

ALEXANDER ISLAND BORING SUMMARY SHEET

| | |
|--------------------------|----------------------|
| BORING ID: | <u>13-B31</u> |
| BORING TYPE: | <u>Borrow Source</u> |
| DEPTH: | <u>15'</u> |
| ELEVATION: | <u>30.03'</u> |
| X (US SURVEY FT): | <u>3224956.08</u> |
| Y (US SURVEY FT): | <u>13832789.07</u> |
| DEPTH TO WATER: | <u>2.15'</u> |

Client: USACE-Galveston District Boring: 13-B31
 Date/Time Drilling Begun: 12.5.13/835 Date/Time Drilling Ended: 12.5.13/1000
 Driller: Jason New Logger: Eddie Ficker Designated X (Easting): Long -95.0404724
 Drill Rig: Mobile B57 Designated Y (Northing): 29.7260002 Z (Elevation):
 Total depth: 15 Initial Water Encounter (Depth, date/time): 3.20 ft 12.5.13/859 Water Depth (15 min.): 2.15

835
 ↑
 Dredge Spit
 ↓
 10:00
 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 | 16 | ST | 1B | - | - | Silty SAND (F-C), Light Orangeish Brown, Moist, V. Loose, occasional shell frags |
| 2 | SM | 2-4 3.5-5 | 14 | SS 8-15-11 | 1B | - | - | S.A.A - Light Gray, Wet, Dense |
| 5 | SM | 4-6 8.5-10 | 16 | SS 4-3-3 | 1B | - | - | SAA to 9.5' @ 9.5' silty, clayey SAND (FC), Orangeish Brown, Gray, Wet, Loose, |
| 8 | SM | 6-8 13.5-15 | 18 | SS 3-3-6 | 1T | 0 | 0.25 | to 12.0' |
| 10 | SC | 8-10 | | | | | | 12.0-14.8 Silty, V. Sandy CLAY (CH) Reddish Dark Gray to Black Brown and mottled w/ orangeish V. Silty rich clay (CH) |
| 14.8 | SM | 14.8" | | | | | | 14.8" - Silty SAND (F-C), Light Orangeish Brown, Moist, V. Loose |
| 15 | SM | to 15' | | | | | | |

Weather: Foggy, ~73°F

Comments: S.A.A. = Same as above (F-C) = Fine to coarse grained frags = fragments

USCS Log Legend:



US Army Corps of Engineers, Southwestern Division
 Galveston District
 2000 Fort Point Road/P.O. Box 1229
 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\ALEXANDER ISLAND\DELIVERABLES\ALEX



Quaternary Resource Investigations, LLC
 13588 Florida Boulevard
 Baton Rouge, LA 70820
 Telephone: 225-292-1400
 Fax: 225-292-1404

BORING NUMBER 13-B31

CLIENT USACE-Galveston District **PROJECT NAME** Alexander Island
PROJECT NUMBER W912HY-13-D-0001-DY06 **PROJECT LOCATION** Alexander Island, Baytown, TX
DATE STARTED 12/5/2013 8:35:00 AM **COMPLETED** 12/5/2013 10:00:00 AM **GROUND ELEVATION** 30.0317 ft **HOLE SIZE** 8.25 inches
DRILLING CONTRACTOR QRI **NORTHING** 13832789 ft **EASTING** 3224956 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** 3.20 ft / Elev 26.83 ft
WEATHER cloudy, foggy, 73 **24 HOURS AFTER DRILLING** ▽ 2.15 ft / Elev 27.88 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 | | | | |
| | SC | Clayey SAND; fine to coarse grained, light orangish brown, moist, very loose, with occasional shell fragments | 0 | ST | 16 | | - | | | 18 | | | | 30 | | | |
| | | | 5 | NR | 0 | | | | | | | | | | | | |
| | SP | SAND; fine to coarse grained, light gray, wet, dense | 5 | SS | 14 | 8-15-11 (26) | - | | | 20 | | | | 4 | | | |
| | | | 10 | NR | 0 | | | | | | | | | | | | |
| | SC | Silty clayey SAND; fine to coarse grained, orangish brown and gray, wet, loose | 10 | SS | 16 | 4-3-3 (6) | - | | | 32 | | | | 42 | | | |
| | | | 15 | NR | 0 | | | | | | | | | | | | |
| | CH | CLAY; reddish brown; mixed with organic rich clay (OH), dark gray to black, very soft | 15 | SS | 18 | 3-3-6 (9) | 0 | 0.25 | | 32 | | | | | | | |
| | | | 15 | SM | | | | | | | | | | | | | |

Silty SAND; fine to coarse grained, light orangish brown, moist, very loose
 Bottom of borehole at 15.0 feet.

