



Quaternary Resource Investigations, LLC
 13588 Florida Blvd
 Baton Rouge, LA 70819
 Telephone: 225-292-1400
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BORING NUMBER 13-B113

CLIENT _____ PROJECT NAME Peggy Lake Placement Area
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas
 DATE STARTED 4/12/2013 8:30:00 AM COMPLETED 4/12/2013 6:00:00 PM GROUND ELEVATION 18.7482 ft HOLE SIZE 8.25 inches
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13836225.36 ft EASTING 3215845.977 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, warm, 60s - 70s, breezy AT TIME OF DRILLING 8.00 ft / Elev 10.75 ft 4/12/2013 9:23:00 AM

COPY OF PEGG - PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\RL

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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				
	CL	Silty CLAY, light brown, moist, medium to high plasticity, with grass, rootlets and caliche	0	ST	9		3.2			30							
				ST	12		2.25		101	24	64	20	44		2.71	9.2	0
	SP	SAND, light brown fine grained, moist, no plasticity yellow orange color, with shell material wet, very fine grained, laminated	5	SS	22	10-11-9-10 (20)	3.75			5				10			
			10	SS	12	5-12-11-9 (23)	1.25				15				14		
	CH	CLAY, light brown to yellow orange (orange color increasing with depth), moist, high plasticity with caliche, increasing with depth	15	SS	12	1-2-3-5 (5)	1.25			43							
				ST	16		1.5		101	21	80	23	57	86	1.23	5.3	0
	CH			ST	19		1.5		99	23							
			20	ST	20		0	5.7		34							
	CH	CLAY, dark gray, moist, high plasticity, soft, hydrocarbon odor		ST	21		0.8		98	26	76	21	55	85			
				ST	16		1.75		29								
	CH		25	ST	21		2.75		35								
				ST	14		0.75/1.75		26								
	CL	Silty CLAY, olive gray, moist, low plasticity, with shells (increasing with depth) and caliche about 1' of olive gray CLAY, moist, medium to high plasticity, with shells and caliche	30	ST	22		1.8/0	-/3.2	59	67	119	30	89	99	0.43	1.5	7.2
				ST	21		0/0	2.2/1.7		81							
	CL			ST	19		0/0	1.4/3.2	87	37							
			35														

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C:\DOCUMENTS AND SETTINGS\RL\KTO\PEGGY LAKE PLACEMENT AREA 3. 9-27-13.GPJ
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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							
	CL	Silty CLAY, olive gray, moist, low plasticity, with shells (increasing with depth) and caliche (continued)	35	ST	13		0.3			43										
	CH	CLAY, yellow orange and light gray, slightly moist, medium to high plasticity, with caliche		ST	22		0/1.3	4.7/-		34										
	ML	Clayey SILT, light brown and light gray, slightly moist, low plasticity, with a little caliche laminations present	40	ST	22		1.5/1.5			21										
			ST	19		2.0/3.0		109	19											
		ST	20		2.5			18												
		ST	20	45		3.75/1.95			15											
		ST	20			>4.5/>4.5			115	16	39	15	24	85	2.27	2.9	0			
	CL	Silty CLAY, orange, slightly moist to slightly dry, medium plasticity, with iron/manganese oxide staining and nodules and caliche	50	ST	19		>4.5/4.0			16										
			ST	17		3.3/3.0			21											
		ST	11		>4.5			23												
		ST	14	55		>4.5			23											
		ST	18			4.25			24											
		with dry sections and black staining, looks baked, crumbly and hard sections		ST	19		3.9/2.6													

Bottom of borehole at 60.0 feet.

COPY OF PEGG