



Quaternary Resource Investigations, LLC
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BORING NUMBER 13-B197

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CLIENT USACE-Galveston District **PROJECT NAME** Sabine Neches Placement Area 8
PROJECT NUMBER W912HY-13-D-0001-DY05 **PROJECT LOCATION** Port Arthur, TX
DATE STARTED 1/11/2014 12:20:00 PM **COMPLETED** 1/12/2014 8:30:00 AM **GROUND ELEVATION** 4.895 ft **HOLE SIZE** 8.25 inches
DRILLING CONTRACTOR QRI **NORTHING** 13895087.7 ft **EASTING** 3574108.546 ft
DRILLING METHOD Hollow Stem Auger **DRILLING RIG MAKE/MODEL** Mobile B57 on Gemco Articulated Platform
LOGGED BY Pete Herold **TOTAL DEPTH** 50 ft **GROUND WATER LEVEL** ∇ AT TIME OF DRILLING 10.80 ft / Elev -5.91 ft
WEATHER sunny, windy to calm, 70s to 40s **∇ 15 MINUTES AFTER DRILLING** 6.20 ft / Elev -1.31 ft

COPY OF PEGGY LAKE GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 7/15/14 13:12 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\SABINE NECHES PA 8 FINAL EDITED.GPJ

GRAPHIC LOG	USCS SYMBOL	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE	RECOVERY (in)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	FIELD TORVANE (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			MINUS #200 SIEVE CONTENT (%)	COMPRESSION STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)
			0								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
	CH	Lean CLAY, light brown and greenish gray mottled, stiff, with a trace of roots 0'-2'		ST	15		2.5			31							
				ST	13		2.8		92	31				95	1.66	7	
			5	ST	12		2.1			44							
		 with sand seams and cracks 6'-14'		ST	15		2.4		90	23							
		more sand, dark gray															
			10	ST	18		1.5			27							
		 very soft		ST	14		0	1.0	74	51	50	18	32	90			
		less sand, greenish gray and light brown mottled, firm		ST	16		1.4			28							
		stiff															
			15	ST	17		2.4			32							
				ST	17		2.5		93	31							
		very stiff															
			20	ST	18		3.0			27							
		stiff															
				ST	19		2.7			21							
		with trace shell fragments 22'-24'		ST	18		2.5			24							
	SC	Clayey SAND, fine grained, light brown, very loose, with clay layers	25	ST	15		0.75		109	21	31	16	15	38	0.39	3	17
	ML	SILT, light brown, medium dense, with clay layers			SS	16	10-10-13 (23)	1.0		27	22	19	3	60			
	CL	Lean CLAY with SAND, light brown, firm, with sand seams 34'-36'	30		SS	16	0-4-5 (9)	1.2		35							
		less sand, light brown and greenish gray mottled, very stiff		ST	19		3.8		37								
		stiff		ST	19		2.5		35								
		with cracks 34'-36'	35														

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											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
	CL	Lean CLAY with SAND, light brown, firm, with sand seams 34'-36' (continued) firm	35	ST	19		2.0			31							
				ST	16		1.5		91	33				99	0.76	6	
		dark gray and greenish gray mottled, stiff		ST	19		2.25			37							
			40	ST	18		1.9			35							
				ST	18		2.0			40							
		dark gray	45	ST	19		1.9			44							
				ST	19		2.3			47							
				ST	19		2.6			44							
			50														

Bottom of borehole at 50.0 feet.