Project : Pelican Island Disposal Area
Galveston, Texas
Contract No. DACW64-92-D-0005 Delivery order No. 0023

**SUMMARY OF LABORATORY TEST RESULTS**

Boring No. 93-196

+ 11.95

| 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 | 1.50 | | Brown,Clay,Stiff,w/sand seams&roots | CH | 28.4 | | | | | | | | | | | |
| 2 | 2 - 4 | 0.75 | | Brown&gray,Clay,Medium stiff,w/woods | CH | 30.9 | 88.8 | 116.2 | 66 | 26 | 100.0 | 100.0 | 99.5 | 99.1 | 98.1 | 0.35 | 0.70 |
| 3 | 4 - 6 | 0.00 | | Gray,Clay,Very soft,w/hydrocarbon | CH | 58.1 | | | | | | | | | | 0.11 | |
| 4 | 6 - 8 | 0.00 | | Gray,Clay,Very soft,w/hydrocarbon | CH | 53.6 | | | | | | | | | | 0.11 | |
| 5 | 8 - 10 | 0.00 | | Gray,Clay,Very soft,w/hydrocarbon | CH | 70.7 | 57.9 | 98.8 | 127 | 43 | 100.0 | 100.0 | 99.9 | 99.4 | 98.9 | 0.07 | 0.12 |
| 6 | 10 - 12 | 0.00 | | Olive gray,Clay,Very soft,Sandy,w/sand seams& ferrous nodules | CL | 25.5 | | | | | | | | | | | |
| 7 | 12 - 13.5 | 0.50 | 5 | Olive gray,Clay,Medium stiff,Sandy,w/sand seams&shell fragments | CL | 29.5 | | | | | | | | | | | |
| 8 | 13 - 15.5 | | 12 | Gray,Sand,Medium dense,Silty,w/shell fragments | SM | | | | | | | | | | | | |
| 9 | 19 - 20.5 | | 19 | Gray,Sand,Dense,Silty,w/shell fragments | SM | | | | | | | | | | | | |
| 10 | 24 - 25.5 | | 74 | Gray,Sand,Very dense,Silty | SM | | | | | | | | | | | | |
| 11 | 29 - 30.5 | 1.00 | 8 | Gray,Clay,Stiff,Silty | CL | | | | | | | | | | | | |
| 12 | 31 - 33 | 0.50 | | Yellowish gray,Clay,Medium stiff,Silty,w/ferrous nodules | CL | 21.6 | 103.6 | 126.0 | 38 | 18 | 100.0 | 100.0 | 99.9 | 99.1 | 98.6 | 0.30 | 0.55 |
| 13 | 33 - 35 | 0.75 | | Brown&gray,Clay,Medium stiff,Silty,w/ calcareous&ferrous nodules | CL | 16.8 | | | | | | | | | | | |
| 14 | 35 - 37 | 1.50 | | Yellowish brown,Clay,Stiff,Silty,w/ferrous nodules | CL | 20.0 | | | | | | | | | | | |
| 15 | 37 - 39 | 0.75 | | Yellowish brown,Clay,Medium stiff,Silty,w/ ferrous nodules | CL | 17.6 | | | 37 | | | | | | | | |
| 16 | 39 - 41 | 3.00 | | Brown&gray,Clay,Very stiff,w/calcareous noddules,Slickensided | CH | 21.7 | | | | | | | | | | | |
| 17 | 41 - 43 | 2.00 | | Brown&gray,Clay,Very stiff,w/calcareous nodules&sand seams | CH | 26.3 | | | 60 | 25 | | | | | | | |

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.*

Project : Pelican Island Disposal Area
Galveston, Texas
Contract No. DACW64-92-D-0005 Delivery order No. 0023

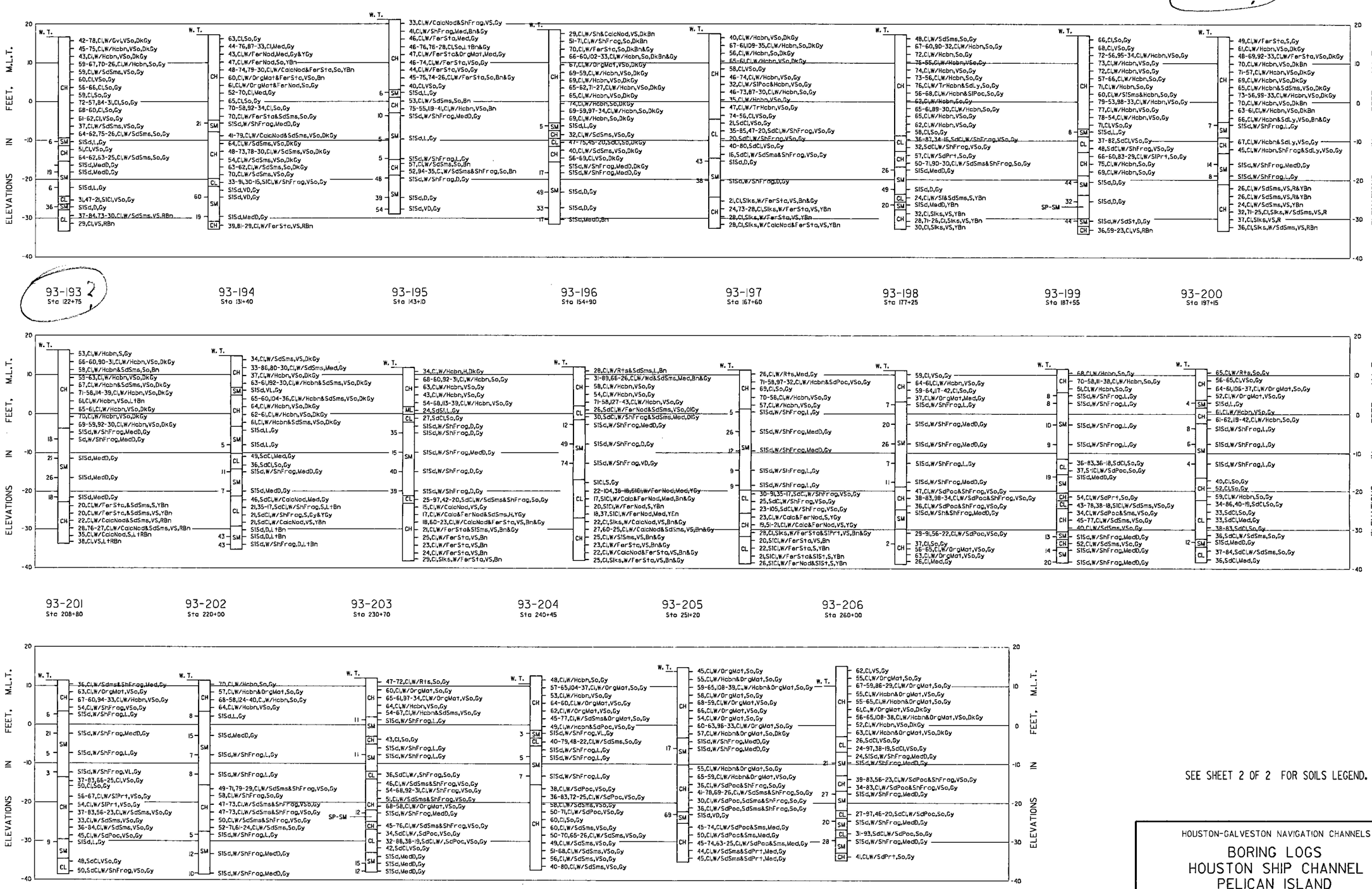
**SUMMARY OF LABORATORY TEST RESULTS**

Boring No. 93-196

| 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 | 43 - 45 | 2.75 | | Brown&gray,Clay,Very stiff,w/silt seams | CH | 25.0 | | | | | | | | | | | |
| 19 | 45 - 47 | 2.25 | | Brown&gray,Clay,Very stiff,w/ferrous stains | CH | 23.0 | | | | | | | | | | | |
| 20 | 47 - 49 | 2.50 | | Brown&gray,Clay,Very stiff,w/calcareous nodules&ferrous stains | CH | 21.7 | | | | | | | | | | | |
| 21 | 49 - 50 | 2.50 | | Brown&gray,Clay,Very stiff,w/ferrous stains, Slickensided | CH | 25.3 | | | | | | | | | | | |

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

***Geotest Engineering, Inc.***




SEE SHEET 2 OF 2 FOR SOILS LEGEND.

HOUSTON-GALVESTON NAVIGATION CHANNELS

# BORING LOGS
# HOUSTON SHIP CHANNEL
# PELICAN ISLAND

U.S. ARMY ENGINEER DISTRICT, GALVESTON, TEXAS

SHEET 1 OF 2

EXHIBIT F-

| Bor. No EL | Depth | Top EL. | V/SO. | SO. | MED | ST. | All in (Psf.) |
|---|---|---|---|---|---|---|---|
| 93-193: 13' | 2'-4' | (16.3) | 190 | | | | |
| 9' | 6'-8' | | 140 | | | | |
| 5' | 10-12' | | 110 | | | | |
| 1' | 14-16' | | 180 | | | | |
| -3' | 18-20' | | 130 | | | | |
| 93-194: 12' | 2'-4' | (14.8) | | | 560 | | |
| 8' | 6-8' | | 150 | | | | |
| 4' | 10-12' | | 220 | | | | |
| 0' | 14-16' | | 130 | | | | |
| 93-195: 9' | 2-4' | (11.83) | | 270 | | | |
| 3' | 8-10' | | 180 | | | | |
| -23' | 33'-35 | | | 280 | | | |
| 93-196: 9' | 2-4' | (11.98) 12 | | | 700 | | |
| 3' | 8-10' | | 120 | | | | |
| -20 | 31-33 | | | | 550 | | |
| 93-197: 8' | 2'-4' | (11.23) | 150 | | | | |
| 4' | 6'-8' | | 200 | | | | |
| -21 | 31'-33' | | 150 | | | | |
| -25 | 35'-37' | | 180 | | | | |
| 93-198: 8' | 2'-4' | (11.13) | 160 | | | | |
| 6' | 4'-6' | | | 420 | | | |
| -22 | 32'-34' | | 270 | | | | |
| -31 | 41'-43' | | 230 | | | | |
| -35 | 45'-47' | | 230 | | | | |

46
11
35