

# ALEXANDER ISLAND BORING SUMMARY SHEET

|                          |                      |
|--------------------------|----------------------|
| <b>BORING ID:</b>        | <u>13-B33</u>        |
| <b>BORING TYPE:</b>      | <u>Borrow Source</u> |
| <b>DEPTH:</b>            | <u>15'</u>           |
| <b>ELEVATION:</b>        | <u>30.06'</u>        |
| <b>X (US SURVEY FT):</b> | <u>3224600.87</u>    |
| <b>Y (US SURVEY FT):</b> | <u>13832572.04</u>   |
| <b>DEPTH TO WATER:</b>   | <u>2.90'</u>         |

Contract Number: W912 HY-13-D-001-DY06

Client: USACE-Galveston District Boring: 13-B33  
 Date/Time Drilling Begun: 12.4.13/1325 Date/Time Drilling Ended: 12.4.13/1600  
 Driller: Jason New Logger: Eddie Ficker Designated X (Easting)/Long: -95.0416134  
 Drill Rig: Mobil B57 Designated Y (Northing): Lat: 29.7254369 Z (Elevation):  
 Total depth: 15.0 Initial Water Encounter (Depth, date/time): 3.45 Ft 12.4.13/1358 Water Depth (15 min.): 2.90

Dredge Spoil

| 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                  | 14                            | ST                      | 1 B             | -                  | -                    | Silty SAND, Light Brownish Gray, Moist, V. Loose, - Roots common to 8"                       |
| 3 1/2" | SM       | 2-4                  | 13                            | SS                      | 1 B             | -                  | -                    | SAA to 3' 2" then color change, Black clayey silty SAND (F-C), Moist, V. Loose, Carbonaceous |
| 4'     | SM/SC    |                      |                               | 1-2-1                   |                 |                    |                      |  |
| 5      | SM       | 4-6                  | 12                            | SS                      | 1 B             | -                  | -                    | SAA; Dark Gray Less carbonaceous material, Wet, V. Loose                                     |
|        | SM       | 6-8                  | 18                            | SS                      | 1 B             | -                  | -                    | SAA Less clay & silt, light Gray, Med. Dense,  |
|        | SM       | 8-10                 | 12                            | SS                      | 1 B             | -                  | -                    | SAA - Turning light Brownish Gray - Common silty clay lams 9'-10'                            |
| 10     | SC       | 13.5-15              | 18                            | SS                      | 1 B             | -                  | -                    | Clayey SAND (F-C), Light Brown + Grayish Brown, Wet, Loose.                                  |
| 15     |          |                      |                               |                         |                 |                    |                      |  |
| 20     |          |                      |                               |                         |                 |                    |                      |  |

- shell frags common  
3 1/2"  
4'  
10'

Weather: Foggy, ~65°F  
 Comments: Backfilled hole with cuttings to the surface. S.A.A = Same as above V. = Very  
 (F-C) = Fine to coarse grained

USCS Log Legend:

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

Alexander Island  
 Houston Ship Channel  
 Baytown, TX



Quaternary Resource Investigations, L.L.C.  
 Government & Industry in Harmony with the Environment  
 13588 Florida Boulevard, Baton Rouge, Louisiana 70819

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-B33**  
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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** 12/4/2013 1:25:00 PM **COMPLETED** 12/4/2013 4:00:00 PM **GROUND ELEVATION** 30.0558 ft      **HOLE SIZE** 8.25 inches  
**DRILLING CONTRACTOR** QRI      **NORTHING** 13832572 ft      **EASTING** 3224601 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** 3.45 ft / Elev 26.61 ft  
**WEATHER** foggy, 65      **24 HOURS AFTER DRILLING** ▽ 2.90 ft / Elev 27.16 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 |                              |                            |                    |                          |
|             | SM          | Silty SAND; fine to coarse grained, light brownish gray, moist, very loose, slightly clayey, roots common to 8", shell fragments common | 0          | ST          | 14            | -                         | -                 | -                   | -                  | 19                   | -                | -             | -                | -                            | -                          | -                  | -                        |
|             |             | black, clayey, carbonaceous   | 3          | SS          | 13            | 1-2-1 (3)                 | -                 | -                   | -                  | -                    | 30               | -             | -                | 24                           | -                          | -                  | -                        |
|             | SC          | Clayey SAND; dark gray, less carbonaceous material, wet   | 5          | SS          | 12            | 0-2-5 (7)                 | -                 | -                   | -                  | 23                   | -                | -             | 21               | -                            | -                          | -                  | -                        |
|             |             | less clay and silt, light gray, medium dense  | 8          | SS          | 18            | 10-10-4 (14)              | -                 | -                   | -                  | 20                   | -                | -             | -                | -                            | -                          | -                  | -                        |
|             |             | light brownish gray   | 10         | SS          | 12            | 4-6-8 (14)                | -                 | -                   | -                  | 18                   | -                | -             | -                | -                            | -                          | -                  | -                        |
|             | CL          | increasing clay and silt, silty clay laminations common from 9-10'  | 10         | NR          | 0             | -                         | -                 | -                   | -                  | -                    | -                | -             | -                | -                            | -                          | -                  | -                        |
|             |             | Sandy CLAY; sand is fine to coarse grained, light brown and grayish brown, wet, loose   | 15         | SS          | 18            | 1-3-6 (9)                 | -                 | -                   | -                  | 32                   | -                | -             | 59               | -                            | -                          | -                  | -                        |

Bottom of borehole at 15.0 feet.





