

REVIEWED BY LAADATE 3/13/95REVIEWED BY gpcDATE 2/14/95

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
93-82	5, 7	Torvane results given, samples sent to SWD → TORVANE WERE DONE IN THE FIELD
93-83	7, 11, 13 23	Torvane results given, samples sent to SWD Unconfined results recorded on lab summary sheet as .97 on test report sheet as .98
93-85	27	MC ordered, not performed
93-88	6	PP results not given, Unconfined results lab summary sheet as .12 on test report as .11
93-89	2	Blow counts indicate loose instead of very loose ✓
93-93	4	PP (.25) indicates soft instead of medium ✓
93-96	4	Unconfined results recorded on lab summary as .15 on test ✓ report .36
	18	Blow counts given, not recorded on field logs

Corrected on my copy 10

JOB NO. 14G783-4

DATE 8/24/94

PROJECT Houston-Galveston Navigation
Channel

AREA Houston, Texas

BORING NO. 93-85

SAMPLE NO. 8

DEPTH 14-16 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown, Clay, Medium stiff, w/ sand parting

Tare No.	P-226	Height	5.595 in.
Tare plus Wet Specimen	415.34 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	303.39 gm	Initial Area	6.290 sq in.
Water Weight	111.95 gm	Volume	35.194 cu in.
Tare Weight	42.74 gm	Volume of Solids	cu in.
Wet Specimen	1054.54 gm	Void Ratio	
Dry Specimen	737.70 gm	Saturation	%
Water Content	42.95 %	Dry Density	79.9 lb/cu ft
Specific Gravity of Solids			
LL = 77	PL = 30	PI = 47	

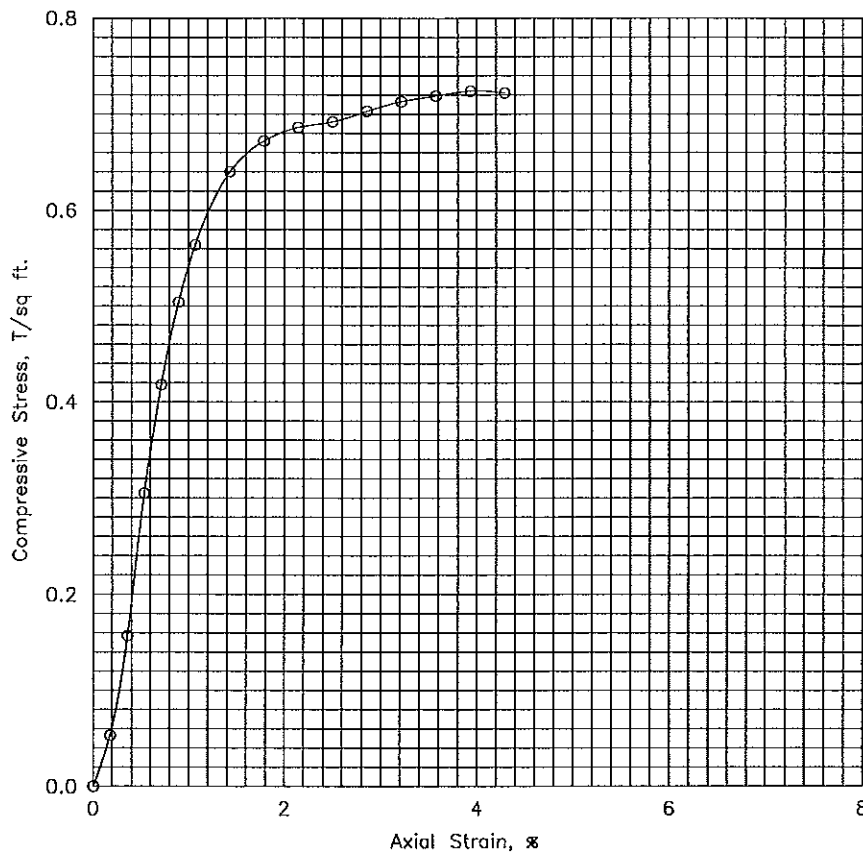
Proving Ring No. 10170

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	6.0	4.6	.002	6.30	.053
.3	20.	.020	18.0	13.8	.004	6.31	.157
.5	30.	.030	35.0	26.8	.005	6.32	.305
.7	40.	.040	48.0	36.8	.007	6.34	.418
.9	50.	.050	58.0	44.4	.009	6.35	.504
1.1	60.	.060	65.0	49.8	.011	6.36	.564
1.4	80.	.080	74.0	56.7	.014	6.38	.640
1.8	100.	.100	78.0	59.7	.018	6.40	.672
2.0	120.	.120	80.0	61.3	.021	6.43	.686
2.4	140.	.140	81.0	62.0	.025	6.45	.692
2.7	160.	.160	82.5	63.2	.029	6.48	.703
3.0	180.	.180	84.0	64.3	.032	6.50	.713
3.3	200.	.200	85.0	65.1	.036	6.52	.719
3.7	220.	.220	86.0	65.9	.039	6.55	.724
4.0	240.	.240	86.0	65.9	.043	6.57	.722

Job No. 14G783-4

Failure Sketches

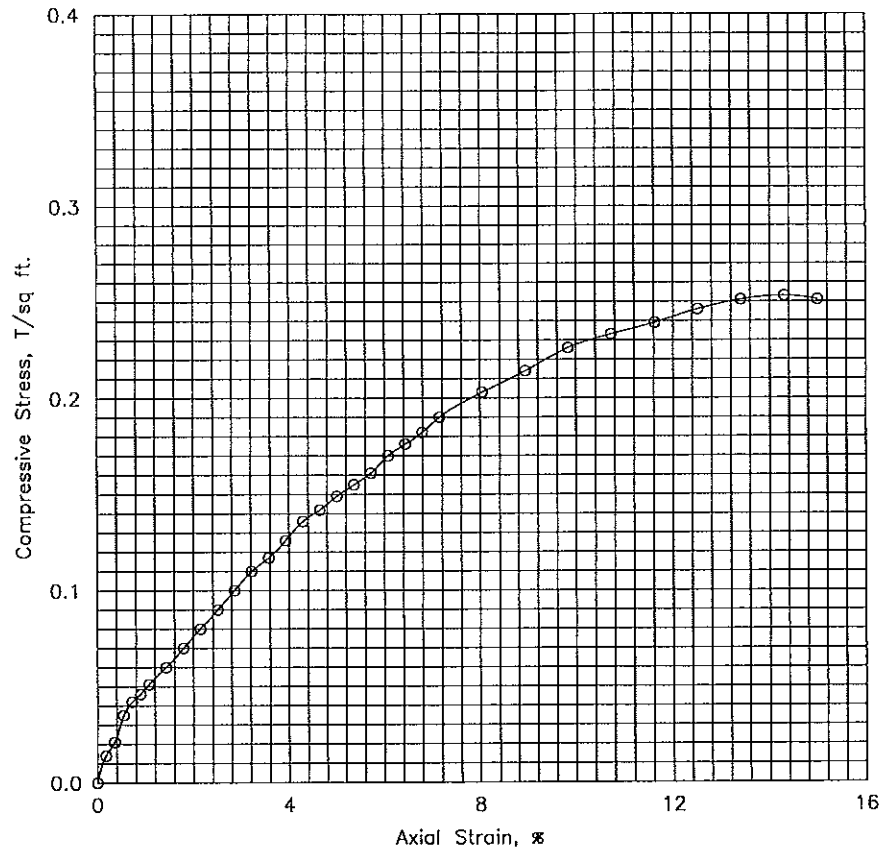


☐ Controlled stress
☒ Controlled strain

Test No.		1																											
Type of Specimen		Undisturbed																											
Initial	Water content	w_0	43.0 %	%	%																								
	Void ratio	e_0																											
	Saturation	S_0	%	%	%																								
	Dry density, lb/cu ft	γ_d	79.9																										
Time to failure, min		t_f	3.67																										
Unconfined compressive strength, T/sq ft		q_u	.72																										
Undrained shear strength, T/sq ft		S_u	.36																										
Sensitivity ratio		S_t																											
Initial specimen diameter, in.		D_0	2.830																										
Initial specimen height, in.		H_0	5.595																										
Classification Brown, Clay, Medium stiff, w/ sand parting																													
LL	77	PL	30	PI	47																								
Remarks		<table border="1"> <tr> <td colspan="2">Project</td> <td colspan="2">Houston-Galveston Navigation</td> </tr> <tr> <td colspan="2">Channel</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Area</td> <td colspan="2">Houston, Texas</td> </tr> <tr> <td>Boring No.</td> <td>93-85</td> <td>Sample No.</td> <td>8</td> </tr> <tr> <td>Depth</td> <td>14-16 ft</td> <td>Date</td> <td>8/24/94</td> </tr> <tr> <td colspan="4">UNCONFINED COMPRESSION TEST REPORT</td> </tr> </table>				Project		Houston-Galveston Navigation		Channel				Area		Houston, Texas		Boring No.	93-85	Sample No.	8	Depth	14-16 ft	Date	8/24/94	UNCONFINED COMPRESSION TEST REPORT			
Project		Houston-Galveston Navigation																											
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Boring No.	93-85	Sample No.	8																										
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UNCONFINED COMPRESSION TEST REPORT																													

Job No. 14G783-4

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	25.9 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	101.5		
Time to failure, min		t_f	13.17		
Unconfined compressive strength, $T/sq\ ft$		q_u	.25		
Undrained shear strength, $T/sq\ ft$		S_u	.13		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Gray, Clay, Soft, Sandy, w/ shell fragments					
LL	24	PL	14	PI	10
Remarks		Project Houston-Galveston Navigation Channel Area Houston, Texas Boring No. 93-86 Sample No. 11 Depth 24-26 ft Date 8/25/94			
UNCONFINED COMPRESSION TEST REPORT					

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
BORING NO. <u>93-85</u> DATE: BEGIN <u>7-22-94</u> PAGE <u>112</u> JOB NO. <u>946783-1</u> COMPLETE <u>7524V</u> Thin Walled Tube PROJECT <u>HOUSTON-GALVESTON Navigation Channel</u> ☒ 3" ☐ 6" LOCATION <u>DISPOSAL AREA 15</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Arco R4X4, C-1000 Marsh Buggy</u> GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>SUNNY & HOT</u> DRILLER <u>SCOTT GRAGGREN</u> LOGGER <u>JOHN ALBERTY</u>									
0	1	0.5	REDISH BROWN	CLAY	MEDIUM STIFF			- w/ GLASS ROOTED 0'-1	
	2	1.0	REDISH BROWN	CLAY	STIFF			- w/ SAND SEAMS 2'-20	
5	2	1.25	REDISH BROWN	CLAY	STIFF				
	4	1.25	REDISH BROWN	CLAY	STIFF				
	5	1.0	REDISH BROWN	CLAY	STIFF				
10	6	1.0	REDISH BROWN	CLAY	STIFF				
	7	1.0	REDISH BROWN	CLAY	STIFF				
15	8	1.0	REDISH BROWN	CLAY	STIFF				
	9	1.75	REDISH BROWN	CLAY	STIFF				
20	10	1.5	GRAY	CLAY	STIFF			- w/ CLAY SAND 19'-20	
	11	0.25	GRAY	CLAY	SOFT	SANDY		SAMPLE BURST ON EXTENSION	
	12	1.5	GRAY	CLAY	STIFF	SANDY		- w/ Shell 20'-24	
25	13	3.5	GRAY	CLAY	VERY STIFF			- w/ Calcareous Nodules 24'-36	
	14	3.5	GRAY	CLAY	VERY STIFF			- w/ Sand POCKETS 26'-32	
	15	3.75	GRAY	CLAY	VERY STIFF				
30	16	4.25	GRAY	CLAY	HARD			- slickensided 34'-36	
	17	3.5	GRAY	CLAY	VERY STIFF				
35	18	3.5	GRAY	CLAY	VERY STIFF				

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET		SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>93-85</u>	DATE: BEGIN <u>7-22-94</u>	PAGE <u>2</u> <u>1</u> <u>2</u>
					JOB NO. <u>946783.1</u>	COMPLETE <u>7-22-94</u>	Thin Walled Tube
					PROJECT <u>Houston-Galveston Navigation Channel</u>	☒ 3"	☐ 6"
					LOCATION <u>DELTA SAL AREA 15</u>		
					ELEVATION OF HOLE _____		
					MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Ardea K44, C-1000 Marsh Buggy</u>		
					GROUNDWATER: DEPTH <u>0</u> ft., ELEV. _____ ft., at end of Drilling		
					WEATHER <u>SUNNY & HOT</u>		
					DRILLER <u>SCOTTY CRECHER</u>	LOGGER <u>JOHN AGENTRY</u>	
		COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS	
35	19	2.75	GRAY CLAY	VERY STIFF		BROWN 35'-44'	
	20	3.5	GRAY CLAY	VERY STIFF		- SILT KEN STIPRO 36'-38'	
40	21	4.25	GRAY CLAY	HARD		- w/ SAND & ROCKS 38'-	
	22	4.5	GRAY CLAY	HARD			
45	23	4.25	GRAY CLAY	HARD		REDISH BROWN 44'	
	24	3.25	GRAY CLAY	HARD	V. ST.	- w/ Calcareous nodules 46'-48'	
50	25	4.5	LIGHT GRAY CLAY	HARD	SANDY	BROWN 48'-54'	
	26	3.75	LIGHT GRAY CLAY	VERY STIFF	SANDY	- w/ SAND STONE 48'-54'	
	27	1.5	LIGHT GRAY CLAY	STIFF			
55	28	14	LIGHT GRAY SAND	DENSE	STILTY	FINE 54'-55'	
	29	3.25	BROWN CLAY	VERY STIFF		- w/ SILT STAINS 58-60'	
60						- SAND PARTS 58-60'	
65							
70							

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 (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2	1.50		Brown, Clay, Stiff, w/silt partings and grass roots	C H	30.6											
2	2 - 4	1.00		Brown, Clay, Stiff, w/sand parting	C H	30.5											
3	4 - 6	1.50		Brown, Clay, Stiff, w/sand parting	C H	34.0											
4	6 - 8	0.75		Brown, Clay, Medium stiff, w/sand parting	C H	26.5											
5	8 - 10	1.00		Brown, Clay, Stiff, w/sand parting	C H	32.3											
6	10 - 12	1.50		Brown, Clay, Stiff, w/sand parting	C H	29.8											
7	12 - 14	1.00		Reddish brown, Clay, Stiff <i>See SWD report 161167</i>	C H	38.2	83		71	20							Q=500
8	14 - 16	0.75		Brown, Clay, Medium stiff, w/sand parting	C H	43.0	79.9	114.1	77	30	100.0	100.0	100.0	99.1	98.6		0.72
9	16 - 18	1.50		Brown, Clay, Stiff, w/calcareous nodules	C H	36.6											
10	18 - 20	0.75		Brown, Clay, Medium stiff, w/sand partings	C H	35.6											
11	20 - 22	0.25		Gray, Clay, Soft, Silty	C L	25.7			24	15	100.0	100.0	100.0	99.6	98.0		
12	22 - 24	0.75		Gray, Clay, Medium stiff, Silty	C L	28.4											
13	24 - 26	2.00		Gray, Clay, Very stiff, w/calcareous nodules	C H	21.5											
14	26 - 28	2.50		Gray, Clay, Very stiff, w/calcareous nodules and sand parting	C H	22.8											
15	28 - 30	3.25		Gray & brown, Clay, Very stiff, w/calcareous nodules and sand pockets	C H	19.2											
16	30 - 32	4.00		Brown & gray, Clay, Very stiff	C H	21.0											
17	32 - 34	4.00		Brown & gray, Clay, Very stiff, w/calcareous nodules and sand pockets, slickensided	C H	24.7	101.0	125.9	61	25	100.0	99.9	99.6	94.7	92.7		
18	34 - 36	2.75		Brown & gray, Clay, Very stiff, w/calcareous nodules and sand pockets	C H	25.8											
19	36 - 38	2.75		Gray, Clay, Very stiff, w/calcareous nodules and ferrous stains, slickensided	C H	21.9											
20	38 - 40	4.00		Gray, Clay, Very stiff, w/sand pockets	C H	20.0											

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

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 93-85

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