



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

BORING NUMBER 13-B111

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas
 DATE STARTED 4/9/2013 8:17:00 AM COMPLETED 4/9/2013 6:10:00 PM GROUND ELEVATION 18.7718 ft HOLE SIZE 8.25 inches
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13835743.55 ft EASTING 3216015.583 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 cloudy, 70s, windy AT TIME OF DRILLING 8.00 ft / Elev 10.77 ft 4/9/2013 9:14:00 AM

COPY OF PEGG = GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\TRL - 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			MINUS #200 SIEVE CONTENT (%)	COMPRESSIVE STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)
											LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
	CL	Silty CLAY, light brown, slightly moist, medium plasticity, with grass roots and pebbles	0	ST	6		1.8										
	CH	CLAY, light brown to yellow orange, moist, medium to high plasticity, with roots and caliche		ST	17		0.5/2.75				37						
light brown, high plasticity		5	ST	15		1.7/2.25		101	23	67	19	48	79	1.64	5.6	2.1	
				ST	13		1.0		98	27							
	SP	SAND, yellow orange (grading to olive gray with depth), medium grained (grain size decreasing with depth), wet, with shell fragments, no plasticity	10	SS	21	11-11-8 (19)	0	0		13				12			
		laminations present		SS	14	4-16-13 (29)	0	0		15							
		laminations present	15	SS	20	4-15-40 (55)	0.5			16				7			
	CL	Silty CLAY, yellow orange to light gray, very moist to moist (moisture decreasing with depth), medium to high plasticity, with caliche and iron/manganese oxide nodules	20	ST	20		1.25			26				95			
		light brown	25	ST	13		0.75		90	34	73	23	50	29	1.13	4.1	0
	CH	CLAY, dark gray to black, very moist, high plasticity, strong hydrocarbon odor		ST	16		0	2.5		60							
	CH	CLAY, yellow orange and light gray, moist, medium to high plasticity, with caliche	30	ST	17		1.15		91	31	80	25	55	92	0.9	2.4	0
	CH	CLAY, olive gray and black, very moist, high plasticity, strong hydrocarbon odor		ST	23		0	2.2		78							
				ST	21		0	3.1		73							
	CL		35														

(Continued Next Page)



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

BORING NUMBER 13-B111

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas

KTOPIEGGY LAKE PLACEMENT AREA 3. 9-27-13.GPJ

GEO TECH BH - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\RL

COPY OF PEGG

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 gray to greenish gray, grading to light brown, moist, medium to high plasticity (<i>continued</i>) with caliche, slightly moist, light brown with some light gray areas yellow orange and light gray, silt in cracks, cracks easily, with caliche	35	ST	23		0.2/0.7	1.7/-	92	32	61	18	43	80						
				ST	20		1.3				34									
				ST	17		1.4				27									
			40	ST	19		2.5/0.75			101	24									
	ML	Clayey SILT, light gray (with some yellow orange spots), very moist to wet, low to medium plasticity, with caliche, cracks easily due to high silt content very moist moist slightly moist		ST	18		0.3			22										
			45	ST	20		0.4/1.75			22										
				ST	18		3.3/2.0			110	19				88	0.72	1.7	11.3		
				ST	21		>4.5/2.25				19									
			50	ST	21		2.0/3.4				18									
	CL	Silty CLAY, yellow orange (some light gray at top), slightly moist, medium to high plasticity, with caliche dense, somewhat dry, blocky, crumbly, black crumbly areas, and bleached dry areas, plasticity seems less		ST	7		3.5/2.5			26										
			55	ST	9		4.0/>4.5													
				ST	11		3.75/3.75				21									
				ST	13		3.2/2.75													
			60	ST	13		2.75/>4.5													

Bottom of borehole at 60.0 feet.