

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT. - BLOW COUNT	BORING NO. <u>91-278</u>	DATE: BEGIN <u>11/9/91</u>	PAGE <u>112</u>	
					JOB NO. <u>146-S31</u>	COMPLETE <u>11/9/91</u>	Thin Walled Tube	
					PROJECT <u>C.I.W.W.</u>	☒ 3" ☐ 6"		
					LOCATION <u>Sargeant Branch Sta 90+50.8</u>			
					ELEVATION OF HOLE			
					MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Failing CFB2</u>			
					GROUNDWATER: DEPTH <u>2</u> ft., ELEV. <u>6.2</u> ft., at end of Drilling			
					WEATHER <u>cool clear</u>			
					DRILLER <u>D. Gecan</u>	LOGGER <u>P. Crowell</u>		
					COLOR	MATERIAL TYPE	CONSISTENCY	
							SECONDARY CONSTITUENTS	
							STRUCTURAL FEATURES AND COMMENTS	
0		1	X 1/2		Tan	Sand	V. loose	Clay w/silt
5		2	X 1.5		Gray	clay	V. soft	Tan
		3	X 0.50		Gray	clay	V. soft	Tan
10		4	X W.O.P.		Gray	clay	V. soft	w/ sand
		5	X W.O.P.		Gray	clay	V. loose	w/ sand
		6	X W.O.P.		Gray	clay	V. loose	w/ sand
15		7	X 1/4		Gray	Sand	V. loose	silt
20		8	X 1/4		Gray	Sand	V. loose	silt
25		9	X 1/2		Gray	Sand	V. loose	silt
30		10	X 1/2		Gray	Sand	V. loose	silt
		11	X 0.25		Tan	clay	soft	Gray
35		12	X 0.25		Gray	clay	soft	Tan

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>91-278</u> DATE: BEGIN <u>11/3/91</u> PAGE <u>2 12</u> JOB NO. <u>14531</u> COMPLETE <u>4/3/91</u> Thin Walled Tube ☒ 3" ☐ 6" PROJECT <u>C-IWW</u> LOCATION <u>Sargent beach st 90+50</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Fairlie CPD2</u> GROUNDWATER: DEPTH <u>2</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>cool cloudy</u> DRILLER <u>D. Carian</u> LOGGER <u>D. C. C. well</u>				
COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS						
35										
36	tan	clay	soft silt	gray						
37	tan	clay	v. soft silt	gray						
38	gray	clay	soft silt	sand seams						
39	gray	clay	soft silt	1/2 sand seam & shell frags						
40	tan	clay	soft silt	gray						
41	tan	clay	soft silt	gray						
42	tan	clay	soft silt	gray						
43	tan	clay	soft silt	gray						
44	tan	clay	soft silt	gray						
45	tan	clay	soft silt	gray						
46	tan	clay	soft silt	gray						
47	tan	clay	soft silt	gray						
48	tan	clay	soft silt	gray						
49	tan	clay	soft silt	gray						
50	tan	clay	soft silt	gray						
51				Bottom of 91-278/50						
52				M.O.P: weight of pipe						
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Project : Gulf Intracoastal Waterway, near Sargent Beach, Texas
 Contract No. DACW64-92-D-0001 Delivery No. 0005

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-278

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 (%)	PL (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0.5-2		3	Tan,Sand,Very loose,silty	S M						100.0	100.0	99.5	43.6	26.6		
2	4-6	1.50		Gray & yellowish brown,Clay,Stiff,w/silt pockets and ferrous stains	CH	28.3			52								
3	6-8	0.50		Gray & tan,Clay,Medium stiff,Silty	CL	28.2	94	121	48	17					95		
4	8.5-10	0.00	W.O.P	Gray,Clay,Very soft,Silty	CL	38.0											
5	10.5-12	0.00	W.O.P	Gray,Clay,Very soft,Silty,w/sand	CL	39.7			31	17	100.0	100.0	100.0	99.8	93.0		
6	12.5-14	0.00	W.O.P	Gray,Clay,Very soft,Silty	CL	36.0											
7	14.5-16		2	Gray,Sand,Very loose,Silty	S M						100.0	100.0	100.0	99.3	37.0		
8	19.5-21		2	Gray,Sand,Very loose,Silty	S M												
9	24.5-26		3	Gray,Sand,Very loose,Silty	S M												
10	29.5-31		3	Gray,Sand,Very loose,Silty	S M						10.0	100.0	100.0	96.6	42.7		
11	32-34	0.25		Tan & gray,Clay,Soft,Silty	CL	49.1	75	111.9	59	22					97		
12	34-36	0.50		Olive gray,Clay,Medium stiff	CH	61.7										0.25	
13	36-38	0.25		Tan & gray,Clay,Soft,Silty	CL	63.6	63	103.1	78	27					99		
14	38-40	0.25		Brown,Clay,Soft,w/shell fragments and ferrous stains	CH	58.8	65.2	103.5	83	31	100.0	99.9	9.7	97.8	95.0	0.12	0.22
15	40-42	0.50		Brown,Clay,Medium stiff,w/shell fragments and sand pockets	CH	52.8										0.25	
16	42-44	0.50		Brown,Clay,Medium stiff,w/shell fragments and sand pockets	CH	54.3										0.25	
17	44-46	0.50		Brown,Clay,Medium stiff,w/silt parting	CH	55.8										0.25	

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

S_u = 730

φ = 19.7

S_u = 420

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

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-278

[illegible]

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content

q_u : Unconfined Compressive Strength, W_{OH} : Weight of hammer, W_{OP} : Weight of pipe

JOB NO. 14G533

DATE 1/23/92

PROJECT Gulf Intracoastal Waterway near Sargent Beach, Texas

BORING NO. 91-278

SAMPLE NO. 14

DEPTH 38-40 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown, Clay, Soft, w/shell fragments & ferrous stains

Tare No.	P-207	Height	5.595 in.
Tare plus Wet Specimen	560.52 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	368.76 gm	Initial Area	6.290 sq in.
Water Weight	191.76 gm	Volume	35.194 cu in.
Tare Weight	42.75 gm	Volume of Solids	cu in.
Wet Specimen	956.27 gm	Void Ratio	
Dry Specimen	602.11 gm	Saturation	%
Water Content	58.82 %	Dry Density	65.2 lb/cu ft
Specific Gravity of Solids			
LL = 83	PL = 31	PI = 52	

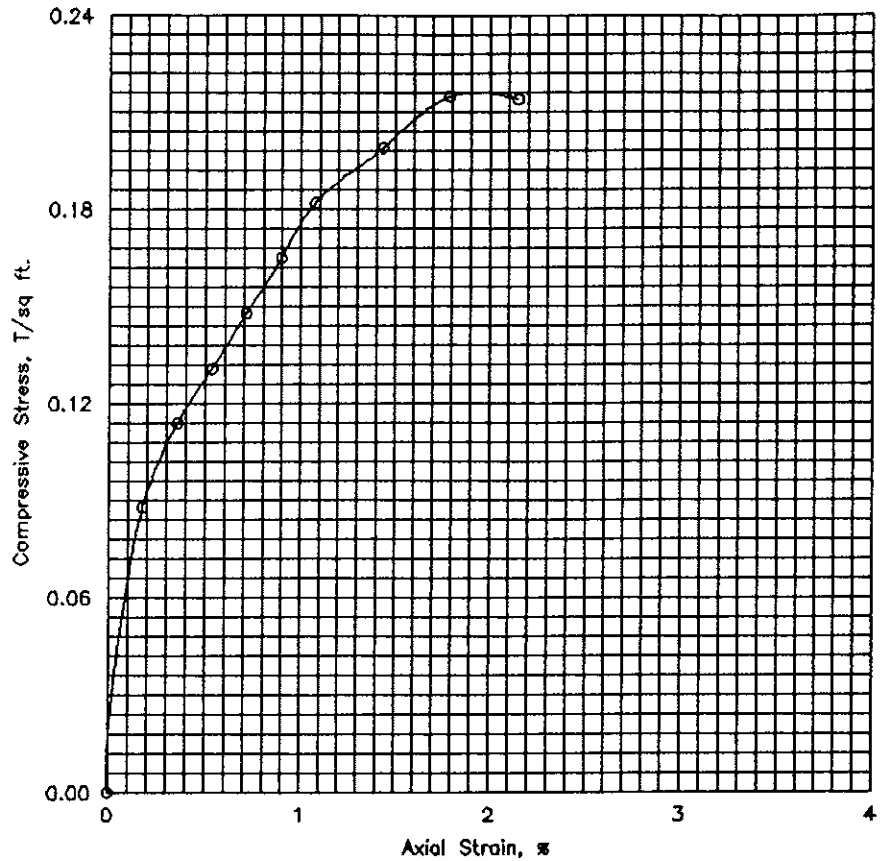
Proving Ring No. 10170

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	10.0	7.7	.002	6.30	.088
.3	20.	.020	13.0	10.0	.004	6.31	.114
.5	30.	.030	15.0	11.5	.005	6.32	.131
.7	40.	.040	17.0	13.0	.007	6.34	.148
.9	50.	.050	19.0	14.6	.009	6.35	.165
1.0	60.	.060	21.0	16.1	.011	6.36	.182
1.3	80.	.080	23.0	17.6	.014	6.38	.199
1.6	100.	.100	25.0	19.1	.018	6.40	.215
1.9	120.	.120	25.0	19.1	.021	6.43	.214

Job No. 14G533

Failure Sketches



- ☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	58.8 %		
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	65.2		
Time to failure, min		t_f	1.63		
Unconfined compressive strength, T/sq ft		q_u	.22		
Undrained shear strength, T/sq ft		S_u	.11		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Brown, Clay, Soft, w/shell fragments & ferrous stains					
LL	83	PL	31	PI	52
				G_s	
Remarks		Project Gulf Intracoastal Waterway			
		Area Near Sargent Beach, Texas			
		Boring No. 91-278		Sample No. 14	
		Depth 38-40 ft		Date 1/23/92	
		UNCONFINED COMPRESSION TEST REPORT			