FJS

FIELD BOREHOLE LOG

Well ID:MW-317 Total Depth (ft. bgs):165

PROJECT: SRI Phase 4
PROJECT NUMBER: 10058697
SITE LOCATION: S. of Bldg. 720
PROJECT MANAGER: T. Holmes
LOGGED BY: <u>C. Mokri</u>
DATE STARTED: <u>10/11/19</u>
DATE COMPLETED: 10/14/19

DRILLING CONTRACTOR: Cascade DRILLER: J. Asua METHOD/RIG: Sonic TS150CC HOLE DIAMETER (IN): 8 GROUND SURFACE ELEVATION (NAVD): 305.3 DEPTH TO WATER (ft. btoc): See Table 1 BOREHOLE USE: Nested Monitoring Well

NOTES: PID measurement indicated where greater than 0. No water used during drilling.

Well installed on 10/14, pad installed on 10/15 and wells developed 10/29-11/1

O DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM
	ML			SILT, (ML) 5YR 5/3 reddish brown, dry, medium stiff, low plasticity, low dry strength, little fine sand		
	CL		<u>6.0</u> 9.0	LEAN CLAY, (CL) 2.5YR 4/3 reddish brown, moist, medium stiff, low plasticity, trace fine sand		
10	CL		11.0	LEAN CLAY, (CL) 2.5YR 4/2 weak red, moist, medium stiff, medium plasticity		
	мн		13.0	ELASTIC SILT, (MH) 2.5YR 4/3 reddish brown, moist, soft, medium plasticity		
			13.0	FAT CLAY, (CL) 2.5YR 5/3 reddish brown, moist, soft, medium plasticity		
	CL					
20	CL		19.0	FAT CLAY, (CL) 2.5YR 5/3 reddish brown, moist, stiff, medium plasticity		
			21.0	FAT CLAY, (CH) 2.5YR 6/3 light reddish brown, moist, soft to medium stiff, high plasticity		
	СН		23.0	LEAN CLAY, (CL) 2.5YR 5/2 weak red, moist, medium stiff, medium plasticity, trace fine		
	CL		27.0	sand		
				LEAN CLAY, (CL) 2.5YR 5/6 red, moist, medium stiff, medium plasticity, trace fine sand		
	CL		32.0			
	sc			CLAYEY SAND, (SC) 2.5YR 4/8 red, moist, soft, medium plasticity		
	SP		37.0 38.0	POORLY GRADED SAND, (SP) 2.5YR 6/6 light red, fine to medium grained, dry, loose		
40	SP]	39.0	POORLY GRADED SAND, (SP) 2.5YR 5/8 red, fine to medium grained, dry, stiff, trace clay		
+0	SP		41.0	POORLY GRADED SAND, (SP) 2.5YR 6/6 light red, fine to medium grained, dry, loose		
	SP		42.0	POORLY GRADED SAND, (SP) 2.5YR 7/4 light reddish brown, fine grained, dry, loose WELL GRADED SAND, (SW) 2.5YR 7/1 light reddish gray, moist, loose		
	SW	******	44.0	POORLY GRADED SAND, (SP) fine to medium grained, moist, loose		
	SP			rooker akabeb skieb, (sr) nile to mealain grainea, moist, loose		
	SP		47.0 48.0	POORLY GRADED SAND WITH GRAVEL, (SP) 5YR 5/8 yellowish red, moist, medium		Grout
	SP		51.0	dense // POORLY GRADED SAND, (SP) 2.5YR 4/8 red, moist, medium dense, trace clay, moderate cementation		
	SP		53.0	POORLY GRADED SAND, (SP) 2.5YR 5/6 red, moist, trace clay, little gravel		
	SC		53.0 54.0	CLAYEY SAND WITH GRAVEL, (SC) 2.5YR 6/6 light red, medium grained, medium stiff,		
	SP]	56.0	medium plasticity		
	CRE	ATED B	<i>(</i> :	<u>C. Mokri</u>		CHECKED BY: <u>T. Holmes</u>
	CREA	ATED D	ATE:	10/24/19 Page: 1 of 3		CHECKED DATE: 2/28/20

	U.S.C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM
	SP		5 0 0	POORLY GRADED SAND, (SP) 2.5YR 4/6 red, fine to medium grained, loose, trace gravel		
-	sw	•••••	58.0	POORLY GRADED SAND, (SP) 10YR 7/6 yellow, fine to medium grained, very loose WELL GRADED SAND, (SW) 10YR 7/6 yellow, moist, very loose, trace fine to medium		
60		•	60.0	gravel		
_	SP		62.0	POORLY GRADED SAND, (SP) 10YR 5/4 yellowish brown / moderate yellowish brown, fine grained, moist, loose, trace clay		
_	SP			POORLY GRADED SAND, (SP) 10YR 7/6 yellow, fine grained, moist, very loose, trace		
-	sw		65.0 69.0	gravel WELL GRADED SAND, (SW) 10YR 6/6 brownish yellow / dark yellowish orange, moist, very loose, little gravel		
70	SP	•••	72.0	POORLY GRADED SAND, (SP) 10YR 7/6 yellow, fine grained, moist, very loose		
-	SW		74.0	WELL GRADED SAND, (SW) 10YR 6/8 brownish yellow, wet, very loose, trace fine gravel		
-	SP			POORLY GRADED SAND, (SP) 10YR 8/6 yellow / pale yellowish orange, very loose, little gravel		
- 80	sw		78.0 81.0	WELL GRADED SAND, (SW) 7.5YR 6/8 reddish yellow, very loose, trace fine gravel		
-	sw		84.0	WELL GRADED SAND, (SW) 7.5YR 7/6 reddish yellow, very loose, trace fine gravel		
_	sw		88.0	WELL GRADED SAND, (SW) 7.5YR 7/6 reddish yellow, very loose, little fine gravel		
90	sw			WELL GRADED SAND, (SW) 7.5YR 7/6 reddish yellow, wet, very loose, trace fine gravel		
-	sw		92.0	WELL GRADED SAND, (SW) 10YR 6/6 brownish yellow / dark yellowish orange, wet, very loose, little gravel		- Bentonite Chips
_	SW		97.0 98.0	WELL GRADED SAND, (SW) 10YR 7/6 yellow, wet, very loose, some gravel		
00	SW		100.0	WELL GRADED SAND, (SW) 10YR 7/6 yellow, wet, very loose, little gravel		
-	SW		100.0	WELL GRADED SAND, (SW) 10YR 7/6 yellow, wet, very loose, no gravel		- Prepacked
- - 10	SW		108.0	WELL GRADED SAND, (SW) 10YR 7/6 yellow, wet, very loose, trace fine gravel		- Bentonite Chips
_	sw		<u>111.0</u> 114.0	WELL GRADED SAND WITH GRAVEL, (SW) 10YR 7/4 very pale brown / grayish orange, wet, very loose		- Prepacked
-	SP		118.0	POORLY GRADED SAND, (SP) 10YR 6/4 light yellowish brown, very loose, little gravel		Well Screen
_	SW	• • • • • •	110.0	WELL GRADED SAND, (SW) 10YR 6/4 light yellowish brown, wet, very loose, trace gravel		

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DEPTH (ft)	C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM	
DE)	U.S.C.	GRA	AYER		Enviro ata PI		2
120							
	SW		121.0				
	SP		123.0	POORLY GRADED SAND, (SP) 10YR 7/6 yellow, fine to medium grained, wet, very loose, trace gravel			
				WELL GRADED SAND, (SP) 10YR 7/6 yellow, fine grained, wet, very loose, no gravel			
	SP						- Bentonite Chips
_130			130.0	POORLY GRADED SAND, (SP) 2.5Y 8/6 yellow, fine to medium grained, wet, very loose,			
				no gravel			
	SP						
			138.0				- - Prepacked
	SC		138.3				Well Screen
_140				POORLY GRADED SAND, (SP) 10YR 7/8 yellow, fine to medium grained, very loose			
	SP						
							- Bentonite
			146.0	POORLY GRADED SAND, (SP) 10YR 7/6 yellow, wet, loose, no gravel			Chips
_ 150 _							
	SP						•
							: - Prepacked : Well Screen
			156.0				
	SP		157.0	POORLY GRADED SAND, (SP) 10YR 7/6 yellow, wet, loose, trace clay FAT CLAY, (CH) Gley 1 4/N dark grey, soft, high plasticity			
160							
	СН						- Bentonite
							Chips
			165.0				
				Bottom of borehole at 165.0 feet.			