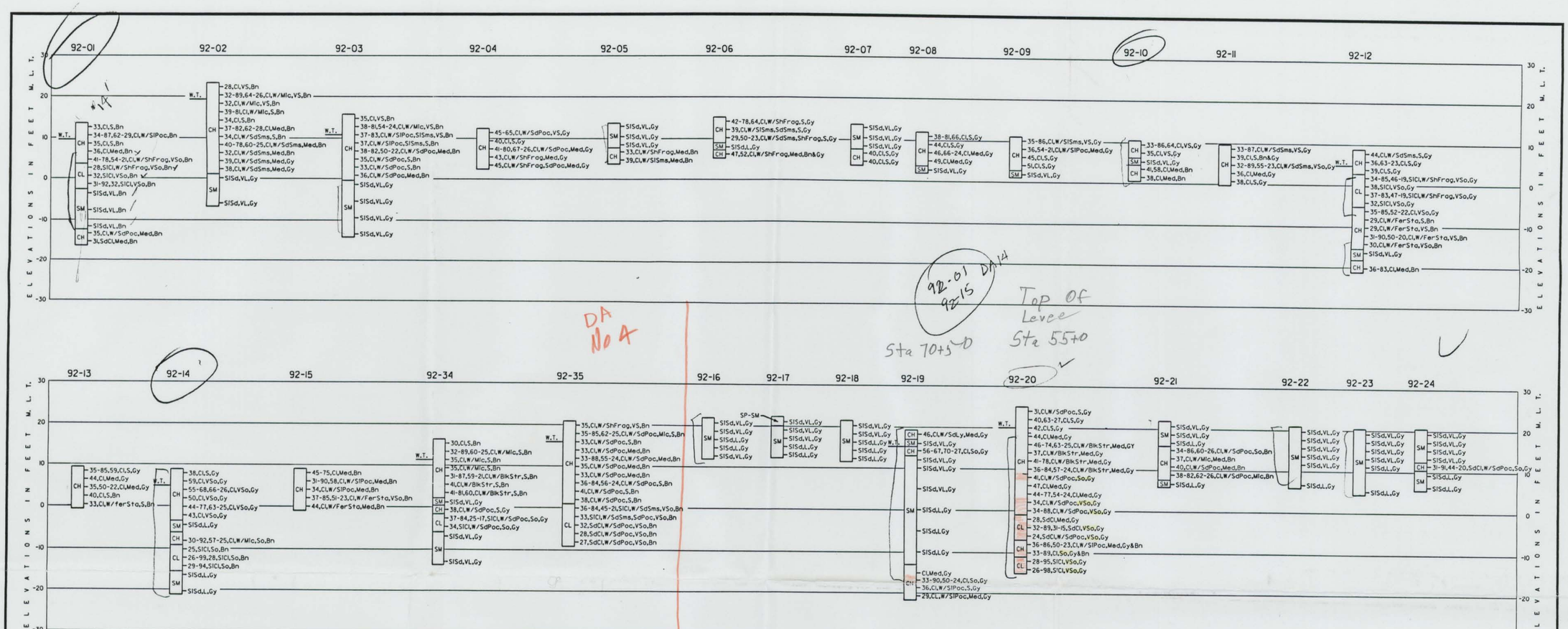
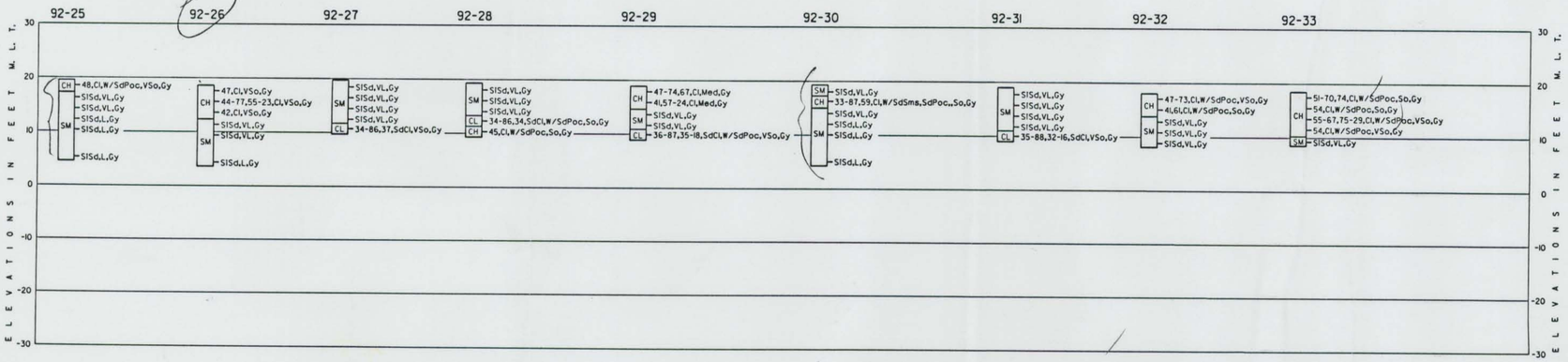




NOTE: SEE DRAWING NUMBER F-6 FOR SOILS NOTES .

REVISION	DATE	DESCRIPTION	BY

OFFICE OF THE DISTRICT ENGINEER
U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON, TEXAS

DRAWN BY: P.B.S.
TRACED BY:
CHECKED BY: J.T.F.
SUBMITTED BY: David D. Campbell, CHIEF, SOILS DESIGN SECTION
APPROVED: David D. Campbell, CHIEF, GEOTECH. & SURVEYS BRANCH
APPROVED: for CHIEF ENGINEERING DIVISION
DATE: MAY 1992
SCALE: AS SHOWN
SPEC. DATE:
DRAWING NUMBER: F-7
SHEET 14 OF 17 FILE NO. RIO 901-240

BRAZOS ISLAND HARBOR, TEXAS
BROWNSVILLE CHANNEL
DREDGING INSHORE REACH No. 1
DISPOSAL AREAS Nos. 2 & 4
BORING LOGS

Prepared under the direction of
Brink P. Miller, Col., C.E.,
District Engineer

78.6

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 92-02 DATE: BEGIN 3-12-92 PAGE 1 / 1
JOB NO. 146535 COMPLETE 3-12-92 Thin Walled Tube
PROJECT Brownsville Disp. Area #4 ☑ 3" ☐ 6"
LOCATION " Ship Channel
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG ARDCO-C-1000
GROUNDWATER: DEPTH 4' ft., ELEV. ____ ft., at end of Drilling
WEATHER Cloudy · Warm · Windy
DRILLER D. Mitchell LOGGER T. Berg

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	2.0	TAN	Clay	Very stiff		
		2	.75	"	"	Med Stiff		
5		3	1.25	Gray & TAN	Clay	Stiff		
		4	2.0	"	"	Very stiff		
		5	1.75	"	"	stiff		
10		6	1.0	"	"	Stiff		
		7	2.0	"	"	Very stiff		
15		8	.25	Gray	"	Soft	Sand	
		9	.5	"	"	Med. stiff	"	
		10	.25	"	"	Soft	Sand	
20		11	1.5	"	"	Stiff	Sand	
	X	12	1/1/1	Gray	Sand	very loose		Sand at 22'
25								
	X	13	1/1/2	Gray	Sand	very Loose		
30								Bottom of 92-02 30'
35								

Project : Disposal Areas Nos.2 and 4 for Brownsville Ship Channel
Brownsville, Texas
Contract No. DACW64-92-D-0001 Delivery order No. 0008

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 92-02

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)	LL (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0-2	2.50		Brown,Clay,Very stiff	CH	28.2											
2	2-4	2.25		Brown,Clay,Very stiff,w/mica	CH	31.7	88.5	116.5	64	26							
3	4-6	2.50		Brown,Clay,Very stiff,w/mica	CH	31.8											
4	6-8	1.25		Brown,Clay,Stiff,w/mica	CH	38.9	81.3	112.9									
5	8-10	1.00		Brown,Clay,Stiff	CH	33.9											
6	10-12	0.75		Brown,Clay.Medium stiff	CH	37.4	81.7	112.2	62	28							
7	12-14	1.00		Brown,Clay,Stiff,w/sand seams	CH	34.1											
8	14-16	0.50		Brown,Clay,Medium stiff,w/sand seams	CH	40.1	78.3	109.7	60	25	100.0	99.5	99.0	98.4	98.1		0.52
9	16-18	0.50		Brown,Clay,Medium stiff,w/sand seams	CH	31.9											
10	18-20	0.50		Gray,Clay,Medium stiff,w/sand seams	CH	38.5											
11	20-22	0.50		Gray,Clay,Medium stiff,w/sand seams	CH	37.9											
12	22.5-24		2	Gray,Sand,Very loose,Silty	S M												
13	28.5-30		3	Gray,Sand,Very loose,Silty	S M												

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

JOB NO. 14G538 DATE 4/3/92

PROJECT Disposal Areas Nos.2 and 4 for Brownsvill Ship Channel,Brown

BORING NO. 92-02 SAMPLE NO. 8 DEPTH 14-16 ft

SPECIMEN NO. 1

CLASSIFICATION
Brown,Clay,Medium stiff, w/sand seams

Tare No.	K1-4	Height	5.595 in.
Tare plus Wet Specimen	389.19 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	289.97 gm	Initial Area	6.290 sq in.
Water Weight	99.22 gm	Volume	35.194 cu in.
Tare Weight	42.35 gm	Volume of Solids	cu in.
Wet Specimen	1013.06 gm	Void Ratio	
Dry Specimen	723.26 gm	Saturation	%
Water Content	40.07 %	Dry Density	78.3 lb/cu ft

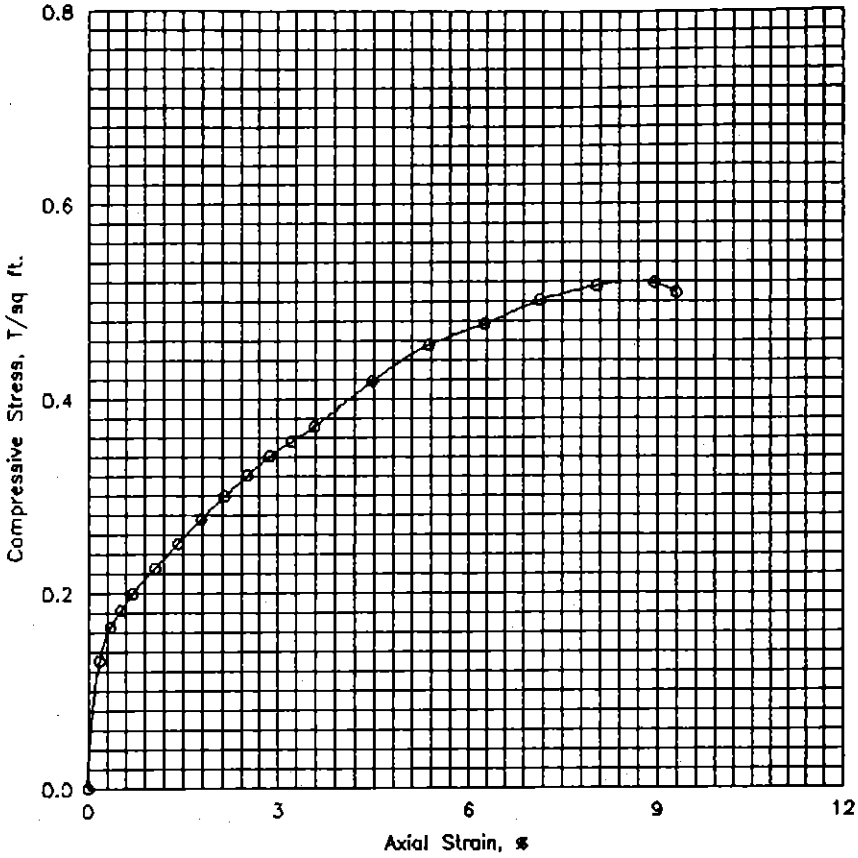
Specific Gravity of Solids
LL = 60 PL = 25 PI = 35

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	15.0	11.5	.002	6.30	.131
.4	20.	.020	19.0	14.6	.004	6.31	.166
.5	30.	.030	21.0	16.1	.005	6.32	.183
.7	40.	.040	23.0	17.6	.007	6.34	.200
1.0	60.	.060	26.0	19.9	.011	6.36	.226
1.4	80.	.080	29.0	22.2	.014	6.38	.251
1.7	100.	.100	32.0	24.5	.018	6.40	.276
2.0	120.	.120	35.0	26.8	.021	6.43	.300
2.4	140.	.140	37.5	28.7	.025	6.45	.321
2.7	160.	.160	40.0	30.6	.029	6.48	.341
3.0	180.	.180	42.0	32.2	.032	6.50	.356
3.4	200.	.200	44.0	33.7	.036	6.52	.372
4.2	250.	.250	50.0	38.3	.045	6.58	.419
5.0	300.	.300	55.0	42.1	.054	6.65	.456
5.8	350.	.350	58.0	44.4	.063	6.71	.477
6.6	400.	.400	61.5	47.1	.071	6.77	.501
7.4	450.	.450	64.0	49.0	.080	6.84	.516
8.2	500.	.500	65.0	49.8	.089	6.91	.519
8.6	520.	.520	64.0	49.0	.093	6.93	.509

Job No. 146538

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	40.1 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	78.3			
Time to failure, min		t_f	8.20			
Unconfined compressive strength, T/sq ft		q_u	.52			
Undrained shear strength, T/sq ft		S_u	.26			
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 seams

LL	PL	PI	G_s
60	25	35	

Remarks

Project Disposal Areas Nos. 2 and 4 for Brownsville

Area Ship Channel, Brownsville, Texas

Boring No. 92-02 | Sample No. 8

Depth El 14-16 ft | Date 4/3/92

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2