

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET.		SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>91-314</u> DATE: BEGIN <u>12-13-91</u> PAGE <u>11</u> JOB NO. <u>14G531</u> COMPLETE <u>12-14-91</u> Thin Walled Tube PROJECT <u>G.I.W.W.</u> ☒ 5" ☐ 6" LOCATION <u>SARGENT BEACH STA. 3193+00</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>ARDC6</u> GROUNDWATER: DEPTH <u>3</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>MOSTLY CLOUDY WINDY & COLD</u> DRILLER <u>Douglas Mitchell</u> LOGGER <u>John A. Haby</u>				
		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS			
0	1	0.75	BROWN	CLAY	MEDIUM STIFF	SANDY *+GRAY			
	2	1.25	GRAY	CLAY	STIFF				
	3	1.0	GRAY	CLAY	STIFF				
	4	0.75	GRAY	CLAY	MEDIUM STIFF	*+BROWN 6' - 11'			
	5	0.25	GRAY	CLAY	SOFT	- w/ SHELL FRAGMENTS 8' - 10'			
	6	0.25	GRAY	CLAY	SOFT	- w/ SAND STRAMS 8' - 10'			
	7	0.25	GRAY	CLAY	SOFT				
	8	0.5	GRAY	CLAY	MEDIUM STIFF	*+BROWN 14' - 18'			
	9	2.25	GRAY	CLAY	VERY STIFF				
	10	1.75	GRAY	CLAY	STIFF	*+ REDDISH BROWN 18' - 24'			
	11	3.5	REDDISH BROWN	CLAY	VERY STIFF	- w/ CALCAREOUS FERRONS 18' - 24'			
	12	1.0	REDDISH BROWN	CLAY	STIFF	*+ LIGHT GRAY 20' - 24'			
	13	0.5	REDDISH BROWN	CLAY	MEDIUM STIFF	- w/ SILT LAYERS 22' - 24'			
	14	0.5	REDDISH BROWN	CLAY	MEDIUM STIFF	*+ LIGHT GRAY 24' - 30'			
	15	1.0	REDDISH BROWN	CLAY	STIFF	- w/ CALCAREOUS FERRONS 24' - 30'			
	16	1.5	REDDISH BROWN	CLAY	STIFF	- w/ SILT LAYERS 24' - 31'			
	17	3.25	REDDISH BROWN	CLAY	VERY STIFF	- w/ CLAY LAYER @ 31 1/2'			
	18		BROWN	SAND	PENSILE	*+ FINE @ 33'			

U.S. ARMY CORPS OF ENGINEERS

BORING NO. <u>9-3/4</u>		DATE: BEGIN <u>12-13-91</u>		PAGE <u>2 1 2</u>	
JOB NO. <u>146531</u>		COMPLETE <u>12/4/91</u>		Thin Walled Tube ☒ 3" ☐ 6"	
PROJECT <u>C.I.W.W.</u>					
LOCATION <u>SARGENT BEACH STA. 393+00</u>					
ELEVATION OF HOLE _____					
MANUFACTURER'S DESIGNATION OF DRILL RIG <u>ARCO</u>					
GROUNDWATER: DEPTH <u>3</u> ft., ELEV. _____ ft., at end of Drilling					
WEATHER <u>MOSTLY CLOUDY WINDY & COLD</u>					
DRILLER <u>Douglas M. L. L.</u>		LOGGER <u>John W. M. L.</u>			

DEPTH, FEET	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
35	X 18	B ₁₃	21	BROWN	SAND	DENSE	SILTY	* FINE BELOW 33'
40	X 18	B ₁₅	19	BROWN	SAND	DENSE	SILTY	
45	X 20	B ₁₇	27	BROWN	SAND	DENSE	SILTY	
50	X 21	B ₁₄	32	BROWN	SAND	VERY DENSE	SILTY	
55								
60								
65								
70								

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

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-314

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		
1	0-2	1.00		Brownish gray, Clay, Stiff, Sandy	CL	40.2											
2	2-4	1.75		Gray, Clay, Stiff, Sandy	CL	26.9	97.1	123.2	41	17	100.0	100.0	99.6	99.3	84.5		
3	4-6	1.00 0.5-1		Gray, Clay, Stiff <i>SWD</i>	CH	<i>28.9</i>	<i>91</i>		<i>53</i>	<i>18</i>					<i>99</i>		<i>C = 440</i>
4	6-8	0.75		Gray & brown, Clay, Medium stiff, Sandy, w/shell fragments	CL	33.6										0.25	
5	8-10	0.25		Gray, Clay, Soft, Sandy	CL	33.0	87.0	115.8	44	20	100.0	99.7	98.7	96.0	76.4	0.10	
6	10-12	0.25		Gray, Clay, soft <i>very soft</i> <i>SWD</i>	CH	<i>41.6</i>	<i>79</i>		<i>51</i>	<i>17</i>					<i>81</i>		<i>C = 290</i>
7	12-14	0.00		Gray & brown, Clay, Very soft, w/shell fragments and sand pockets	CH	48.5	74.4	110.5	57	23	99.5	99.3	98.6	97.1	90.0	0.06	0.10
8	14-16	0.75		Gray & brown, Clay, Medium stiff, w/shell fragments	CH	47.6										0.25	
9	16-18	1.75		Gray, Clay, Stiff	CH	37.6											
10	18-20	1.50		Gray & tan, Clay, Stiff, w/calcareous nodules	CH	36.3	85.9	117.1	80		100.0	99.8	99.7	98.1	93.2		
11	20-22	2.00		Gray & brown, Clay, Very stiff, w/calcareous nodules	CH	35.9											
12	22-24	2.00		Reddish brown, Clay, Very stiff, Sandy, w/silt parting	CL	19.4											
13	24-26	1.25		Reddish brown, Clay, Stiff, Sandy, w/calcareous nodules	CL	21.8											
14	26-28	1.00		Reddish brown, Clay, Stiff, Sandy, w/calcareous nodules	CL	23.2	105.4	129.8	27		99.9	99.8	95.9	89.3	83.8		
15	28-30	1.00		Reddish brown, Clay, Stiff, Sandy, w/calcareous nodules	CL	19.5											
16	30-32	2.00		Reddish brown, Clay, Very stiff, Sandy, w/sand seam and calcareous nodules	CL	20.2											
17	32-24	3.00		Reddish brown, Clay, Very stiff, Sandy, w/sand layer	CL	20.5					100.0	99.8	99.5	97.8	84.1		

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. 14G533

DATE 1/8/92

PROJECT Gulf Intracoastal Waterway near Sargent Beach, Texas

BORING NO. 91-314

SAMPLE NO. 7

DEPTH 12 - 14 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray & Brown, Clay, Very soft, w/shell fragments & sand pockets

Tare No.	P-204	Height	5.595 in.
Tare plus Wet Specimen	489.71 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	343.78 gm	Initial Area	6.290 sq in.
Water Weight	145.93 gm	Volume	35.194 cu in.
Tare Weight	42.60 gm	Volume of Solids	cu in.
Wet Specimen	1020.54 gm	Void Ratio	
Dry Specimen	687.45 gm	Saturation	%
Water Content	48.45 %	Dry Density	74.4 lb/cu ft
Specific Gravity of Solids			
LL = 57	PL = 23	PI = 34	

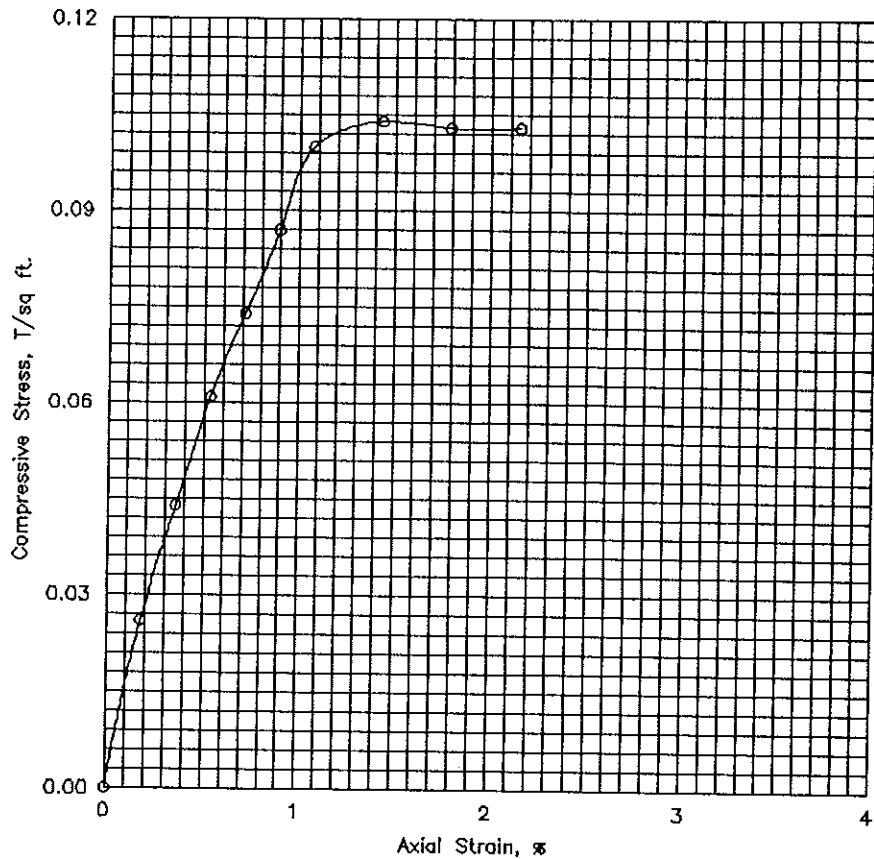
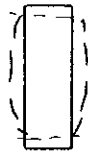
Proving Ring No. 10170

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	3.0	2.3	.002	6.30	.026
.3	20.	.020	5.0	3.8	.004	6.31	.044
.5	30.	.030	7.0	5.4	.005	6.32	.061
.7	40.	.040	8.5	6.5	.007	6.34	.074
.8	50.	.050	10.0	7.7	.009	6.35	.087
1.0	60.	.060	11.5	8.8	.011	6.36	.100
1.4	80.	.080	12.0	9.2	.014	6.38	.104
1.7	100.	.100	12.0	9.2	.018	6.40	.103
1.9	120.	.120	12.0	9.2	.021	6.43	.103

Job No. 14G533

Failure Sketches



- ☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	48.5 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	74.4		
Time to failure, min		t_f	1.37		
Unconfined compressive strength, T/sq ft		q_u	.10		
Undrained shear strength, T/sq ft		S_u	.05		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray & Brown, Clay, Very soft, w/shell fragments & sand pockets					
LL	57	PL	23	PI	34
Remarks		G _c			
		Project Gulf Intracoastal Waterway			
		Area Near Sargent Beach, Texas			
		Boring No. 91-314		Sample No. 7	
		Depth 12 - 14 ft		Date 1/8/92	
		UNCONFINED COMPRESSION TEST REPORT			