

U.S. ARMY CORPS OF ENGINEERS

| DEPTH, FEET | | SAMPLE NO. | PEN./TORVANE | SPT.-BLOW COUNT | BORING NO. <u>91-276</u> DATE: BEGIN <u>1/4/92</u> PAGE <u>1/2</u> | | | | |
|-------------|-------------------------------------|--|---------------|-----------------|--|----------------------------------|--|--|--|
| | | | | | JOB NO. <u>14G-531</u> COMPLETE <u>1/4/92</u> Thin Walled Tube | | | | |
| | | PROJECT <u>S. C-TWW</u> <input checked="" type="checkbox"/> 3" <input type="checkbox"/> 6" | | | | | | | |
| | | LOCATION <u>Sargent beach</u> sta <u>70+50</u> | | | | | | | |
| | | ELEVATION OF HOLE _____ | | | | | | | |
| | | MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Marling C.P.D. 2</u> | | | | | | | |
| | | GROUNDWATER DEPTH <u>1</u> ft., ELEV. <u>6.6</u> ft., at end of Drilling | | | | | | | |
| | | WEATHER <u>cool cloudy</u> | | | | | | | |
| | | DRILLER <u>A. Cranan</u> LOGGER <u>D. Crowell</u> | | | | | | | |
| | | COLOR | MATERIAL TYPE | CONSISTENCY | SECONDARY CONSTITUENTS | STRUCTURAL FEATURES AND COMMENTS | | | |
| 0 | | | | | | | | | |
| 1 | <input checked="" type="checkbox"/> | <u>2/3</u> Tan | <u>sand</u> | <u>loose</u> | <u>clay</u> | <u>w/Shell Frag</u> | | | |
| 2 | <input checked="" type="checkbox"/> | <u>1.0</u> Gray | <u>Clay</u> | <u>stiff</u> | <u>silt</u> | | | | |
| 5 | <input checked="" type="checkbox"/> | <u>1.0</u> Gray | <u>Clay</u> | <u>stiff</u> | <u>silt</u> | | | | |
| 4 | <input checked="" type="checkbox"/> | <u>0.25</u> Tan | <u>Clay</u> | <u>m. stiff</u> | <u>silt</u> | <u>Gray</u> | | | |
| 10 | <input checked="" type="checkbox"/> | <u>0.25</u> Tan | <u>Clay</u> | <u>soft</u> | <u>silt</u> | <u>Gray</u> | | | |
| 6 | <input checked="" type="checkbox"/> | <u>W.O.P</u> Gray | <u>Clay</u> | <u>v. soft</u> | <u>silt</u> | <u>Gray</u> | | | |
| 7 | <input checked="" type="checkbox"/> | <u>W.O.P</u> Gray | <u>Clay</u> | <u>v. soft</u> | <u>silt</u> | <u>Tan</u> | | | |
| 15 | <input checked="" type="checkbox"/> | <u>W.O.P</u> Gray | <u>Clay</u> | <u>v. soft</u> | <u>silt</u> | <u>Tan</u> | | | |
| 9 | <input checked="" type="checkbox"/> | <u>W.O.P</u> Gray | <u>Clay</u> | <u>v. soft</u> | <u>silt</u> | <u>Tan</u> | | | |
| 20 | <input checked="" type="checkbox"/> | <u>W.O.P</u> Gray | <u>Clay</u> | <u>v. soft</u> | <u>silt</u> | <u>Tan</u> | | | |
| 11 | <input checked="" type="checkbox"/> | <u>W.O.P</u> Gray | <u>Clay</u> | <u>v. soft</u> | <u>silt</u> | <u>Tan</u> | | | |
| 25 | <input checked="" type="checkbox"/> | <u>1 1/2</u> Gray | <u>sand</u> | <u>loose</u> | <u>silt</u> | | | | |
| 13 | <input checked="" type="checkbox"/> | <u>2 1/5</u> Gray | <u>sand</u> | <u>loose</u> | <u>silt</u> | | | | |
| 30 | <input checked="" type="checkbox"/> | <u>0.25</u> Gray | <u>Clay</u> | <u>soft</u> | <u>silt</u> | <u>w/sand seams</u> | | | |
| 14 | <input checked="" type="checkbox"/> | <u>0.25</u> Gray | <u>Clay</u> | <u>soft</u> | <u>silt</u> | <u>w/Shell Frag</u> | | | |
| 15 | <input checked="" type="checkbox"/> | <u>0.25</u> Gray | <u>Clay</u> | <u>soft</u> | <u>silt</u> | <u>w/strong smell</u> | | | |
| 35 | <input checked="" type="checkbox"/> | <u>0.25</u> Gray | <u>Clay</u> | <u>soft</u> | <u>silt</u> | | | | |

U.S. ARMY CORPS OF ENGINEERS

| DEPTH, FEET | SAMPLE NO. | PEN./TORVANE SPT.-BLOW COUNT | BORING NO. <u>91-276</u> DATE: BEGIN <u>1/4/92</u> PAGE <u>2</u> OF <u>12</u> | | | | |
|-------------|------------|---------------------------------|---|--|-------------|------------------------|----------------------------------|
| | | | JOB NO. <u>145-531</u> COMPLETE <u>1/4/92</u> Thin Walled Tube | | | | |
| | | | PROJECT <u>GTWW</u> | <input checked="" type="checkbox"/> 4" <input type="checkbox"/> 6" | | | |
| | | | LOCATION <u>Sargeant Beach</u> | Sta <u>79+50</u> | | | |
| | | | ELEVATION OF HOLE _____ | | | | |
| | | | MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Falling CFD2</u> | | | | |
| | | | GROUNDWATER: DEPTH <u>1</u> ft., ELEV. _____ ft., at end of Drilling | | | | |
| | | | WEATHER <u>cool cloudy raining</u> | | | | |
| | | | DRILLER <u>D. Coonan</u> LOGGER <u>D. Crowell</u> | | | | |
| | | | COLOR | MATERIAL TYPE | CONSISTENCY | SECONDARY CONSTITUENTS | STRUCTURAL FEATURES AND COMMENTS |
| -35- | | | | | | | |
| | 17 | 0.50 | Gray | clay | stiff | silt | w/organic material |
| -40- | 18 | 1.5 | Tan | clay | stiff | silt | Gray |
| | 19 | 0.25 | Gray | clay | soft | silt | w/sand seams |
| | 20 | 0.25 | Gray | clay | soft | silt | w/sand seams |
| -45- | 21 | 0.50 | Tan | clay | stiff | silt | Gray |
| | 22 | 0.50 | Tan | clay | stiff | silt | Gray |
| -50- | 23 | 1.0 | Tan | clay | stiff | silt | Gray |
| | | | | | | | Bottom of 91-276 @ 50' |
| -55- | | | | | | | W.O.P: Weight of Pipe |
| -60- | | | | | | | |
| -65- | | | | | | | |
| -70- | | | | | | | |

Project : Gulf Intracoastal Waterway, near Sargent Beach, Texas
Contract No. DACW64-92-D-0001 Delivery No. 0005

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-276

| S # | Depth (ft) | P P (tsf) | SPT Blows per Foot | Visual Classification | USC | M c (%) | Dry Unit Wt (pcf) | Wet Unit Wt (pcf) | LL (%) | PL (%) | Mechanical Analysis % Passing | | | | | Torvane Shear Strength (tsf) | qu (tsf) | |
|-----|------------|-----------|--------------------|---|----------|---------|-------------------|-------------------|--------|--------|-------------------------------|-------|-------|-------|------|------------------------------|----------|----------------|
| | | | | | | | | | | | #4 | #10 | #40 | #100 | #200 | | | |
| 1 | 0.5-2 | | 8 | Light brown,sand,Loose,Silty,w/shell fragments | SM | | | | | | | 99.0* | 98.2* | 94.5* | 28.7 | 14.2 | | |
| 2 | 2-4 | 1.50 | | Gray,Clay,Stiff,w/roots,slickensided | CH | 34.2 | | | | | | | | | | | | |
| 3 | 4-6 | 2.25 | | Gray,Clay,very stiff,w/roots and calcareous nodules,slickensided | CH | 25.1 | | | 54 | | | | | | | | | |
| 4 | 6-8 | 1.25 | | Yellowish brown,Clay,Stiff,w/silt seams | CH | 28.1 | | | | | | | | | | | | |
| 5 | 8-10 | 0.25 | | Tan & gray,Clay,Soft,Silty | CL | 37.8 | 83 | | | | | | | | | | | C = 470 P.S.F. |
| 6 | 10.5-12 | 0.00 | W.O.P | Brown,Clay,Very soft,Silty,w/sand | CL | 34.7 | | | 44 | | | 100.0 | 100.0 | 99.9 | 99.6 | 96.5 | | |
| 7 | 12.5-14 | 0.00 | W.O.P | Brown,Clay,Very soft,Silty | CL | 45.5 | | | | | | | | | | | | |
| 8 | 14.5-16 | 0.00 | W.O.P | Brown,Clay,Very soft,Silty | CL | 44.8 | | | | | | | | | | | | |
| 9 | 16.5-18 | 0.00 | W.O.P | Brown,Clay,Very soft,Silty,w/sand | CL | 37.4 | | | 32 | | | 100.0 | 100.0 | 99.9 | 99.5 | 95.4 | | |
| 10 | 18.5-20 | 0.00 | W.O.P | Brown,Clay,Very soft,Silty | CL | 42.1 | | | | | | | | | | | | |
| 11 | 20.5-22 | 0.00 | W.O.P | Brown,Clay,Very soft,Silty,w/sand | CL | 39.6 | | | 35 | | | 100.0 | 100.0 | 99.9 | 96.7 | 95.9 | | |
| 12 | 22.5-24 | | 5 | Gray,Sand,Loose,Silty | SM | | | | | | | | | | | | | |
| 13 | 27.5-29 | | 9 | Gray,Sand,Loose,Silty | SM | | | | | | | 100.0 | 100.0 | 99.9 | 55.6 | 21.8 | | |
| 14 | 30-32 | 0.50 | | Gray,Clay,Medium stiff,w/sand pockets and sand parting and organic material | CH | 46.8 | | | | | | | | | | | | 0.25 |
| 15 | 32-34 | 0.50 | | Gray,Clay,Medium stiff,w/organic material | CH | 70.7 | | | | | | | | | | | | 0.25 |
| 16 | 34-36 | 0.25 | | Gray,Clay,Soft,Silty,w/organic material | CL CH | 64.2 | 58 | | 95 | 28 | | | | | | | | C = 570 P.S.F. |
| 17 | 36-38 | 0.75 | | Gray,Clay,Medium stiff,w/organic material | CH | 44.2 | | | | | | | | | | | | |

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content
qu : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of pipe
* : Material Retained are Shell fragments

Project : Gulf Intracoastal Waterway, near Sargent Beach, Texas
Contract No. DACW64-92-D-0001 Delivery No. 0005

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-276

| 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) | LL (%) | P L (%) | Mechanical Analysis % Passing | | | | | Torvane Shear Strength (tsf) | q u (tsf) |
|-----|------------|-----------|--------------------|---|-------|---------|-------------------|-------------------|--------|---------|-------------------------------|-----|-----|------|------|------------------------------|-----------|
| | | | | | | | | | | | #4 | #10 | #40 | #100 | #200 | | |
| 18 | 38-40 | 0.75 | | Brown,Clay,Medium stiff,w/silt seams | CH | 40.6 | | | 53 | | | | | | | | |
| 19 | 40-42 | 0.75 | | Brown,Clay,Medium stiff,w/silt pockets and silt seams | CH | 31.9 | | | | | | | | | | 0.35 | |
| 20 | 42-44 | 0.75 | | Brown,Clay,Medium stiff,w/silt pockets and silt seams | CH | 45.8 | | | | | | | | | | 0.35 | |
| 21 | 44-46 | 0.50 | | Brown,Clay,Medium stiff,w/silt pockets and silt parting | CH | 38.5 | | | 59 | | | | | | | | |
| 22 | 46-48 | 0.50 | | Brown,Clay,Medium stiff | CH | 58.7 | | | | | | | | | | | |
| 23 | 48-50 | 1.25 | | Brown,Clay,Stiff,w/blocky structure.slickensided | CH | 36.7 | | | | | | | | | | | |
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q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of pipe