



Quaternary Resource Investigations, LLC
 13588 Florida Blvd
 Baton Rouge, LA 70819
 Telephone: 225-292-1400
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BORING NUMBER 13-B108

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas
 DATE STARTED 4/8/2013 8:05:00 AM COMPLETED 4/8/2013 7:16:00 PM GROUND ELEVATION 16.9858 ft HOLE SIZE 8.25 inches
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13835175.77 ft EASTING 3216419.82 ft
 DRILLING METHOD Hollow Stem Auger DRILLING RIG MAKE/MODEL Mobile B57 on Gemco Articulated Platform
 LOGGED BY Terri Russin TOTAL DEPTH 57 ft GROUND WATER LEVEL _____
 WEATHER partly cloudy, 60s - 70s, very windy ∇ AT TIME OF DRILLING 14.00 ft / Elev 2.99 ft 4/8/2013 10:46:00 AM

COPY OF PEGG - GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\TRL\...KTOP\PEGGY 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, light brown, low to medium plasticity, slightly dry, with grass, roots and caliche; moistness, clay content and plasticity increasing with depth	0	ST	7		>4.5/2.0													
			1	ST	10		1.25				29									
			5	ST	9		3.25/1.4				31									
			11	ST	11		0.75/1.0				98	26	60	19	41	86	1.09	5.2	0	
	CH	CLAY, light brown, medium to high plasticity, slightly moist (increasing with depth), with caliche, orange swirls and rootlets	10	ST	12		2.1/0.5				33									
			12	ST	12		0.5/0.75				34									
			13	ST	13		0.5/1.5				95	28	60	17	43	93	1.14	1.3	5.1	
	SM	Silty SAND, light brown to light gray, wet, with rootlet	15	ST	19		0.5/0	-/0.7			16									
				SAND, light gray to light brown, laminated, no plasticity, wet, with shells, rock and wood fragments	18	SS	22	3-3-5 (8)	<0.25	0.2			18				13			
	CH	CLAY, black, very moist, strong hydrocarbon odor, high plasticity			20	SS	0	2-5-49-23 (54)	0.6/0	-/0.4			69							
			22	ST	22		0.5/0	-/0.9	54	83					97					
			25	ST	22		0.3/0	-/1.1				82								
			27	ST	22		0/0	0.6/0.7				97								
	CH	CLAY, olive gray, very moist, medium to high plasticity	30	ST	22		0/0.3	0.6/--			90									
				Clayey SILT, light gray, moist	31	ST	22		0/0.3	0.8/--			25							
	CL	Silty CLAY, greenish gray, moist, crumbly, medium plasticity			35	ST	15		0.75/0.35			96	28			64	0.81	14.9	0	

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											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX						
	CL		35	ST	19		0.7/2.05			25									
	CL	Silty CLAY, light gray and yellow orange, medium plasticity, moist, with caliche		ST	17		1.85/1.8		92	31	73	25	48	95					
			40	ST	20		2.75			31									
	CL-ML	Silty CLAY, light gray (with yellow orange spots), low plasticity, slightly moist, crumbly, blocky texture, with iron and manganese nodules		ST	22		0.5/2.75			37									
				ST	22		2.25/2.0												
			45	ST	19		2.75/0.5			113	18	29	12	17	0.97	10	12.3		
				ST	20		1.1/3.0												
			50	ST	22		2.5/3.0				18								
	CL	Silty CLAY, light gray with orange (and some dark brown spots), slightly crumbly and dry, with iron and manganese oxide nodules and caliche, low to medium plasticity, very stiff		ST	20		>4.5/3.75												
				ST	21		2.25/4.0			16									
			55	ST	21		3.5/3.75				21								
				ST	12		>4.5			19									

Refusal at 57.0 feet.
 Bottom of borehole at 57.0 feet.