



Quaternary Resource Investigations, LLC
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BORING NUMBER 13-B148

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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 10/29/2013 4:10:00 PM **COMPLETED** 10/30/2013 12:30:00 PM **GROUND ELEVATION** 11.967 ft **HOLE SIZE** 8.25 inches
DRILLING CONTRACTOR QRI **NORTHING** 13888881.96 ft **EASTING** 3569784.876 ft
DRILLING METHOD Hollow Stem Auger **DRILLING RIG MAKE/MODEL** Mobile B57 on Gemco Articulated Platform
LOGGED BY Pete Herold **TOTAL DEPTH** 70 ft **GROUND WATER LEVEL** AT TIME OF DRILLING 8.71 ft / Elev 3.26 ft
WEATHER partly cloudy, windy, 80s **15 MINUTES AFTER DRILLING** 8.00 ft / Elev 3.97 ft

COPY OF PEGGY LAKE GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 7/15/14 13:09 - 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)
	CL-ML	CLAY with SILT, light brown, very stiff, cracked	0	ST	20		2.3/4.5		115	8					
		fine grained, yellow orange, cracked with layered plant material, hard		ST	14		>4.5			6		62			
		with clayey sand, firm	5	ST	11.5		1.0			17					
		yellow orange and light brown, soft		SS	11		0.5								
		light brown, very soft		SS	12		0	0.25		27		56			
		yellow orange	10	SS	17		0	0.3							
		Fat CLAY with SAND, fine grained, olive gray, very soft, with decaying plant material		NR											
		more sand		SS	11		0	0.3							
			15	NR											
		less sand, firm		ST	21		1.0		103	25	43	14	29	87	
	CL		20	NR											
		light gray and yellow orange mottled, with a few iron nodules, very stiff		ST	18.5		3.2			24					
			25	NR											
				ST	18		1.4		98	28		91	0.72	4	
			30	ST	20.5		1.3			31					
	CL-ML	CLAY with SILT, light brown, with a trace of iron nodules, firm, cracks and laminated sand layers 28'-35'		NR											
			35												

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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 (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	MINUS #200 SIEVE CONTENT (%)	COMPRESSIVE STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)
	CL	Lean CLAY with SILT, light brown, firm, with a trace of iron nodules, cracks and laminated sand/silt layers 35'-48'	35	ST	20		0.75		94	30	40	19	21	97	0.63	3	18
				NR													
		less sand, yellow orange and light gray, with iron nodules black staining, stiff	40	ST	16		1.75			31							
				NR													
		light gray and light brown, with iron staining	45	ST	17		2.25		97	19							
				NR													
		Fat CLAY, olive gray, firm, with a few sand seams 48'-50'	50	ST	20		1.4			49							
				NR													
				ST	12		1.25			58							
				NR													
	CH	stiff	55	ST	12		1.25			58							
				NR													
				ST	19.5		0.75		78	47	75	24	51	99	1.12	8	
			60	NR													
		olive gray and light gray, with trace white inclusions (shell and/or caliche), with iron staining and nodules, very stiff	65	ST	20		3.5			26	62	20	42				
				NR													
		light brown/yellow orange/light gray mottled, stiff	70	ST	21		1.75			23							

Bottom of borehole at 70.0 feet.