

90 U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET SAMPLE NO. PEN./TORVANE SPT.-BLOW COUNT		BORING NO. <u>90-198</u>		DATE: BEGIN <u>4/23/98</u> PAGE <u>1 / 1</u>			
		JOB NO. <u>146437</u>		COMPLETE <u>Y</u> Thin Walled Tube ☒ 3" ☐ 6"			
		PROJECT <u>Victoria Channel</u>		LOCATION <u>Sea Drift</u>			
		ELEVATION OF HOLE _____		MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Failing-36</u>			
		GROUNDWATER: DEPTH <u>6</u> ft., ELEV. _____ ft., at end of Drilling		WEATHER <u>Cloudy, Cool</u>			
		DRILLER <u>D. Mitchell</u>		LOGGER <u>J. Berg</u>			
		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS	
0							
	1	2.5	GRAY	CLAY	very stiff		1 Root
	2	4.5	GRAY	CLAY	hard		
5	3	4.5	"	"	"		
	4	2.75	GRAY	CLAY	very stiff	Sand	
JAR	5	9 1/2	TAN	Sand	medium Dense		Sand at 8'
JAR	6	9 1/2	TAN	Sand	Dense		
JAR	7	17 1/2	TAN	Sand	Dense		
	8	3.5	TAN	CLAY	very stiff	Sand	1 calc. noda
25	9	2.25	TAN GRAY	CLAY	very stiff	Sand	1 calc. noda
30							Bottom of 90-198 (26')
35							

Project : Disposal Area B, Channel to Victoria near Seadrift, Texas**SUMMARY OF LABORATORY TEST RESULTS**Boring No. 90-198

Contract No. DACW64-91-D-0001 Delivery Order No. 0013

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	0-2	4.00		Dark gray, Clay, Very stiff, w/roots	CH	19.5											
2	2-4	4.5+		Dark gray, Clay, Hard, w/roots	CH	22.2			60	25							
3	4-6	4.5+		Dark gray & gray, Clay, Hard, w/sand pockets	CH	17.2											
4	6-8	4.5+		Dark gray, Clay, Hard, w/calcareous nodules	CH	16.9	111.0	129.8	59	25	100.0	99.7	98.4		91.5		12.04
5	8.5-10		21	Tan, Sand, Medium dense, Silty	S M						100.0	100.0	99.5		18.7		
6	13.5-15		42	Tan, Sand, Dense, Silty	S M												
7	18.5-20		37	Yellowish brown, Sand, Dense, w/silt	SP-SM						100.0	99.7	99.5		6.1		
8	22-24	1.50		Yellowish brown, Clay, Stiff, Sandy, w/calcareous nodules	CL	19.3			23								
9	24-26	1.50		Yellowish brown, Clay, Stiff, Sandy, w/calcareous nodules	CL	18.4											

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. 14G475

DATE 5/30/91

PROJECT DISPOSAL AREA B, CHANNEL TO VICTORIA, NEAR SEADRIFT, TX

RING NO. 90-198

SAMPLE NO. 4

DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION

Dark gray, clay, hard, w/ calcareous nodules

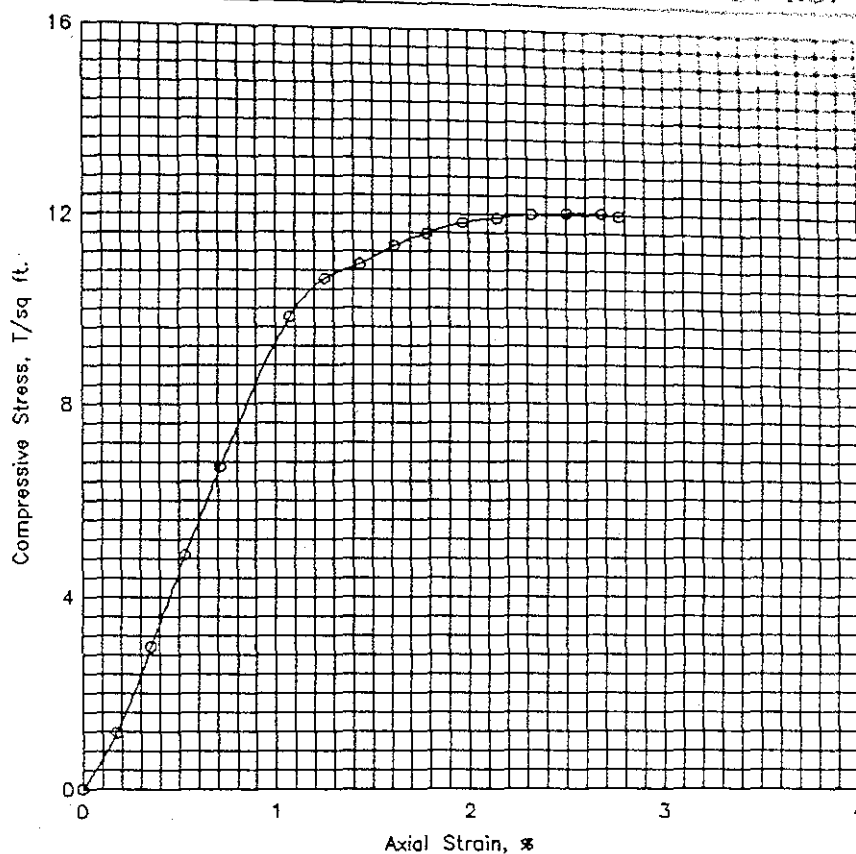
Tare No.	GE-6	Height	5.595 in.
Tare plus Wet Specimen	379.12 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	330.52 gm	Initial Area	6.290 sq in.
Water Weight	48.60 gm	Volume	35.194 cu in.
Tare Weight	42.56 gm	Volume of Solids	cu in.
Wet Specimen	1198.73 gm	Void Ratio	
Dry Specimen	1025.63 gm	Saturation	%
Water Content	16.88 %	Dry Density	111.0 lb/cu ft
Specific Gravity of Solids			
LL = 59	PL = 25	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
.4	10.	.010	135.0	103.4	.002	6.30	1.182
.9	20.	.020	340.0	260.4	.004	6.31	2.970
1.3	30.	.030	560.0	429.0	.005	6.32	4.884
1.8	40.	.040	770.0	589.8	.007	6.34	6.703
2.6	60.	.060	1133.0	867.9	.011	6.36	9.828
2.8	70.	.070	1227.0	939.9	.013	6.37	10.624
3.0	80.	.080	1265.0	969.0	.014	6.38	10.933
3.2	90.	.090	1312.0	1005.0	.016	6.39	11.319
3.5	100.	.100	1346.0	1031.0	.018	6.40	11.591
3.7	110.	.110	1375.0	1053.3	.020	6.42	11.819
3.8	120.	.120	1390.0	1064.7	.021	6.43	11.926
4.0	130.	.130	1403.0	1074.7	.023	6.44	12.016
4.2	140.	.140	1409.0	1079.3	.025	6.45	12.045
4.3	150.	.150	1410.0	1080.1	.027	6.46	12.031
4.5	155.	.155	1406.0	1077.0	.028	6.47	11.986

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	16.9 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	111.0		
Time to failure, min		t_f	4.18		
Unconfined compressive strength, T/sq ft		q_u	12.04		
Undrained shear strength, T/sq ft		S_u	6.02		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Dark gray, clay, hard, w/ calcareous nodules					
LL	59	PL	25	PI	34
				G_s	
Remarks		Project DISPOSAL AREA B, CHANNEL TO VICTORIA			
		Area Near Seadrift, Texas			
		Boring No. 90-198		Sample No. 4	
		Depth 6-8 ft		Date 5/30/91	
		UNCONFINED COMPRESSION TEST REPORT			