



Quaternary Resource Investigations, LLC
 13588 Florida Blvd
 Baton Rouge, LA 70819
 Telephone: 225-292-1400
 Fax: 225-292-1404

BORING NUMBER 13-B129

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas
 DATE STARTED 4/10/2013 8:00:00 AM COMPLETED 4/10/2013 4:00:00 PM GROUND ELEVATION 19.1295 ft HOLE SIZE 8.25 inches
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13833778.9 ft EASTING 3218595.965 ft
 DRILLING METHOD Hollow Stem Auger DRILLING RIG MAKE/MODEL Mobile B57 on Gemco Articulated Platform
 LOGGED BY Lamar Melder TOTAL DEPTH 60 ft GROUND WATER LEVEL _____
 WEATHER cloudy, 70s, windy, +/-rain, hard rain at 3:49 p.m. AT TIME OF DRILLING 13.00 ft / Elev 6.13 ft 4/10/2013 9:45:00 AM

COPY OF PEGG E GEOTECH BH - PEGGY LAKE TEMPLATE GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\TRL - JKT01PEGGY LAKE PLACEMENT AREA 3 - 9-27-13.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 (%)	COMPRESSIVE STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX					
	CL	Silty CLAY/CLAY, light brown, damp, with rootlets, levee material	0	ST	12		1.5			28								
	SM	SAND, light brown, loose, dry, levee material		ST	10					7								
	CL	Silty CLAY, light brown, medium stiff	5	ST	10		2.75			19								
	ML	SILT, light gray and black, loose		ST	12		1.0			15				25				
	SP-SC	Clayey SAND, light gray to light brown, loose, soft, damp, with SAND pockets, with black stains a few bivalves		ST	12		1.0			13								
	SM	SAND, light gray, fine, loose, damp, black streaks, with a few bivalve shells	10	ST	12		0.75											
	SP-SC	SAND, tan (loose, wet) with pockets of gray CLAY (soft), laminated		ST	12		0.5			32				69				
	CH	CLAY, dark gray/light brown, damp, plastic, soft, with pieces of black wood	15	ST	13		1.25			49								
	CH	light gray/yellow orange clay, mottled, damp, soft, plastic with caliche		ST	15		1.5		90	33	78	24	54	95				
	CH	CLAY, light gray/yellow orange, mottled, damp, medium stiff, plastic, with caliche	20	ST	9		1.5			29								
	CH	CLAY, light gray/yellow orange, mottled, damp, medium stiff, plastic, with caliche		ST	8		2.25			24								
	CH	CLAY, dark gray with plant material (grass, wood), wet, soft		ST	15		1.25/0.75			49								
	CL	CLAY, dark gray with light gray SILT pockets, very soft	25	ST	13		1.5		100	26	44	14	30	71	0.35	9.2	7.5	
	CL	CLAY, light gray/greenish gray/yellow orange mottled, soft, wet, plastic, with some light brown SAND pockets with shell hash and glauconitic pockets		ST	14		1.5			32								
	SW	SAND, light gray, loose, wet, with shell hash	30	ST	13		1.75			20								
	ML	Clayey SILT, light gray, wet, soft, with silty CLAY layers		ST	16					24				46				
	ML	CLAY, light gray, wet, soft, with silty CLAY layers		ST	13		1.0/2.75		93	31								
	CL	Silty CLAY, light gray, blue-gray, and yellow orange, medium stiff	35															

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											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX							
	CL	CLAY, greenish gray and yellow orange, some SILT inclusions with white coloring, stiff, damp (continued)	35	ST	17		3.0		97	27	68	20	48	96	1.06	3.2	0			
				ST	12		2.75				29									
	ML	SILT, light gray, saturated, loose, laminated with a little bit of greenish gray CLAY; clay content increasing with depth	40	ST	16		1.0			20				85						
				ST	18		1.0/2.75			19										
	CL	Silty CLAY, light gray and yellow orange, damp, crumbly, cemented in places light gray, hard to very hard mottled with reddish brown color reddish brown and light gray mottled, with copious amount of white nodules, wet from 50-51' fewer white nodules		ST	13		3.75		111	19	34	15	19	88	0.87	5.6	11.4			
			45	ST	16		4.0			18										
				ST	10		>4.5			15										
				ST	19		4.0			109	19									
			50	ST	18		4.0/2.75			21										
				ST	14		4.0			23										
			55	ST	17		>4.5			26										
				ST	18		4.5													
	ST	13		4.5																

Bottom of borehole at 60.0 feet.