

SUMMARY OF QUESTIONABLE
ERRONEOUS OR MISSING DATA
FOR

CONTRACT NO. DACW64-94-C-0040

PROJECT: SOILS TESTING, HOUSTON-GALVESTON NAVIGATION CHANNEL

BORING NO.	SAMPLE NO.	COMMENTS ON DRILLING RESULTS
93-101	2	Test order on sample 4 performed on sample 2
93-103	5	Unconfined results given as 28 on lab summary, 27 given on test report
93-105	2	footnote(*) states that material retained are shell fragments, classification does not include this description
93-112	7	footnote(*) states that material retained are shell fragments, classification does not include this description
93-113	5	Mech Ana does not suggest SP-SM, amount passing not between 5-12
93-115	5	footnote(*) states that material retained are shell fragments, classification does not include this description
93-117	13	Blow counts indicate med dense instead of loose

(corrected on my copies)

JJA 2/17/95
JB 3/13/95

JOB NO. 94G783-4

DATE 9/7/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-105

SAMPLE NO. 2

DEPTH 2-4 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Medium stiff, Sandy

Tare No.	7F	Height	3.794 in.
Tare plus Wet Specimen	110.32 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	92.07 gm	Initial Area	6.290 sq in.
Water Weight	18.25 gm	Volume	23.865 cu in.
Tare Weight	32.43 gm	Volume of Solids	cu in.
Wet Specimen	740.33 gm	Void Ratio	
Dry Specimen	566.87 gm	Saturation	%
Water Content	30.60 %	Dry Density	90.5 lb/cu ft
Specific Gravity of Solids			
LL = 26	PL = 15	PI = 11	

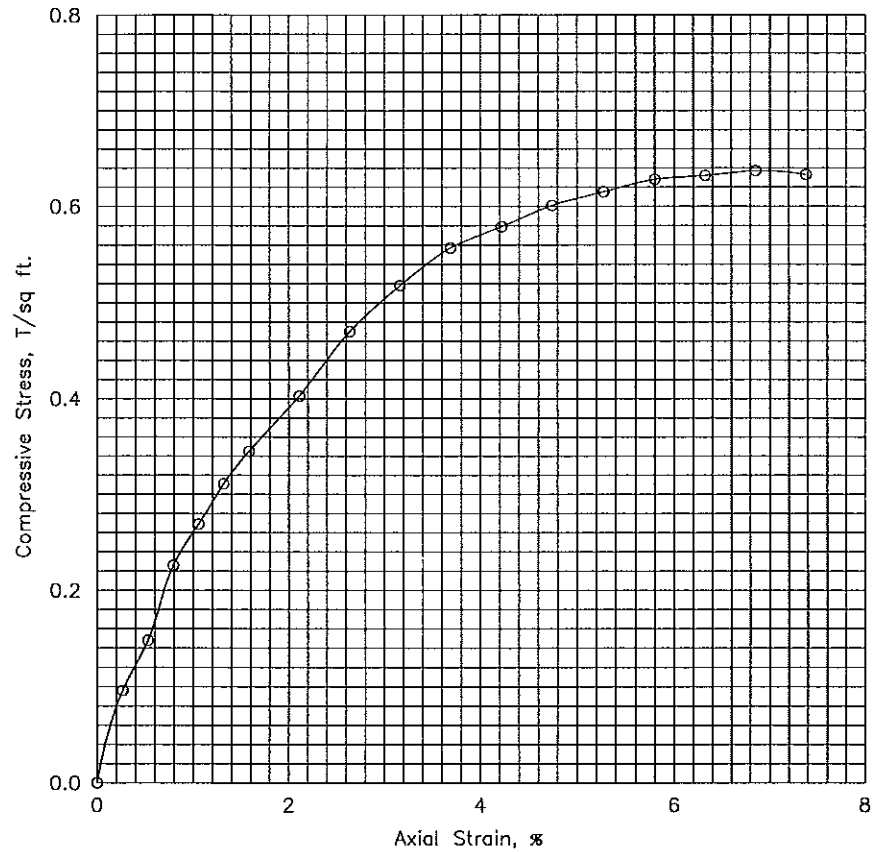
Proving Ring No. 10170

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	11.0	8.4	.003	6.31	.096
.5	20.	.020	17.0	13.0	.005	6.32	.148
.8	30.	.030	26.0	19.9	.008	6.34	.226
1.0	40.	.040	31.0	23.7	.011	6.36	.269
1.2	50.	.050	36.0	27.6	.013	6.37	.311
1.3	60.	.060	40.0	30.6	.016	6.39	.345
1.6	80.	.080	47.0	36.0	.021	6.43	.403
2.0	100.	.100	55.0	42.1	.026	6.46	.470
2.3	120.	.120	61.0	46.7	.032	6.50	.518
2.7	140.	.140	66.0	50.6	.037	6.53	.557
2.9	160.	.160	69.0	52.9	.042	6.57	.579
3.3	180.	.180	72.0	55.2	.047	6.60	.601
3.5	200.	.200	74.0	56.7	.053	6.64	.615
3.9	220.	.220	76.0	58.2	.058	6.68	.628
4.3	240.	.240	77.0	59.0	.063	6.71	.632
4.6	260.	.260	78.0	59.7	.069	6.75	.637
4.8	280.	.280	78.0	59.7	.074	6.79	.633

Job No. 94G783-4

Failure Sketches



- ☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	30.6 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	90.5		
Time to failure, min		t_f	4.55		
Unconfined compressive strength, $T/sq\ ft$		q_u	.64		
Undrained shear strength, $T/sq\ ft$		S_u	.32		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	3.794		
Classification Gray, Clay, Medium stiff, Sandy					
LL	26	PL	15	PI	11
Remarks		Project Houston-Galveston Navigation Channel Area Houston, Texas Boring No. 93-105 Sample No. 2 Depth 2-4 ft Date 9/7/94			
UNCONFINED COMPRESSION TEST REPORT					

JOB NO. 94G783-4

DATE 9/7/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-105

SAMPLE NO. 5

DEPTH 10-12 ft

SPECIMEN NO. 1

CLASSIFICATION

Gray, Clay, Very soft, w/shell fragments

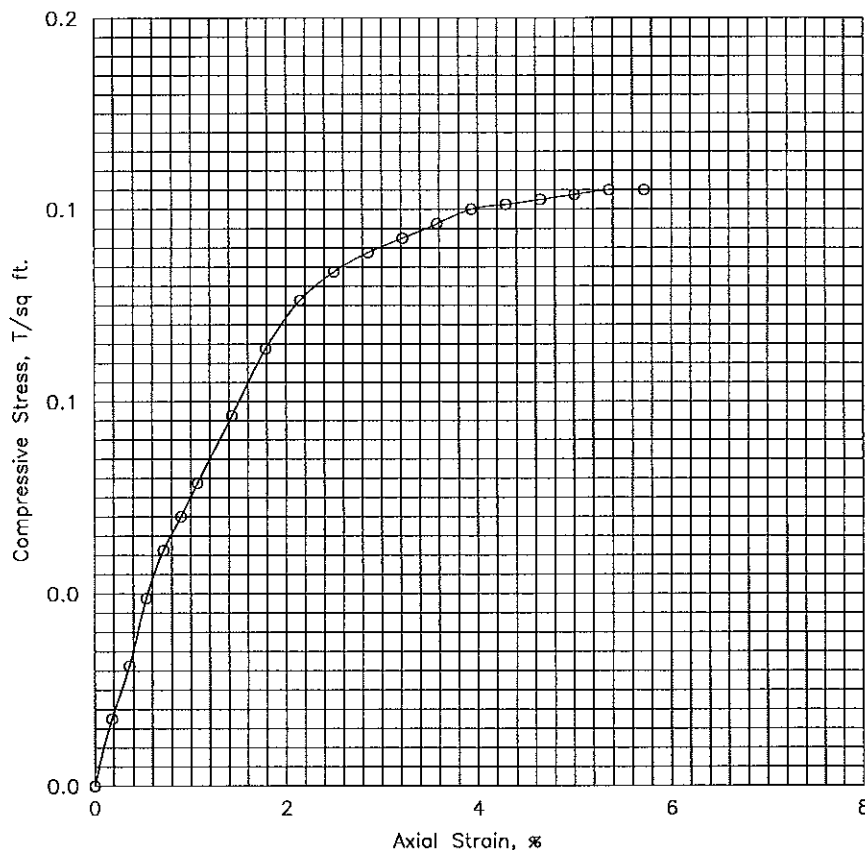
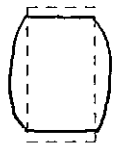
Tare No.	IM-3	Height	5.595 in.
Tare plus Wet Specimen	389.41 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	262.21 gm	Initial Area	6.290 sq in.
Water Weight	127.20 gm	Volume	35.194 cu in.
Tare Weight	42.37 gm	Volume of Solids	cu in.
Wet Specimen	927.82 gm	Void Ratio	
Dry Specimen	587.75 gm	Saturation	%
Water Content	57.86 %	Dry Density	63.6 lb/cu ft
Specific Gravity of Solids			
LL = 80	PL = 29	PI = 51	

Proving Ring No. 17015

Proving Ring Constant, K = .311 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	4.0	1.2	.002	6.30	.014
.4	20.	.020	7.0	2.2	.004	6.31	.025
.6	30.	.030	11.0	3.4	.005	6.32	.039
.7	40.	.040	14.0	4.3	.007	6.34	.049
.9	50.	.050	16.0	5.0	.009	6.35	.056
1.1	60.	.060	18.0	5.6	.011	6.36	.063
1.6	80.	.080	22.0	6.8	.014	6.38	.077
1.9	100.	.100	26.0	8.1	.018	6.40	.091
2.3	120.	.120	29.0	9.0	.021	6.43	.101
2.6	140.	.140	31.0	9.6	.025	6.45	.107
3.0	160.	.160	32.0	9.9	.029	6.48	.111
3.3	180.	.180	33.0	10.2	.032	6.50	.114
3.6	200.	.200	34.0	10.6	.036	6.52	.117
4.0	220.	.220	35.0	10.9	.039	6.55	.120
4.3	240.	.240	35.5	11.0	.043	6.57	.121
4.6	260.	.260	36.0	11.2	.046	6.60	.122
4.9	280.	.280	36.5	11.3	.050	6.62	.123
5.3	300.	.300	37.0	11.5	.054	6.65	.124
5.6	320.	.320	37.0	11.5	.057	6.67	.124

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	57.9 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	63.6		
Time to failure, min		t_f	5.33		
Unconfined compressive strength, T/sq ft		q_u	.12		
Undrained shear strength, T/sq ft		S_u	.06		
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, w/shell fragments					
LL	80	PL	29	PI	51
		G_s			
Remarks		Project Houston-Galveston Navigation			
		Channel			
		Area Houston, Texas			
		Boring No. 93-105		Sample No. 5	
		Depth 10-12 ft		Date 9/7/94	
		EI			
UNCONFINED COMPRESSION TEST REPORT					

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>93-105</u> DATE: BEGIN <u>8-3-97</u> PAGE <u>1 12</u> JOB NO. <u>946783-1</u> COMPLETE <u>8-3-97</u> Thin Walled Tube PROJECT <u>HOUSTON-GALVESTON Navigation Channel</u> ☒ 3" ☐ 6" LOCATION <u>DISPOSAL AREA # 16</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Arco K4x4, C-1000 Marsh Buggy</u> GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>Sunny and Hot 95°</u> DRILLER <u>David Gregurek</u> LOGGER <u>Willie Barnes</u>				
						COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
Torvane Reading		0								
		1	0.75			Gray	Clay	Medium Stiff	Sandy	W/ roots 0'-2'
		2	0.75			Gray	Clay	Medium Stiff	Sandy	Sand AT 4'
		3	2 1/4			Gray	SAND	MEDIUM DENSE	SILTY	- W/ Shell Fragments
		4	0.00			Gray	Clay	Very Soft	SANDY	Clay AT 8'
0.15		5	0.00			Gray	Clay	Very Soft	SANDY	
0.2		6	0.00			Gray	Clay	Very Soft	SANDY	
0.2		7	6 1/4			Gray	Sand	MEDIUM DENSE	Silty	Sand AT Bottom of Sample
		8	4 1/2			Gray	Sand	MEDIUM DENSE	Silty	W/ Shell Fragments
		9	8 1/4			Gray	Sand	MEDIUM DENSE	Silty	
		10	7 1/2			Gray	Sand	MEDIUM DENSE	Silty	
		11	3 1/4			Gray	Sand	MEDIUM DENSE	Silty	

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>43-105</u> DATE: BEGIN <u>8-3-94</u> PAGE <u>2 1 2</u> JOB NO. <u>946783.1</u> COMPLETE <u>8-3-94</u> Thin Walled Tube PROJECT <u>Houston-Galveston Navigation Channel</u> ☒ 3" ☐ 6" LOCATION <u>DISPOSAL AREA</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Ardea K444, C-1000 Marsh Buggy</u> GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>Sunny and Hot 97°</u> DRILLER <u>David</u> LOGGER <u>Willie Barnes</u>					
					COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS	
-35-										
-40-	☒	12	7 1/2		Gray	sand	medium DENSE	silty	Torvane Multiplier 0.2	
-45-										
-50-										
-55-										
-60-										
-65-										
-70-										

Project: Houston-Galveston Navigation Channel

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-94-C-0040

Boring No. 93-105

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	0.75		Gray,Clay,Medium stiff,Sandy	C L	44.9											
2	2 - 4	0.75		Gray,Clay,Medium stiff,Sandy w/ sh frag	C L	30.6	90.5	118.2	26.0	15.0	99.5*	98.4*	92.9*	66.0	52.3		0.64
3	4-5.5		11	Gray,Sand,Medium dense,Silty,w/shell fragments	S M						100.0	99.9	99.2	79.7	46.6		
4	8-10	0.00		Gray,Clay,Very soft,w/shell fragments	C H	62.0											
5	10-12	0.00		Gray,Clay,Very soft,w/shell fragments	C H	57.9	63.6	100.4	80.0	29.0	100.0	100.0	99.5	98.8	96.8		0.12
6	12-14	0.00		Gray,Clay,Very softw/shell fragments	C H	88.4											
7	14-15.5		16	Gray,Sand,Medium dense,Silty,w/shell fragments	S M												
8	19-20.5		11	Gray,Sand,Medium dense,Silty,w/shell fragments	S M						96.3*	95.0*	93.2*	66.3	44.0		
9	24-25.5		16	Gray,Sand,Medium dense,Silty,w/shell fragments	S M												
10	29-30.5		11	Gray,Sand,Medium dense,Silty,w/shell fragments	S M												
11	14-35.5		11	Gray,Sand,Medium dense,Silty,w/shell fragments	S M												
12	38.5-40		13	Gray,Sand,Medium dense,Silty,w/shell fragments	S M												

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content

q u : Uncogined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

* : Material retained are shell fragments

Geotest Engineering, Inc.