



Quaternary Resource Investigations, LLC  
 13588 Florida Blvd  
 Baton Rouge, LA 70819  
 Telephone: 225-292-1400  
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**BORING NUMBER 13-B119**

CLIENT \_\_\_\_\_ PROJECT NAME Peggy Lake Placement Area  
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas  
 DATE STARTED 3/21/2013 10:40:00 AM COMPLETED 3/28/2013 9:00:00 AM GROUND ELEVATION 18.4785 ft HOLE SIZE 8.25 inches  
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13837299.63 ft EASTING 3217221.918 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 sunny, cool, 40s - 60s, windy  $\nabla$  AT TIME OF DRILLING 8.00 ft / Elev 10.48 ft 3/21/2013 1:35:00 PM

COPY OF PEGG E GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\RL J\KTOPEGGY 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				COMPRESSIONIVE STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)	
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	MINUS #200 SIEVE CONTENT (%)				
	CH	CLAY, yellow orange, dry to slightly dry to moist (increasing with depth), medium to high plasticity, with a little caliche	0	ST	16		>4.5/1.3				24							
				ST	14		1.0/>4.5				22							
			5	ST	11		2.9/4.1			101	24	80	25	55	96	4.21	2.3	2.3
				ST	10		2.55/1.3			88	36							
	SP	SAND, light brown, wet, no plasticity, some shell fragments	10	SS	13	1-5-13 (18)	0.45/0.5				20							
				SS	20	2-0-6 (6)	0.2	0.2				22			4			
	CH	CLAY, yellow orange, moist, high plasticity	15	SS	15	4-5-5 (10)	0.0/1.1	1.9/--			29							
				ST	9		0.3/1.1			102	21	81	25	56	79	1.23	3.4	0
	SP-SC	Clayey SAND, yellow orange, wet, low plasticity	20	ST	16		0.5/0.95				35							
				ST	20		0/0.6	0.3/--				19						
	CL	Silty CLAY, laminated light brown/black, wet, low plasticity, dense		SS	24	25-33-17 (50)	0.6				18							
				SS	3	2-0-0 (0)												
	SC-SM	Clayey SAND, light brown to light gray, wet, low plasticity	25	SS	24	11-7-5 (12)	0.75/0	--/2.8			33							
				ST	19		0/0.25	2.2/3.8	66	58	95	27	68	95				
	CH	CLAY, dark gray to black, moist, medium to high plasticity, soft, hydrocarbon odor	30	ST	20		0/0	1.1/2.2										
				ST	17		0/0.3	0.4/--			35							
	ML	Silty CLAY, olive gray, moist, medium plasticity		ST	17													
				ST	17													
	CH	CLAY, dark gray to black, moist, medium to high plasticity, soft, hydrocarbon odor	35	ST	17													
				ST	17													

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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 (%)	ATTERBERG LIMITS			MINUS #200 SIEVE CONTENT (%)	COMPRESSIVE STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
	ML	Sandy/Silty CLAY, olive gray, wet, little to no plasticity, grain size decreasing with depth	35	ST	19		0/0	0.9/0.7		22							
	CL		40	ST	21		0/0	0.6/0.9		22							
		Clayey SILT, olive gray, very soft, wet, little to no plasticity, with shell fragments	40	ST	20		0/0	1.0/3.1	97	27							
	ML		45	ST	17		0/0	--/0.6		25			61				
		Clayey SAND, olive gray, wet, little to no plasticity, shell fragments	45	ST	19		0/0.25	0.7/1.5		23							
	SC-SM		45	SS	15		0/0	0.4/0.7		22							
		Clayey SILT/Silty CLAY, olive gray, wet, low to medium plasticity, with shell fragments, very soft	45	ST	19		0/0	0.7/1.2	107	22	21	16	5	45	0.3	14.8	0
	SC-SM		50	ST	17		0/0	0.9/0.4		26							
		Clayey SILT/Silty CLAY, olive gray, wet, low to medium plasticity, with shell fragments, very soft	50	SS	24	6-6-5-5 (11)	0	0.5									
			50	ST	19		0/0	1.1/1.0		21							
	CL-ML		55	ST	18		0	0.6									
			55	ST	20		0	0.7		24							
			60	ST	23		0	0.5									

Bottom of borehole at 60.0 feet.

COPY OF PEGG