



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-290

TOTAL DEPTH (FT BGS): 225

PROJECT INFORMATION

PROJECT: SRI Phase 3

PROJECT NO.: 10058697

SITE LOCATION: DDMT, Main Installation

PROJECT MANAGER: T. Holmes

FIELD STAFF: D. Kremer

BOREHOLE STARTED: 6/11/2018

BOREHOLE FINISHED: 6/20/2018

DRILLING INFORMATION

DRILLING CO.: Cascade Drilling, L.P.

DRILLER: Thesius Taylor

DRILLING METHOD/RIG: SR-20/SuperSonic II

BOREHOLE DIAMETER: 12 in., 6 in.

GROUND SURFACE ELEVATION (FT NAVD): 304.49

WATER DEPTH/ DATE(FT BTOC): 129.51 on 8/11/18

BOREHOLE USE: Monitoring Well

NOTES: 12-in borehole and 8-in surface casing installed to 180 ft, bgs; 6-in borehole from 180 to 225 ft bgs. PID readings collected at intervals of 5 feet or less beginning at ground surface; all readings were 0 parts per million (ppm). 2,500 gallons of water used during drilling. Well installed 06/20, pad constructed 06/30 and well developed 07/14/18.

Depth (ft, bgs)	Soil Symbol	Soil Description	Well Completion	Comments
		Fill		
		CL Silty clay, medium stiff, low plasticity, weak cementation, 7.5 YR 4/4, brown Low to medium plasticity, moist		
10		Medium stiff to stiff		
		Stiff to very stiff		
20		Medium stiff to stiff, low plasticity		
		Low to medium plasticity, 5 YR 4/6, yellowish red		
30		ML Sandy silt with clay, fine grained, stiff, low plasticity, 2.5 YR 4/4, reddish brown Clayey silt with sand, medium stiff to stiff		
		SM Silty sand, very fine sand, medium stiff, nonplastic, 2.5 YR 4/5, red, moist		
40		SP/SM Sand with silt, fine to medium grained, loose, 2.5 YR 4/5, red, moist		
		SP Sand, fine to medium grained, loose, no cementation, 2.5 YR 5/5, red Trace silt 2.5 YR 5/6, red		
50				

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Depth	Soil Symbol	Soil Description	Well Completion	Comments
60		Very loose, 10 YR 6/6, brownish yellow		
		Some rounded to subrounded gravel up to 2", medium to coarse grained, loose, no cementation, 10 YR 5/6, yellowish brown		
		Very loose, no gravel, no fines, 10 YR 5/8, yellowish brown, moist		
		Gravelly sand, subrounded gravel to 2", very loose		
70		10 YR 5/6, yellowish brown		
		Sand with subrounded gravel to 1", 10 YR 6/8, brownish yellow		
		Some gravel to 2", 10 YR 6/6, brownish yellow		
80		Trace silt, fine to medium grained, 10 YR 7/3, very pale brown		
		Trace silt, fine to medium grained, 10 YR 7/3, very pale brown		
		7.5 YR 7/3, pink		
		7.5 YR 6/6, reddish yellow		
90		Trace silt, 2.5 YR 7/4, light reddish brown		
		5 YR 5/6, yellowish red		
		Trace coarse sand, 10 YR 7/3, very pale brown		
100		Trace subrounded gravel to 1"		

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Depth	Soil Symbol	Soil Description	Well Completion	Comments
110		2 YR 6/4, light yellowish brown 7.5 YR 6/6, reddish yellow Few subrounded gravel to 1", 10 YR 6/6, brownish yellow Some gravel to 1.5", 10 YR 5/6, yellowish brown Few subrounded gravel up to 1" Some subrounded gravel to 2", 7.5 YR 5/6, strong brown Sand with gravel, subrounded gravel to 1", trace silt		
120		SW Sand with some gravel to 2", 10 YR 6/6, brownish yellow		
		GP Gravel with medium to coarse sand, subrounded up to 3", 10 YR 5/6, yellow brown		
		CL Clay, medium stiff, medium to high plasticity, no cementation, 10 YR 7/2, light gray		
130		SM Silty sand with stiff interbedded clay, poorly graded sand, very fine to fine grained, loose, 10 YR 6/3, pale brown		
140		SP Sand with trace silt and clay, fine to medium grained, very loose, no cementation, 10 YR 7/3, very pale brown Trace silt, 10 YR 6/2, light brownish gray 10 YR 6/3, pale brown Trace silt, 10 YR 8/4, light yellowish brown 10 YR 7/5, very pale brown 10 YR 6/4, light yellowish brown		
150				

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Depth	Soil Symbol	Soil Description	Well Completion	Comments
160		Trace silt 10 YR 7/3, very pale brown 10 YR 6/3, pale brown, 2 to 3-inch lens of dark organic matter 10 YR 3/1 encountered at 163.5-feet bgs No fines, very loose, 10 YR 5/3, brown 10 YR 5/6, yellowish brown		
170		CL Clay with silt, very stiff, medium plasticity, silt bedding less than 0.01in, 10 YR 6/3, pale brown		
		ML Clayey silt with trace fine sand, stiff, nonplastic to low plasticity, clay and silt interbedded 0.25in to <0.01in, 10 YR 6/3, pale brown, moist		
180		CL Clay, very stiff, medium to high plasticity, 10 YR 5/1, gray		
		ML Silt with trace very fine sand, medium stiff, nonplastic, 10 YR 5/1, gray, moist Sandy silt, very fine to fine sand		
190		Trace clay		
200				

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Depth	Soil Symbol	Soil Description	Well Completion	Comments
		No clay		
		SM Silty sand, very fine to fine grained, medium dense, nonplastic, 2.5 YR 5/1, gray		
		No cementation, moist to wet		
210				
		1 inch thick clay lenses		
220		CL Clay, very stiff, medium plasticity, 10 YR 5/1, gray, moist		
		SM Silty sand, very fine to fine grained, medium dense, nonplastic, 2.5 YR 5/1, gray		
		End of Log		
230				
240				
250				

BENTONITE

SAND PACK

SCREEN

END CAP

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