



GRAPHIC LOG OF BOREHOLE

NPZ-A3
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PROJECT Jerritt Canyon, TSF1 Piezometer Installation

PROJECT NO. 174700.180

TOTAL DEPTH: 200'

LOGGED BY Brooke Miller

GROUND CONDITION

COORDINATES OF LOCATION

DATE 6/23/2011

Saturated tailings

41.3985N, 115.8990 E

EQUIPMENT Prosonic, 7" Core Barrel

ELEVATION

DRILLER Boart Longyear Drilling

6, 293' amsl

DEPTH (FEET)	SAMPLE #	SAMPLE TYPE	GRAPHIC LOG	USCS SOIL CLASS	WELL COMPLETION	DESCRIPTION OF MATERIAL
0				SM		Recovery 6.5/17' = 38%, ~2' lost on deck Dark reddish gray silty sand; mottled with orange to brown silty sand streaks; wet and fluid; no excess water; non-plastic; tailings; flapper bit to 87'.
5	NPZ A3 B01-B04	CORE				
10						
15						
20	NPZ A3 B0-B13	CORE				Recovery 16.5/20 = 82.56% Red to brown slurry and water in string above core tube; top saturated; excess water in 2' bagged sample; rest is wet; black sand in red to brown silt near end; material flows out of core tube.
25						
30						
35						
40	NPZ A3 B14-B21	CORE				Recovery 14/20 = 70% Color turning into reddish brown; wet with saturated areas that have excess water; water in string ~3' above 20'; sample excess water to ~39' and 48-50'.
45						
50						
55						
60	NPZ A3 B22-B30	CORE				Recovery 13/20 = 65% Parameters of slurry in 0 - 20' rod, suspended silt and more solids than liquid: pH = 8.8; conductivity = 11.38 µs; TDS = 9,367 ppm. Color turning into dark olive to gray, mottled with red; wet (saturated); some dense and wet; excess water throughout.
65						
70						
75						
80	NPZ A3 B31-B37	CORE		ML		Recovery 10/10 = 100%. Water from above 77' - 87' sample: pH = 8.7; conductivity = 11.5 µs; TDS = 9,440 ppm; Color turning into orange to tan with minor gravel; dense; moist but not saturated. Tailings / alluvium interface at 77' bgs. Mixed tailings and native ground; saturated; medium density, not consolidated.
85						
90	NPZ A3 B38-B43	CORE				Recovery 9.5/10 = 95%, open bit. Orange to brown gravelly silt; coarse, well-graded gravels are angular to sub-rounded; silt matrix also has some sand; cohesive; dense; weakly plastic; moist.
95						
100						Recovery 10/10 = 100%. Water on top of sample is mostly suspended silt; pH = 7.5; conductivity = 16.4 µs;

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100						
105	NPZ A3 B44-B49	CORE		ML		TDS = 14.3 ppm. Orange to brown silt with gravel; moist but not wet; even at top very dense; moderately plastic.
110	NPZ A3 B50-B55	CORE		CL		Recovery 10/10 = 100% Tan silty clay with well-graded gravels less than 1.5"; sub-rounded or sub-angular; fines are moist; moderately plastic. 113' - 117' wet but cohesive.
115						
120	NPZ A3 B56-B60	CORE				Recovery 10/10 = 100% Dark yellowish tan clay and silt; rare or absent gravel; wet to moist; moderately plastic.
125						
130	NPZ A3 B61-B65	CORE		MH		Recovery 10/10 = 100%. Interbedded dense clayey silt with minor gravel and loose gravelly silt; wet; gravel zones have more excess water; top of true phreatic zone.
135						
140	NPZ A3 B66-B71	CORE				Recovery 10/10 = 100% Color turning into reddish to brown with minor, variable gravel; wet; dense; cohesive; low plasticity.
145						
150	NPZ A3 B72-B76	CORE				Recovery 10/10 = 100% Water in string above 140'; outside string wet to ~ 120'. Color turning into orange to tan with clay; dense; cohesive; moist; top is saturated and loose;
155						Silt with well-graded gravel; dense; wet; more visible water than rest of interval.
160	NPZ A3 B77-B82	CORE				1st attempt with open bit - empty core tube; 2nd attempt with flapper bit - recovery ~ 8/10 = 80%; water above 20' joint in drill string under pressure; pH = 7.2; conductivity = 32 µs; TDS = 31.6 ppm; T = 18°C; TDS very low (unnatural). Suspended silt settles rapidly, less solids than above water; orange to tan well-graded silt to gravel; lost recovery was liquid; 1 - 2' dense silt zones.
165						
170	NPZ A3 B83-B87	CORE				Recovery 10/10 = 100% Color turning into reddish to tan with fine gravel about 1/8"; dense; moist to wet; cohesive; weakly plastic.
175						
180	NPZ A3 B88-B93	CORE				Recovery 3/10 = 30%; mostly water; 2nd attempt with flapper bit - recovery 7/10 = 70%; pH = 6.5; conductivity = 20 µs; TDS = 18 ppm. Recovered: suspended silt; consistency of gravel; some liquid and silt and gravel lost; rest is orange to brown clayey silt with coarse gravel; dense; wet or saturated with excess water.
185						
190	NPZ A3 B94-B101	CORE				Recovery 12/13 = 92% Water in rods +60'; mostly competent material. Gravelly silt with silty gravel interbeds; moderately-graded gravel; loose; saturated with excess water;
195				CL		Silty clay with minor gravel; dense; cohesive; wet.
200						