U.S. ARMY CORPS OF ENGINEERS

BORING NO. 92-49 DATE: BEGIN 7-31-92 PAGE 1 / 1
JOB NO. 146549 COMPLETE 7-31-92 Thin Walled Tube
PROJECT Disposal Area For Channel to Victoria ☒ 3" ☐ 6"
LOCATION Near Seadrift, Tx
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Ardco Failing Buggy
GROUNDWATER: DEPTH 10.00 ft., ELEV. ____ ft., at end of Drilling
WEATHER Sunny & Hot
DRILLER Mark Thornton LOGGER Fraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	4.5+	DK. Gray	clay	Hard		-w/roots
		2	0.50	Gray	clay	M-stiff		-w/calc nod
5		3	1.00	Gray & Y Brown	clay	stiff		-w/calc nod & Fe st
		4	0.75	Gray & Y. Brown	clay	M-stiff		-w/calc nod & Fe st
		5	0.50	Gray & Y Brown	clay	M-stiff		-w/calc nod & Fe st
10		6	1.00	Gray & Y Brown	clay	stiff		-w/calc nod & Fe st, sand Seams & sand PKts
		7	AA	Gray	Sand		silt	
15	X	8	3/4/4	Gray	Sand	loose	silt	
	X	9	4/6/11	Gray	Sand	M. Dense	silt	
20								Bottom of 92-49 @ 20'
25								
30								
35								

GEOTEST ENGINEERING, INC.

SUMMARY OF LABORATORY TEST RESULTS

Project: Proposed new Disposal area for channel to victoria project, near Seadrift, Texas
Contract No. DACW64-92-D-0001 Delivery Order No. 0023

Boring No. 92-49

S#	Depth (ft.)	PP (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)	qu (tsf)
											#4	#10	#40	#100	#200		
1	0-2	4.5+		Dark gray,Clay,Hard,w/roots	C H	20.5											
2	2-4	0.50		Gray,Clay,Medium stiff,w/calcareous nodules and blocky structure	C H	49.1	72.8	108.6	85	31	100.0	99.9	98.8	98.7	97.7	0.30	0.50
3	4-6	1.25		Olive gray,Clay,Stiff,w/calcareous nodules ferrous stains and blocky structure	C H	38.9										0.60	
4	6-8	0.75		Olive gray&gray,Clay,Medium stiff,w/calcareous nodules and ferrous stains	C H	24.0										0.35	
5	8-10	1.25		Olive gray,Clay,Stiff,w/calcareous nodules ferrous stains and sand pockets	C H	29.2	95.1	122.9	60	25	99.7	99.2	98.5	97.1	95.3	0.50	0.95
6	10-12	1.50		Yellowish gray,Clay,Stiff,w/calcareous nodules ferrous stains sand pockets and sand seams	C H	26.5										0.75	
7	12-14			Yellowish gray,Sand,Loose,Silty	S M												
8	14.5-16		8	Yellowish gray,Sand,Loose,Silty	S M												
9	18.5-20		17	Yellowish gray,~~Clay~~ Sand,Medium dense,Silty	S M												

S#: Sample Number, PP: Pocket Penetrometer Reading, USC: Unified Soil Classification, MC: Moisture Content
qu: Unconfined Compressive Strength, WOH: Weight of Hammer, WOP: Weight of Pipe

GEOTEST ENGINEERING, INC.

PROJECT Proposed Disposal area for Channel to Victoria Project

AREA near Seadrift, Texas

BORING NO. 92-49 SAMPLE NO. 2 DEPTH 2-4 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray,Clay,Medium stiff,w/calc nod & Blocky structure

Tare No.	K1-17	Height	5.595 in.
Tare plus Wet Specimen	519.76 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	362.65 gm	Initial Area	6.290 sq in.
Water Weight	157.11 gm	Volume	35.194 cu in.
Tare Weight	42.48 gm	Volume of Solids	cu in.
Wet Specimen	1003.16 gm	Void Ratio	
Dry Specimen	672.94 gm	Saturation	%
Water Content	49.07 %	Dry Density	72.8 lb/cu ft
Specific Gravity of Solids			

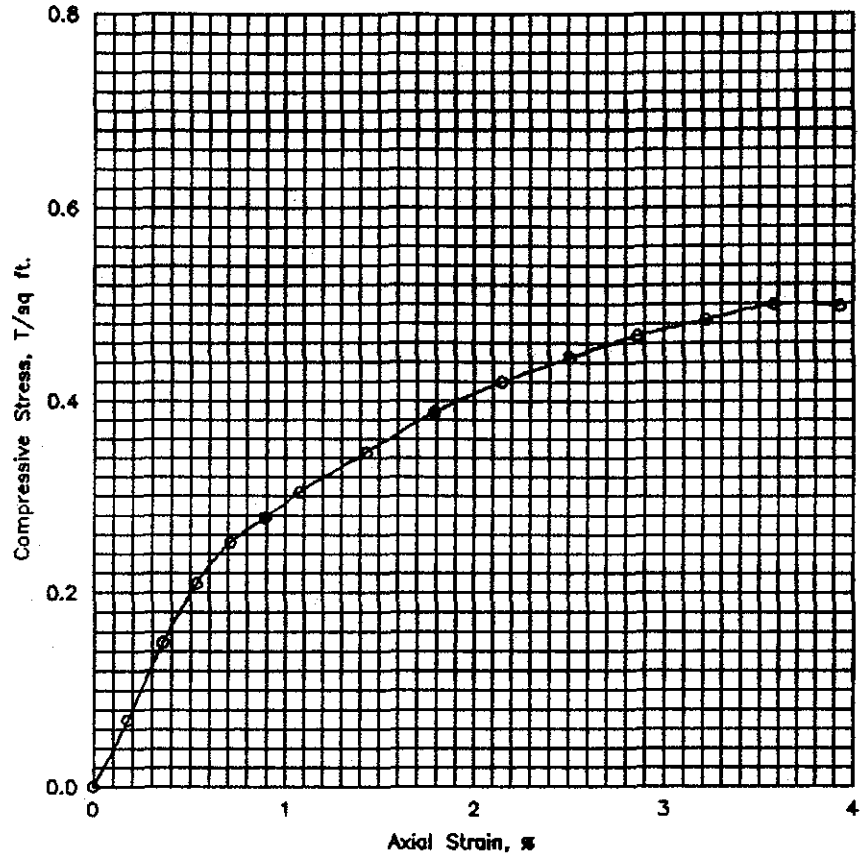
LL = 85 PL = 31 PI = 54

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	8.0	6.1	.002	6.30	.070
.3	20.	.020	17.0	13.0	.004	6.31	.149
.5	30.	.030	24.0	18.4	.005	6.32	.209
.7	40.	.040	29.0	22.2	.007	6.34	.252
.9	50.	.050	32.0	24.5	.009	6.35	.278
1.0	60.	.060	35.0	26.8	.011	6.36	.304
1.4	80.	.080	40.0	30.6	.014	6.38	.346
1.7	100.	.100	45.0	34.5	.018	6.40	.388
2.0	120.	.120	49.0	37.5	.021	6.43	.420
2.3	140.	.140	52.0	39.8	.025	6.45	.445
2.7	160.	.160	55.0	42.1	.029	6.48	.468
3.0	180.	.180	57.0	43.7	.032	6.50	.484
3.3	200.	.200	59.0	45.2	.036	6.52	.499
3.5	220.	.220	59.0	45.2	.039	6.55	.497

Job No. 14G599

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_o	49.1 %	%	%	%
	Void ratio	e_o				
	Saturation	S_o	%	%	%	%
	Dry density, lb/cu ft	γ_d	72.8			
Time to failure, min		t_f	3.27			
Unconfined compressive strength, T/sq ft		q_u	.50			
Undrained shear strength, T/sq ft		S_u	.25			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_o	2.830			
Initial specimen height, in.		H_o	5.595			

Classification Gray,Clay,Medium stiff,w/calc nod & Blocky structure

LL	85	PL	31	PI	54	G_s	

Remarks

Project Proposed Disposal area for Channel to Victoria Project

Area near Seadrift, Texas

Boring No. 92-49 | Sample No. 2

Depth El 2-4 ft | Date 8/10/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G599 DATE 8/10/92

PROJECT Proposed Disposal area for Channel to Victoria Project

AREA near Seadrift, Texas

BORING NO. 92-49 SAMPLE NO. 5 DEPTH 8-10 ft

SPECIMEN NO. 1

CLASSIFICATION
Olivegray,Clay,Stiff,w/calc nod & fe st and sand pockets

Tare No.	K1-4	Height	5.595 in.
Tare plus Wet Specimen	480.64 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	381.59 gm	Initial Area	6.290 sq in.
Water Weight	99.05 gm	Volume	35.194 cu in.
Tare Weight	42.40 gm	Volume of Solids	cu in.
Wet Specimen	1134.73 gm	Void Ratio	
Dry Specimen	878.26 gm	Saturation	%
Water Content	29.20 %	Dry Density	95.1 lb/cu ft
Specific Gravity of Solids			

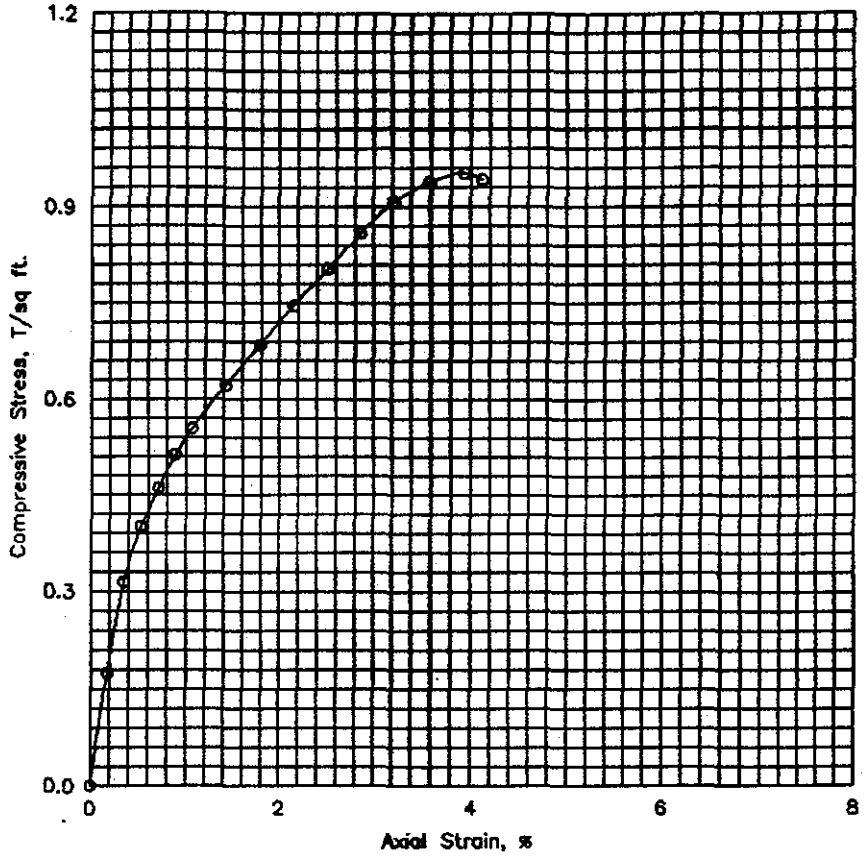
LL = 60 PL = 25 PI = 35

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	20.0	15.3	.002	6.30	.175
.3	20.	.020	36.0	27.6	.004	6.31	.315
.5	30.	.030	46.0	35.2	.005	6.32	.401
.7	40.	.040	53.0	40.6	.007	6.34	.461
.9	50.	.050	59.0	45.2	.009	6.35	.513
1.0	60.	.060	64.0	49.0	.011	6.36	.555
1.3	80.	.080	72.0	55.2	.014	6.38	.622
1.6	100.	.100	79.5	60.9	.018	6.40	.685
1.9	120.	.120	87.0	66.6	.021	6.43	.746
2.2	140.	.140	94.0	72.0	.025	6.45	.804
2.5	160.	.160	101.0	77.4	.029	6.48	.860
2.8	180.	.180	107.0	82.0	.032	6.50	.908
3.1	200.	.200	111.0	85.0	.036	6.52	.938
3.4	220.	.220	113.0	86.6	.039	6.55	.952
3.6	230.	.230	112.0	85.8	.041	6.56	.942

Job No. 14G599

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	29.2 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	95.1			
Time to failure, min		t_f	3.40			
Unconfined compressive strength, T/sq ft		q_u	.95			
Undrained shear strength, T/sq ft		S_u	.48			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Olivegray,Clay,Stiff,w/calc nod & fe st and sand pockets

LL	60	PL	25	PI	35	G_s	

Remarks

Project Proposed Disposal area for Channel to Victoria Project

Area near Seadrift, Texas

Boring No. 92-49 | Sample No. 5

Depth El 8-10 ft | Date 8/10/92

UNCONFINED COMPRESSION TEST REPORT

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PLATE XI-2

Geotest Engineering, Inc.

PLATE