U.S. ARMY CORPS OF ENGINEERS

BORING NO. 91-222 DATE: BEGIN 12-10-91 PAGE 1 / 1
JOB NO. 144532 COMPLETE 12-10-91 Thin Walled Tube
PROJECT Victoria Channel ☑ 3" ☐ 6"
LOCATION " " West Bank - Sta. #770+00
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Mayhew 200
GROUNDWATER: DEPTH Surface ft., ELEV. ft., at end of Drilling
WEATHER Clear - Cool - Windy
DRILLER S. Ward 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	.75	Gray	Clay	Med stiff	Sand	w/shell frag-
		2	.25	"	"	soft	"	w/shell frag. Rotten Egg odor
5		3	.25	"	"	"	"	w/shell frag. Rotten Egg odor
		4	.25	"	"	"	"	w/shell frag. Rotten Egg odor
Si. at 8'		5	.25	"	Silt	loose	Clay	w/shell frag Rotten Egg odor
10								
JAR 15	X	6	WOH	Gray	Silt	Very loose	clay	Shell frag
JAR 20	X	7	WOH	Gray	"	"	Clay	" "
JAR 25	X	8	WOH	Gray	"	"	"	w/shell frag
JAR 30	X	9	WOH	"	"	"	Sand	w/ " "
								Bottom of 91-222 30'
35								

GEOTEST ENGINEERING INC

JOB NO. 14G536 DATE 2/27/92

PROJECT Channel to Victoria. Victoria, Texas

BORING NO. 91-222 SAMPLE NO. 2 DEPTH 2-4 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray,Clay,Very soft,Sandy,w/shell fragments

Tare No.	P-228	Height	5.595 in.
Tare plus Wet Specimen	553.27 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	433.27 gm	Initial Area	6.290 sq in.
Water Weight	120.00 gm	Volume	35.194 cu in.
Tare Weight	42.51 gm	Volume of Solids	cu in.
Wet Specimen	1090.96 gm	Void Ratio	
Dry Specimen	834.65 gm	Saturation	%
Water Content	30.71 %	Dry Density	90.3 lb/cu ft

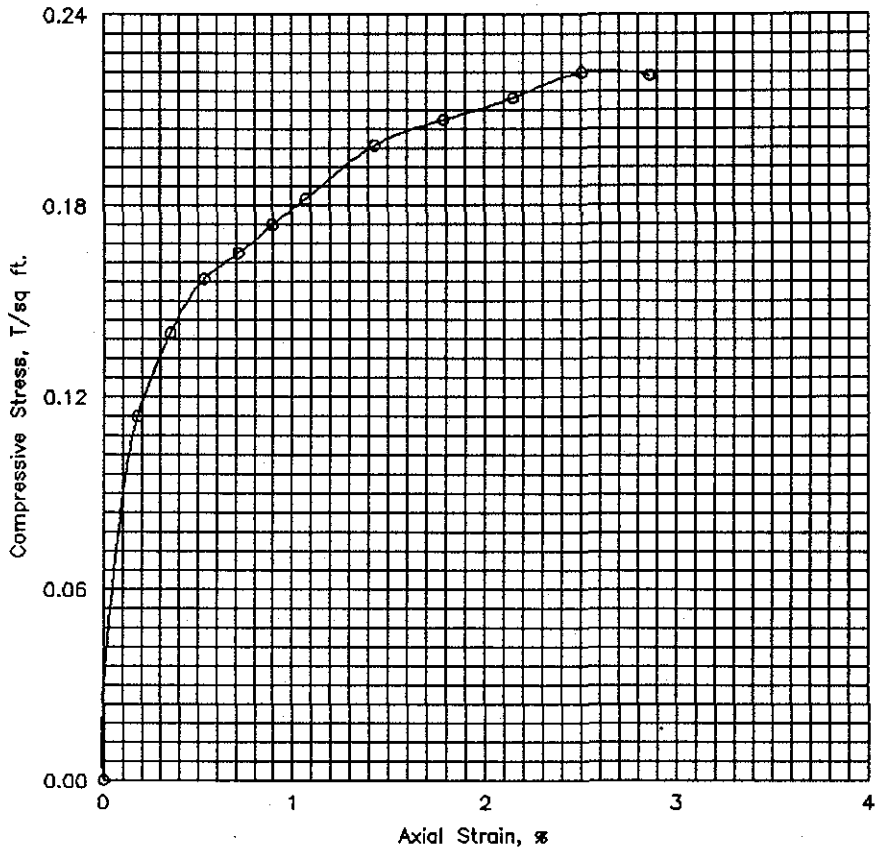
Specific Gravity of Solids
LL = 35 PL = 17 PI = 18

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	13.0	10.0	.002	6.30	.114
.3	20.	.020	16.0	12.3	.004	6.31	.140
.5	30.	.030	18.0	13.8	.005	6.32	.157
.7	40.	.040	19.0	14.6	.007	6.34	.165
.8	50.	.050	20.0	15.3	.009	6.35	.174
1.0	60.	.060	21.0	16.1	.011	6.36	.182
1.3	80.	.080	23.0	17.6	.014	6.38	.199
1.6	100.	.100	24.0	18.4	.018	6.40	.207
2.0	120.	.120	25.0	19.1	.021	6.43	.214
2.3	140.	.140	26.0	19.9	.025	6.45	.222
2.6	160.	.160	26.0	19.9	.029	6.48	.221

Job No. 140536

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	30.7 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	90.3			
Time to failure, min		t_f	2.27			
Unconfined compressive strength, T/sq ft		q_u	.22			
Undrained shear strength, T/sq ft		S_u	.11			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Gray,Clay,Very soft,Sandy,w/shell fragments

LL	PL	PI	G_s
35	17	18	

Remarks

Project Channel to Victoria

Area Victoria, Texas

Boring No. 91-222 | Sample No. 2

Depth El 2-4 ft | Date 2/27/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G536 DATE 2/27/92

PROJECT Channel to Victoria. Victoria, Texas

BORING NO. 91-222 SAMPLE NO. 4 DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray,Clay,Very Soft,Sandy,w/shell fragments

Tare No.	3	Height	5.595 in.
Tare plus Wet Specimen	482.80 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	359.70 gm	Initial Area	6.290 sq in.
Water Weight	123.10 gm	Volume	35.194 cu in.
Tare Weight	53.93 gm	Volume of Solids	cu in.
Wet Specimen	1036.50 gm	Void Ratio	
Dry Specimen	738.99 gm	Saturation	%
Water Content	40.26 %	Dry Density	80.0 lb/cu ft

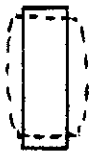
Specific Gravity of Solids
LL = 37 PL = 17 PI = 20

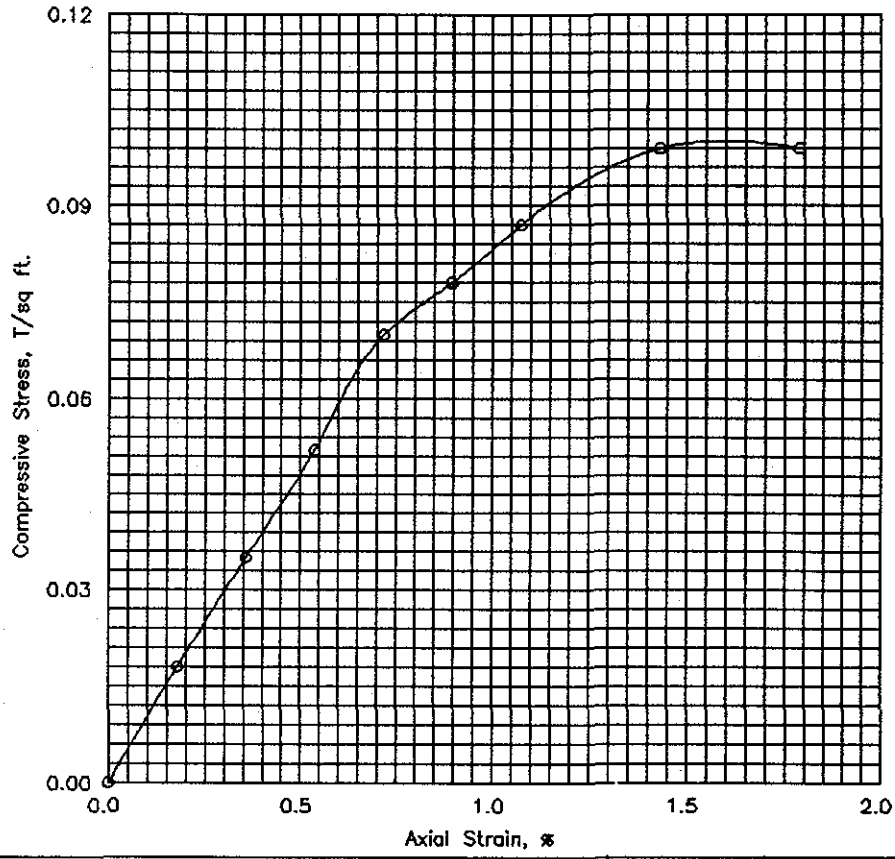
Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

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	2.0	1.5	.002	6.30	.018
.3	20.	.020	4.0	3.1	.004	6.31	.035
.5	30.	.030	6.0	4.6	.005	6.32	.052
.7	40.	.040	8.0	6.1	.007	6.34	.070
.9	50.	.050	9.0	6.9	.009	6.35	.078
1.0	60.	.060	10.0	7.7	.011	6.36	.087
1.4	80.	.080	11.5	8.8	.014	6.38	.099
1.6	100.	.100	11.5	8.8	.018	6.40	.099

Job No. 14G536

Failure Sketches





☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	40.3 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	80.0			
Time to failure, min		t_f	1.35			
Unconfined compressive strength, T/sq ft		q_u	.10			
Undrained shear strength, T/sq ft		S_u	.05			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Gray,Clay,Very Soft,Sandy,w/shell fragments

LL	37	PL	17	PI	20	G_s	

Remarks

Project Channel to Victoria

Area Victoria, Texas

Boring No. 91-222 | Sample No. 4

Depth El 6-8 ft | Date 2/27/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

Project : Channel to Victoria . Victoria, Texas
Contract No. DACW64-92-D-0001 Delivery order No. 0006

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-222

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	0.50		Gray,Clay,Medium stiff,Sandy,w/shell fragments	C L	26.9										0.25	
2	2-4	0.00		Gray,Clay,Very soft,Sandy,w/shell fragments	C L	30.7	90.3	118.1	35	17	99.7*	98.8*	92.9	73.1	61.1	0.12	0.22
3	4-6	0.00		Gray,Clay,Very soft,Sandy,w/shell fragments	C L	35.4										0.08	
4	6-8	0.00		Gray,Clay,Very soft,Sandy,w/shell fragments	C L	40.3	80.0	112.2	37	17	100.0	99.5	98.1	89.8	73.4	0.06	0.10
5	8-10	0.00		Gray,Clay,Very soft,Sandy,w/shell fragments	C L	47.2										0.05	
6	13.5-15		W.O.H	Gray,Silt,Very loose,Sandy,w/shell fragments & clay seams	M L	39.6											
7	18.5-20		W.O.H	Gray,Silt,Very loose,Sandy,w/shell fragments & clay seams	M L	35.4			38	26	98.7*	97.0	94.6	78.5	51.2		
8	23.5-25		W.O.H	Gray,Silt,Very loose,Sandy,w/shell fragments & clay seams	M L	33.4											
9	28.5-30		W.O.H	Gray,Silt,Very loose,Sandy,w/shell fragments & clay seams	M L												

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
*: Material Reatained are Shell fragments