U.S. ARMY CORPS OF ENGINEERS

BORING NO. 90-191 DATE: BEGIN [illegible] PAGE 1 / 1
JOB NO. 196439 COMPLETE [illegible] Thin Walled Tube ☑ 3" ☐ 6"
PROJECT Victoria Channel
LOCATION Sea Drift
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing-36
GROUNDWATER: DEPTH 8'2" ft., ELEV. ____ ft., at end of Drilling
WEATHER Clear Warm
DRILLER D. Mitchell LOGGER J Berg

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	4.5+	Gray	Clay	hard		
		2	4.5+	"	"	"		
5		3	4.5+	Gray + Tan	"	"		w/calc.
		4	4.5+	"	"	"		w/calc.
		5	3.0	"	"	Very Stiff		w/calc. Sand at 10'
10								
Jar	X	6	4/9/9	Tan	Sand	Medium Dense		
Jar	X	7	5/7/11	Tan	Sand	"		
15								Clay at 18'
		8	3.0	Gray + Tan	Clay	Very Stiff	Sand	
20		9	1.5	"	"	Stiff	"	w/calc.
		10	1.75	"	"	"	"	w/ "
		11	1.5	"	"	"	"	w/ "
25								Bottom of 90-191 (26')
30								
35								

GEOTEST ENGINEERING, INC.

Project : Disposal Area B, Channel to Victoria near Seadrift, Texas

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 90-191

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)	L L (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0-2	2.25		Dark gray,Clay,Very stiff,Sandy	CL	20.5											
2	2-4	4.5+		Dark gray,Clay,Hard,Sandy	CL	15.1											
3	4-6	4.5+		Gray&yellowish gray,Clay,Hard,Sandy,w/cal-careous nodules	CL	14.9	119.1	136.9	46	22	100.0	99.4	98.3		84.2		5.48
4	6-8	4.5+		Gray&yellowish gray,Clay,Hard,Sandy,w/cal-careous nodules	CL	14.9											
5	8-10	3.00		Gray&yellowish gray,Clay,Very stiff,Silty,w/ calcareous nodules	CL	12.7			29	16							
6	10.5-12		16	Yellowish gray,Sand,Medium dense,Silty	S M						100.0	99.9	99.6		49.6		
7	13.5-15		18	Yellowish gray,Sand,Medium dense,Silty	S M												
8	18-20	3.00		Gray&yellowish gray,Clay,Very stiff,Sandy	CL	19.4											
9	20-22	2.50		Gray&yellowish gray,Clay,Very stiff,Sandy,w/ calcareous nodules	CL	23.3			24								
10	22-24	2.50		Gray&yellowish gray,Clay,Very stiff,Sandy, w/calcareous nodules	CL	19.1											
11	24-26	2.50		Gray&yellowish gray,Clay,Very stiff,Sandy, w/calcareous nodules	CL	19.5											

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

NO. 14G475 DATE 5/27/91

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

RING NO. 90-191 SAMPLE NO. 3 DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray & yellowish gray, clay, hard, sandy, w/ calcareous nodules

Tare No.	GE-10	Height	5.595 in.
Tare plus Wet Specimen	759.10 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	666.37 gm	Initial Area	6.290 sq in.
Water Weight	92.73 gm	Volume	35.194 cu in.
Tare Weight	42.74 gm	Volume of Solids	cu in.
Wet Specimen	1264.36 gm	Void Ratio	
Dry Specimen	1100.69 gm	Saturation	%
Water Content	14.87 %	Dry Density	119.1 lb/cu ft

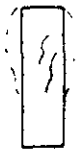
Specific Gravity of Solids
LL = 46 PL = 22 PI = 24

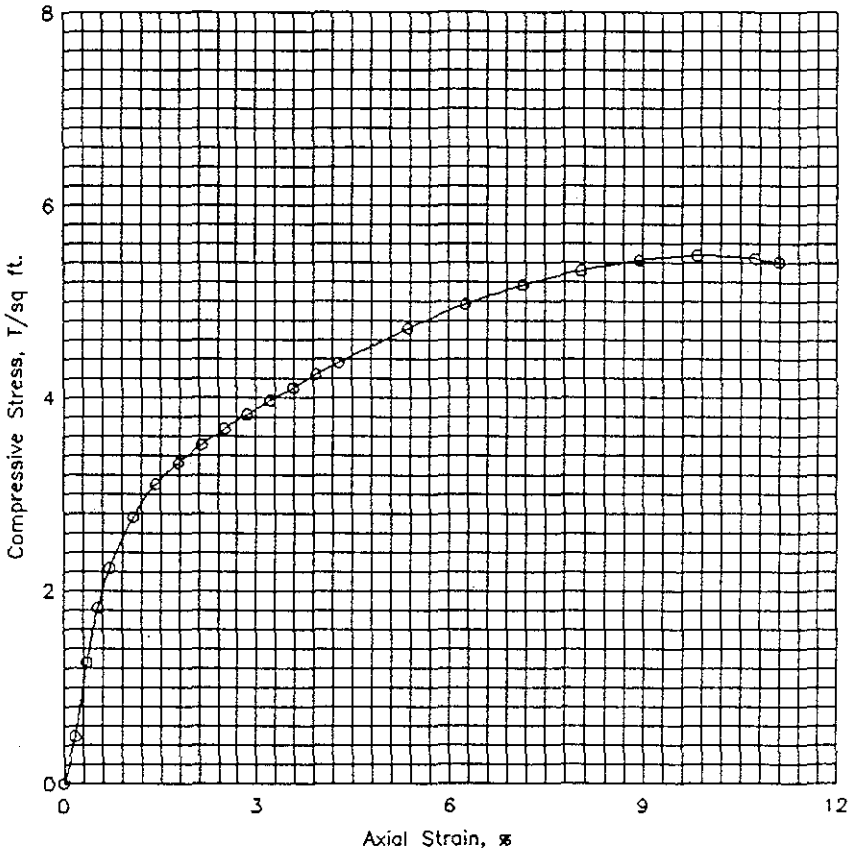
Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

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
.5	10.	.010	56.0	42.9	.002	6.30	.490
.7	20.	.020	144.0	110.3	.004	6.31	1.258
1.0	30.	.030	209.0	160.1	.005	6.32	1.823
1.3	40.	.040	257.0	196.9	.007	6.34	2.237
1.6	60.	.060	319.0	244.4	.011	6.36	2.767
2.0	80.	.080	359.0	275.0	.014	6.38	3.103
2.4	100.	.100	386.0	295.7	.018	6.40	3.324
2.7	120.	.120	409.0	313.3	.021	6.43	3.509
3.0	140.	.140	430.0	329.4	.025	6.45	3.676
3.5	160.	.160	449.0	343.9	.029	6.48	3.824
3.8	180.	.180	468.0	358.5	.032	6.50	3.971
4.1	200.	.200	485.0	371.5	.036	6.52	4.100
4.5	220.	.220	503.0	385.3	.039	6.55	4.237
4.9	240.	.240	520.0	398.3	.043	6.57	4.364
5.9	300.	.300	569.0	435.9	.054	6.65	4.721
6.8	350.	.350	605.0	463.4	.063	6.71	4.973
7.6	400.	.400	635.0	486.4	.071	6.77	5.170
8.5	450.	.450	660.0	505.6	.080	6.84	5.321
9.3	500.	.500	680.0	520.9	.089	6.91	5.429
10.2	550.	.550	693.0	530.8	.098	6.98	5.479
10.9	600.	.600	696.0	533.1	.107	7.05	5.448
11.3	620.	.620	694.0	531.6	.111	7.07	5.411

Job No. 14G475

Failure Sketches





☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_o	14.9 %	%	%	%
	Void ratio	e_o				
	Saturation	S_o	%	%	%	%
	Dry density, lb/cu ft	γ_d	119.1			
Time to failure, min		t_f	10.18			
Unconfined compressive strength, T/sq ft		q_u	5.48			
Undrained shear strength, T/sq ft		S_u	2.74			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_o	2.830			
Initial specimen height, in.		H_o	5.595			

Classification Gray & yellowish gray, clay, hard, sandy, w/ calcareous nodules

LL	PL	PI	G_s
46	22	24	

Remarks

Project DISPOSAL AREA B, CHANNEL TO VICTORIA

Area Near Seadrift, Texas

Boring No. 90-191 | Sample No. 3

Depth 4-6 ft | Date 5/27/91
El

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2