Project: Sabine Lake North Disposal Area
Near Port Arthur , Texas
Contract No. DACW64-93-D-0005 Delivery Order No. 0014

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 94-56

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 (%)	PL (%)	Mechanical Analysis % Passing #4	#10	#40	#100	#200	Torvane Shear Strength (tsf)	q u (tsf)
1	0 - 2	1.00		Yellowish gray,Clay,Stiff,w/ferrous stains and sand seams	C H	33.6											
2	2 - 4	0.50		Yellowish gray,Clay,Medium stiff,w/ferrous stains and sand seams	C H	41.4											
3	4 - 6	1.25		Gray,Clay,Stiff,w/calcareous nodules ferrous stains and sand pockets	C H	32.3	91.3	120.8	58	24	100.0	100.0	98.9	96.7	95.3		1.23
4	6 - 8	0.50		Gray,Clay,Medium stiff,w/sand seams and organic material	C H	27.3											
5	8 - 10	0.25		Yellowish gray,Clay,Soft,w/ferrous stains and sand seams	C H	32.1											
6	10 - 12	0.25		Yellowish gray,Clay,Soft,w/ferrous stains and sand seams	C H	32.9											
7	12 - 14	0.50		Yellowish gray,Clay,Medium stiff,w/ferrous stains and sand seams	C H	39.3											
8	14 - 16	0.25		Dark gray,Clay,Soft,w/sand seams and organic material	C H	39.5	82.3	114.8	74	26	100.0	99.9	98.4	97.5	97.1		0.44
9	16 - 18	0.50		Dark gray,Clay,Medium stiff,w/sand seams and organic material	C H	44.8											
10	18 - 20	0.75		Gray,Clay,Medium stiff,w/ferrous stains	C H	20.7											
11	20 - 22	0.50		Yellowish gray,Clay,Medium stiff,w/ferrous stains	C H	38.1											
12	22 - 24	0.25		Yellowish gray,Clay,Soft,w/ferrous stains	C H	36.3											
13	24 - 26	1.25		Yellowish gray,Clay,Stiff,Sandy,w/ferrous stains and sand seams	C L	22.9											

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classifcation, M c : Moisture Content
q u : Uncogined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe

JOB NO. 14G727-14 DATE 5/6/94

PROJECT Sabine Lake North Disposal Area
No. 11

AREA Near Port Arthur, Texas

BORING NO. 94-56 SAMPLE NO. 8 DEPTH 14-16 ft

SPECIMEN NO. 1

CLASSIFICATION
Dark gray,Clay,Soft,w/sand seams and organic material

Tare No.	W-15	Height	5.595 in.
Tare plus Wet Specimen	616.77 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	454.26 gm	Initial Area	6.290 sq in.
Water Weight	162.51 gm	Volume	35.194 cu in.
Tare Weight	42.58 gm	Volume of Solids	cu in.
Wet Specimen	1060.25 gm	Void Ratio	
Dry Specimen	760.17 gm	Saturation	%
Water Content	39.47 %	Dry Density	82.3 lb/cu ft
Specific Gravity of Solids			

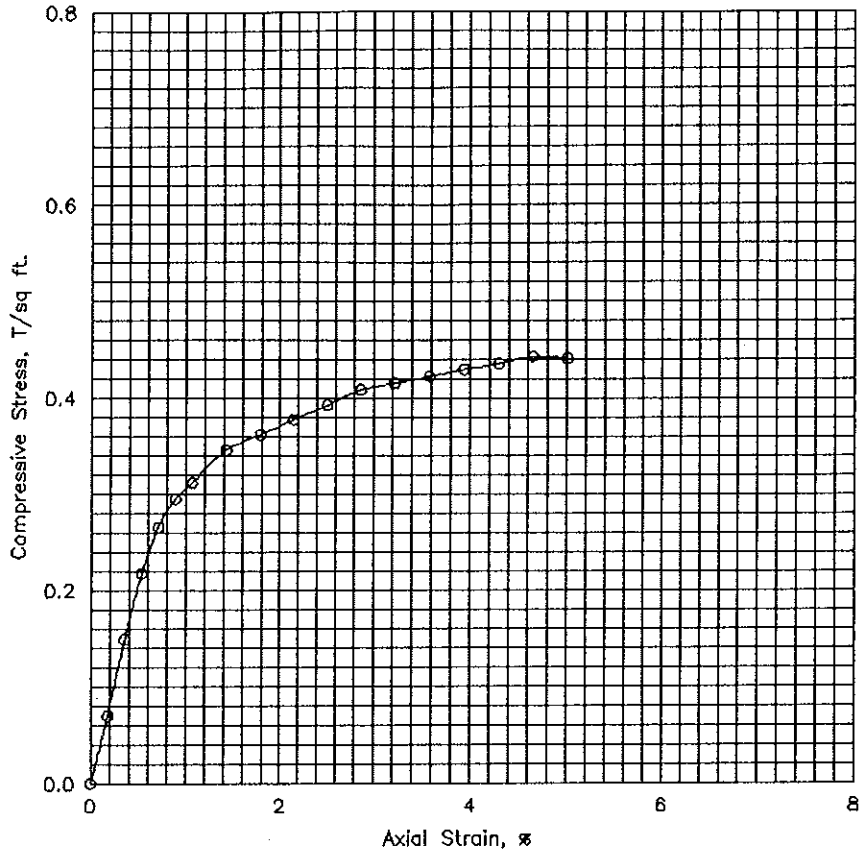
LL = 74 PL = 26 PI = 48

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
.4	20.	.020	17.0	13.0	.004	6.31	.149
.6	30.	.030	25.0	19.1	.005	6.32	.218
.8	40.	.040	30.5	23.4	.007	6.34	.266
.9	50.	.050	34.0	26.0	.009	6.35	.295
1.1	60.	.060	36.0	27.6	.011	6.36	.312
1.4	80.	.080	40.0	30.6	.014	6.38	.346
1.8	100.	.100	42.0	32.2	.018	6.40	.362
2.1	120.	.120	44.0	33.7	.021	6.43	.378
2.4	140.	.140	46.0	35.2	.025	6.45	.393
2.8	160.	.160	48.0	36.8	.029	6.48	.409
3.1	180.	.180	49.0	37.5	.032	6.50	.416
3.4	200.	.200	50.0	38.3	.036	6.52	.423
3.7	220.	.220	51.0	39.1	.039	6.55	.430
4.0	240.	.240	52.0	39.8	.043	6.57	.436
4.3	260.	.260	53.0	40.6	.046	6.60	.443
4.7	280.	.280	53.0	40.6	.050	6.62	.441

Job No. 14G727-14

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	39.5 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	82.3			
Time to failure, min		t_f	4.35			
Unconfined compressive strength, T/sq ft		q_u	.44			
Undrained shear strength, T/sq ft		S_u	.22			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Dark gray,Clay,Soft,w/sand seams and organic material

LL	74	PL	26	PI	48	G_s	

Remarks

Project Sabine Lake North Disposal Area	
No. 11	
Area Near Port Arthur, Texas	
Boring No. 94-56	Sample No. 8
Depth El 14-16 ft	Date 5/6/94
UNCONFINED COMPRESSION TEST REPORT	

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

JOB NO. 14G727-14 DATE 5/6/94

PROJECT Sabine Lake North Disposal Area
No. 11

AREA Near Port Arthur, Texas

BORING NO. 94-56 SAMPLE NO. 3 DEPTH 4-6 ft

SPECIMEN NO. 1

CLASSIFICATION
Gray,Clay,Stiff,w/Calcareous nodules ferrous stains and sand pockets

Tare No.	W-5	Height	5.595 in.
Tare plus Wet Specimen	669.98 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	516.89 gm	Initial Area	6.290 sq in.
Water Weight	153.09 gm	Volume	35.194 cu in.
Tare Weight	42.38 gm	Volume of Solids	cu in.
Wet Specimen	1115.62 gm	Void Ratio	
Dry Specimen	843.49 gm	Saturation	%
Water Content	32.26 %	Dry Density	91.3 lb/cu ft
Specific Gravity of Solids			

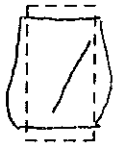
LL = 58 PL = 24 PI = 34

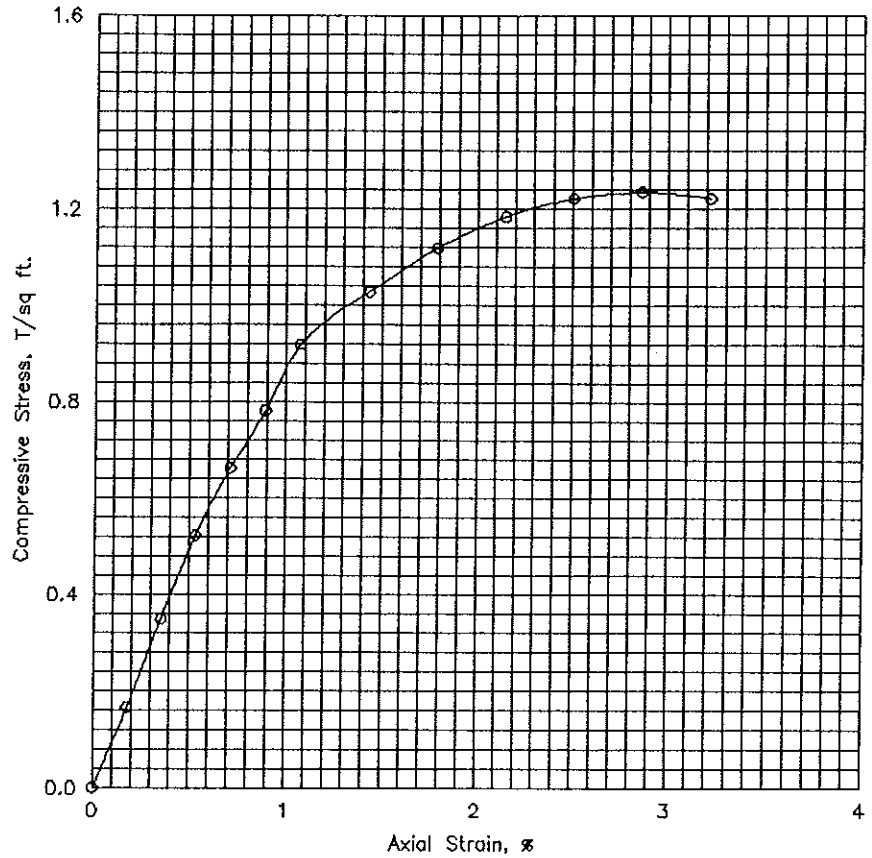
Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

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	19.0	14.6	.002	6.30	.166
.4	20.	.020	40.0	30.6	.004	6.31	.349
.6	30.	.030	60.0	46.0	.005	6.32	.523
.8	40.	.040	76.0	58.2	.007	6.34	.662
.9	50.	.050	90.0	68.9	.009	6.35	.782
1.1	60.	.060	106.0	81.2	.011	6.36	.919
1.4	80.	.080	119.0	91.2	.014	6.38	1.028
1.7	100.	.100	130.0	99.6	.018	6.40	1.119
2.1	120.	.120	138.0	105.7	.021	6.43	1.184
2.4	140.	.140	143.0	109.5	.025	6.45	1.222
2.7	160.	.160	145.0	111.1	.029	6.48	1.235
3.1	180.	.180	144.0	110.3	.032	6.50	1.222

Job No. 14G727-14

Failure Sketches





☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_o	32.3 %	%	%	%
	Void ratio	e_o				
	Saturation	S_o	%	%	%	%
	Dry density, lb/cu ft	γ_d	91.3			
Time to failure, min		t_f	2.73			
Unconfined compressive strength, T/sq ft		q_u	1.23			
Undrained shear strength, T/sq ft		S_u	.62			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_o	2.830			
Initial specimen height, in.		H_o	5.595			

Classification Gray,Clay,Stiff,w/Calcareous nodules ferrous stains and sand pockets

LL	58	PL	24	PI	34	G_s	

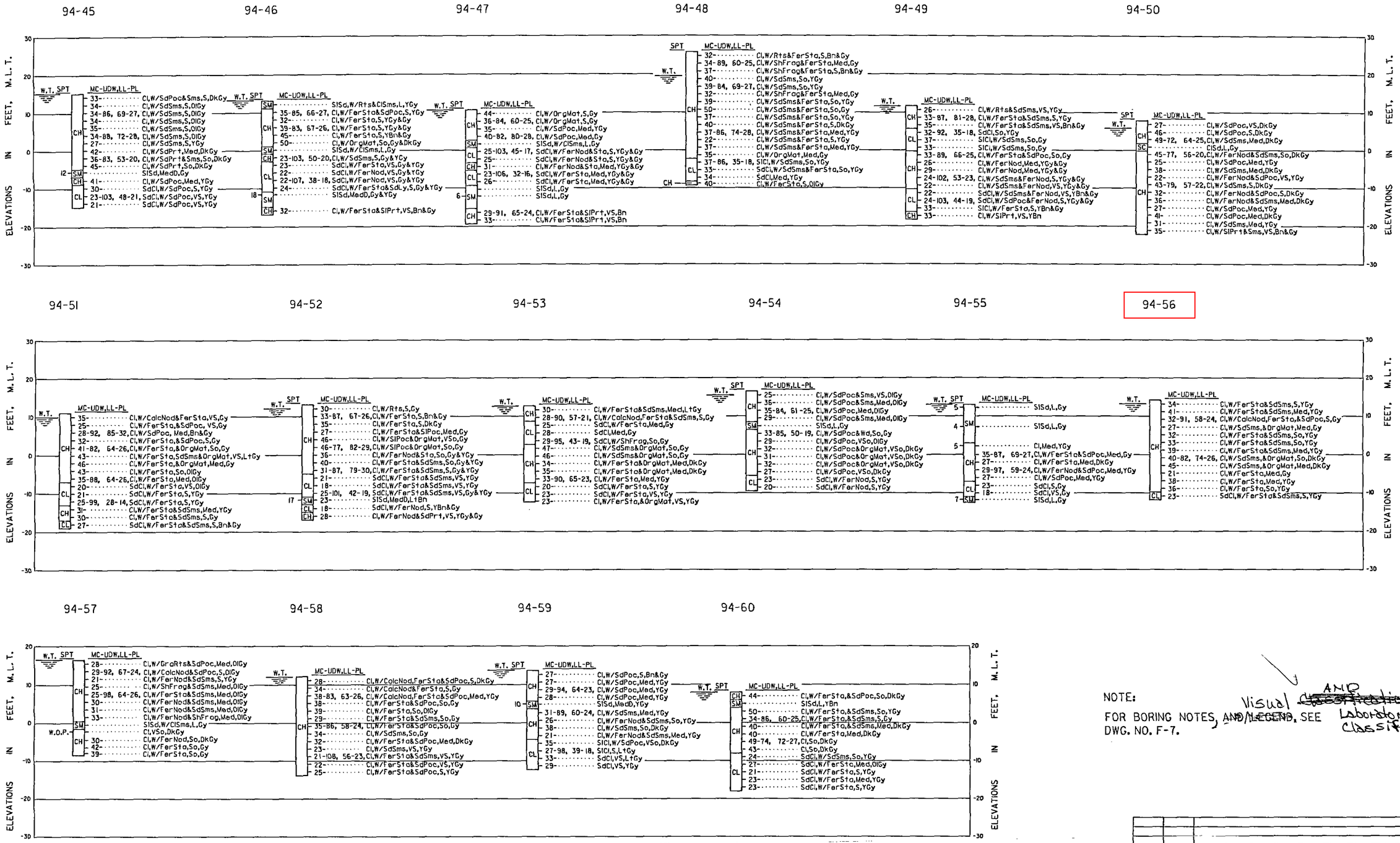
Remarks

Project Sabine Lake North Disposal Area	
No. 11	
Area Near Port Arthur, Texas	
Boring No. 94-56	Sample No. 3
Depth El 4-6 ft	Date 5/6/94
UNCONFINED COMPRESSION TEST REPORT	

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.



NOTE:

FOR BORING NOTES, ~~AND LEGEND~~, SEE DWG. NO. F-7.

Visual AND ~~CLASSIFICATIONS~~ Laboratory Classifications

REVISION	DATE	DESCRIPTION	BY

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

DRAWN BY: P.N.
DESIGNED BY: G.M.
CHECKED BY: G.M./L.A.A.
SUBMITTED BY:
CHIEF, GEOTECH & SURVEYS SECTION
APPROVED:
CHIEF, DESIGN BRANCH
APPROVED:
CHIEF, ENGINEERING DIVISION
DATE: JULY 1995
1 = AS REQUIRED BY ENGINEER CIRCULAR NO. 80-1-952 1
SCALE: AS SHOWN
SPEC. DATED
DRAWING NUMBER F-4
SHEET 26 OF 32 FILE NO. SN 103-336

SABINE - NECHES WATERWAY, TEXAS
SABINE - NECHES CANAL
REHABILITATION OF PLACEMENT AREA NO. 11

BORING LOGS

BORROW AREA NO. 1

Prepared under the direction of
Robert B. Gatlin, Col., C.E.,
District Engineer