

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>91-288</u> DATE: BEGIN <u>12/30/91</u> PAGE <u>1/1</u> JOB NO. <u>146531</u> COMPLETE <u>12/30/91</u> Thin Walled Tube PROJECT <u>G.I. WW</u> LOCATION <u>Sargent Beach</u> ☐ 3" ☐ 6" ELEVATION OF HOLE <u>St 192+50</u> MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Failing CFD2</u> GROUNDWATER: DEPTH <u>0</u> ft., ELEV. <u> </u> ft., at end of Drilling WEATHER <u>Cool cloudy light rain</u> DRILLER <u>D. Gearen</u> LOGGER <u>D. Crowell</u>				
		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS			
0									
1	1.5	Gray	Clay	stiff	silt	w/Roots			
2	0.25	Gray	Clay	soft	silt	w/Roots			
5	0.50	Gray	Clay	Medium stiff	silt	Tan			
	0.50	Tan	Clay	"	silt	Gray			
10	1.0	Tan	Clay	stiff	silt	w/calc nod			
	1.0	Tan	Clay	stiff	silt	w/calc nod Gray			
	1.0	Tan	clay	stiff	silt	Gray			
15	1.5	Tan	clay	stiff	silt	Gray			
	1.5	Gray	Clay	stiff	silt	Tan w/calc. nod			
	2.0	Gray	Clay	very stiff		w/calc nod			
20	2.5	Gray	Clay	v. stiff		w/calc nod			
	2.5	Tan	Clay	v. stiff		w/calc nod			
25	2.5	Tan	Clay	v. stiff		w/calc nod			
						Bottom of 91-288 @ 26'			
30									
35									

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

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-288

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					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0-2	0.75		Dark brown,Clay,Medium stiff	CH	34.5										0.35	
2	2-4	0.75		Dark gray,Clay,Medium stiff	CH	35.7			51							0.35	
3	4-6	0.75		Gray,Clay,Medium stiff	CH	36.2										0.35	
4	6-8	0.50		Brown,Clay,Medium stiff,w/calcareous nodules & sand pockets and blocky structure	CH	43.3	77.0	110.4	82	31	100.0	99.8	98.6	98.0	96.8	0.25	0.33
5	8-10	1.50		Brown,Clay,Stiff,w/ferrous stains	CH	38.2											
6	10-12	1.00		Brown,Clay,Stiff,w/ferrous stains	CH	42.4											
7	12-14	1.25		Brown,Clay,Stiff,slickensided	CH	40.3	81.4	114.1	76								
8	14-16	1.25		Dark brown,Clay,Stiff,w/organic material	CH	66.0											
9	16-18	1.50		Brown,Clay,Stiff	CH	32.7											
10	18-20	2.00		Gray,Clay,Very stiff,w/calcareous and ferrous nodules	CH	23.8											
11	20-22	2.25		Yellowish gray,Clay,Very stiff,w/calcareous nodules and ferrous stains	CH	22.1			66								
12	22-24	2.25		Light redish brown,Clay,Very stiff,w/calcareous nodules	CH	29.6											
13	24-26	3.25		Redish brown,Clay,Very stiff,w/calcareous nodules	CH	31.4											

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

JOB NO. 14G533

DATE 1/29/92

PROJECT Gulf Intracoastal Waterway near Sargent Beach, Texas

BORING NO. 91-288

SAMPLE NO. 4

DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown, Clay, Medium stiff, w/Calc nod&sand pockets&blocky structure

Tare No.	P-23	Height	5.595 in.
Tare plus Wet Specimen	359.22 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	263.50 gm	Initial Area	6.290 sq in.
Water Weight	95.72 gm	Volume	35.194 cu in.
Tare Weight	42.68 gm	Volume of Solids	cu in.
Wet Specimen	1019.63 gm	Void Ratio	
Dry Specimen	711.30 gm	Saturation	%
Water Content	43.35 %	Dry Density	77.0 lb/cu ft
Specific Gravity of Solids			
LL = 82	PL = 31	PI = 51	

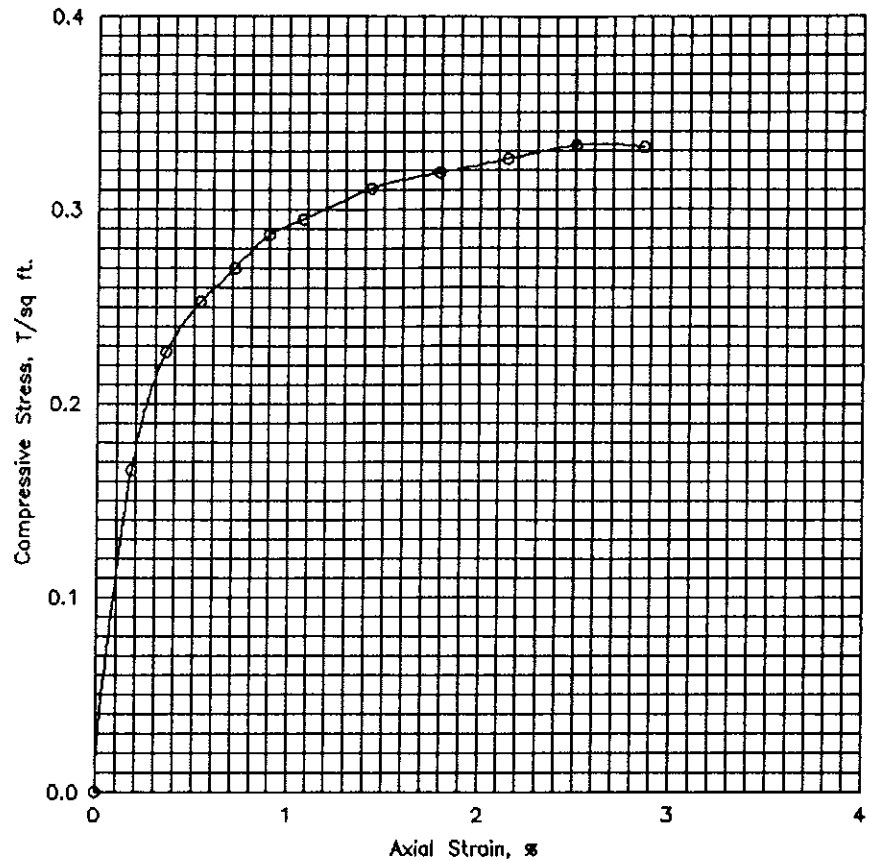
Proving Ring No. 10170

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	19.0	14.6	.002	6.30	.166
.3	20.	.020	26.0	19.9	.004	6.31	.227
.6	30.	.030	29.0	22.2	.005	6.32	.253
.7	40.	.040	31.0	23.7	.007	6.34	.270
.9	50.	.050	33.0	25.3	.009	6.35	.287
1.0	60.	.060	34.0	26.0	.011	6.36	.295
1.4	80.	.080	36.0	27.6	.014	6.38	.311
1.6	100.	.100	37.0	28.3	.018	6.40	.319
2.0	120.	.120	38.0	29.1	.021	6.43	.326
2.3	140.	.140	39.0	29.9	.025	6.45	.333
2.6	160.	.160	39.0	29.9	.029	6.48	.332

Job No. 14G533

Failure Sketches



- ☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	43.3 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	77.0		
Time to failure, min		t_f	2.30		
Unconfined compressive strength, T/sq ft		q_u	.33		
Undrained shear strength, T/sq ft		S_u	.17		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Brown, Clay, Medium stiff, w/Calc nod& sand pockets& blocky structure					
LL	82	PL	31	PI	51
				G_o	
Remarks		Project Gulf Intracoastal Waterway			
		Area Near Sargent Beach, Texas			
		Boring No. 91-288		Sample No. 4	
		Depth 6-8 ft		Date 1/29/92	
		UNCONFINED COMPRESSION TEST REPORT			