U.S. ARMY CORPS OF ENGINEERS

BORING NO. 95-138 DATE: BEGIN 6-3-95 PAGE 1 / 1
JOB NO. 946799-15 COMPLETE 6-3-95 Thin Walled Tube
PROJECT Channel to Victoria ■ 3" □ 6"
LOCATION Disposal Area No. 6
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Ardco K4X4, C-1000, Marsh Buggy
GROUNDWATER: DEPTH ____ ft., ELEV. ____ ft., at end of Drilling
WEATHER Sunny & Hot
DRILLER Scott Gregurek LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	1.00	Dk. Gray	Clay	Stiff		-w/roots
		2	1.25	Dk gray	Clay	Stiff		
5		3	1.50	Yellowish Brown	Clay	Stiff	Silty	-w/calc nod
		4	4.5+	Yellowish Brown	Clay	Hard	Silty	-w/calc nod
		5	4.5+	Yellowish Brown	Clay	Hard	Silty	-w/calc nod
10		6	2.75	Yellowish Brown	Clay	V. stiff	Silty	-w/calc nod & Sa sms
		7	2.00	Yellowish Brown	Clay	V. stiff	Silty	-w/calc nod & Sa sms
15		8	2.25	Yellowish Brown	clay	V. stiff		-w/calc nod, slickensided
		9	2.25	Yellowish Brown	Clay	V. stiff		-w/calc nod, slickensided
		10	2.50	Yellowish Brown	Clay	V. stiff		-w/calc nod & Fe st, SLS
20		11	2.75	Yellowish Brown	Clay	V stiff		-w/calc nod & Fe st, SLS
		12	1.25	Yellowish gray	Clay	Stiff	Sandy	-w/Sa sms, Sa @ bottom of sample
25	X	13	8 15 21	Brown	Sand	Dense	Silty	
	X	14	13 19 24	Brown	Sand	Dense	Silty	
30								
35								

Project: Channel to Victoria
Seadrift, Texas
Contract No. DACW64-94-D-0015 Delivery Order No. 0018

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 95-138

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	Mc (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	PL (%)	Mechanical Analysis % Passing #4	#10	#40	#100	#200	Torvane Shear Strength (tsf)	q u (tsf)
1	0 - 2	1.00		Clay,w/roots,Stiff,Dark gray	CH	24.9											
2	2 - 4	1.25		Clay,Stiff,Dark gray	CH	24.6	99.5	123.9	65.0	26.0	100.0	99.0	97.6	91.4	89.3		1.46
3	4 - 6	1.50		Silty Clay,w/calcareous nodules,Stiff, Yellowish brown	CL	18.8											
4	6 - 8	4.5+		Silty Clay,w/calcareous nodules,Hard, Yellowish brown	CL	12.3	123.7	139.0	37.0	18.0	100.0	100.0	99.1	95.6	79.3		4.13
5	8 - 10	4.5+		Silty Clay,w/calcareous nodules,Hard, Yellowish brown	CL	13.6											
6	10 - 12	2.75		Silty Clay,w/calcareous nodules & sand seams, Very stiff,Yellowish brown	CL	19.4											
7	12 - 14	2.00		Silty Clay,w/calcareous nodules & sand seams, Very stiff,Yellowish brown	CL	17.3	109.1	128.0	33.0	17.0							
8	14 - 16	2.25		Clay,w/calcareous nodules,slickensided, Very stiff,Yellowish brown	CH	26.8											
9	16 - 18	2.25		Clay,w/calcareous nodules,slickensided, Very stiff,Yellowish brown	CH	25.1											
10	18 - 20	2.50		Clay,w/calcareous nodules & ferrous stains, slickensided,Very stiff,Yellowish brown	CH	25.8			79.0	30.0							
11	20 - 22	2.75		Clay,w/calcareous nodules & ferrous stains, slickensided,Very stiff,Yellowish brown	CH	25.9											
12	22 - 24	1.25		Sandy Clay,w/sand seams,Stiff,Yellowish gray	CL	21.1											
13	24-25.5		36	Silty Sand,Dense,Brown	SM						100.0	100.0	100.0	98.0	22.7		
14	25.5-27		43	Silty Sand, Dense,Brown	SM												

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classifcation, M c : Moisture Content
q u : Unconfined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

JOB NO. 94G799-18 DATE 6/26/95

PROJECT Channel to Victoria

AREA Seadrift, Texas

BORING NO. 95-138 SAMPLE NO. 2 DEPTH 2-4 ft

SPECIMEN NO. 1

CLASSIFICATION
Clay,Stiff,Dark gray

Tare No.	MP-6	Height	5.595 in.
Tare plus Wet Specimen	401.52 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	330.97 gm	Initial Area	6.290 sq in.
Water Weight	70.55 gm	Volume	35.194 cu in.
Tare Weight	43.64 gm	Volume of Solids	cu in.
Wet Specimen	1144.46 gm	Void Ratio	
Dry Specimen	918.85 gm	Saturation	%
Water Content	24.55 %	Dry Density	99.5 lb/cu ft
Specific Gravity of Solids			

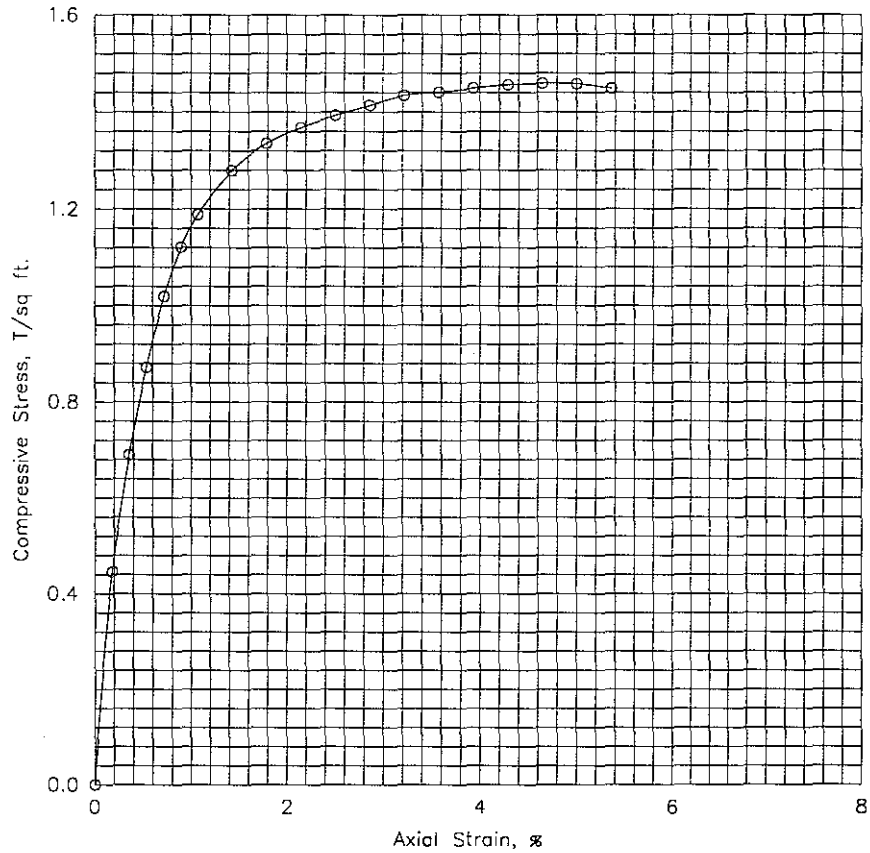
LL = 65 PL = 26 PI = 39

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
.3	10.	.010	51.0	39.1	.002	6.30	.446
.5	20.	.020	79.0	60.5	.004	6.31	.690
.6	30.	.030	100.0	76.6	.005	6.32	.872
.8	40.	.040	117.0	89.6	.007	6.34	1.019
1.0	50.	.050	129.0	98.8	.009	6.35	1.121
1.2	60.	.060	137.0	104.9	.011	6.36	1.188
1.6	80.	.080	148.0	113.4	.014	6.38	1.279
1.9	100.	.100	155.0	118.7	.018	6.40	1.335
2.2	120.	.120	159.5	122.2	.021	6.43	1.368
2.5	140.	.140	163.0	124.9	.025	6.45	1.393
2.8	160.	.160	166.0	127.2	.029	6.48	1.414
3.2	180.	.180	169.0	129.5	.032	6.50	1.434
3.5	200.	.200	170.5	130.6	.036	6.52	1.441
3.8	220.	.220	172.0	131.8	.039	6.55	1.449
4.0	240.	.240	173.5	132.9	.043	6.57	1.456
4.5	260.	.260	174.5	133.7	.046	6.60	1.459
4.8	280.	.280	175.0	134.0	.050	6.62	1.458
5.2	300.	.300	174.5	133.7	.054	6.65	1.448

Job No. 94G799-18

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	24.6 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	99.5			
Time to failure, min		t_f	4.48			
Unconfined compressive strength, T/sq ft		q_u	1.46			
Undrained shear strength, T/sq ft		S_u	.73			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Clay,Stiff,Dark gray

LL	65	PL	26	PI	39	G_s

Remarks

Project Channel to Victoria

Area Seadrift, Texas

Boring No. 95-138 | Sample No. 2

Depth El 2-4 ft | Date 6/26/95

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 94G799-18 DATE 6/26/95

PROJECT Channel to Victoria

AREA Seadrift, Texas

BORING NO. 95-138 SAMPLE NO. 4 DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION
Silty Clay,w/calcareous nodules,Hard,Yellowish brown

Tare No.	HP-5	Height	5.595 in.
Tare plus Wet Specimen	362.09 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	327.05 gm	Initial Area	6.290 sq in.
Water Weight	35.04 gm	Volume	35.194 cu in.
Tare Weight	42.79 gm	Volume of Solids	cu in.
Wet Specimen	1284.14 gm	Void Ratio	
Dry Specimen	1143.22 gm	Saturation	%
Water Content	12.33 %	Dry Density	123.7 lb/cu ft
Specific Gravity of Solids			

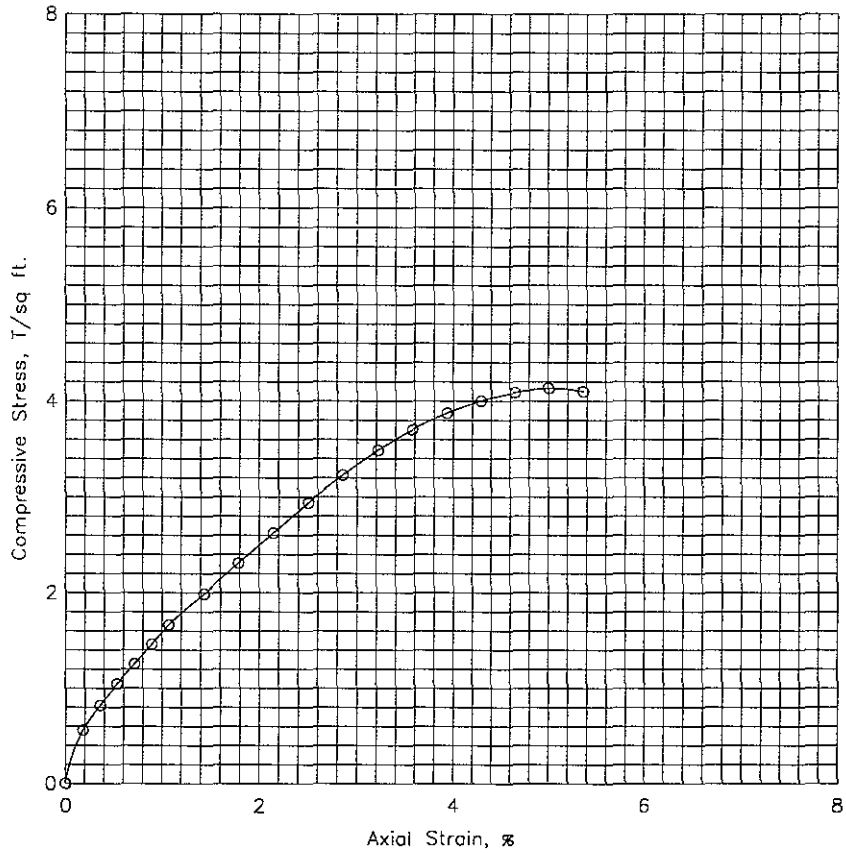
LL = 37 PL = 18 PI = 19

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
.3	10.	.010	64.0	49.0	.002	6.30	.560
.5	20.	.020	94.0	72.0	.004	6.31	.821
.7	30.	.030	120.0	91.9	.005	6.32	1.047
.9	40.	.040	144.0	110.3	.007	6.34	1.254
1.1	50.	.050	168.0	128.7	.009	6.35	1.460
1.3	60.	.060	192.0	147.1	.011	6.36	1.665
1.6	80.	.080	230.0	176.2	.014	6.38	1.988
2.0	100.	.100	268.0	205.3	.018	6.40	2.308
2.3	120.	.120	306.0	234.4	.021	6.43	2.625
2.7	140.	.140	344.0	263.5	.025	6.45	2.941
3.1	160.	.160	379.0	290.3	.029	6.48	3.228
3.4	180.	.180	411.0	314.8	.032	6.50	3.488
3.8	200.	.200	438.0	335.5	.036	6.52	3.703
4.1	220.	.220	460.0	352.4	.039	6.55	3.875
4.4	240.	.240	477.0	365.4	.043	6.57	4.003
4.7	260.	.260	489.0	374.6	.046	6.60	4.088
5.8	280.	.280	496.0	379.9	.050	6.62	4.131
5.3	300.	.300	494.0	378.4	.054	6.65	4.099

Job No. 94G799-18

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	12.3 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	123.7			
Time to failure, min		t_f	5.83			
Unconfined compressive strength, T/sq ft		q_u	4.13			
Undrained shear strength, T/sq ft		S_u	2.07			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Silty Clay,w/calcareous nodules,Hard,Yellowish brown

LL	37	PL	18	PI	19	G_s	

Remarks

Project Channel to Victoria

Area Seadrift, Texas

Boring No. 95-138 | Sample No. 4

Depth El 6-8 ft | Date 6/26/95

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE