

U.S. ARMY CORPS OF ENGINEERS

| DEPTH, FEET |      | SAMPLE NO. |               | PEN./TORVANE |                        | SPT.-BLOW COUNT                  |  | BORING NO. <u>92-106</u> DATE: BEGIN <u>7-25-92</u> PAGE <u>111</u><br>JOB NO. <u>146548</u> COMPLETE <u>7-25-92</u> Thin Walled Tube<br>PROJECT <u>DISPOSAL AREA #5</u> <input checked="" type="checkbox"/> 3" <input type="checkbox"/> 6"<br>LOCATION <u>BROWNSVILLE SHIP CHANNEL</u><br>ELEVATION OF HOLE _____<br>MANUFACTURER'S DESIGNATION OF DRILL RIG <u>C-1000 Marsh Buggy</u><br>GROUNDWATER: DEPTH <u>4.00</u> ft., ELEV. _____ ft., at end of Drilling<br>WEATHER <u>PARTLY CLOUDY</u><br>DRILLER <u>SCOTT GREGUREK</u> LOGGER <u>JOHN A. GENTRY</u> |  |  |  |  |
|-------------|------|------------|---------------|--------------|------------------------|----------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|             |      | COLOR      | MATERIAL TYPE | CONSISTENCY  | SECONDARY CONSTITUENTS | STRUCTURAL FEATURES AND COMMENTS |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 0           |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 1           | 2.25 | BROWN      | CLAY          | VERY STIFF   |                        | * + GRAY 0' - 10'                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 2           | 1.25 | "          | "             | stiff        |                        | - w/ sa PKA 2' - 10'             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 3           | 2.0  | "          | "             | Very stiff   |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 4           | 1.0  | "          | CLAY          | STIFF        |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 5           | 2.0  | "          | CLAY          | VERY STIFF   |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 6           | 2.0  | GRAY       | "             | "            |                        | * + BROWN 10' - 22'              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 7           | 2.0  | "          | "             | "            |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 8           | 0.75 | "          | "             | MEDIUM STIFF |                        | - w/ sa LAYERS 14' - 18'         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 9           | 1.5  | "          | CLAY          | STIFF        |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 10          | 0.75 | "          | CLAY          | MEDIUM STIFF |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 11          | 0.75 | "          | CLAY          | "            |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 12          | 0.75 | GRAY       | CLAY          | "            |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 13          | 0.75 | "          | "             | "            |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 14          | 2.0  | BROWN      | CLAY          | VERY STIFF   |                        | + GRAY 26' - 30'                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 15          | 1.75 | "          | "             | STIFF        |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 16          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 17          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 18          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 19          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 20          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 21          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 22          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 23          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 24          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 25          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 26          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 27          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 28          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 29          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 30          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 31          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 32          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 33          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 34          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 35          |      |            |               |              |                        |                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |

Project : Disposal area site adjacent to the Brownsville Ship channel for the  
Brazos Island Harbor project near Brownsville, Texas  
Contract No. DACW64-92-D-0001 Delivery order No. 0025

# SUMMARY OF LABORATORY TEST RESULTS

Boring No. 92-106

| S # | Depth<br>(ft) | P P<br>(tsf) | SPT<br>Blows<br>per<br>Foot | Visual<br>Classification                               | U S C | M c<br>(%) | Dry<br>Unit<br>Wt<br>(pcf) | Wet<br>Unit<br>Wt<br>(pcf) | LL<br>(%) | P L<br>(%) | Mechanical Analysis<br>% Passing |      |      |      |      | Torvane<br>Shear<br>Strength<br>(tsf) | q u<br>(tsf) |
|-----|---------------|--------------|-----------------------------|--------------------------------------------------------|-------|------------|----------------------------|----------------------------|-----------|------------|----------------------------------|------|------|------|------|---------------------------------------|--------------|
|     |               |              |                             |                                                        |       |            |                            |                            |           |            | #4                               | #10  | #40  | #100 | #200 |                                       |              |
| 1   | 0-2           | 2.25         |                             | Brown,Clay,Very stiff,w/mica&sand seams                | CH    | 11.6       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 2   | 2-4           | 3.00         |                             | Olive gray,Clay,Very stiff,w/sand pockets&sand seams   | CH    | 35.9       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 3   | 4-6           | 1.75         |                             | Gray&brown,Clay,Stiff,w/sand pockets&sand seams        | CH    | 28.1       | 92.8                       | 118.9                      | 58        | 24         | 99.6                             | 99.1 | 98.1 | 96.6 | 93.7 |                                       |              |
| 4   | 6-8           | 1.50         |                             | Gray&brown,Clay,Stiff,w/sand pockets&sand seams        | CH    | 32.7       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 5   | 8-10          | 0.75         |                             | Gray&brown,Clay,Medium stiff,Sandy,w/sand seams        | CL    | 20.5       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 6   | 10-12         | 0.50         |                             | Gray&brown,Clay,Medium stiff,w/sand pockets&sand seams | CH    | 29.8       | 90.7                       | 117.7                      | 51        | 21         | 99.9                             | 99.5 | 98.2 | 95.5 | 90.0 |                                       |              |
| 7   | 12-14         | 1.75         |                             | Brown,Clay,Stiff,w/mica                                | CH    | 30.6       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 8   | 14-16         | 0.50         |                             | Brown&gray,Clay,Medium stiff,w/sand pockets&sand seams | CH    | 32.0       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 9   | 16-18         | 0.75         |                             | Brown&gray,Clay,Medium stiff,w/soft calcareous nodules | CH    | 28.8       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 10  | 18-20         | 0.50         |                             | Gray,Clay,Medium stiff                                 | CH    | 38.9       |                            |                            | 68        |            |                                  |      |      |      |      |                                       |              |
| 11  | 20-22         | 1.00         |                             | Gray,Clay,Stiff                                        | CH    | 36.8       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 12  | 22-24         | 0.75         |                             | Gray,Clay,Medium stiff                                 | CH    | 38.0       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 13  | 24-26         | 1.00         |                             | Gray,Clay,Stiff                                        | CH    | 38.4       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
| 14  | 26-28         | 1.25         |                             | Reddish brown,Clay,Stiff,w/ferrous stains              | CH    | 29.3       |                            |                            | 67        |            |                                  |      |      |      |      |                                       |              |
| 15  | 28-30         | 2.00         |                             | Gray,Clay,Very stiff                                   | CH    | 27.4       |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
|     |               |              |                             |                                                        |       |            |                            |                            |           |            |                                  |      |      |      |      |                                       |              |
|     |               |              |                             |                                                        |       |            |                            |                            |           |            |                                  |      |      |      |      |                                       |              |

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

Geotest Engineering, Inc.