29 19	S17 15	113.0 115.0															
115							Drill action indicates coarse material.											
	34 45 38 50/2	S18 13	118.0 119.7			SP-SM	Similar to S17 except, mps 1 in.											
					-129.1 119.3	ML	Very desne brown sandy SILT with gravel (ML), mps 3/4 in., no structure, no odor, wet	0.0	20				20	60				
120				NO WELL INSTALLED	-129.8 120.0		Note: Refusal at 120 ft See Core Boring Report for rock details											
125																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-004

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

HALEY ALDRICH

CORE BORING REPORT

Boring No. PD2-GR-004
File No. 28612-329
Sheet No. 6 of 6

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
								TOP OF BEDROCK 120.0
120	2.5	C1	120.0 125.0	58 41	97 68		-129.8 120.0	C1: Very hard to hard, fresh, gray black, fine grained GNEISS. Folliation is moderately dipping, extremely close. Primary joint set moderately dipping, close to moderately spaced, rough, undulating, fresh to discolored, open. Secondary joint set low angle, moderately spaced, rough, undulating, fresh to discolored, open.
	3.0							
	3.5							-BEDROCK-
	4.5							
	4.0							
125							-134.8 125.0	BOTTOM OF EXPLORATION 125.0 FT
								Note: Borehole grouted upon completion.
130								
135								
140								
145								

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TEST BORING REPORT

Boring No. PD2-GR-005

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 4
Start 25 July 2014
Finish 29 July 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation -22.4 (est.)
Datum NAVD88
Location See Plan
N 788,476
E 661,433

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/U	-	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)		30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							Note: 34.5 ft to mudline from deck. Advance 4.0 in. casing by push.											
	WOR WOR WOR WOR	S1 19	4.0 6.0	NO WELL INSTALLED		OH	Very soft dark gray ORGANIC CLAY (OH), mps 1/4 in., no structure, organic odor, wet, trace shells, and organics	0.0					10	90	S	M	M	
5							-MARINE DEPOSITS- (MARINE SILT)											
	PUSH	U1 23	8.0 10.0			OH	Hydraulic tube sample taken. Gray, ORGANIC CLAY (OH)					3	7	90				
10					-36.4													
	WOR WOR WOR WOR	S2 12	14.0 16.0		14.0	CL	Very soft gray lean CLAY (CL), no structure, organic odor, wet, occasional fine sand with shells partings, trace shells and organics	0.0					10	90	S	M	M	
15																		
	PU	U2 21	19.0 21.0			CL	Hydraulic tube sample taken. Gray lean CLAY (CL)					2	6	92				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 81.0
Rock Cored (ft) -
Samples 10S, 6U

Boring No. PD2-GR-005

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-005
File No. 28612-329
Sheet No. 2 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	S H			NO WELL INSTALLED														
	WOR WOR WOR WOR	S3 22	24.0 26.0			CL	Very soft gray lean CLAY (CL), no structure, organic/sulfur odor, wet, occasional fine sand with shells partings	0.0					5	95	S	M	M	
25																		
	P U S H	U3 24	29.0 31.0				Hydraulic tube sample taken. Gray fat CLAY (CH) Note: Observed a 1-1/4 in rounded gravel at top of tube.						5	95				
30																		
					-56.4													
	WOR 1 1 1	S4 13	34.0 36.0		34.0	SM	Very loose gray silty SAND (SM), mps 1/4 in., no structure, organic/sulfur odor, wet, occasional silt layer, ~25% shells -MARINE DEPOSITS- (MARINE SILT)	0.0				25	60	15				
35																		
	P U S H	U4 16	39.0 41.0			CL	Hydraulic tube sample taken. Gray sandy lean CLAY (CL) Note: Observed 8 in. void at bottom of tube.					3	41	56				
40																		
	WOR WOR WOR 1	S5 23	44.0 46.0			ML	Very soft gray lean CLAY (CL), no structure, organic odor, wet, frequent fine sand with shells partings	0.0					5	95	S	M	M	
45																		
	P	U5	49.0			CH	Hydraulic tube sample taken. Gray fat CLAY (CH)				1	1	6	92				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-005

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-005
File No. 28612-329
Sheet No. 3 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	U S H	20	51.0	NO WELL INSTALLED			-MARINE DEPOSITS- (MARINE SILT)											
	WOR WOR WOR WOR	S6 24	54.0 56.0			CL	Very soft gray lean CLAY (CL), mps 3/4 in., no structure, organic odor, wet, trace shells	0.0					40	60				
60	P U S H	U6 10	59.0 61.0		-82.7 60.3		Hydraulic tube sample taken. Note: Tube bent at the bottom, poor recovery. Sample consisted of silty sand with ~5% shells, placed in jar.											
							Note: Drill action indicates coarse material from 60.3 ft to 64.0 ft. Advance casing with 300 lb. hammer											
65	20 15 19 25	S7 11	64.0 66.0			SM	Dense red brown silty SAND (SM), no structure, no odor, wet	0.0					55	45	R			
							-MARINE DEPOSITS- (BASAL SAND)											
70	15 15 20 27	S8 18	69.0 71.0			SM	Dense red brown silty SAND (SM), mps 1/2 in., no structure, no odor, wet	0.0					55	45	R			
75	11 15 18 18	S9 17	74.0 76.0			SM	Dense red brown silty SAND (SM), no structure, no odor, wet, occasional silt seam	0.0					60	40	R			
													70	30	R			

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-005

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-005
File No. 28612-329
Sheet No. 4 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80	13 12 15 16	S10 17	79.0 81.0	NO WELL INSTALLED	-103.4 81.0	SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet	0.0										
							BOTTOM OF EXPLORATION 81.0 FT Note: Borehole grouted upon completion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-005

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GR-006

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 4
Start 30 July 2014
Finish 04 August 2014
Driller P. Dickinson
H&A Rep. S. Brousseau

Elevation -4.9 (est.)
Datum NAVD88
Location See Plan
N 788,533
E 661,547

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/U	-	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	24	30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Safety/Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 16.5 ft to mudline from deck. Advance 4.0 in. casing by push.											
	WOR WOR WOR WOR	S1 18	2.0 4.0			OL	Very soft dark gray ORGANIC SILT (OL), no structure, organic odor, wet, trace organics and shells	0.0					5	95	S	M	M	
5																		
	PUSH	U1 21	7.0 9.0			MH	Hydraulic tube sample taken. Gray elastic SILT (MH)						8	92				
10																		
	WOR WOR WOR WOR	S2 17	12.0 14.0			OL	Samilar to S1								S	M	M	
							-MARINE DEPOSITS- (MARINE SILT)											
15																		
	PUSH	U2 15	17.0 19.0			CH	Hydraulic tube sample taken. Gray, fat CLAY (CH)						4	96				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 94
Rock Cored (ft) -
Samples 13S, 7U

Boring No. PD2-GR-006

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GR-006
File No. 28612-329
Sheet No. 2 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	WOR WOR WOR WOR	S3 11	22.0 24.0			OL	Very soft dark gray ORGANIC SILT (OL), mps 1/2 in., no structure, organic odor, wet, trace organics and shells -MARINE DEPOSITS- (MARINE SILT)	0.0					5	95				
25																		
	PUSH	U3 24	27.0 29.0			MH	Hydraulic tube sample taken. Gray, elastic SILT (MH)					1	6	93				
30																		
	WOR WOR WOR WOR	S4 22	32.0 34.0		-36.9 32.0	CL	Very soft gray lean CLAY (CL), no structure, no odor, wet, frequent fine sand with shells partings	0.0					5	95	S	M	M	
35																		
	PUSH 1 WOR WOR WOR	U4 4 S5 6	37.0 37.5 37.5 39.5			CL	Hydraulic tube sample taken. Poor recovery, similar to S4 except with two 1 in. gravel pieces. Sample placed in jars. Very soft gray lean CLAY (CL), no structure, no odor, wet	0.0					5	95				
40																		
	PUSH	U5 19	42.0 44.0			CL	Hydraulic tube sample taken. Gray lean CLAY (CL) Note: Observed dents in side of tube -MARINE DEPOSITS- (MARINE SILT)					1	9	90				
45																		
	WOR WOR WOH 2	S6 12	47.0 49.0			CL	Very soft gray lean CLAY (CL), no structure, no odor, wet, occasonal silty medium fine sand with shells layer	0.0					5	95				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-006

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-006
File No. 28612-329
Sheet No. 3 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED														
	P U S H	U6 23	52.0 54.0			SC	Hydraulic tube sample taken. Gray clayey SAND (SC) Note: Observed one 1.0 in. gravel piece at top of tube and silty medium to fine sand with shells at bottom of tube.			1	1	15	52	31				
55																		
	WOR WOH 1/12	S7 23	57.0 59.0			CL	Very soft gray lean CLAY (CL), mps 1/2 in., no structure, no odor, wet, with occasional silty coarse fine sand, trace fine gravel with shells layer and frequent silty fine sand with shells partings	0.0						10	90	S	M	M	
60																		
	P U S H	U7 23	62.0 64.0			CL	Hydraulic tube sample taken. Gray lean CLAY (CL) Note: Observed slight dent at bottom of tube and silty medium fine sand with shells at bottom of tube.							12	88				
65							-MARINE DEPOSITS- (MARINE SILT)											
	WOR WOR WOR WOR	S8 23	67.0 69.0			CL	Very soft gray lean CLAY (CL), mps 1/2 in., no structure, no odor, wet, trace shells	0.0						10	90	S	M	M	
70					-76.7													
	17 22 18 13	S9 12	72.0 74.0		71.8	SM	S9A: Dense gray silty SAND with gravel (SM),mps 1-1/4 in., no structure, no odor, wet	0.0	20	20	15	15	15	15				
					-77.9													
					73.0	ML	S9B: Hard gray brown to red brown SILT (ML), no structure, no odor, wet							30	70			
75																		
					-81.9													
	18 16 16 17	S10 14	77.0 79.0		77.0	SM	Dense red brown silty SAND (SM), no structure, no odor, wet	0.0						60	40	R		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-006

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-006
File No. 28612-329
Sheet No. 4 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80				NO WELL INSTALLED														
	14 15 19 21	S11 16	82.0 84.0			SM	Dense red brown silty SAND (SM), no structure, no odor, wet, occasional layer of interbedded silty and clay	0.0					55	45	R			
85																		
	13 15 14 15	S12 22	87.0 89.0			SM	Medium dense red brown silty SAND (SM), no structure, no odor, wet	0.0					60	40				
90																		
	10 14 18 23	S13 21	92.0 94.0			SM	Dense red brown silty SAND (SM), no structure, no odor											
					-98.9 94.0		BOTTOM OF EXPLORATION 94.0 FT Note: Borehole grouted upon competion.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-006

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-007

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 4
Start 03 June 2014
Finish 06 June 2014
Driller M. Mueller
H&A Rep. S. Brousseau
Elevation -22.8 (est.)
Datum NAVD88
Location See Plan
N 788,533
E 661,547

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SW/HW	S/U	-	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	6.0/4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	-	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	-	30	-	Casing: Push/Spin
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							35.1 ft to mudline from deck											
5	WOR WOR WOR WOR	S1 13	4.4 6.4	NO WELL INSTALLED		OH	Very soft dark gray ORGANIC CLAY (OH), no structure, organic odor, wet, trace shells -MARINE DEPOSITS- (MARINE SILT)	0.0					10	90	N			
10	PUSH	U1 15	7.9 9.9			CH	Hydraulic tube sample taken. Gray fat CLAY (CH) 3 in. missing at bottom						6	94				
15	WOR WOR WOR WOR	S2 24	12.9 14.9			OH	Very soft dark gray ORGANIC CLAY with sand (OH), mps 0.5 in., no structure, organic/sulfur odor, wet, trace organics, occasional sand partings	0.0					20	80	N			
20	PUSH	U2 23	17.9 19.9			OH	Hydraulic tube sample taken. Gray ORGANIC CLAY (OH) O-ring missing from sample, 5 in. missing at bottom					1	13	86				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 79.9
Rock Cored (ft) -
Samples 11S, 5U

Boring No. PD2-GR-007

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-007
File No. 28612-329
Sheet No. 2 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED														
	WOR WOR WOR WOR	S3 14	22.9 24.9			OH	Very soft dark gray ORGANIC CLAY with sand (OH), no structure, organic/sulfur odor, wet, 10% organics and sand layers	0.0				5	20	75	N			
25																		
	P U S H	U3 24	27.9 29.9			OH	Direct push tube sample taken. Gray ORGANIC CLAY (OH)						1	99				
30																		
	WOR WOR WOR WOR	S4 20	32.9 34.9			OH	Very soft gray ORGANIC CLAY with sand (OH), no structure, organic/sulfur odor, wet, ~10% shells, occasional sand layers -MARINE DEPOSITS- (MARINE SILT)	0.0				5	20	75	N			
35																		
	P U S H	U4 24	37.9 39.9			CL	Direct push tube sample taken. Gray lean CLAY with sand (CL), with shells					1	21	78				
40																		
	WOR WOR WOR WOR	S5 21	42.9 44.9			OH	Very soft gray ORGANIC CLAY with sand (OH), no structure, organic/sulfur odor, wet, trace shells and organics, occasional sand partings -MARINE DEPOSITS- (MARINE SILT)	0.0					10	90	N			
45																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-007

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-007
File No. 28612-329
Sheet No. 3 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
					-72.7													
50	PUSH	U50	49.9 51.9		49.9		Direct push tube sample taken. No recovery, slight beds observed at bottom of tube Note: drill action indicated coarse material from 51.9 ft to 52.9 ft											
	19 25 34 25	S6 10	52.9 54.9			SM	Very dense gray silty SAND with gravel (SM), mps 1.5 in., no structure, no odor, wet	0.0	10	10	20	30	15	25				
55							Note: drill action indicates coarse material from 52.9 ft to 57.9 ft, advance with mud lost ~130 gallons of mud											
	27 22 10 6	S7 10	57.9 59.9			SM	Dense gray silty SAND (SM), mps 1 in., no structure, no odor, wet	0.0	5	5	15	30	25	20				
					-81.7													
					58.9	MH	Hard gray elastic SILT with sand (MH), mps 1/8 in., no structure, no odor, wet	0.0					25	75	S	M	M
60				NO WELL INSTALLED			Note: advance with mud wash, lost ~65 gallons of mud											
	3 11 22 18	S8 6	62.9 64.9			MH	Hard gray elastic SILT (ML), no structure, no odor, wet	0.0					5	95	S	M	M
65							Note: advance with mud wash, lost ~65 gallons of mud -MARINE DEPOSITS- (MARINE SILT)											
	1 2 2 4	S9 22	67.9 69.9			CH	Soft gray fat CLAY (CH), mps 3/4 in., no structure, no odor, wet	0.0					20	80	S	M	H
70																		
	3 1 1 3	S10 16	72.9 74.9			MH	Very soft gray elastic SILT (MH), no structure, no odor, wet Note: drill action indicates coarse material from 74.9 ft to 77.9 ft, advance with push and wash	0.0					5	95	S	M	M
					-97.7													
75					74.9		-MARINE DEPOSITS- (BASAL SAND)											
	16 18 17 16	S11 13	77.9 79.9			SM	Dense brown silty SAND (SM), mps 0.5 in.	0.0				35	50	15				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-007

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-007
File No. 28612-329
Sheet No. 4 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
				NO WELL INSTALLED	-102.7 79.9		BOTTOM OF EXPLORATION 79.9 FT Note: borehole grouted upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-007

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-008

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 5
Start 09 June 2014
Finish 09 June 2014
Driller P. Dickinson/M. Mueller
H&A Rep. S. Brousseau
Elevation -19.3 (est.)
Datum NAVD88
Location See Plan
N 787,013
E 661,358

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/U	NQ	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	24	30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Automatic/Safety Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 31.5 ft to mudline from deck, advance with 4 in. casing by push											
	WOR WOR WOR WOR	S1 16	2.0 4.0			OH	Very soft gray ORGANIC CLAY with sand (OH), no structure, organic odor, wet, trace organics	0.0				5	20	75	N			
5																		
	PUSH	U1 22	7.0 9.0			OH	Direct push tube sample taken. Gray ORGANIC CLAY with sand (OH)					1	14	85				
							-MARINE DEPOSITS- (MARINE SILT)											
10																		
	WOR WOR WOR WOR	S2 5	12.0 14.0			OH	Very soft gray ORGANIC CLAY (OH), no structure, organic odor, wet, trace shells	0.0					10	90	N			
15																		
	PUSH	U2 23	17.0 19.0			OH	Direct push tube sample taken. Black ORGANIC CLAY (OH)					1	11	88				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	84.5
Rock Cored (ft)	5
Samples	10S, 5U

Boring No. PD2-GR-008

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-008
File No. 28612-329
Sheet No. 2 of 5

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	WOR WOR WOR WOR	S3 20	22.0 24.0	NO WELL INSTALLED		CL	Very soft gray lean CLAY (CL), no structure, no odor, wet, trace shells, with occasional sand partings	0.0					5	95	S	M	H	
25	P U S H	U3 24	27.0 29.0			CL	Direct push tube sample taken. Gray lean CLAY (CL) -MARINE DEPOSITS- (MARINE SILT)					1	6	93				
30	WOH WOH WOH WOH	S4 6	32.0 34.0		-51.3 32.0	ML	Very soft gray SILT with sand (ML), mps 1 in., no structure, no odor, wet, with occasional sand seams, trace shells, 1 in. mps cemented shell mass	0.3				5	20	75				
35	P U S H	U4 24	37.0 39.0			OL	Direct push tube sample taken. Black ORGANIC SILT with sand (OL)						18	82				
40	WOR WOR WOR WOR	S5 19	42.0 44.0			ML	Very soft gray SILT with sand (ML), no structure, organic odor, wet, ~10% shells, with frequent sand seams	0.4				5	20	75				
45	P U S H	U5 23	47.0 49.0			ML	Direct push tube sample taken. Gray SILT (ML)						6	94				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-008

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-008
File No. 28612-329
Sheet No. 3 of 5

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED	-71.3													
	100/5	S6 5	52.0 52.4		52.0	SM	Very dense gray silty SAND with gravel (SM), mps 1 in., no structure, no odor, wet Note: Drill action indicates coarse material from 52 ft to 57 ft	0.0	10	10	20	30	15	15				
55	18 10 3 5	S7 8	57.0 59.0			SM	Medium dense gray silty SAND (SM), mps 1 in., no structure, no odor, wet	0.4	5	5	5	20	20	45				
60	7 7 8 10	S8 0	62.0 64.0				No recovery	0.2										
65	13 17 6 11	S9 13	67.0 69.0			SM	Medium dense gray silty SAND (SM), mps 1/2 in., no structure, no odor, wet, occasional brown sand pocket	0.4		5	5	5	40	45				
						SM	Medium dense gray silty SAND (SM), mps 3/4 in., no structure, no odor, wet			5	5	35	30	25				
70							Drill action indicates coarse material from 67 ft to 72 ft											
	47 26 21 26	S10 14	72.0 74.0			SM	S10A: Dense red brown silty SAND (SM),mps 1/2 in., no structure, no odor, wet, occasional silty pocket	0.0		5	30	30	20	15				
						SM	S10B: Dense red brown silty SAND (SM), mps 1/4 in., no structure, no odor, wet					25	50	25				
75							Note: Drill action indicates occasional gravel											
	36 45 21 20	S11 9	77.0 79.0			SM	Very dense brown silty SAND (SM), no structure, no odor, wet, interbedded seams of silty and fine sand, occasional medium to fine sand layer	0.0				15	55	30				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-008

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-008
File No. 28612-329
Sheet No. 4 of 5

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80				NO WELL INSTALLED			Note: Drill action indicates coarse material from 79 ft to 81 ft											
	14 15 16 20	S12 13	82.0 84.0			SM	Dense gray brown silty SAND (SM), mps 1/2 in., no structure, no odor, wet, interbedded layers of silt and medium fine sand Note: Begin coring at 84.5 ft Top of bedrock at 84.5 ft					15	55	30				
					-103.8 84.5													
85							See Core Boring Report for rock details											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-008

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

CORE BORING REPORT

Boring No. PD2-GR-008
File No. 28612-329
Sheet No. 5 of 5

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
								TOP OF BEDROCK 84.5
	1.00	C1	84.5	43	72		-103.8 84.5	C1: Hard, fresh to slightly weathered, light gray to tan, fine to medium grained MARBLE. Foliation is moderately dipping to high angle, close. Primary joints set moderately dipping, moderately spaced, rough, undulating, fresh to discolored, open. Secondary joint set low angle to horizontal, moderately spaced, rough, undulating, fresh to discolored, open. Slight to moderate effervescence with dilute HCl .
85	3.50		89.5	35	58			-BEDROCK-
	4.25							
	4.50						-108.8 89.5	BOTTOM OF EXPLORATION 89.5 FT
90								Note: Borehole grouted upon completion.
95	4.25							
100								
105								
110								

H+A_CORE+WELL07-1 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-009

Project Former Anaconda Wire and Cable
Client Atlantic Richfield Company
Contractor Cascade Drilling

File No. 28612-329
Sheet No. 1 of 3
Start 18 June 2014
Finish 20 June 2014
Driller P. Dickinson
H&A Rep. S. Brousseau
Elevation -14.2 (est.)
Datum NAVD88
Location See Plan
N 787,018
E 661,407

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S/U	NQ	Rig Make & Model: Skid Diedrich D50
Inside Diameter (in.)	4.0	1 3/8 / 2 7/8	-	Bit Type: Roller Bit
Hammer Weight (lb)	300	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	24	30	-	Casing: Push/Drive
				Hoist/Hammer: Winch Automatic/Safety Hammer
				PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			Note: 27 ft for mudline form deck, advance 4 in. casing by push											
	WOR WOH WOH WOH	S1 16	1.0 3.0			OH	Very soft dark gray ORGANIC CLAY (OH), mps 1/2 in., no structure, organic odor, wet, trace organics, shells, and wood	0.0					10	90	S			
5	PUSH	U1 21	6.0 8.0			OH	Direct push tube sample taken. Black ORGANIC CLAY (OH)					1	4	95				
							-MARINE DEPOSITS- (MARINE SILT)											
10	WOR WOR WOR WOR	S2 17	11.0 13.0			OH	Very soft dark gray ORGANIC CLAY (OH), mps 1/2 in., no structure, organic odor, wet, trace organics, shells, and probable slag, occasional medium fine sand seams	0.0					10	90	S			
15	PUSH	U2	16.0 18.0			OH	Direct push tube sample taken (drill head used). Gray ORGANIC SILT with sand (OH)						18	82				
20																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary
Overburden (ft) 71.5
Rock Cored (ft) -
Samples 10S, 5U

Boring No. PD2-GR-009

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-009
File No. 28612-329
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20				NO WELL INSTALLED	-35.2													
	WOR WOR WOR WOR	S3 24	21.0 23.0		21.0	CL	Very soft gray lean CLAY (CL), mps 1/3 in., no structure, organic odor, wet, trace shells, frequent fine sand partings	0.0					10	90	S	M	H	
25	P U S H	U3 24	26.0 28.0			CL	Direct push tube sample taken (drill head used). Gray lean CLAY (CL), with shells -MARINE DEPOSITS- (MAINE SILT)						5	95				
30	WOR 1 WOH WOH	S4 16	31.0 33.0			CL	Very soft gray lean CLAY (CL), no structure, organic odor, wet, frequent fine sand partings, occasional medium fine sand seams, trace shells	0.0					10	90	S	M	H	
35	P U S H	U4 24	36.0 38.0			CH	Direct push tube sample taken. Gray fat CLAY with sand (CH)					1	16	83				
40	WOR WOR WOR 1	S5 24	41.0 43.0			CL	Very soft gray lean CLAY with sand (CL), no structure, organic odor, wet, frequent fine sand partings, trace organics and shells -MARINE DEPOSITS- (MARINE SILT)	0.0					20	80	S	M	H	
45	P U S H	U5 24	46.0 48.0			CL	Direct push tube sample taken. Gray lean CLAY with sand (CL)					1	16	83				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-009

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GR-009
File No. 28612-329
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50				NO WELL INSTALLED														
	WOR WOR 1 4	S6 21	51.0 53.0			ML	Very soft gray SILT (ML), no structure, organic odor, wet, trace shells, frequent silty sand seams	0.0					20	80				
					-66.2 52.0	SM	Very loose gray silty SAND (SM), mps 1/2 in., no structure, slight organic odor, wet, trace shells and organics/wood	0.1		5	10	30	25	30				
					-68.7 54.5		Note: Drill action indicates probable cobble to 54.5 to 55.3 ft											
55	30 10 12 9	S7 7	56.0 58.0			ML	Very stiff sandy SILT (ML), mps 3/4 in., no structure, no odor			5	5	10	20	60				
							Note: Drill action indicates coarse material from 56 ft to 61 ft											
60	8 7 3 3	S8 17	61.0 63.0			ML	S8A: Stiff gray sandy SILT (ML), mps 1 in., no structure, no odor, wet, frequent fine sand partings	0.0					30	70				
						ML	S8B: Stiff gray lean CLAY (CL), no structure, no odor, wet	0.0					10	90	S	M	M	
65							Note: Drill action indicates hard material from 65 ft to 66 ft											
	50/4	S9 0	66.0 66.3				No recovery	NA										
							Note: Drill action indicates occasional coarse material, roller bit through hard material from 70 ft to 71.5 ft											
							-MARINE DEPOSITS- (BASAL SAND)											
70							No recovery											
	50/0	S10 0	71.5 71.5		-85.7 71.5		BOTTOM OF EXPLORATION 71.5 FT Note: borehole grouted upon completion											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GR-009

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-329TB_PDI7_RIVER_LS.GPJ 6 Aug 15

BORING REPORTS-LAND

TEST BORING REPORT

Boring No. PD2-GL-001

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 3
Start 08 October 2013
Finish 10 October 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation 7.9 (est.)
Datum NAVD88
Location See Plan
N 787,784
E 661,758

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: BK 81
Inside Diameter (in.)	4	1 3/8	2	Bit Type: Roller Bit
Hammer Weight (lb)	140	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	30	30	-	Casing: 25 ft Driven
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	6.7		15 in. thick concrete grade slab at the surface: no voids observed under the slab											
	11 11 14 19	S1 15	1.0 3.0		1.3	SM	Medium dense, dark brown to black, silty SAND (SM), no odor, dry, with tar, bricks, and wood fragments -FILL-											
	15 14 12 12	S2 24	3.0 5.0			SM	Medium dense dark brown silty SAND (SM), mps 1/2 in., no odor, dry, with brick and wood fragments			5	20	40	20	15				
5	9 16 8 8	S3 20	5.0 7.0			SM	Similar to above, dry to moist											
	4 3 1 2	S4 8	7.0 9.0			SM	Loose dark brown silty SAND (SM), mps 1/2 in., petroleum-like odor, wet, oily substance present in the sample	15.0		5	30	30	20	15				
	6 3 2 2	S5 8	9.0 11.0			SM	Similar to above except sheen observed in the mud tub	0.0		5	25	30	25	15				
10	1 1 1 1	S6 4	11.0 13.0			SM	Similar to above except, wood fragments in the tip											
	1 1 8 8	S7 3	13.0 15.0		-5.1 13.0	GP	Loose dark brown GRAVEL (GP), wood and concrete fragments with poorly graded sand, slight petroleum-like odor, wet	0.0										
15	6 4 2 2	S8 2	15.0 17.0			SP	Loose dark brown poorly graded SAND with gravel (SP), mps 3/4 in., slight petroleum odor											
	1 1 4 4	S9 8	17.0 19.0		-10.1	SP	Poor recovery from 17 ft to 18 ft, likely similar to above											
	P U S H	U1 0	19.0 21.0		18.0	MH	Soft dark brown clayey elastic SILT (MH), organic odor, wet -INTERMIXED MARINE SILT/FILL- Shelby tube damaged likely from obstruction in the sampled interval. Resampled with 3" spoon: dark brown sandy SILT, with concrete and metal fragments, clayey silt at 20.5 ft				5	5	15	75			M	L
20	2 6 4 3	S10 20	21.0 23.0		-13.1 21.0	ML	Stiff, dark gray clayey SILT with sand (ML), slight organic odor, wet, with peat and sandy silt layers 1/4 in. thick, and coarse gravel -MARINE SILT-					10	20	70				
25																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft) 92.0
Rock Cored (ft) -
Samples 21S, 7U

Boring No. PD2-GL-001

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GL-001
File No. 28612-312
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25	PUSH	U2 0	25.0 27.0	NO WELL INSTALLED		SM/ ML	Shelby tube: no recovery. Resampled with 3" spoon: Gray silty SAND to sandy SILT with clay, with layers of shell fragments, organic odor, wet					20	30	50	S	L	L	L
	PUSH	U3 20	27.0 29.0			SM/	Top: gray silty SAND (SM)					10	50	40				
						CL	Bottom: gray sandy lean CLAY (CL)			4	3	11	17	65				
30	1 2 3 2	S11 0	30.0 32.0			SM	No recovery. Resampled with 3" spoon: Loose gray silty SAND (SM), with sandy silt layers, wet, with shell fragments				5	10	45	40				
							-MARINE SILT-											
35	PUSH	U4 10	35.0 37.0			CH	Gray fat CLAY (CH)						12	88				
40	3 1 1 1	S12 8	40.0 42.0			SM	Very loose gray silty SAND with clay (SM), mps 1/4 in., no odor, wet, trace gravel, and shell fragments				5	20	35	40				
	PUSH	U5 24	42.0 44.0			CL	Gray sandy lean CLAY (CL)			1	2	4	25	69				
							-MARINE SILT-											
45	1 1 2 4	S13 0	48.0 50.0			SM	No recovery, resampled with 3 in. spoon: Loose gray silty SAND (SM), mps 1/2 in., no odor, wet, with clay and gravel, shell fragments			5	15	15	25	40				
50	PUSH	U6 0	50.0 52.0				No recovery, resampled with 3in. sampler: mps <1 mm, no odor, wet, with thin layers of sand and organic matter					10	30	60				
					-44.1 52.0													
	PUSH	U7 0	52.0 54.0				No recovery. Damaged sampler indicates hard formation											
55	10 12 10 11	S14 8	55.0 57.0			SM	Medium dense brown silty SAND (SM), mps 1/2 in., no odor, wet			5	15	30	20	30				
60	15 4 4 4	S15 4	60.0 62.0			CL	Stiff gray sandy lean CLAY (CL), mps 3/4 in., no odor, wet, with rounded gravel			5	10	10	15	60				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GL-001

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HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GL-001
File No. 28612-312
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
					-55.1													
					63.0		Rig chatter from 63 ft to 65 ft, likely gravelly layer -BASAL SAND-											
65	37 16 15 17	S16 12	65.0 67.0			SM	Dense red-brown silty SAND (SM) with pockets of sandy SILT, trace fine gravel, no odor, wet					5	65 40	30 60				
70	7 9 13 14	S17 18	70.0 72.0			ML	Medium dense red-brown sandy SILT (ML), mps < 1 mm, no odor, wet Occasional rig chatter.						30	70	S	L	N	L
75	10 15 17 21	S18 15	75.0 77.0	NO WELL INSTALLED		SM	Dense red-brown silty SAND (SM) with 2 in. thick pocket of clayey sand at the tip, mps 1/2 in., no odor, wet, trace gravel							40	R	L	N	N
80	4 9 10 13	S19 24	80.0 82.0			SM/ ML	Medium dense red-brown silty SAND (SM) and sandy SILT (ML), mps < 1 mm, no odor, wet					10	40	50				
85	10 18 13 13	S20 18	85.0 87.0			SM	Dense red-brown silty SAND (SM), mps < 1 mm, no odor, wet					15	45	40				
90	9 15 28 70/3"	S21 12	90.0 92.0			SM	Dense red-brown silty SAND (SM), mps 1/2 in., no odor, wet, few pieces of red-brown gravel at the tip				10			30				
					-84.1 92.0		BOTTOM OF EXPLORATION 92.0 FT Note: borehole grouted with portland cement grout mix.											

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GL-001

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_7_LAND_LS.GPJ 6 Aug 15

HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GL-002

Project FORMER ANACONDA WIRE AND CABLE
Client ATLANTIC RICHFIELD COMPANY
Contractor CASCADE DRILLING, L.P.

File No. 28612-312
Sheet No. 1 of 5
Start 02 October 2013
Finish 08 October 2013
Driller P. Dickinson
H&A Rep. B. Issac
Elevation 7.7 (est.)
Datum NAVD88
Location See Plan
N 788,146
E 661,738

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: BK 81
Inside Diameter (in.)	4	1 3/8	2	Bit Type: Roller Bit
Hammer Weight (lb)	140	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	30	30	-	Casing: 25 ft Driven
				Hoist/Hammer: Winch Automatic Hammer
				PID Make & Model: MiniRAE 2000

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			15 in. concrete slab											
					6.4													
	3 12 14 7	S1 24	1.0 3.0		1.3	SP-SM	Medium dense dark brown poorly graded SAND with silt (SP-SM), mps 1 in., no odor, dry, mostly cinder, brick, concrete -FILL-			15	20	30	25	10				
	6 6 7 5	S2 24	3.0 5.0			SP-SM	Similar to above except higher fine gravel content			30	15	20	25	10				
5	2 1 1 1	S3 5	5.0 7.0			SM	Very loose dark brown silty SAND with gravel (SM), mps 3/4 in., slight petroleum odor, wet, may contain oily material	6.2		15	15	20	35	15				
	1 1 1 1	S4 8	7.0 9.0			SM	Similar to above	6.5										
	WOR WOH WOH 1	S5 7	9.0 11.0			SP-SM	Very loose gray brown poorly graded SAND with silt to silty SAND (SP-SM), mps 1/2 in., petroleum-like odor, wet, concrete glass, and brick particles	12		10	20	20	35	15				
10	WOR 1 1 1	S6 0	11.0 13.0				No Recovery											
	1 WOH WOH WOH	S7 0	13.0 15.0			SP-SM	No recovery with standard split spoon sampler. Resampled with 3" spoon: Poor recovery, similar to S5, no odor	1.0										
15	1 1 1 1	S8 0	15.0 17.0				No recovery											
	1 WOH WOH WOH	S9 3	17.0 19.0			SC/SM	Very loose dark brown silty/clayey SAND (SC/SM), mps 1/2 in., slight petroleum odor, wet, with brick, wood, concrete particles -FILL-	2.5		5	20	20	35	20				
20	WOH 1 WOH WOH	S10 0	19.0 21.0				No recovery with standard split spoon, resampled with 3" spoon: Similar to above											
					-13.3													
	WOR WOR WOR WOR	S11 24	21.0 23.0		21.0	CL-ML	Very soft gray clayey SILT (ML) to silty CLAY (CL), mps < 1 mm, slight organic odor, wet, trace organic matter -MARINE SILT-						20	80				
25	P U S H	U1 9	23.0 25.0			CL-ML	Similar to above											

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed
S - Split Spoon
G - Geoprobe
H - Hand Auger

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	109.5
Rock Cored (ft)	6.5
Samples	21S, 4U, 1C

Boring No. PD2-GL-002

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich of New York.

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TEST BORING REPORT

Boring No. PD2-GL-002
File No. 28612-312
Sheet No. 2 of 5

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25	1 1 1 1	S12 15	25.0 27.0	NO WELL INSTALLED		CL	Very soft gray sandy lean CLAY (CL), mps <1 mm, slight organic odor, wet						30	70				
							-MARINE SILT-											
30	P U S H	U2 0	30.0 32.0				No recovery											
	P U S H	U3 10	32.0 34.0			CH	Dark gray sandy fat CLAY (CH), trace shell particles				10	10	20	60				
35	WOH WOH WOH WOH	S13 0	34.0 36.0				No recovery with standard split spoon, resampled with 3 in. spoon, no recovery											
	WOH WOH WOH WOH	S14 15	36.0 38.0			CH	Very soft dark gray sandy fat CLAY (CH), mps 1 mm, slight organic odor, wet, with sea shells				5	10	25	60				
	P U S H	U4 21	38.0 40.0			CH	Dark gray fat CLAY (CH)					2	11	87				
40	1 1 1 1	S15 20	40.0 42.0		-32.3 40.0	SM	Very loose dark gray silty SAND with clay (SM), mps 2 mm, no odor, wet, with shell fragments				15	10	35	40				
	1 1 2 2	S16 24	43.0 45.0			ML-,SM	Very loose soft dark gray sandy SILT (ML) to silty SAND (SM) with clay, mps 2 mm, layered with thin partings of shell fragments and fine sand, no odor, wet					10	40	50				
45																		
	1 1 2 3	S17 24	48.0 50.0			ML-,SM	Similar to above				5	10	25	60				
50																		
	WOH WOH 2 2	S18 24	53.0 55.0			SM/ ML	Very loose dark gray silty SAND (SM) with pockets of sandy SILT with clay (ML), shell fragments, mps 1/4 in., varved, no odor, wet				10	15	35	40				
55																		
	1 1 1 10	S19 24	58.0 60.0			SM	Similar to above with a 6 in. layer of poorly graded sand at the tip				10	15	35	40				
60																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GL-002

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HALEY ALDRICH

TEST BORING REPORT

Boring No. PD2-GL-002
File No. 28612-312
Sheet No. 3 of 5

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
	1 2 7 5	S20 3	63.0 65.0	NO WELL INSTALLED	-57.3 65.0	SC	Loose dark gray clayey SAND (SC), mps 1/2 in., no odor, wet, higher plasticity than above				10	20	30	40			M	
65						SP	Medium dense red-brown poorly graded SAND (SP), mps 1 mm, no odor, wet -BASAL SAND-					20	75	5				
	13 11 10 10	S21 24	68.0 70.0															
70						SM	Medium dense red-brown silty SAND (SM), mps <1 mm, uniformly graded, no odor, wet						80	20	R			
	3 5 8 12	S22 20	73.0 75.0															
75						SM	Similar to above						80	20	R			
	5 11 15 19	S23 18	78.0 80.0				Hard drilling at 80 ft											
80						SM	Similar to above						80	20	R			
	4 6 11 16	S24 18	83.0 85.0															
85						SM	Medium dense red-brown silty SAND (SM), with 6 to 8 in. thick pocket of brown sandy SILT with clay, no odor, wet						50	50	R			
	5 7 10 18	S25 20	88.0 90.0															
90						SM	Medium dense red-brown silty SAND (SM), mps <1 mm, uniformly graded, no odor, wet											
	6 12 17 18	S26 20	93.0 95.0															
95						SM	Similar to above except, coarser gradation					15	50	35				
	6 10	S27 24	98.0 100.0															

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. PD2-GL-002

28612 TB 2015 28612_HASTINGS LIBRARY.GLB HA-TB+CORE+WELL-07-1.GDT K:\HASTINGS GINT FOLDER\2013-28612-312TB_PDI_7_LAND_LS.GPJ 6 Aug 15

TEST BORING REPORT

Boring No. PD2-GL-002
File No. 28612-312
Sheet No. 4 of 5

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	PID Readings (ppm)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
100	12 20			NO WELL INSTALLED														
	10 19 24 17	S28 18	103.0 105.0			SM	Medium dense red-brown silty SAND (SM), mps 1/4 in., no odor, wet, 1 in. thick parting of coarse sand and trace fine gravel at 105 ft depth				5	10	45	40				
105																		
	9 11 29 101	S29	108.0 110.0			SM	Very dense gray-brown to red-brown silty SAND with trace gravel (SM),mps 3/4 in., no odor, wet			10	15	25	25	25				
					-101.8 109.5		109.5 ft to 110 ft: slight gray and green rock fragments											
110					-102.3 110.0		-BEDROCK- SEE CORE BORING REPORT											
115																		

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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CORE BORING REPORT

Boring No. PD2-GL-002
File No. 28612-312
Sheet No. 5 of 5

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
								Top of rock approximately 109.5 ft based on split spoon sample and drill action.
							109.5	
110								
	2	C1	111.0 116.0	26 19	43 32			Hard medium to fine grained light gray GNEISS, vertical to sub vertical foliation.
	2							
	2							
	23							
115	9							
							116.0	BOTTOM OF EXPLORATION 116.0 FT
								Borehole grouted with cement - bentonite grout.
120								
125								
130								
135								

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TEST PIT REPORTS
&
PHOTOGRAPHS

TEST PIT LOG

Test Pit No. PD2-TP-1

Project	Former Anaconda Wire & Cable Company	**File No.**	28612-331
Location	Hastings-On-Hudson, New York	**H&A Rep**	S. Collinge
Client	ARCO	**Date**	25 Jun 14
Contractor	AEAC, R. Rivera	**Weather**	Sunny/Humid
Equipment Used	John Deere 200CL		

Ground El.: 9.4 **El. Datum:** NAVD 88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):**

Depth (ft)	Sample ID	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0				Surface covered with red brick, concrete pieces, and vegetation.										
		7.9												
		1.5		Red brick, pieces of pipe, tie downs, tar roofing material, wire, concrete pieces, piece of 6-in. concrete slab up to 3 ft by 3 ft. Wood debris observed on north side of the test pit.										
	No Sample Taken 0 - 5.9		SM	-FILL- Brown coarse to fine SAND, some silt and fine gravel, no structure, no odor, moist. 50% red brick, 20% concrete pieces, 70% fill.										
				Relatively easy to excavate, no water encountered.										
5				Concrete slab observed on face of east sidewall.										
		3.5		Excavator bucket refusal at 5.9 ft on what appears to be a concrete floor.										
		5.9		BOTTOM OF EXPLORATION 5.9 FT										
				Note: No sample was taken for soil stabilization testing. Water was not encountered in the test pit.										
10														

Obstructions: No large obstruction: a lot of fill material.

Remarks:

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth	0	ft
measured after	0	hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24	0	=
over 24	0	=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 5.9 X 7.5

Pit Depth (ft) 14.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HALEY ALDRICH

TEST PIT LOG

Test Pit No. PD2-TP-2

Project	Former Anaconda Wire & Cable Company	**File No.**	28612-331
Location	Hastings-On-Hudson, New York	**H&A Rep**	S. Collinge
Client	ARCO	**Date**	30 Jun 14
Contractor	AEAC, R. Rivera	**Weather**	Sunny/Hot/Humid
Equipment Used	John Deere 200CL		

Ground El.: 7.5 **El. Datum:** NAVD 88 | **Location:** See Plan BS2-outfall | **Groundwater depths/entry rates (in./min.):**

Depth (ft)	Sample ID	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0				CONCRETE.										
		6.6 0.9	SM	Black poorly graded coarse grained SAND with fine gravel, moist, concrete (1x2x10"), brick, glass.	15	20	30	25	10		N	N	N	N
		4.7 2.8		Yellowish/reddish-brown, brick, metal, wood debris, concrete -FILL-										
		2.7		Black liquid running in sidewall at 4.8 ft.										
5	No Sample Taken 0 - 11.0	4.8	SP	Black poorly graded fine to coarse SAND with gravel, very strong odor, concrete up to 1x1x8", 1 in. copper rope, wire up to 6 ft in length, roofing material, bottles, copperwire, wood debris, leather. -FILL-	15	20	30	25	10					
				Water encountered										
				Continual trench collapsse past 9 ft At 9 to 10 ft, increase of wood debris										
10		-2.5 10.0	GP	Grayish-brown poorly graded fine to coarse GRAVEL with medium to coarse sand, strong petroleum-like odor	15	35	20	20	10		N	N	N	N
		-3.5 11.0		BOTTOM OF EXPLORATION 11.0 FT										

Obstructions: Bricks.

Remarks:

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 11 x 14
Pit Depth (ft) 14.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HALEY ALDRICH

TEST PIT LOG

Test Pit No. PD2-TP-3

Project	Former Anaconda Wire & Cable Company	**File No.**	28612-331
Location	Hastings-On-Hudson, New York	**H&A Rep**	S. Collinge
Client	ARCO	**Date**	26 Jun 14
Contractor	AEAC, R. Rivera	**Weather**	Sunny/Humid
Equipment Used	John Deere 200CL		

Ground El.: 4.8 **El. Datum:** NAVD 88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):**

Depth (ft)	Sample ID	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0				ASPHALT. Coarse GRAVEL (Base Course).										
	No Sample Taken 0 - 4.5	3.8 / 1.0	SP	Black poorly graded coarse to fine SAND, with 25% to 30% brick pieces, copper wire, and glass. -FILL-										
		1.8 / 3.0	SP	Grayish-black poorly graded coarse to fine SAND with gravel, moderate odor, moist to wet.	15	30	25	20	10		N	N	N	N
		1.0 / 3.8	ML	Yellowish-brown sandy SILT, wet.					30	70	R	N	N	N
		0.6 / 4.2	SP	Black silty SAND with gravel, wet to saturated.		20	30	20	10	20				
5		-0.3 / 5.0	GP	Grayish-black poorly graded coarse to fine GRAVEL with sand, strong petroleum-like odor, sheen on water and soil. -FILL- Test pit terminated at 7 ft due to caving in that filled up the excavation to about 5.5 ft depth.	25	30	20	15	10					
		-2.3 / 7.0		BOTTOM OF EXPLORATION 7.0 FT										
10				Note: Water was coming into the test pit rapidly as the test pit was advanced. Water was observed at a depth of approximately 4.0 ft after excavation was stopped. A roughly 2.5-gallon composite soil sample was taken from 0 to 4.5 ft depth for soil stabilization testing. Test pit was left open until the afternoon (around 3 pm) and the water level was observed at 3.5 ft depth. Water pushed to the surface during backfilling operation. Pausing during backfilling allowed the water to seep back into the excavation.										

Obstructions: No large obstruction.

Remarks:

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth	3.5	ft
measured after	6	hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24	0	=
over 24	0	=

Test Pit Dimensions (ft)

Pit Length x Width (ft)	7.0 X 5.5
Pit Depth (ft)	14.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HALEY ALDRICH

TEST PIT LOG

Test Pit No. PD2-TP-4

Project	Former Anaconda Wire & Cable Company	**File No.**	28612-331
Location	Hastings-On-Hudson, New York	**H&A Rep**	S. Collinge
Client	ARCO	**Date**	27 Jun 14
Contractor	AEAC, R. Rivera	**Weather**	Sunny/Humid
Equipment Used	John Deere 200CL		

Ground El.: 7.8 | **El. Datum:** NAVD 88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):**

Depth (ft)	Sample ID	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0				CONCRETE.										
		6.9												
		0.9	SP	Black, brown and red poorly graded coarse to fine SAND with gravel, few cobbles.										
		6.3												
		1.5		Red brick, copper wire, concrete pieces up to 2 ft by 3 ft and 12 in. thick, heavily-stained (green, greenish-blue) fill material from 2 ft to 4 ft depth.										
				-FILL-										
				Possible railroad ties at north end of the test pit from 2 ft to 3 ft depth. Steel, old hand shovel, miscellaneous debris, glass, granite, 75% to 80% fill.										
				Soil excavation difficult from 1.5 ft to 7.4 ft depth.										
5	No Sample Taken 0 - 11.8			Unknown steel structure encountered in northern 1/3 of the test pit at 5.7 ft depth.										
				Water encountered at 7 ft depth.										
		0.4												
		7.4	GP	Water initially trickling into test pit but flow rate increased from all sides of the excavation as it was advanced. Grayish-black poorly graded coarse to fine GRAVEL with sand, cobbles up to 8 in., strong petroleum-like odor, saturated.										
				-FILL-										
10				Excavation effort is easier at this depth. Apparent change in color at 11 ft.										
		-4.0												
		11.8		BOTTOM OF EXPLORATION 11.8 FT										
				Note: No sample was taken for soil stabilization testing. A 6-in. cast-iron pipe was broken during excavation of soils. Pipe is believed to be abandoned. As a precaution, a concrete plug was placed at the end of the pipe before test pit was completely backfilled. Pipe was encountered 8 to 11 in. BGL, along the eastern edge of the test pit. Unknown steel structure encountered at 5.7 ft depth is made up of 0.25 in. thick steel on east, west, and north walls of the test pit. Test pit was backfilled with the excavated material, but the last 9 in. was covered with clean fill. One bucket (Bobcat) of excavated soil was placed in the										

Obstructions: Possible old tank 1/4 in. steel.

Remarks:

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) ___ X 11.8
Pit Depth (ft) 14.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HALEY ALDRICH

TEST PIT LOG

Test Pit No. PD2-TP-5

Project	Former Anaconda Wire & Cable Company	**File No.**	28612-331
Location	Hastings-On-Hudson, New York	**H&A Rep**	S. Collinge
Client	ARCO	**Date**	26 Jun 14
Contractor	AEAC, R. Rivera	**Weather**	Sunny/Humid
Equipment Used	John Deere 200CL		

Ground El.: 7.1 | **El. Datum:** NAVD 88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):**

Depth (ft)	Sample ID	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0	No Sample Taken 0 - 7.0			Surface covered with brick, concrete pieces, vegetation. Grayish-black coarse to fine SAND, 40% cinder blocks, 30% red brick, with large pieces of concrete and concrete blocks from 2 ft by 4 ft by 10 in. thick to 3 ft by 4 ft by 20 in. thick, granite blocks 8 in. by 3 ft by 10 in. thick, 6 in. diameter cast-iron pipe, 6-in. diameter PVC pipe, pieces of tin (possibly from old tin roof). -FILL- Difficult excavation to 5 ft depth.										
5		2.1 5.0	GP	Water encountered at 5.5 ft depth. Grayish-brown poorly graded GRAVEL with sand, strong petroleum-like odor, sheen on water surface. Moderate to high water flow rate into test pit from all sides. At depth of 7.5 ft, test pit caves in to 6.5 ft depth. -FILL-										
		-0.4 7.5		BOTTOM OF EXPLORATION 7.5 FT Note: No sample was taken for soil stabilization testing. A concrete wall bounded the test pit to the south. A 6-in. cast-iron pipe was broken during excavation of soils. Pipe is believed to be abandoned. As a precaution, a concrete plug was placed at the both ends of the exposed pipe before test pit was completely backfilled. Pipe was encountered along the southern edge of the test pit. Concrete slab (6 ft by 6 ft by 8 in. thick) was encountered on the northeast wall of the test pit at approximately 4 ft depth. A piece of 6-in. cast-iron pipe was also removed from the northeast part of the test pit.										
10														

Obstructions:

Remarks:

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth	5.5	ft
measured after	1.5	hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24	0	=
over 24	0	=

Test Pit Dimensions (ft)

Pit Length x Width (ft)	7.0 X 8.6
Pit Depth (ft)	14.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HA TESTPIT-07-1 28612_HASTINGS LIBRARY.GLB HA-TP07-1.GDT K:\HASTINGS GINT FOLDER\2014-28612-331_PDI7_TP.GPJ 6 Aug 15

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-1



Test Pit PD2-TP-1

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-1



Test Pit PD2-TP-1

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-2



Test Pit PD2-TP-2

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-3



Test Pit PD2-TP-3

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-4



Test Pit PD2-TP-4

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-4



Test Pit PD2-TP-4

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-5



Test Pit PD2-TP-5

Former Anaconda Wire & Cable Plant Site
Hastings-on-Hudson, New York
June-July 2014



Test Pit PD2-TP-5



Test Pit PD2-TP-5