



Quaternary Resource Investigations, LLC
 13588 Florida Blvd
 Baton Rouge, LA 70819
 Telephone: 225-292-1400
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BORING NUMBER 13-B106

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas
 DATE STARTED 4/7/2013 7:50:00 AM COMPLETED 4/7/2013 7:27:00 PM GROUND ELEVATION 18.9066 ft HOLE SIZE 8.25 inches
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13834709.96 ft EASTING 3216708.364 ft
 DRILLING METHOD Hollow Stem Auger DRILLING RIG MAKE/MODEL Mobile B57 on Gemco Articulated Platform
 LOGGED BY Terri Russin TOTAL DEPTH 60 ft GROUND WATER LEVEL _____
 WEATHER partly to mostly sunny, 60s - 70s, breezy AT TIME OF DRILLING 10.00 ft / Elev 8.91 ft 4/7/2013 9:47:00 AM

COPY OF PEGG .E GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\TRU... SKTOPPEGGY 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							
	CH	CLAY, light brown and yellow orange, slightly moist, stiff, with roots and caliche, medium to high plasticity	0	ST	8		2.25/1.0				29									
				ST	11.5		1.0/2.25				33									
			5	ST	7.5		1.25/1.5			95	26	68	22	46	84	1.96	5.2	0		
				ST	14		1.1/1.7				34									
	SM	Silty SAND, Light brown, small to medium grained, moist to wet, no plasticity a few small pebbles and bits of shell, wood and plastic fragments laminated (black and light brown) layers	10	ST	15		2.0/0.4			13										
				SS	14	6-6-7 (13)	0.4			18										
				SS	20	13-19-12 (31)	0.5/3.0			17										
	SS	14	3-4-6 (10)	0.5			19								40					
	CH	CLAY, light brown and dark gray, moist, high plasticity CLAY, olive gray, very moist, high plasticity, hydrocarbon odor	20	SS	15	1-2-0 (2)	0.5/0	--/2.4		81										
				ST	23		0.2/0	--/0.4	52	85										
	CH	CLAY, yellow orange, medium to high plasticity, with caliche moist, some black staining and one large shell at top slightly moist to moist, a vertical root inclusion, very stiff slightly moist to slightly dry, crumbly and blocky, larger caliche pieces slightly dry, crumbly and blocky texture with iron oxide (dry) inclusions		ST	22		0/0.5	1.1/--		35										
			25	ST	19		1.5		97	27	63	19	44	87						
				ST	21		0.3/2.5			31										
				ST	19		0.5/4.0			25										
				ST	23		3.25/2.1			104	21	66	24	42	90	1.35	1.4	8.1		
	ST	22		2.6/2.25				22												
			35																	

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											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX					
	ML	Clayey SILT, yellow orange, little plasticity, moist, dense	35	ST	21.5		2.7/1.5		109	20	43	18	25	98	2.11	5.2	0	
				ST	22		0.75/1.75			23								
				ST	21		0.75			21								
			ST	17		0/0	0.4/0.5		24									
			SS	24		5-6-11 (17)	2.85/0	--/2.1	19					87				
			ST	21			1.75/2.25		18									
	CL-ML	Silty CLAY, light gray, slightly moist, little to no plasticity, with caliche, with iron and manganese oxide spots, crumbly, cracks easily on silt planes		ST	22		2.75		112	17	28	16	12	87	0.69	2.2	11.1	
				ST	21.5		3.5		16									
		some large caliche pieces		ST	12		3.0/3.5		18									
				ST	19		3.75/4.0		113	20								
				ST	22		2.0/3.5		21									
				ST	15		4.25/3.0		21									
				ST	11		3.25/2.75											

Bottom of borehole at 60.0 feet.