

U.S. ARMY CORPS OF ENGINEERS

BORING NO. <u>91-293</u>		DATE: BEGIN <u>12/29/91</u>		PAGE <u>1</u>	
JOB NO. <u>146 531</u>		COMPLETE <u>1/2/92</u>		Thin Walled Tube	
PROJECT <u>G I WW</u>		☒ 3" ☐ 6"			
LOCATION <u>Sergeant beach str</u>		<u>242+00</u>			
ELEVATION OF HOLE					
MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Fielding CFD 2</u>					
GROUNDWATER: DEPTH <u>2</u> ft., ELEV. _____		ft., at end of Drilling			
WEATHER <u>cool Clear</u>					
DRILLER <u>Donny C. Green</u>		LOGGER <u>D. Crowe II</u>			

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0									
	1	1 1/2			Tan	So.	Very loose	Shell	
	2	1 1/2			"	"	"	"	
5	3	2.50			Gray	Clay	Medium stiff	sandy	some Tan
	4	2.50			Tan	Clay	"	sandy	some Gray
	5	1.0			Tan	Clay	stiff	sandy	some Gray
10	6	2.50			Tan	Clay	Medium stiff	silty	some Gray
	7	0.75			Tan	clay	"	silty	some Gray
15	8	1.5			Tan	clay	stiff	silty	some Gray
	9	1.5			Tan	clay	stiff	silty	some Gray
	10	2.0			Gray	clay	stiff	silty	some Tan
20	11	2.0			Gray	clay	stiff	silty	some Tan
	12	2.0			Gray	clay	stiff	silty	some Tan
25	13	3.5			Gray	clay	stiff	silty	some Tan & calc. nod.
									Bottom of 91-293 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. 91-293

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	0.5-2		3	Light brown,Sand,Very loose,Silty,w/shell fragm- ents	S M												
2	2.5-4		3	Light brown,Sand,Very loose,Silty,w/shell fragm- ents	S M												
3	4-6	1.25		Gray & yellowish gray,Clay,Stiff,w/ferrous stain	CH	40.1	82.4	115.5								0.60	
4	6-8	0.75		Brown & gray,Clay,medium stiff,w/ferrous nod- ules and blocky structure	CH	39.7	81.4	113.7	69	25	100.0	100.0	99.1	98.8	98.5	0.35	0.45
5	8-10	0.75		Brown & gray,Clay,medium stiff,w/ferrous nod- ules and blocky structure	CH	31.6										0.35	
6	10-12	1.00		Brown,Clay,Stiff,w/calcareous nodules	CH	31.1										0.45	
7	12-14	1.25		Brown,Clay,Stiff,w/ferrous stains,slickensided	CH	35.2										0.55	
8	14-16	1.50		Brown,Clay,Stiff,w/ferrous stains,slickensided	CH	28.9	92.6	119.3	65								
9	16-18	1.50		Brown,Clay,Stiff,w/ferrous stains,slickensided	CH	37.2											
10	18-20	2.50		Gray,Clay,Very stiff,w/ferrous nodules,slicken- sided	CH	22.4											
11	20-22	2.00		Gray,Clay,Very stiff,w/sand seams and ferrous stains	CH	22.6											
12	22-24	1.50		Gray,Clay,Stiff,w/sand seams and ferrous stains	CH	26.7			52								
13	24-26	3.00		Yellowish brown & gray,Clay,Very stiff,silty, w/calcareous nodules and mica	CL	20.8											

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 1/31/92

PROJECT Gulf Intracoastal Waterway near Sargent Beach, Texas

BORING NO. 91-293

SAMPLE NO. 4

DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown & gray, Clay, Medium stiff, w/fe nod & blocky structure

Tare No.	90	Height	5.595 in.
Tare plus Wet Specimen	558.84 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	415.19 gm	Initial Area	6.290 sq in.
Water Weight	143.65 gm	Volume	35.194 cu in.
Tare Weight	52.97 gm	Volume of Solids	cu in.
Wet Specimen	1050.10 gm	Void Ratio	
Dry Specimen	751.91 gm	Saturation	%
Water Content	39.66 %	Dry Density	81.4 lb/cu ft
Specific Gravity of Solids			
LL = 69	PL = 25	PI = 44	

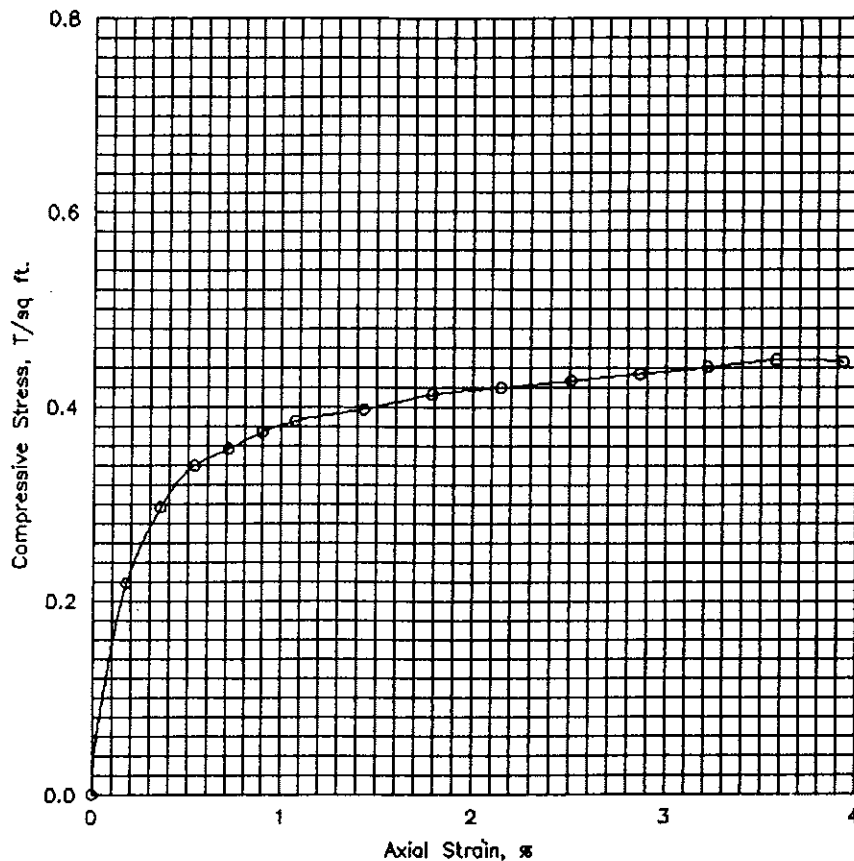
Proving Ring No. 10170

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	25.0	19.1	.002	6.30	.219
.4	20.	.020	34.0	26.0	.004	6.31	.297
.6	30.	.030	39.0	29.9	.005	6.32	.340
.8	40.	.040	41.0	31.4	.007	6.34	.357
.9	50.	.050	43.0	32.9	.009	6.35	.374
1.1	60.	.060	44.5	34.1	.011	6.36	.386
1.4	80.	.080	46.0	35.2	.014	6.38	.398
1.7	100.	.100	48.0	36.8	.018	6.40	.413
2.1	120.	.120	49.0	37.5	.021	6.43	.420
2.4	140.	.140	50.0	38.3	.025	6.45	.427
2.7	160.	.160	51.0	39.1	.029	6.48	.434
3.0	180.	.180	52.0	39.8	.032	6.50	.441
3.3	200.	.200	53.0	40.6	.036	6.52	.448
3.7	220.	.220	53.0	40.6	.039	6.55	.446

Job No. 14G533

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	39.7 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	81.4		
Time to failure, min		t_f	3.33		
Unconfined compressive strength, T/sq ft		q_u	.45		
Undrained shear strength, T/sq ft		S_u	.22		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Brown & gray, Clay, Medium stiff, w/fe nod & blocky structure					
LL	69	PL	25	PI	44
Remarks		Project Gulf Intracoastal Waterway Area Near Sargent Beach, Texas Boring No. 91-293 Sample No. 4 Depth 6-8 ft Date 1/31/92			
UNCONFINED COMPRESSION TEST REPORT					