



Quaternary Resource Investigations, LLC
 13588 Florida Blvd
 Baton Rouge, LA 70819
 Telephone: 225-292-1400
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BORING NUMBER 13-B136

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas
 DATE STARTED 4/30/2013 8:30:00 AM COMPLETED 4/30/2013 4:30:00 PM GROUND ELEVATION 15.7481 ft HOLE SIZE 8.25 inches
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13834357.25 ft EASTING 3216752.869 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 mostly cloudy, warm, 70s, slight breeze ∇ AT TIME OF DRILLING 14.00 ft / Elev 1.75 ft 4/30/2013 9:20:00 AM

COPY OF PEGG. : GEOTECH BH - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:40 - C:\DOCUMENTS AND SETTINGS\TRU...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				
	CH	CLAY, light brown, moist, high plasticity, with plant roots and stems	0	ST	12		1.75			21							
		color changes to yellow orange, medium to high plasticity, with caliche, with manganese oxide staining	5	ST	8		1.3			22							
	CL	Silty CLAY, yellow orange, moist, medium to high plasticity, with manganese oxide staining	5	ST	16		2.05		95	31	84	25	59	99	1.24	1.4	0
			10	ST	16		3.25			26							
	CL	Silty CLAY, yellow orange, moist, medium to high plasticity, with manganese oxide staining	10	ST	17		2.5			28							
			15	ST	19		2.2		99	26	62	20	42		2.45	2.8	4.3
	CL	Silty CLAY, yellow orange, varying levels of SILT, silt-lined cracks, with manganese oxide staining and caliche, moist, medium to high plasticity (between silty cracks); more CLAY at bottom	15	ST	21		3.25			24							
			15	ST	22		2.2		99	26							
	CL	Silty CLAY, yellow orange, very moist to wet, clay has high plasticity and silty clay has medium plasticity, with manganese oxide staining and clay at the top moist, decreasing SILT with depth, medium to high plasticity	15	ST	18		2.8			23							
			20	ST	21		2.2		108	22	53	22	31	85	2.34	2.2	0
	CL	with caliche	20	ST	19		3.1			22							
			25	ST	16		3.0		93	30							
	CL	caliche increasing	25	ST	17		3.0			29							
			30	ST	20		3.25		96	28	67	26	41	89	1.78	2.3	8.7
	CL	Silty CLAY, orange (with light gray), slightly moist, blocky texture, cracks, with iron/manganese oxide staining and nodules, with caliche	30	ST	20		>4.5			25							
			35	ST	21		3.0			18							
	CL		35	ST	18		1.9		110	20	48	15	33	87	3.27	7.6	0

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

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COPY OF PEGGY...

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	SILT, yellow orange, little to no plasticity, cracks easily, moist to wet	35	ST	19		1.3			23								
				ST	19		1.0/3.0		110	21								
	CH	CLAY, orange, slightly moist, medium to high plasticity																
	CL	Silty CLAY, yellow orange, moist, medium to high plasticity, with caliche nodules and manganese oxide staining blocky texture	40	ST	17		2.75			29								
	CL	slightly moist, with iron/manganese oxide nodules		ST	15		2.0		114	17	70	22	48	89				
				ST	19		>4.5			15								
	ML	SILT, yellow orange, slightly moist, little to no plasticity, cracks very easily, white sparkly SILT lines cracks, with iron/manganese oxide staining	45	ST	18		>4.5			16								
				ST	20		>4.5			16								
				ST	19		4.0		114	18	41	16	25	88	3.67	11.4	0	
	CL	Silty CLAY, yellow orange, moist, prone to cracking, medium to high plasticity, with lots of caliche, baked appearance of some of the CLAY	50	ST	20		3.5/3.75			21								
		wet area		ST	20		3.5											
	CH	CLAY, orange, slightly dry, with a lot of caliche, medium to high plasticity, with manganese oxide staining, blocky texture (centimeter scale), baked looking clay present	55	ST	15		4.0			30								
				ST	18		3.5			29								
				ST	13		>4.5											

Bottom of borehole at 60.0 feet.