

DEPARTMENT OF THE ARMY  
DIVISION Southwestern  
INSTALLATION Galv Dist, Eng Div

1. PROJECT  
Port Aransas - Corpus Christi  
2. LOCATION (Coordinates or Station)  
Tide 1.0 @ 10:00 AM Sta 47+00  
3. DRILLING AGENCY  
U. S. Army Corps of Engineers  
4. HOLE NO. (As shown on drawing title and file No.)  
6ST-1  
5. NAME OF DRILLER  
Smith  
6. DIRECTION OF HOLE  
☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL  
7. THICKNESS OF OVERBURDEN  
8. DEPTH DRILLED INTO ROCK  
9. TOTAL DEPTH OF HOLE 65.0  
10. SIZE AND TYPE OF BIT  
Shelby Tube - 6"  
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)  
12. MANUFACTURER'S DESIGNATION OF DRILL  
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN  
DISTURBED 4 Jars UNDISTURBED 6 Cont  
14. TOTAL NO. CORE BOXES  
15. ELEV. GROUND WATER  
16. DATE HOLE  
STARTED 25 June COMPLETED 25 June 1962  
17. ELEV. TOP OF HOLE  
18. TOTAL CORE RECOVERY FOR BORING (%)  
19. SIGNATURE OF INSPECTOR

| ELEVATION | DEPTH | LEGEND | CLASSIFICATION OF MATERIALS (Description)                                                    | % CORE RECOVERY | BOX OR SAMPLE NO. | REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) |
|-----------|-------|--------|----------------------------------------------------------------------------------------------|-----------------|-------------------|--------------------------------------------------------------------------------|
| 0.0       | 34.0  |        | Water                                                                                        |                 |                   |                                                                                |
| 34.0      | 36.0  |        | 34.5-35.0 3 blows<br>35.0-35.5 1 blow<br>Gray sand silt, w/shell frag and grass              | SM              |                   | Jar 1                                                                          |
| 36.0      | 40.0  |        | Washed, sand silt                                                                            |                 |                   |                                                                                |
| 40.0      | 42.0  |        | Gray sand silty clayey w/shell fragments, stiff                                              | SC              |                   | Cont. 1 1.00                                                                   |
| 42.0      | 44.0  |        | Gray clay sandy w/cal nod v/stiff                                                            | CL              |                   | Cont. 2 2.75                                                                   |
| 44.0      | 46.0  |        | Tan clay sandy w/cal nod hard                                                                |                 |                   | Cont. 3 4.50                                                                   |
| 46.0      | 48.0  |        | Gray sand, clayey w/cal nod v/stiff                                                          |                 |                   | Cont. 4 Top 2.50<br>Bottom 3.00                                                |
| 48.0      | 50.0  |        | Tan and gray sand clayey w/cal nod                                                           | SC              |                   | Cont. 5 3.75                                                                   |
| 50.0      | 52.0  |        | Same as above w/small sandstone nod, v/stiff                                                 |                 |                   | Cont. 6 2.75                                                                   |
| 52.0      | 54.0  |        | Sand                                                                                         |                 |                   |                                                                                |
| 54.0      | 56.0  |        | 54.5-55.0 37 blows<br>55.0-55.5 61 blows<br>Brown sand silty clay shell fragments            |                 |                   | Jar 2                                                                          |
| 56.0      | 58.0  |        | Same as above                                                                                | SM              |                   | Washed                                                                         |
| 58.0      | 60.0  |        | 58.0-58.5 No count<br>58.5-59.0 83 blows<br>59.0-59.5 refusal<br>Tan sand, fine w/shell frag |                 |                   | Jar 3                                                                          |
| 60.0      | 63.0  |        | Same as above, sand w/shell fragments                                                        |                 |                   | No sample                                                                      |
| 63.0      | 65.0  |        | 63.0-63.5 No count<br>63.5-65.0 refusal<br>Gray sand fine w/shell frag                       |                 |                   | Jar 4                                                                          |
|           |       |        | Bottomed at 65.0 in above<br>Water 34.0<br>Weight of hammer 140#<br>Drop Distance - 30"      |                 |                   |                                                                                |

U.S. STANDARD SIEVE SIZE

3 IN. 2 IN. NO. 4 NO. 10 NO. 40 NO. 200

PERCENT FINER BY WEIGHT

100  
80  
60  
40  
20  
0

GRAIN SIZE IN MILLIMETERS

1000 100 10 1.0 0.1 0.01 0.001

COBBLES

GRAVEL

SAND

SILT OR CLAY

C F C M F

|                                       |      |      |      |       |
|---------------------------------------|------|------|------|-------|
| Test No.                              | 1    | 2    | 3    | 4     |
| Water Content, $W_0$ %                | 20.1 | 21.8 | 19.0 | 21.7  |
| Dry Density Lbs/Cu Ft                 | 106  | 105  | 109  | 105   |
| Void Ratio, $e_0$                     | .573 | .600 | .530 | .600  |
| Saturation, $S_0$ %                   | 94   | 98   | 96   | 97    |
| W.C. after Saturation, $W_s$ %        |      |      |      |       |
| Saturation, $S$ %                     |      |      |      |       |
| Consol Pressure T/Sq Ft               |      |      |      |       |
| W.C. after Consol, $W_c$ %            |      |      |      |       |
| Void Ratio after Consol $e_c$         |      |      |      |       |
| At Failure                            |      |      |      |       |
| Major Prin Stress, $\sigma_1$ T/Sq Ft | 2.79 | 4.87 | 7.39 | 11.77 |
| Min Prin Stress, $\sigma_3$ T/Sq Ft   | 0.5  | 1.5  | 3.0  | 6.0   |
| Water Content, $W_f$ %                |      |      |      |       |
| Void Ratio, $e_f$                     |      |      |      |       |
| Specimen Diameter Inches              | 1.4  | 1.4  | 1.4  | 1.4   |
| Initial Height Inr                    | 3.0  | 3.0  | 3.0  | 3.0   |
| Test Time to Failure Min              | 11   | 26   | 32   | 33    |

DEVIATOR STRESS, TONS/SQ FT

8  
6  
4  
2  
0

Test 1

AXIAL STRAIN, PERCENT

0 8 16 24

VOLUMETRIC STRAIN, PERCENT

0  
-2  
-4  
-6  
-8  
-10  
-12  
-14  
-16  
-18  
-20  
-22  
-24  
-26  
-28  
-30  
-32  
-34  
-36  
-38  
-40  
-42  
-44  
-46  
-48  
-50  
-52  
-54  
-56  
-58  
-60  
-62  
-64  
-66  
-68  
-70  
-72  
-74  
-76  
-78  
-80  
-82  
-84  
-86  
-88  
-90  
-92  
-94  
-96  
-98  
-100

Type of Test - Q

Constant strain, 0.03 in/min

Control

Un Consolidated, Un Drained

Type of Specimen Undisturbed

$\phi = 13.3^\circ$  Tan  $\phi = .237$  c = 0.7 T/Sq Ft

Classification Sandy CLAY (CL)

LL 41 G 2.68

PL 12 D<sub>10</sub>

SHEAR STRESS, TONS/SQ FT

10  
8  
6  
4  
2  
0

APPLIED PRINCIPAL STRESSES, TONS/SQ FT

0 2 4 6 8 10 12 14

Remarks:  
Q test

Project Port Aransas - Corpus Christi

Foundation Material

Area GALVESTON DISTRICT

Boring No. EST-1 Sample No. S-13,598

Elev or Depth 44.0 - 46.0 Date SEP 62

TRIAXIAL COMPRESSION TEST REPORT

SMDGL Report No. 8007

10/1/2009