

# ALEXANDER ISLAND BORING SUMMARY SHEET

|                          |                      |
|--------------------------|----------------------|
| <b>BORING ID:</b>        | <u>13-B17</u>        |
| <b>BORING TYPE:</b>      | <u>Borrow Source</u> |
| <b>DEPTH:</b>            | <u>15'</u>           |
| <b>ELEVATION:</b>        | <u>27.15'</u>        |
| <b>X (US SURVEY FT):</b> | <u>3224619.87</u>    |
| <b>Y (US SURVEY FT):</b> | <u>13832095.98</u>   |
| <b>DEPTH TO WATER:</b>   | <u>2.8'</u>          |

Client: USACE-Galveston District      Boring: 13-B17  
 Date/Time Drilling Begun: 12.9.13/800      Date/Time Drilling Ended: 12.9.13/950  
 Driller: J. New      Logger: E. Ficker      Designated X (Easting): 3224620  
 Drill Rig: Mobile B57      Designated Y (Northing): 13832096      Z (Elevation):  
 Total depth: 15      Initial Water Encounter (Depth, date/time): 3.3 ft, 12.9.13/823      Water Depth (15 min.): 2.8 ft

800  
↓  
950  
END

| Feet | USCS Log | Sample Interval (ft)      | Amount Material Obtained (in) | Sample Type Blow Counts | Number of Tubes | Pocket Pene. (tsf) | Shear Strength (tsf) | Description (SOIL TYPE, color, moisture, plasticity, consistency, density, inclusions, etc.) |
|------|----------|---------------------------|-------------------------------|-------------------------|-----------------|--------------------|----------------------|--|
| 0    | SM       | 0-2                       | 18                            | ST                      | 1B              | -                  | -                    | Silt (F-C) SAND, light gray, Moist, V. Loose, abundant oyster shells at surface              |
| 1    | SM       | <del>0-2</del><br>3.5-5   | 10                            | SS<br>6-6-11            | 1B              | -                  | -                    | S.A.A., Dark Gray, Wet, med dense, Carbonaceous from 4' 6" to S.D.; common shell frags       |
| 5    |          | 4-6                       |                               |                         |                 |                    |                      |  |
| 6.8' |          | 6-8                       |                               |                         |                 |                    |                      |  |
| 8.8' | CH       | <del>8-10</del><br>8.5-10 | 13                            | SS<br>1-1-2             | 1B              | 1.25               | 0.55                 | 6.8" Slightly sandy CLAY, Dark Gray, Moist, Med stiff, turning light grayish brown at 10ft.  |
| 10   | CH       | 10-12                     | 13                            | ST                      | 1+              | 1.25               | 0.55                 | CLAY, light gray + reddish brown, Moist, Mixed with (F-C) light gray SAND                    |
| 12'  | SM       | 12-13.5                   | 15                            | ST                      | 1B              | -                  | -                    | 12' Silt (F-C) SAND, Light Grayish Brown, Wet, Loose, slightly clayey, Common shell frags    |
| 15   | SM       | 13.5-15                   | 11                            | SS<br>2-3-4             | 1B              | -                  | -                    | S.A.A. Turning Gray at 14' 8" Common shell frags   |
| 20   |          |                           |                               |                         |                 |                    |                      |  |

Weather: Overcast, Breezy, ~35°F

Comments: (F-C) = fine to coarse grained    V. = very    frags = fragments    Med = medium

USCS Log Legend:

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| GW | GP | GM | GC | SW | SP | SM | SC | ML | CL | OL | MH | CH | OH | PT |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

US Army Corps of Engineers, Southwestern Division  
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 Galveston, TX 77553-1229

Alexander Island  
 Houston Ship Channel  
 Baytown, TX



Quaternary Resource Investigations, L.L.C.  
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COPY OF PEGGY LAKE GEOTECH BH - PEGGY LAKE TEMPLATE GDT - 4/4/14 15:03 - F:\QRI DATA\TECHNICAL JOBS (CURRENT)\AGE - GALVESTON\2012-12-20 GEOTECHNICAL CONTRACT\TASK ORDER DY06 2013-09-10 ALEXANDER ISLAND\DELIVERABLES\ALEX



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# BORING NUMBER 13-B17

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**CLIENT** USACE-Galveston District **PROJECT NAME** Alexander Island  
**PROJECT NUMBER** W912HY-13-D-0001-DY06 **PROJECT LOCATION** Alexander Island, Baytown, TX  
**DATE STARTED** 12/9/2013 8:00:00 AM **COMPLETED** 12/9/2013 9:50:00 AM **GROUND ELEVATION** 27.1501 ft **HOLE SIZE** 8.25 inches  
**DRILLING CONTRACTOR** QRI **NORTHING** 13832096 ft **EASTING** 3224620 ft  
**DRILLING METHOD** Hollow Stem Auger **DRILLING RIG MAKE/MODEL** Mobile B57 on Gemco Articulated Platform  
**LOGGED BY** Eddie Ficker **TOTAL DEPTH** 15 ft **GROUND WATER LEVEL** ▽ AT TIME OF DRILLING 3.30 ft / Elev 23.85 ft  
**WEATHER** cloudy, mid 30s, breezy **24 HOURS AFTER DRILLING** ▽ 2.80 ft / Elev 24.35 ft

| 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 |                              |                            |                    |                          |
|             | SP-SC       | SAND with CLAY; fine to coarse grained, light gray, moist, very loose to medium dense, with abundant oyster shells at surface   | 0          | ST          | 18            |                           | -                 |                     |                    | 14                   |                  |               |                  | 6                            |                            |                    |                          |
|             |             |   |            | NR          | 0             |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             | SP-SM       | SAND with SILT; dark gray, wet, medium dense, carbonaceous from 4.5-5.0', with common shell fragments   | 5          | SS          | 10            | 6-6-11 (17)               | -                 |                     |                    | 19                   |                  |               |                  | 8                            |                            |                    |                          |
|             |             |   |            | NR          | 0             |                           |                   |                     |                    |                      |                  |               |                  |                              |                            |                    |                          |
|             | CL          | Slightly sandy CLAY; dark gray, moist, medium stiff<br><br>light grayish brown, light gray and reddish brown clay mixed with silty sand, fine to coarse grained, light gray | 10         | SS          | 13            | 1-1-2 (3)                 | 1.25              | 0.55                |                    | 21                   |                  |               |                  |                              |                            |                    |                          |
|             |             |   |            | ST          | 13            |                           |                   | 1.25                | 0.55               |                      | 22               | 37            | 13               | 24                           | 69                         |                    |                          |
|             | SM          | Silty SAND; fine to coarse grained, light grayish brown, wet, loose, slightly clayey, with common shell fragments   |            | ST          | 15            |                           | -                 |                     |                    | 26                   |                  |               |                  |                              |                            |                    |                          |
|             |             |   |            | SS          | 11            | 2-3-4 (7)                 | -                 |                     |                    | 19                   |                  |               |                  |                              |                            |                    |                          |

gray  
 Bottom of borehole at 15.0 feet.





