Brown and Caldwell

Carson City, Nevada

BORING LOG

Project Name: OU4 Phase 1 - Yerington Mine Evaporation Ponds **Project Number:** 136742

Soil Boring: [X] Monitoring Well: [ ] Piezometer: [ ] **Boring/Well Name:** OU4-UEP-11 **Sheet** 1 **of** 2

Boring Location: OU4 Unlined Evaporation Ponds

Drilling Contractor: WDC

Drilling Equipment: Geoprobe

Drilling Method: Direct-Push

Sampling Method: Continuous Core **Driller:** Rick Smedley

Well Seal: N/A **Borehole Diameter:** 2"

Logged By: P. Bassett **Drilling Fluid:** N/A

Northing: 1552240.18 **Easting:** 323864.85

Top of PVC Elevation:

Ground Surface Elevation: 4366.09 feet amsl

Date Started: 10-09-08 **Date Finished:** 10-13-08

Completed Depth: 50 ft bgs **Water Depth:** 36 ft bgs

WELL CONSTRUCTION

Type and Diameter of Well Casing: N/A

Slot Size: N/A **Filter Material:** Cement grout

Depth (ft)	Elevation (famsl)	USCS Group Symbol	Material Description	Sample Type I Name	Sample Type I Location	Sample Type II Name	Sample Type II Location	Lithology	Remarks
0	4365	GW	**GRAVEL with sand and silt (VLT Subbase) (0 - 9)** VLT Subbase consists of 3/4"-minus crushed rock. Fill material used to construct roadway/dike.						Description of drilled cuttings based on ASTM Method D-2488 (the visual-manual procedure), grain-size determinations and nomenclature based on the Unified Soil Classification System. Horizontal Survey data is expressed in the Nevada State Plane system, Nevada West zone, in feet. Sharp contacts indicated by solid lines, gradational contacts indicated by dashed line. All depths are below land surface unless stated otherwise. Type 1 Samples are representative of geochemical and geotechnical soil samples as well as groundwater samples. Type 2 Samples are representative of meteoric water mobility soil samples.
5	4360								
10	4355	ML-GW	**GRAVEL with sand and silt (VLT Subbase)/SILT (Pond Sediments) (9 - 15)** Mixture of VLT Subbase and Pond Sediments. VLT material consists of 3/4"-minus crushed rock and pond sediments are yellow, moist silt.						
15	4350	SP	**SAND (Native Soil) (15 - 17)** Loose, fine- to medium-grained. Sample: OU4-UEP-11A-SC from 15 to 20 feet.	OU4-UEP-11A-SC					
		MH	**SILT (17 - 17.5)** Soft, plastic.						
20		SM	**Silty SAND (17.5 - 21)** Medium dense to dense.						
	4345	MH	**SILT with clay (21 - 21.5)** Soft, plastic.						
		SP	**SAND (21.5 - 24)** Loose, fine- to medium-grained.						
		SM	**Silty SAND (24 - 26)** Moist, dense and hard packed.						

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Depth (ft)	Elevation (famsl)	USCS Group Symbol	Material Description	Sample Type I Name	Sample Type I Location	Sample Type II Name	Sample Type II Location	Lithology	Remarks
	4340	SP	**SAND (26 - 27)** Medium dense, medium-grained.						
		ML	**SILT / sandy SILT (27 - 32)** Dense, moist. Sample: OU4-UEP-11B-SC from 31-35 feet.						
30	4335								
		MH	**SILT with clay (32 - 33)** Dense, plastic.	OU4-UEP-11B-SC					
		SP	**SAND with some silt (33 - 40)** Medium dense, fine-grained. Soil is tightly packed.						
35									
	4330								
40		SP	**SAND (40 - 43)** Medium- to coarse-grained, moderately to poorly graded. Sample: OU4-UEP-11-GW from 41-45 feet. Groundwater grab sample from hydropunch screen using bailer.	OU4-UEP-11-GW					
	4325	SM	**Silty SAND (43 - 45)** Sand is fine-grained.						
45		SM	**Silty SAND / SAND (45 - 50)** Core not described. Bottom of hole sloughed most likely due to sand heaving.						
	4320								
50			Bottom of Borehole at 50 feet below ground surface.						
	4315								
55									
	4310								