# U.S. ARMY CORPS OF ENGINEERS

BORING NO. 92-45 DATE: BEGIN 7-30-92 PAGE 1 / 1
JOB NO. 146549 COMPLETE 7-30-92 Thin Walled Tube
PROJECT Disposal Area For channel to victoria ☒ 3" ☐ 6"
LOCATION Near Sea drift, Tx
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Ardco Failing Buggy
GROUNDWATER: DEPTH 8.00 ft., ELEV. ____ ft., at end of Drilling
WEATHER Sunny & Hot
DRILLER Mack Thornton LOGGER Fraj Mostamand

| DEPTH, FEET | SAMPLE | SAMPLE NO. | PEN./TORVANE SPT.-BLOW COUNT | COLOR | MATERIAL TYPE | CONSIS-TENCY | SECONDARY CONSTITUENTS | STRUCTURAL FEATURES AND COMMENTS |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1 | 4.5+ | Dk. Gray | clay | Hard | sand | -w/roots |
| | | 2 | 1.50 | Gray & Yellowish gray | clay | stiff | sand | -w/Fe stains |
| 5 | | 3 | 1.25 | Gray & Y. Gray | clay | stiff | sand | -w/calc nod & Fe st |
| | | 4 | 0.75 | Gray & Y. Gray | clay | M. stiff | sand | -w/ Fe st & sand @ bottom of sample |
| 10 | X | 5 | 1/2/2 | Gray | sand | loose | silt | |
| 15 | X | 6 | 3/4/4 | Gray | sand | loose | silt | |
| 20 | X | 7 | 3/4/5 | Gray | sand | loose | silt | |
| | | | | | | | | Bottom of 92-45 @ 20' |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

GEOTEST ENGINEERING, INC.

# SUMMARY OF LABORATORY TEST RESULTS

Project: Proposed new Disposal area for channel to victoria project, near Seadrift, Texas
Contract No. DACW64-92-D-0001 Delivery Order No. 0023

Boring No. 92-45

| S# | Depth (ft.) | PP (tsf) | SPT Blows per foot | Visual Classification | U S C | M C (%) | Dry Unit Wt. (pcf) | Wet Unit Wt. (pcf) | LL (%) | PL (%) | Mechanical Analysis % passing #4 | #10 | #40 | #100 | #200 | Torvane Shear Strength (tsf) | qu (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0-2 | 4.5+ | | Dark gray,Clay,Hard,Sandy,w/roots | C L | 12.0 | | | | | | | | | | | |
| 2 | 2-4 | 1.50 | | Gray&Yellowish gray,Clay,Stiff,Sandy,w/calc-areous nodules | C L | 21.4 | | | | | | | | | | | |
| 3 | 4-6 | 0.75 | | Gray&Yellowish gray,Clay,Medium stiff,Sandy,w/ calcareous nodules ferrous stains and sand seam | C L | 26.8 | 98.2 | 124.5 | 49 | 19 | 99.8 | 99.8 | 99.6 | 98.3 | 73.0 | | 0.84 |
| 4 | 6-8 | 0.50 | | Gray&Yellowish gray,Clay,Medium stiff,Sandy,w/ calcareous nodules | C L | 28.3 | | | | | | | | | | | |
| 5 | 8.5-10 | | 4 | Gray,Sand,Loose,Silty | S M | | | | | | | | | | | | |
| 6 | 13.5-15 | | 8 | Gray,Sand,Loose,Silty | S M | | | | | | | | | | | | |
| 7 | 18.5-20 | | 9 | Gray,Sand,Loose,Silty | S M | | | | | | | | | | | | |

S#: Sample Number, PP: Pocket Penetrometer Reading, USC: Unified Soil Classification, MC: Moisture Content
qu: Unconfined Compressive Strength, WOH: Weight of Hammer, WOP: Weight of Pipe

***GEOTEST ENGINEERING, INC.***

JOB NO. 14G599 DATE 8/7/92

PROJECT Proposed Disposal area for Channel to Victoria Project

**AREA** near Seadrift, Texas

**BORING NO.** 92-45 **SAMPLE NO.** 3 **DEPTH** 4-6 ft

**SPECIMEN NO.** 1

**CLASSIFICATION**
Gray&Yellowish gray,Clay,Medium stiff,Sandy,w/calc nod&fe st&sand seams

| | | | |
|---|---|---|---|
| Tare No. | K1-4 | Height | 5.595 in. |
| Tare plus Wet Specimen | 638.67 gm | Average Diameter | 2.830 in. |
| Tare plus Dry Specimen | 512.52 gm | Initial Area | 6.290 sq in. |
| Water Weight | 126.15 gm | Volume | 35.194 cu in. |
| Tare Weight | 42.37 gm | Volume of Solids | cu in. |
| Wet Specimen | 1150.84 gm | Void Ratio | |
| Dry Specimen | 907.37 gm | Saturation | % |
| Water Content | 26.83 % | Dry Density | 98.2 lb/cu ft |
| Specific Gravity of Solids | | | |

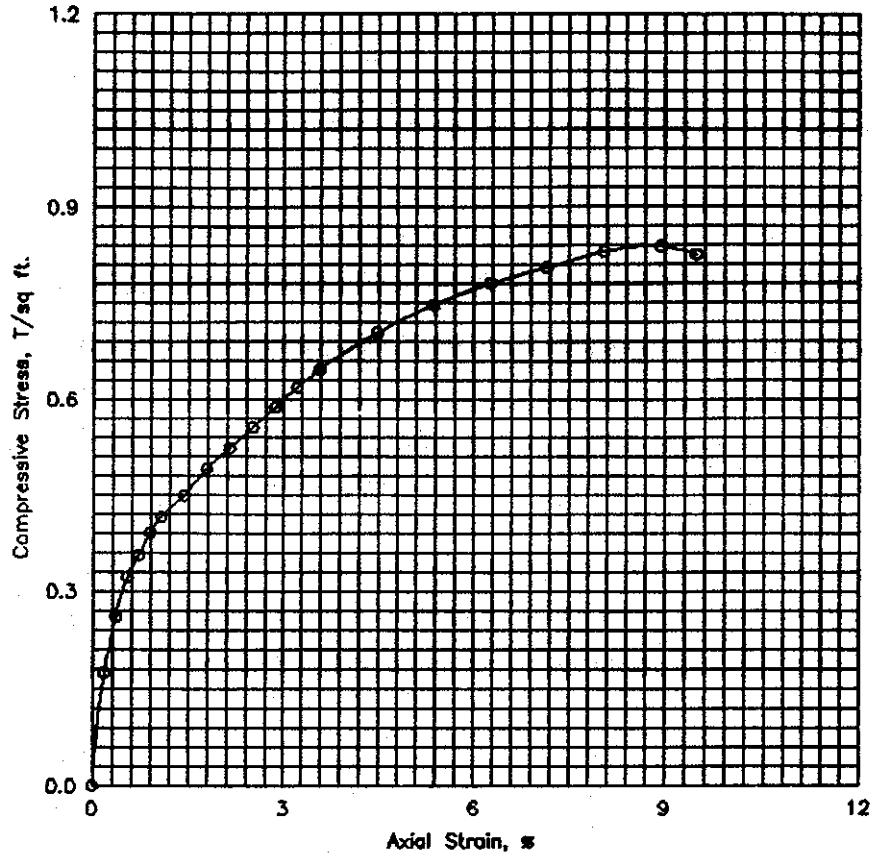
LL = 49 PL = 19 PI = 30

Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

| Elapsed Time min. | Dial Reading 0.001" | Cumulative Change in. | Proving Ring Dial Reading | Axial Load lb | Axial Strain | Area Corr. sq in. | Compr. Stress tsf |
|---|---|---|---|---|---|---|---|
| .0 | 0. | .000 | .0 | .0 | .000 | 6.29 | .000 |
| .2 | 10. | .010 | 20.0 | 15.3 | .002 | 6.30 | .175 |
| .3 | 20. | .020 | 30.0 | 23.0 | .004 | 6.31 | .262 |
| .5 | 30. | .030 | 37.0 | 28.3 | .005 | 6.32 | .323 |
| .7 | 40. | .040 | 41.0 | 31.4 | .007 | 6.34 | .357 |
| .9 | 50. | .050 | 45.0 | 34.5 | .009 | 6.35 | .391 |
| 1.1 | 60. | .060 | 48.0 | 36.8 | .011 | 6.36 | .416 |
| 1.4 | 80. | .080 | 52.0 | 39.8 | .014 | 6.38 | .449 |
| 1.7 | 100. | .100 | 57.0 | 43.7 | .018 | 6.40 | .491 |
| 2.0 | 120. | .120 | 61.0 | 46.7 | .021 | 6.43 | .523 |
| 2.3 | 140. | .140 | 65.0 | 49.8 | .025 | 6.45 | .556 |
| 2.7 | 160. | .160 | 69.0 | 52.9 | .029 | 6.48 | .588 |
| 3.0 | 180. | .180 | 73.0 | 55.9 | .032 | 6.50 | .619 |
| 3.4 | 200. | .200 | 76.5 | 58.6 | .036 | 6.52 | .647 |
| 4.2 | 250. | .250 | 84.0 | 64.3 | .045 | 6.58 | .704 |
| 4.9 | 300. | .300 | 90.0 | 68.9 | .054 | 6.65 | .747 |
| 5.8 | 350. | .350 | 95.0 | 72.8 | .063 | 6.71 | .781 |
| 6.6 | 400. | .400 | 99.0 | 75.8 | .071 | 6.77 | .806 |
| 7.4 | 450. | .450 | 103.0 | 78.9 | .080 | 6.84 | .830 |
| 8.3 | 500. | .500 | 105.0 | 80.4 | .089 | 6.91 | .838 |
| 8.7 | 530. | .530 | 104.0 | 79.7 | .095 | 6.95 | .825 |

Job No. 14G599

Failure Sketches




☐ Controlled stress
☒ Controlled strain

| | | | | | | |
|---|---|---|---|---|---|---|
| Test No. | | | 1 | | | |
| Type of Specimen | | | Undisturbed | | | |
| Initial | Water content | $w_0$ | 26.8 % | % | % | % |
| | Void ratio | $e_0$ | | | | |
| | Saturation | $S_0$ | % | % | % | % |
| | Dry density, lb/cu ft | $\gamma_d$ | 98.2 | | | |
| Time to failure, min | | $t_f$ | 8.25 | | | |
| Unconfined compressive strength, T/sq ft | | $q_u$ | .84 | | | |
| Undrained shear strength, T/sq ft | | $S_u$ | .42 | | | |
| Sensitivity ratio | | $S_t$ | | | | |
| Initial specimen diameter, in. | | $D_0$ | 2.830 | | | |
| Initial specimen height, in. | | $H_0$ | 5.595 | | | |

Classification Gray&Yellowish gray,Clay,Medium stiff,Sandy,w/calc nod&fe st&sand seams

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LL | 49 | PL | 19 | PI | 30 | $G_s$ | |

Remarks

Project Proposed Disposal area for Channel to Victoria Project

Area near Seadrift, Texas

Boring No. 92-45 | Sample No. 3

Depth El 4-6 ft | Date 8/7/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE