



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

**BORING NUMBER 13-B124**

CLIENT \_\_\_\_\_ PROJECT NAME Peggy Lake Placement Area  
 PROJECT NUMBER W912HY-13-D-0001; Task Order 0002 PROJECT LOCATION La Porte, Texas  
 DATE STARTED 4/14/2013 8:00:00 AM COMPLETED 4/14/2013 3:00:00 PM GROUND ELEVATION 18.3672 ft HOLE SIZE 8.25 inches  
 DRILLING CONTRACTOR Quaternary Resource Investigations, LLC NORTHING 13835275.47 ft EASTING 3219031.423 ft  
 DRILLING METHOD Hollow Stem Auger DRILLING RIG MAKE/MODEL Mobile B57 on Gemco Articulated Platform  
 LOGGED BY Lamar Melder TOTAL DEPTH 60 ft GROUND WATER LEVEL \_\_\_\_\_  
 WEATHER partly cloudy, 60s - 70s, windy  $\nabla$  AT TIME OF DRILLING 19.50 ft / Elev -1.13 ft 4/14/2013 9:15:00 AM

COPY OF PEGGY LAKE TEMPLATE.GDT - 10/2/13 10:39 - C:\DOCUMENTS AND SETTINGS\STR... SKTOIRPEGGY 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, gray and brown, damp, medium stiffness, medium plasticity, with caliche   | 0  | ST          | 14   |                           | 2.75              |                     |                    |                      |                  |               |                  |    |                              |                            |                    |                          |     |  |
|             |             |   |  | ST          | 11   |                           | 4.0               |                     |                    |                      |                  | 23            |                  |    |                              |                            |                    |                          |     |  |
|             |             |   | 5  | ST          | 10   |                           | 3.5               |                     | 107                | 20                   | 68               | 19            | 49               | 78 | 3.38                         | 5.4                        | 0                  |                          |     |  |
|             |             |   |  | CL          | Silty CLAY, brown and gray, medium stiff, damp, medium plasticity, wet pockets | ST                        | 11                |                     | 3.0                |                      | 101              | 24            |                  |    |                              |                            |                    |                          |     |  |
|             |             |   |  | CH          | CLAY, light brown, wet, soft, plastic  | ST                        | 11                |                     | 1.75               |                      |                  | 30            |                  |    |                              |                            |                    |                          |     |  |
|             |             |   |  | CH          | yellow orange color  | ST                        | 14                |                     | 1.25               |                      | 89               | 35            | 72               | 24 | 48                           | 95                         | 0.74               | 4.4                      | 4.4 |  |
|             |             | CH  | CLAY, mottled colors - yellow orange, reddish brown, dark brown, gray; stiff, damp, low plasticity, blocky | 15          | ST   | 16                        |                   | 3.0                 |                    |                      | 27               |               |                  |    |                              |                            |                    |                          |     |  |
|             |             |   |  | ST          | 17   |                           | 3.0               |                     |                    | 31                   |                  |               |                  |    |                              |                            |                    |                          |     |  |
|             |             |   |  | ST          | 20   |                           | 2.75              |                     | 96                 | 29                   | 75               | 22            | 53               | 89 | 2.56                         | 9.2                        | 0                  |                          |     |  |
|             |             |   |  | ST          | 18   |                           | 2.5               |                     |                    |                      |                  |               |                  |    |                              |                            |                    |                          |     |  |
|             |             | SP  | SAND, light gray, wet, no plasticity   | 20          | SS   | 20                        | 2-6-7 (13)        |                     |                    |                      | 22               |               |                  |    | 3                            |                            |                    |                          |     |  |
|             |             |   |  | 25          | SS   | 20                        | 2-1-1 (2)         |                     |                    |                      | 22               |               |                  |    |                              |                            |                    |                          |     |  |
|             | CH          | CLAY, dark gray to black, very soft, wet, plastic, hydrocarbon stained and odor | 30   | SS          | 18   | 0-0-0 (0)                 | 0.75              |                     |                    | 117                  | 30               | 87            | 96               |    |                              |                            |                    |                          |     |  |
|             |             |   | ST   | 11          |  | 2.0                       | 63                | 61                  |                    |                      |                  |               |                  |    |                              |                            |                    |                          |     |  |
|             | CH          | a few light gray SILT layers  |  | ST          | 16   |                           |                   | 1.25                |                    | 18                   |                  |               |                  |    |                              |                            |                    |                          |     |  |
|             |             |   | CL   |             |  |                           |                   |                     |                    |                      |                  |               |                  |    |                              |                            |                    |                          |     |  |

(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-B124**

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

K:\TO\PEGGY LAKE PLACEMENT AREA 3 - 9-27-13.GPJ

E:\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, dark gray, damp, very soft, plastic, with a few SILT pockets (continued) | 35         | ST          | 14            |                           | 0.75              |                     | 68                 | 52                   | 97               | 26            | 71               | 94                           |                            |                    |                          |
|             | ML          | Clayey SILT, dark gray, saturated, loose   |            | ST          | 17            |                           |                   | 1.75                |                    | 28                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  |            | ST          | 13            |                           |                   | 1.5                 |                    | 26                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  | 40         |             |               |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             | CL          | Silty CLAY, dark gray (almost clayey SILT), wet, very soft, plastic, with bivalves   |            | ST          | 16            |                           |                   | 2.25                |                    | 35                   |                  |               |                  |                              |                            |                    |                          |
|             |             | no bivalves  |            | ST          | 14            |                           |                   | 1.5                 | 100                | 29                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  | 45         |             |               |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             |             | SILT pockets   |            | ST          | 15            |                           |                   | 1.0                 |                    | 25                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  |            | ST          | 18            |                           |                   | 1.5                 |                    | 34                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  | 50         |             |               |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             | ML          | Clayey SILT, dark gray, saturated, very soft, plastic                                |            | ST          | 20            |                           | 1.0               |                     | 98                 | 30                   | 42               | 15            | 27               | 58                           | 0.41                       | 10.5               | 13.1                     |
|             |             | with a few bivalves  |            | ST          | 18            |                           |                   | 1.25                |                    | 26                   |                  |               |                  |                              |                            |                    |                          |
|             |             | no bivalves  |            | ST          | 15            |                           |                   | 1.25                |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             |             |  | 55         |             |               |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             | CL          | Silty CLAY, dark gray, wet, very soft, plastic, with light gray SAND pockets         |            | ST          | 18            |                           |                   | 1.5                 |                    | 31                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  |            | ST          | 15            |                           | 1.0               |                     |                    | 29                   |                  |               |                  |                              |                            |                    |                          |
|             |             |  |            | ST          | 15            |                           | 1.0               |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             |             |  | 60         |             |               |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |

Bottom of borehole at 60.0 feet.