BKM

# U.S. ARMY CORPS OF ENGINEERS

BORING NO. 91-66 DATE: BEGIN 03-07-91 PAGE 1 / 2
JOB NO. 146446 COMPLETE 03-07-91 Thin Walled Tube
PROJECT CHANNEL TO VICTORIA ☒ 3" ☐ 6"
LOCATION VICTORIA CHANNEL
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG F-36
GROUNDWATER: DEPTH 10 ft., ELEV. ____ ft., at end of Drilling
WEATHER
DRILLER ROBERT TANKERSLEY LOGGER JOHN A. GENTRY

| DEPTH, FEET | SAMPLE | SAMPLE NO. | PEN./TORVANE SPT.-BLOW COUNT | COLOR | MATERIAL TYPE | CONSISTENCY | SECONDARY CONSTITUENTS | STRUCTURAL FEATURES AND COMMENTS |
|---|---|---|---|---|---|---|---|---|
| 0 | | 1 | 2.25 | LIGHT GRAY | CLAY | VERY STIFF | SANDY | BLACK w/roots (FILL) SAND POCKETS 0'-5' |
| | | 2 | 4.5+ | DARK GRAY | " | Hard | | 4'-5' W/ BRICK + ORGANIC |
| 5 | | 3 | 4.5+ | LIGHT GRAY | CLAY | HARD | " | TAN w/CALC NODS 5'-14' |
| | | 4 | 4.5 | | | " | | |
| | | 5 | 4.25 | " | " | " | | |
| 10 | | 6 | 4.0 | " | " | Very stiff | | |
| | | 7 | 4.5+ | " | " | Hard | | |
| 15 | X | 8 | 12/16/17 | LIGHT GRAY | SAND | DENSE | | w/ SANDY CLAY LAYER 14-17½ |
| | | 9 | 4.5+ | LIGHT GRAY | CLAY | HARD | SANDY | TAN w/CALC NODS 17½- |
| 20 | | 10 | 4.5+ | " | " | " | " | |
| | | 11 | 3.5 | " | " | VERY STIFF | " | |
| 25 | | 12 | 3.5 | " | " | " | " | |
| | | 13 | 4.5+ | " | " | Hard | " | SHORT SAMPLE BECAUSE CALC NODS LAYERS 26'-31' |
| | | 14 | 4.5+ | " | " | " | " | |
| 30 | X | 15 | 8/8/6 | LIGHT GRAY | SAND | MEDIUM DENSE | | 30-32½ |
| | | 16 | 4.5+ | LIGHT GRAY | CLAY | HARD | SANDY | TAN w/CALC NODS |
| 35 | | | | | | | | |

GEOTEST ENGINEERING, INC.

U.S. ARMY CORPS OF ENGINEERS

BKM

BORING NO. 91-66 DATE: BEGIN 03-07-91 PAGE 2 / 2

JOB NO. 146446 COMPLETE 03-07-91 Thin Walled Tube

PROJECT CHANNEL TO VICTORIA ☐ 3" ☐ 6"

LOCATION VICTORIA CHANNEL

ELEVATION OF HOLE

MANUFACTURER'S DESIGNATION OF DRILL RIG F-36

GROUNDWATER: DEPTH 10 ft., ELEV. ____ ft., at end of Drilling

WEATHER CLOUDY

DRILLER ROBERT TANNER LOGGER JOHN H. GENTRY

| DEPTH, FEET | SAMPLE | SAMPLE NO. | PEN./TORVANE SPT.-BLOW COUNT | COLOR | MATERIAL TYPE | CONSISTENCY | SECONDARY CONSTITUENTS | STRUCTURAL FEATURES AND COMMENTS |
|---|---|---|---|---|---|---|---|---|
| 35 | | 17 | 4.5+ | LIGHT GRAY | CLAY | HARD | SANDY | TAN w/ CALC NODS 33' - |
| | | 18 | 4.5+ | " | " | " | " | |
| 40 | | 19 | 4.5+ | " | " | " | " | |
| | | 20 | 4.5+ | " | " | " | " | w/ SAND LAYERS 41'-49' |
| | | 21 | 4.5+ | " | " | " | " | |
| 45 | | 22 | 4.0 | " | " | Very Stiff | " | |
| | | 23 | 4.0 | " | " | " | " | |
| | | 24 | 2.25 | " | " | " | VERY SANDY | |
| 50 | | 25 | 35 50/5" | | SAND | Very Dense | | NO RECOVERY LOST SHOE WHILE DRIVING |
| | | | | | | | | BOTTOM OF 91-66 |
| 55 | | | | | | | | |
| 60 | | | | | | | | |
| 65 | | | | | | | | |
| 70 | | | | | | | | |

GEOTEST ENGINEERING, INC.

Project : Channel enlargement channel to victoria,Victoria,Texas

**SUMMARY OF LABORATORY TEST RESULTS**

Boring No. 91-66 El. 22.6' NGVD

Contract No. DACW64-91-D-0001 Delivery Order No. 0009

| S # | Depth (ft) | P P (tsf) | SPT Blows per Foot | Visual Classification | U S C | M c (%) | Dry Unit Wt (pcf) | Wet Unit Wt (pcf) | L L (%) | P L (%) | Mechanical Analysis % Passing #4 | #10 | #40 | #100 | #200 | Torvane Shear Strength (tsf) | q u (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0-2 | 2.00 | | Gray,Clay,Very stiff,Sandy | CL | 22.8 | | | | | | | | | | | |
| 2 | 2-4 | 4.5+ | | Dark gray,Clay,Hard,Sandy | CL | 12.6 | 110.7 | 124.6 | 37 | 16 | 98.4 | 96.7 | 95.0 | | 59.8 | | 10.64 |
| 3 | 4-6 | 4.5+ | | Gray&yellowish brown,Clay,Hard,Sandy,w/calcareous nodules | CL | 12.9 | | | | | | | | | | | |
| 4 | 6-8 | 4.5+ | | Olive gray,Clay,Hard,w/calcareous nodules | CH | 27.2 | | | | | | | | | | | |
| 5 | 8-10 | 4.5+ | | Olive gray,Clay,Hard,w/calcareous nodules | CH | 26.3 | | | | | | | | | | | |
| 6 | 10-12 | 4.5+ | | Olive gray&yellowish brown,Clay,Hard,w/calcareous nodules and slickensided | CH | 7.2 | 115.0 | 123.2 | 81 | 29 | 100.0 | 99.7 | 99.6 | | 93.7 | | 1.54 |
| 7 | 12-14 | 4.5+ | | Olive gray&yellowish brown,Clay,Hard,w/calcareous nodules | CH | | | | | | | | | | | | |
| 8 | 14.5-16 | | 33 | Tan,Sand,Dense,Silty | S M | 27.7 | | | | | 100.0 | 99.9 | 92.8 | | 13.6 | | |
| 9 | 16-18 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | CL | 17.7 | | | | | | | | | | | |
| 10 | 20-22 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | CL | 18.7 | | | | | | | | | | | |
| 11 | 22-24 | 3.00 | | Gray,Clay,Very stiff,Sandy,w/calcareous nodules | CL | 19.9 | | | | | | | | | | | |
| 12 | 24-26 | 2.50 | | Gray,Sand,Dense,Clayey,w/calcareous nodules | SC | 18.7 | 106.0 | 125.9 | 30 | 15 | 94.2 | 92.6 | 91.5 | | 49.5 | | |
| 13 | 26-28 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | CL | 21.9 | | | | | | | | | | | |
| 14 | 28-30 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | CL | 15.9 | | | | | | | | | | | |
| 15 | 30.5-32 | | 14 | Tan,Sand,Medium dense,Silty | SP-SM | | | | | | 100.0 | 100.0 | 99.7 | | 8.3 | | |
| 16 | 33-35 | 4.5+ | | Gray&yellowish brown,Clay,Hard,Sandy,w/calcareous nod&ferrous stains and blocky structure | CL | 17.2 | 115.8 | 135.7 | 47 | 20 | 100.0 | 99.9 | 99.6 | | 87.9 | | 3.84 |
| 17 | 35-37 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | CL | 19.3 | | | | | | | | | | | |

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content
q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of pipe

Project : Channel enlargement channel to victoria,Victoria,Texas

**SUMMARY OF LABORATORY TEST RESULTS**

Boring No. 91-66

Contract No. DACW64-91-D-0001 Delivery Order No. 0009

| S # | Depth (ft) | P P (tsf) | SPT Blows per Foot | Visual Classification | U S C | M c (%) | Dry Unit Wt (pcf) | Wet Unit Wt (pcf) | L L (%) | P L (%) | Mechanical Analysis % Passing #4 | #10 | #40 | #100 | #200 | Torvane Shear Strength (tsf) | q u (tsf) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 37-39 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | C L | 20.1 | | | | | | | | | | | |
| 19 | 39-41 | 4.5+ | | Gray,Clay,Hard,Sandy,w/calcareous nodules | C L | 18.4 | | | | | | | | | | | |
| 20 | 41-43 | 3.50 | | Gray,Clay,Very stiff,Sandy,w/calcareous nodules | C L | 13.8 | | | | | | | | | | | |
| 21 | 43-45 | 3.00 | | Gray,Clay,Very stiff,Sandy,w/calcareous nodules | C L | 14.0 | | | | | | | | | | | |
| 22 | 45-47 | 3.00 | | Gray&yellowish brown,Clay,Very stiff,Sandy,w/ calcareous nodules | C L | 15.3 | 121.4 | 140.0 | 28 | 15 | 94.4 | 93.4 | | | 69.1 | | .72 |
| 23 | 47-49 | 3.00 | | Gray,Clay,Very stiff,Sandy,w/calcareous nodules | C L | 16.1 | | | | | | | | | | | |
| 24 | 49-49.5 | 2.50 | | Gray,Clay,Very stiff,Sandy,w/calcareous nodules | C L | 17.8 | | | | | | | | | | | |
| 25 | 49.5-51 | | 50/5" | Sand,Very dense | | | | | | | | | | | | | |

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content
q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of pipe

JOB NO. 14G459 DATE 5/10/91

PROJECT CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA, TEXAS

BORING NO. 91-66 SAMPLE NO. 2 DEPTH 2-4 ft

SPECIMEN NO. 1

CLASSIFICATION
Dark gray, Clay, Hard, Sandy

| | | | |
|---|---|---|---|
| Tare No. | GE-9 | Height | 5.595 in. |
| Tare plus Wet Specimen | 598.18 gm | Average Diameter | 2.830 in. |
| Tare plus Dry Specimen | 536.15 gm | Initial Area | 6.290 sq in. |
| Water Weight | 62.03 gm | Volume | 35.194 cu in. |
| Tare Weight | 42.38 gm | Volume of Solids | cu in. |
| Wet Specimen | 1151.35 gm | Void Ratio | |
| Dry Specimen | 1022.85 gm | Saturation | % |
| Water Content | 12.56 % | Dry Density | 110.7 lb/cu ft |
| Specific Gravity of Solids | | | |

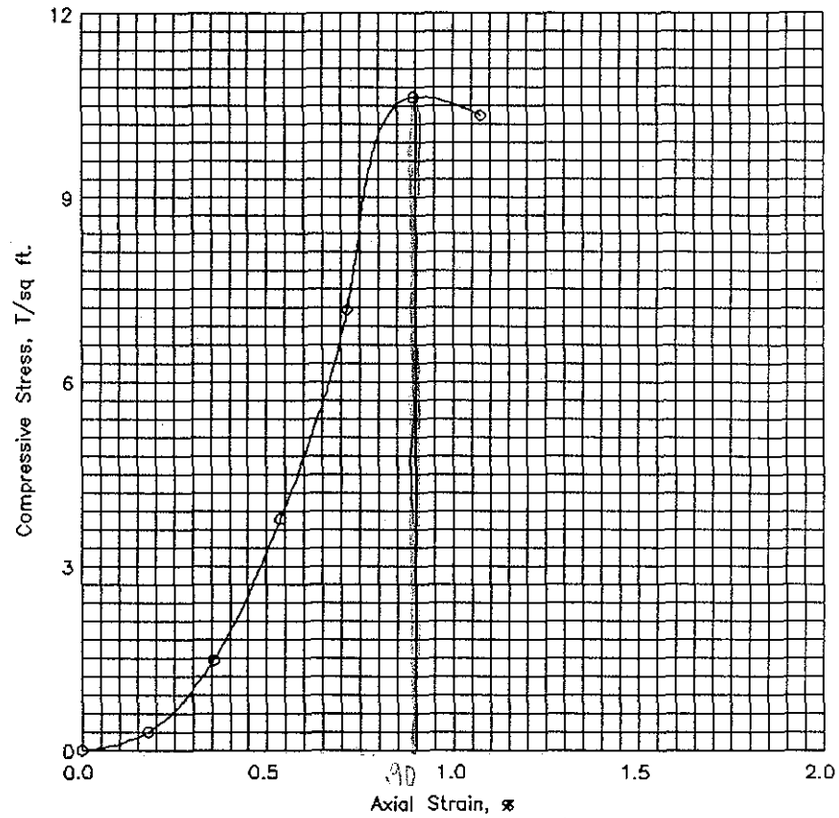
LL = 37 PL = 16 PI = 21

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 | 35.0 | 26.8 | .002 | 6.30 | .306 |
| .6 | 20. | .020 | 168.0 | 128.7 | .004 | 6.31 | 1.468 |
| 1.1 | 30. | .030 | 433.0 | 331.7 | .005 | 6.32 | 3.776 |
| 1.9 | 40. | .040 | 823.0 | 630.4 | .007 | 6.34 | 7.164 |
| 2.4 | 50. | .050 | 1225.0 | 938.3 | .009 | 6.35 | 10.645 |
| 2.7 | 60. | .060 | 1193.0 | 913.8 | .011 | 6.36 | 10.348 |

Job No. 14G459

Failure Sketches




☐ Controlled stress
☒ Controlled strain

| | | | | | | |
|---|---|---|---|---|---|---|
| Test No. | | | 1 | | | |
| Type of Specimen | | | Undisturbed | | | |
| Initial | Water content | $w_0$ | 12.6 % | % | % | % |
| | Void ratio | $e_0$ | | | | |
| | Saturation | $S_0$ | % | % | % | % |
| | Dry density, lb/cu ft | $\gamma_d$ | 110.7 | | | |
| Time to failure, min | | $t_f$ | 2.37 | | | |
| Unconfined compressive strength, T/sq ft | | $q_u$ | 10.64 | | | |
| Undrained shear strength, T/sq ft | | $S_u$ | 5.32 | | | |
| Sensitivity ratio | | $S_t$ | | | | |
| Initial specimen diameter, in. | | $D_0$ | 2.830 | | | |
| Initial specimen height, in. | | $H_0$ | 5.595 | | | |

Classification Dark gray, Clay, Hard, Sandy

| LL | 37 | PL | 16 | PI | 21 | $G_s$ |
|---|---|---|---|---|---|---|

Remarks

Project CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA

Area Victoria, Texas

Boring No. 91-66 | Sample No. 2

Depth El 2-4 ft | Date 5/10/91

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

*Geotest Engineering, Inc.*

JOB NO. 14G459 DATE 5/10/91

PROJECT CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA, TEXAS

BORING NO. 91-66 SAMPLE NO. 6 DEPTH 10-12 ft

SPECIMEN NO. 1

CLASSIFICATION
Olive gray & yellowish brown, Clay, Hard, w/ calcareous nodules, Slickensided

| | | | |
|---|---|---|---|
| Tare No. | GE-3 | Height | 5.595 in. |
| Tare plus Wet Specimen | 683.52 gm | Average Diameter | 2.830 in. |
| Tare plus Dry Specimen | 547.36 gm | Initial Area | 6.290 sq in. |
| Water Weight | 136.16 gm | Volume | 35.194 cu in. |
| Tare Weight | 42.67 gm | Volume of Solids | cu in. |
| Wet Specimen | 1138.35 gm | Void Ratio | |
| Dry Specimen | 896.49 gm | Saturation | % |
| Water Content | 26.98 % | Dry Density | 97.0 lb/cu ft |
| Specific Gravity of Solids | | | |

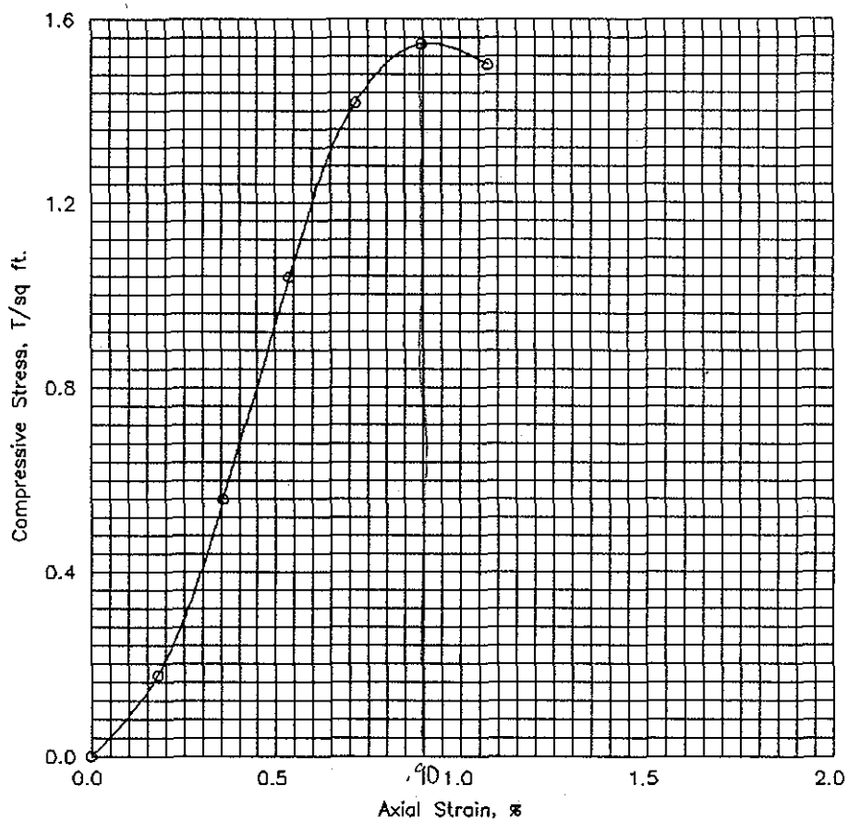
LL = 81 PL = 29 PI = 52

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 |
| .4 | 20. | .020 | 64.0 | 49.0 | .004 | 6.31 | .559 |
| .6 | 30. | .030 | 119.0 | 91.2 | .005 | 6.32 | 1.038 |
| .9 | 40. | .040 | 163.0 | 124.9 | .007 | 6.34 | 1.419 |
| 1.1 | 50. | .050 | 178.0 | 136.3 | .009 | 6.35 | 1.547 |
| 1.2 | 60. | .060 | 173.0 | 132.5 | .011 | 6.36 | 1.501 |

Job No. 14G459

Failure Sketches




Controlled stress
Controlled strain

| | | | | | | |
|---|---|---|---|---|---|---|
| Test No. | | | 1 | | | |
| Type of Specimen | | | Undisturbed | | | |
| Initial | Water content | $w_0$ | 27.0 % | % | % | % |
| | Void ratio | $e_0$ | | | | |
| | Saturation | $S_0$ | % | % | % | % |
| | Dry density, lb/cu ft | $\gamma_d$ | 97.0 | | | |
| Time to failure, min | | $t_f$ | 1.13 | | | |
| Unconfined compressive strength, T/sq ft | | $q_u$ | 1.55 | | | |
| Undrained shear strength, T/sq ft | | $S_u$ | .77 | | | |
| Sensitivity ratio | | $S_t$ | | | | |
| Initial specimen diameter, in. | | $D_0$ | 2.830 | | | |
| Initial specimen height, in. | | $H_0$ | 5.595 | | | |

Classification Olive gray & yellowish brown, Clay, Hard, w/ calcareous nodules, Slickensided

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LL | 81 | PL | 29 | PI | 52 | $G_s$ | |

Remarks

Project CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA

Area Victoria, Texas

Boring No. 91-66 | Sample No. 6

Depth El 10-12 ft | Date 5/10/91

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

*Geotest Engineering, Inc.*

PLATE

JOB NO. 14G459 DATE 5/10/91

PROJECT CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA, TEXAS

BORING NO. 91-66 SAMPLE NO. 16 DEPTH 33-35 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray & yellowish brown, Clay, Hard, Sandy, w/calcareous nodules, ferrous stains

| | | | |
|---|---|---|---|
| Tare No. | P-3 | Height | 5.595 in. |
| Tare plus Wet Specimen | 812.61 gm | Average Diameter | 2.830 in. |
| Tare plus Dry Specimen | 699.53 gm | Initial Area | 6.290 sq in. |
| Water Weight | 113.08 gm | Volume | 35.194 cu in. |
| Tare Weight | 42.63 gm | Volume of Solids | cu in. |
| Wet Specimen | 1253.65 gm | Void Ratio | |
| Dry Specimen | 1069.54 gm | Saturation | % |
| Water Content | 17.21 % | Dry Density | 115.8 lb/cu ft |
| Specific Gravity of Solids | | | |

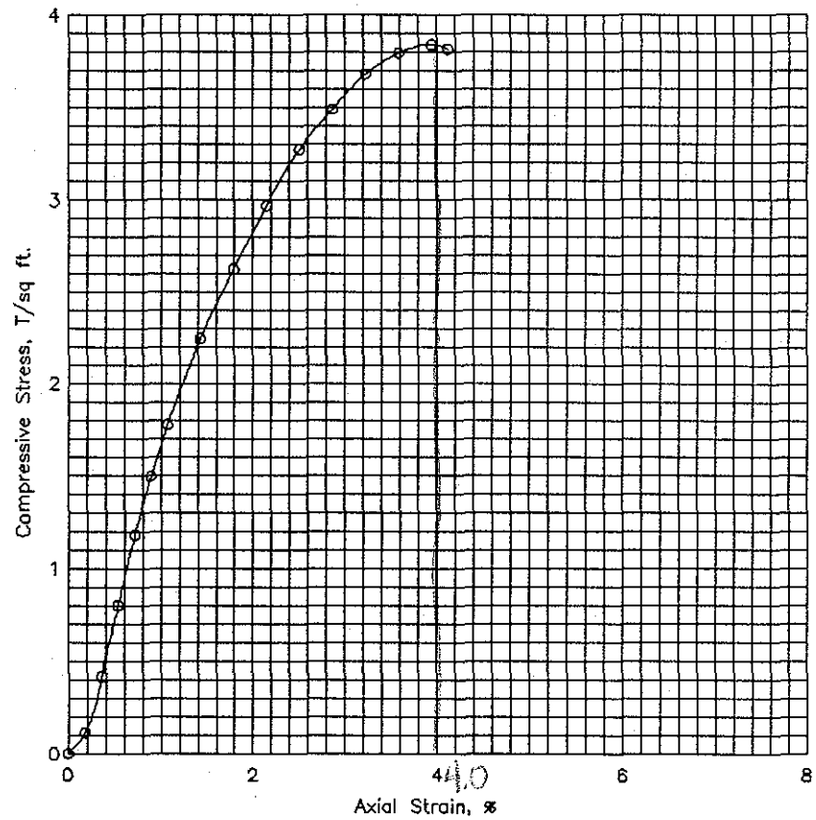
LL = 47 PL = 20 PI = 27

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 | 13.0 | 10.0 | .002 | 6.30 | .114 |
| .3 | 20. | .020 | 48.0 | 36.8 | .004 | 6.31 | .419 |
| .7 | 30. | .030 | 92.0 | 70.5 | .005 | 6.32 | .802 |
| .9 | 40. | .040 | 136.0 | 104.2 | .007 | 6.34 | 1.184 |
| 1.1 | 50. | .050 | 172.0 | 131.8 | .009 | 6.35 | 1.495 |
| 1.4 | 60. | .060 | 205.0 | 157.0 | .011 | 6.36 | 1.778 |
| 1.8 | 80. | .080 | 260.0 | 199.2 | .014 | 6.38 | 2.247 |
| 2.2 | 100. | .100 | 305.0 | 233.6 | .018 | 6.40 | 2.626 |
| 2.5 | 120. | .120 | 346.0 | 265.0 | .021 | 6.43 | 2.969 |
| 2.9 | 140. | .140 | 383.0 | 293.4 | .025 | 6.45 | 3.274 |
| 3.3 | 160. | .160 | 410.0 | 314.1 | .029 | 6.48 | 3.492 |
| 3.7 | 180. | .180 | 434.0 | 332.4 | .032 | 6.50 | 3.683 |
| 4.0 | 200. | .200 | 449.0 | 343.9 | .036 | 6.52 | 3.796 |
| 4.3 | 220. | .220 | 456.0 | 349.3 | .039 | 6.55 | 3.841 |
| 4.5 | 230. | .230 | 454.0 | 347.8 | .041 | 6.56 | 3.817 |

Job No. 14G459

Failure Sketches




☐ Controlled stress
☒ Controlled strain

| | | | | | | |
|---|---|---|---|---|---|---|
| Test No. | | | 1 | | | |
| Type of Specimen | | | Undisturbed | | | |
| Initial | Water content | $w_0$ | 17.2 % | % | % | % |
| | Void ratio | $e_0$ | | | | |
| | Saturation | $S_0$ | % | % | % | % |
| | Dry density, lb/cu ft | $\gamma_d$ | 115.8 | | | |
| Time to failure, min | | $t_f$ | 4.33 | | | |
| Unconfined compressive strength, T/sq ft | | $q_u$ | 3.84 | | | |
| Undrained shear strength, T/sq ft | | $S_u$ | 1.92 | | | |
| Sensitivity ratio | | $S_t$ | | | | |
| Initial specimen diameter, in. | | $D_0$ | 2.830 | | | |
| Initial specimen height, in. | | $H_0$ | 5.595 | | | |

Classification Gray & yellowish brown, Clay, Hard, Sandy, w/calcareous nodules, ferrous stains

| LL | 47 | PL | 20 | PI | 27 | $G_s$ |
|---|---|---|---|---|---|---|

Remarks

Project CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA

Area Victoria, Texas

Boring No. 91-66 | Sample No. 16

Depth El 33-35 ft | Date 5/10/91

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

*Geotest Engineering, Inc.*

PLATE

JOB NO. 14G459 DATE 5/08/91

PROJECT CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA, TEXAS

BORING NO. 91-66 SAMPLE NO. 22 DEPTH 45-47 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray & yellowish brown, Clay, Very stiff, Sandy, w/ calcareous nodules

| | | | |
|---|---|---|---|
| Tare No. | GE-4 | Height | 5.595 in. |
| Tare plus Wet Specimen | 568.31 gm | Average Diameter | 2.830 in. |
| Tare plus Dry Specimen | 498.35 gm | Initial Area | 6.290 sq in. |
| Water Weight | 69.96 gm | Volume | 35.194 cu in. |
| Tare Weight | 42.40 gm | Volume of Solids | cu in. |
| Wet Specimen | 1293.03 gm | Void Ratio | |
| Dry Specimen | 1121.02 gm | Saturation | % |
| Water Content | 15.34 % | Dry Density | 121.3 lb/cu ft |
| Specific Gravity of Solids | | | |

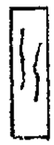
LL = 28 PL = 15 PI = 13

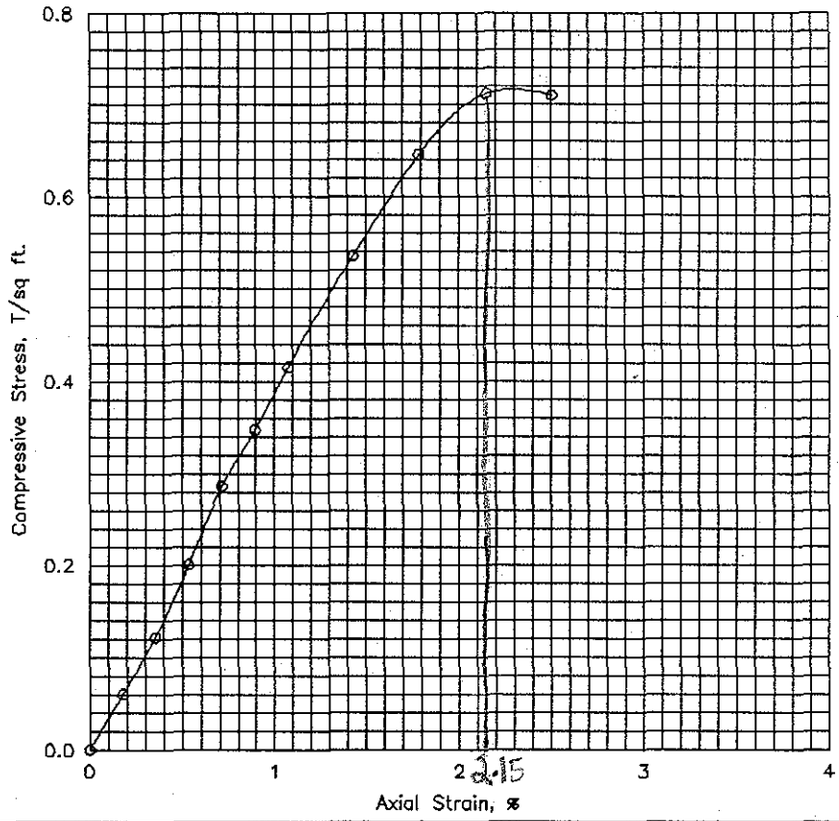
Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

| 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 | 7.0 | 5.4 | .002 | 6.30 | .061 |
| .4 | 20. | .020 | 14.0 | 10.7 | .004 | 6.31 | .122 |
| .6 | 30. | .030 | 23.0 | 17.6 | .005 | 6.32 | .201 |
| .8 | 40. | .040 | 33.0 | 25.3 | .007 | 6.34 | .287 |
| .9 | 50. | .050 | 40.0 | 30.6 | .009 | 6.35 | .348 |
| 1.1 | 60. | .060 | 48.0 | 36.8 | .011 | 6.36 | .416 |
| 1.5 | 80. | .080 | 62.0 | 47.5 | .014 | 6.38 | .536 |
| 1.8 | 100. | .100 | 75.0 | 57.4 | .018 | 6.40 | .646 |
| 2.2 | 120. | .120 | 83.0 | 63.6 | .021 | 6.43 | .712 |
| 2.4 | 140. | .140 | 83.0 | 63.6 | .025 | 6.45 | .710 |

Job No. 14G459

Failure Sketches






☐ Controlled stress
☒ Controlled strain

| | | | | | | |
|---|---|---|---|---|---|---|
| Test No. | | | 1 | | | |
| Type of Specimen | | | Undisturbed | | | |
| Initial | Water content | $w_0$ | 15.3 % | % | % | % |
| | Void ratio | $e_0$ | | | | |
| | Saturation | $S_0$ | % | % | % | % |
| | Dry density, lb/cu ft | $\gamma_d$ | 121.3 | | | |
| Time to failure, min | | $t_f$ | 2.15 | | | |
| Unconfined compressive strength, T/sq ft | | $q_u$ | .71 | | | |
| Undrained shear strength, T/sq ft | | $S_u$ | .36 | | | |
| Sensitivity ratio | | $S_t$ | | | | |
| Initial specimen diameter, in. | | $D_0$ | 2.830 | | | |
| Initial specimen height, in. | | $H_0$ | 5.595 | | | |

Classification Gray & yellowish brown, Clay, Very stiff, Sandy, w/ calcareous nodules

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LL | 28 | PL | 15 | PI | 13 | $G_s$ | |

Remarks

Project CHANNEL ENLARGEMENT, CHANNEL TO VICTORIA

Area Victoria, Texas

Boring No. 91-66 | Sample No. 22

Depth El 45-47 ft | Date 5/08/91

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

*Geotest Engineering, Inc.*

PLATE