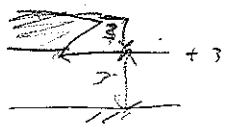


U.S. ARMY CORPS OF ENGINEERS
GEOTECHNICAL BORING DATA

rec'd 9/30

PROJECT NAME Colorado River lock

LOG OF BORING NO. 94-133

LOCATION/STATION 445+300

DATE/TIME STARTED 9-22-94 9:30 AM
DATE/TIME COMPLETED 9-22-94 12:30 PM

TIDE ELEVATION +3' MLT DATUM, TIME ____ LOCATION LT. BKN.# ____

WATER DEPTH 6' - 3' (Deck) = 3'

DEPTH FROM WATER SURFACE TO BOTTOM OF BORING 48'

WEATHER Sunny

DRILL RIG MANUFACTURE MODEL NO. Failing 3600

DRILLER Dempsey Gearen
LOGGER H. Patel

DRILLER'S/LOGGER'S COMMENTS

pc,vp12,cos.log.r

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 94-133 DATE: BEGIN 9-22-94 PAGE 1/2
JOB NO. 94G790 COMPLETE 9-22-94 Thin Walled Tube
PROJECT Colorado River lock ☒ 3" ☐ 6"
LOCATION Sta # 445+300
ELEVATION OF HOLE 0'
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing 3600
GROUNDWATER: DEPTH ____ ft., ELEV. ____ ft., at end of Drilling
WEATHER Sunny
DRILLER Dempsey Gearen LOGGER H. Patel

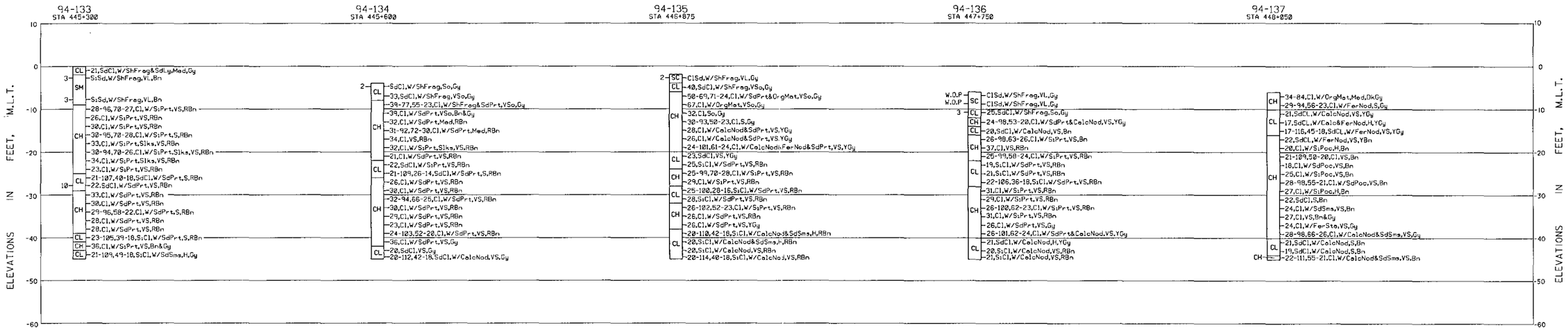
DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	0.75	Gray	clay	Medium stiff	Sandy	with sand layers & shell fragments
	X	2	3/2/1	Gray	Sand	Very Loose		With Shell fragments
5								
	X	3	2/2/1	Gray	Sand	Very Loose	clayey	With shell fragments, (partial recovery)
10		4	3.0	Brown	clay	Very stiff		Slickensided
		5	3.0	Brown	clay	Very stiff		Slickensided
		6	3.0	Brown	clay	Very stiff		With silt partings
15		7	2.25	Brown	clay	Very stiff		With silt partings
		8	2.5	Brown	clay	Very stiff		With silt partings
20		9	2.5	Brown	clay	Very stiff		With silt partings
		10	2.5	Brown	clay	Very stiff		Slickensided
		11	3.0	Brown	clay	Very stiff		With silty sand partings
25		12	1.0	Brown	clay	Stiff	Sandy	With silty sand @ bottom
	X	13	4/4/6	Brown	clay	Stiff	sandy	With silty sand partings
30		14	2.5	Brown	clay	Very stiff		With silty sand partings
		15	3.0	Brown	clay	Very stiff		
		16	2.5	Brown	clay	Very stiff		With silty sand partings
35								

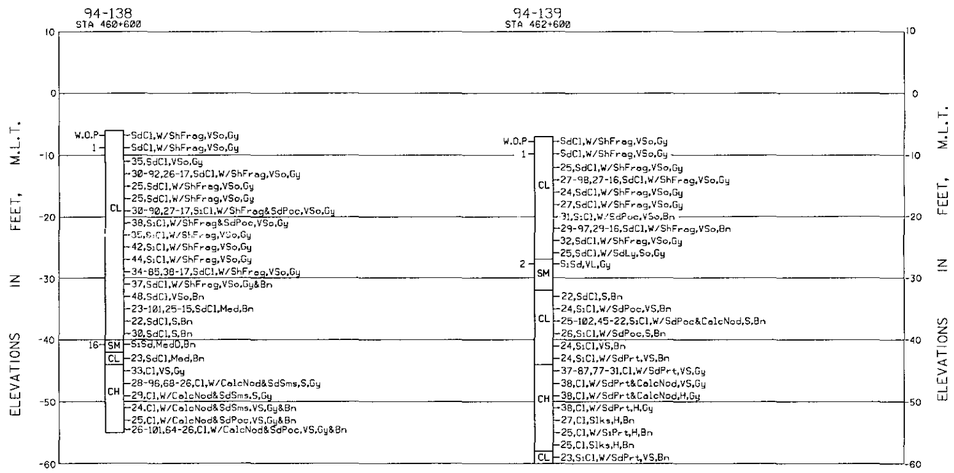
U.S. ARMY CORPS OF ENGINEERS

BORING NO. 94-133 DATE: BEGIN 9-22-94 PAGE 2/2
JOB NO. 94G790 COMPLETE 9-22-94 Thin Walled Tube
PROJECT Colorado River Lock ☒ 3" ☐ 6"
LOCATION Sta. No. 445+300
ELEVATION OF HOLE 0'
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing 3600
GROUNDWATER: DEPTH ____ ft., ELEV. ____ ft., at end of Drilling
WEATHER Sunny
DRILLER Dempsey Gearner LOGGER H. Patel

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
35		17	2.5	Brown	clay	Very stiff		with Sand partings
		18	1.5	Brown	clay	Stiff	Silty	with Sand partings
40		19	1.5	Brown	clay	Stiff	Silty	with Sand partings
		20	1.5	Gray	clay	Stiff	Silty	with Sand partings
		21	3.0	Gray	clay	Very stiff	Sandy	with silt partings
45								
50								
55								
60								
65								
70								

GEOTEST ENGINEERING, INC.





VISUAL CLASSIFICATIONS:

Bn Brown(ish)	H Hard	Ol Olive	Si Silty
Cac Calcareous	L Loose	Part Particle(s)	Slks Slicken Sides
Cl Clay(ey)	Ly Layer(s)	Poc Pocket(s)	Sms Seams
D Dense	Lt Light	Prt Parting(s)	So Soft
Dcm Decomposed	Mat Material	R Red(dish)	Sta Stains
Dk Dark	Med Medium	S Stiff	V Very
Fer Ferrous	Nod Nodules	Sd Sand(y)	W With
Gy Gray(ish)	Org Organic	Sh Shell(y)	Y Yellow(ish)

LABORATORY CLASSIFICATIONS:

CH INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.
CL INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, LEAN CLAYS.
SC CLAYEY SANDS, SAND-CLAY MIXTURES.
SM SILTY SANDS, SAND-SILT MIXTURES.

NOTES:

1. SOILS HAVE BEEN CLASSIFIED IN ACCORDANCE WITH MILITARY STANDARD 6198 'UNIFIED SOIL CLASSIFICATION SYSTEM FOR ROADS, AIRFIELDS, EMBANKMENTS, AND FOUNDATIONS.' CONSISTENCY OF SOILS SUCH AS SOFT, MEDIUM, HARD, LOOSE, DENSE, ETC., ARE RELATIVE TERMS BASED ON ESTIMATED UNDISTURBED SHEAR STRENGTH OF THE MATERIAL AS DETERMINED BY VISUAL CLASSIFICATION POCKET PENETROMETER TESTS AND PENETRATION RESISTANCE DURING SAMPLING.
2. FIGURES TO THE RIGHT OF BORING LOGS ARE WATER CONTENTS IN PERCENT OF THE DRY WEIGHT, DRY DENSITY, LIQUID LIMIT, PLASTIC LIMIT, AND BAR LINEAR SHRINKAGE. (MC-UDW),(LL-PL),(B.L.S.)* FIGURES TO THE LEFT OF BORING LOGS ARE BLOWS PER FOOT OF PENETRATION FROM STANDARD PENETRATION TESTING.
3. BORINGS WERE DRILLED USING WET ROTARY DRILLING TECHNIQUES AND UNDISTURBED SAMPLES WHERE RECOVERED WITH A 3-INCH DIAMETER THIN WALL SAMPLER WHERE COHESIVE MATERIALS WERE ENCOUNTERED. WHERE COHESIVE MATERIALS WERE ENCOUNTERED, DISTURBED SAMPLES WERE TAKEN WITH A SPLIT SPOON SAMPLER DURING PERFORMANCE OF STANDARD PENETRATION TESTING.
4. WATER TABLE LEVELS SHOWN ON BORING LOGS WERE DETERMINED AFTER DRILLING BORINGS BY MEASURING THE TOP OF FLUID LEVELS IN THE BORINGS. INASMUCH AS WET ROTARY DRILLING TECHNIQUES AND DRILLING MUD WERE USED TO DRILL THE HOLES, THE LEVEL OF DRILLING FLUIDS IN THE BORE HOLES MAY NOT HAVE STABLILIZED TO THE LEVEL OF THE ACTUAL WATER TABLE. ADDITIONALLY, WATER TABLES IN THE FIELD ARE LIKELY TO FLUCTUATE DEPENDING ON WEATHER CONDITIONS. THEREFORE, SOME VARIATION SHOULD BE ANTICIPATED BETWEEN WATER TABLES INDICATED AND WATER TABLES ENCOUNTERED IN THE FIELD.

REVISION	DATE	DESCRIPTION	BY

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

DRAWN BY: * J.G.
DESIGNED BY: * X
CHECKED BY: * L.A.A.
SUBMITTED BY: * CHIEF, X
APPROVED: * CHIEF, X
APPROVED: * CHIEF, ENGINEERING DIVISION
DATE: X

Colorado River Locks

Boring logs

(* AS REQUIRED BY ENGINEER CIRCULAR NO. 1110-1-70)
SCALE: AS SHOWN
SPEC. DATE:
DRAWING NUMBER X
SHEET 1 OF 1 FILE NO. X

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

DESIGN FILE: N:\cad_h\gatlin\vol17\rcrlaborlogs
CREATED BY: J.Gatlin
ON: 31 OCT 1994
AT: 10:58

Project: Colorado River Locks

Contract No. DACW64-94-M-0880

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 94-133

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	0.50	Med	Gray,Clay,Medium stiff,Sandy,w/shell fragments and sand layer	C L	21.1											
2	2-3.5	VL	3	Brown,Sand,Very loose,Silty,w/shell fragments	S M						96.3*	90.3*	82.9*	40.3	17.3		
3	7-8.5	VL	3	Brown,Sand,Very loose,Silty,w/shell fragments	S M												
4	9-11	3.50	VS	Reddish brown,Clay,Very stiff,w/silt partings	C H	27.6	96.3	122.9	70.0	27.0	100.0	100.0	100.0	99.2	97.8		
5	11-13	3.50	VS	Reddish brown,Clay,Very stiff,w/silt partings	C H	26.4											
6	13-15	2.25	VS	Reddish brown,Clay,Very stiff,w/silt partings	C H	29.7											
7	15-17	1.75	S	Reddish brown,Clay,Stiff,w/silt partings	C H	30.1	95.1	123.7	70.0	28.0	100.0	100.0	100.0	98.8	96.8		1.46
8	17-19	3.00	VS	Reddish brown,Clay,Very stiff,w/silt partings, slickensided	C H	32.5											
9	19-21	4.00	VS	Reddish brown,Clay,Very stiff,w/silt partings, slickensided	C H	29.8	93.8	121.7	70.0	26.0	100.0	100.0	100.0	98.9	97.1		
10	21-23	2.75	VS	Reddish brown,Clay,Very stiff,w/silt partings, slickensided	C H	34.4											
11	23-25	3.50	VS	Reddish brown,Clay,Very stiff,w/silt partings	C H	23.4											
12	25-27	1.75	S	Reddish brown,Clay,Stiff,Sandy,w/sand partings	C L	20.6	106.6	128.6	40.0	18.0	100.0	100.0	99.8	96.4	73.7		1.71
13	27-28.5	2.50 VS	L 10	Reddish brown,Clay,Very stiff,Sandy,w/sand partings	C L	22.3											
14	29-31	3.50	VS	Reddish brown,Clay,Very stiff,w/sand partings	C H	32.9					100.0	100.0	100.0	99.2	97.5		
15	31-33	3.00	VS	Reddish brown,Clay,Very stiff,w/sand partings	C H	30.0											
16	33-35	1.75	S	Reddish brown,Clay,Stiff,w/sand partings	C H	28.9	96.2	124.0	58.0	22.0	100.0	100.0	99.8	97.9	94.6		1.64
17	35-37	2.25	VS	Reddish brown,Clay,Very stiff,w/sand partings	C H	27.9											
18	37-39	3.50	VS	Reddish brown,Clay,Very stiff,w/sand partings	C H	27.6											
19	39-41	1.75	S	Reddish brown,Clay,Stiff,Silty,w/sand partings	C L	23.2	105.0	129.4	39.0	18.0	100.0	100.0	99.7	99.1	89.5		1.03
20	41-43	3.00	VS	Brown&gray,Clay,Very stiff,w/silt partings	C H	36.3											

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
* : Material Retained are shell fragments

Project: Colorado River Locks

Contract No. DACW64-94-M-0880

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 94-133

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					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
21	43-45	4.50	17	Gray,Clay,Hard,Silty,w/sand seams	C L	20.7	108.7	131.2	49.0	18.0	100.0	100.0	100.0	98.4	86.6		

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. 14G790 DATE 10/10/94

PROJECT Colorado River Locks

AREA GIWW at Colorado River, Texas

BORING NO. 94-133 SAMPLE NO. 7 DEPTH 15-17 ft.

SPECIMEN NO. 1

CLASSIFICATION
Reddish brown,Clay,Stiff,w/silt partings

Tare No.	P-17	Height	5.595 in.
Tare plus Wet Specimen	309.21 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	247.57 gm	Initial Area	6.290 sq in.
Water Weight	61.64 gm	Volume	35.194 cu in.
Tare Weight	42.57 gm	Volume of Solids	cu in.
Wet Specimen	1143.25 gm	Void Ratio	
Dry Specimen	878.96 gm	Saturation	%
Water Content	30.07 %	Dry Density	95.1 lb/cu ft
Specific Gravity of Solids			

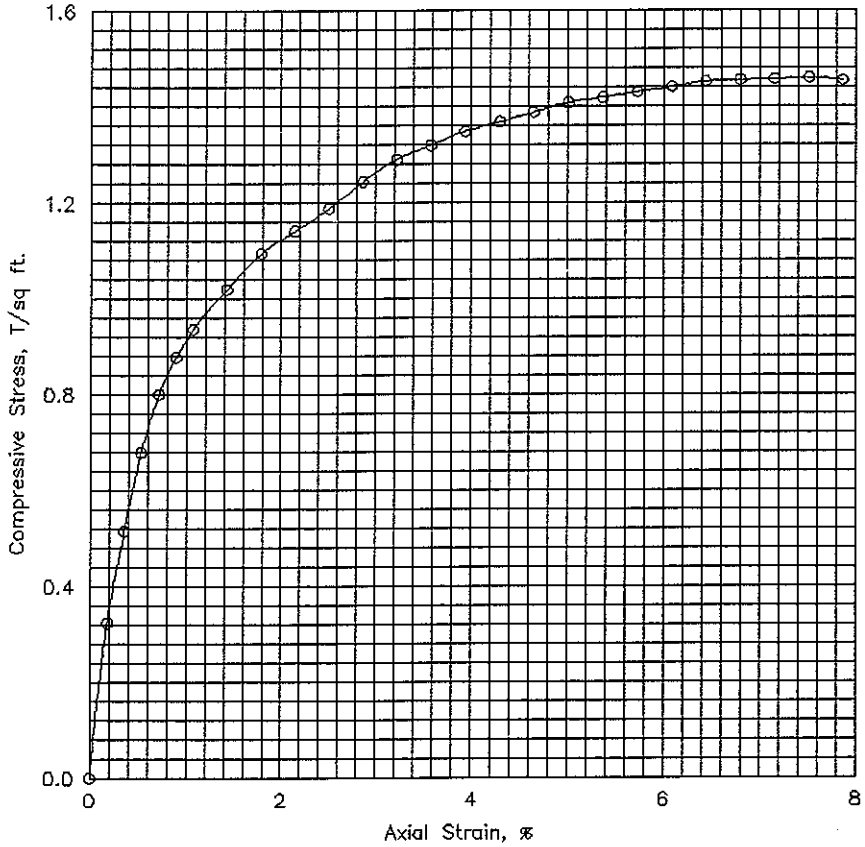
LL = 70 PL = 28 PI = 42

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	37.0	28.3	.002	6.30	.324
.4	20.	.020	59.0	45.2	.004	6.31	.515
.6	30.	.030	78.0	59.7	.005	6.32	.680
.7	40.	.040	92.0	70.5	.007	6.34	.801
.9	50.	.050	101.0	77.4	.009	6.35	.878
1.2	60.	.060	108.0	82.7	.011	6.36	.937
1.4	80.	.080	118.0	90.4	.014	6.38	1.020
1.8	100.	.100	127.0	97.3	.018	6.40	1.094
2.2	120.	.120	133.0	101.9	.021	6.43	1.141
2.5	140.	.140	139.0	106.5	.025	6.45	1.188
2.8	160.	.160	146.0	111.8	.029	6.48	1.244
3.2	180.	.180	152.0	116.4	.032	6.50	1.290
3.5	200.	.200	156.0	119.5	.036	6.52	1.319
3.8	220.	.220	160.0	122.6	.039	6.55	1.348
4.2	240.	.240	163.0	124.9	.043	6.57	1.368
4.5	260.	.260	166.0	127.2	.046	6.60	1.388
4.9	280.	.280	169.0	129.5	.050	6.62	1.408
5.2	300.	.300	171.0	131.0	.054	6.65	1.419
5.5	320.	.320	173.0	132.5	.057	6.67	1.430
5.8	340.	.340	175.0	134.0	.061	6.70	1.441
6.2	360.	.360	177.0	135.6	.064	6.72	1.452
6.5	380.	.380	178.0	136.3	.068	6.75	1.455
6.8	400.	.400	179.0	137.1	.071	6.77	1.457
7.2	420.	.420	180.0	137.9	.075	6.80	1.460
7.5	440.	.440	180.0	137.9	.079	6.83	1.454

Job No. 146790

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	30.1 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	95.1			
Time to failure, min		t_f	7.17			
Unconfined compressive strength, T/sq ft		q_u	1.46			
Undrained shear strength, T/sq ft		S_u	.73			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Reddish brown,Clay,Stiff,w/silt partings

LL	70	PL	28	PI	42	G_s

Remarks

Project Colorado River Locks

Area GIWW at Colorado River, Texas

Boring No. 94-133 | Sample No. 7

Depth El 15-17 ft. | Date 10/10/94

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G790 DATE 10/10/94

PROJECT Colorado River Locks

AREA GIWW at Colorado River, Texas

BORING NO. 94-133 SAMPLE NO. 12 DEPTH 25-27 ft.

SPECIMEN NO. 1

CLASSIFICATION
Reddish brown,Clay,Stiff,Sandy,w/sand partings

Tare No.	P-230	Height	5.595 in.
Tare plus Wet Specimen	347.44 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	295.30 gm	Initial Area	6.290 sq in.
Water Weight	52.14 gm	Volume	35.194 cu in.
Tare Weight	42.74 gm	Volume of Solids	cu in.
Wet Specimen	1188.27 gm	Void Ratio	
Dry Specimen	984.93 gm	Saturation	%
Water Content	20.64 %	Dry Density	106.6 lb/cu ft
Specific Gravity of Solids			

LL = 40 PL = 18 PI = 22

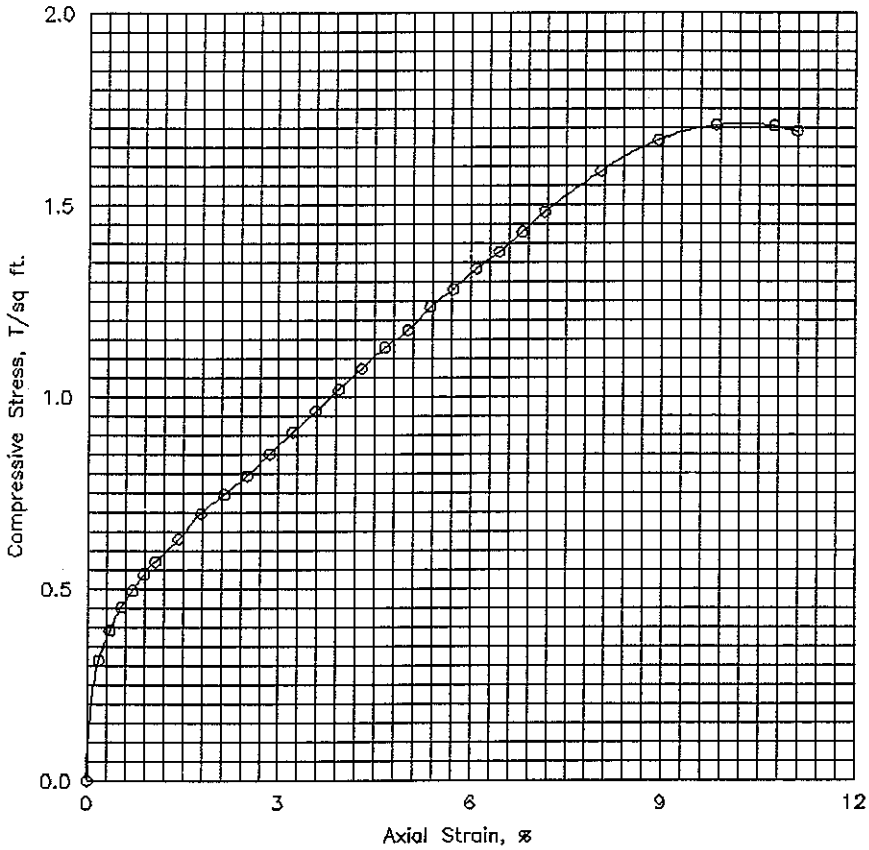
Proving Ring No. 10170
Proving Ring Constant, K = .766 lbs/div.

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	36.0	27.6	.002	6.30	.315
.4	20.	.020	45.0	34.5	.004	6.31	.393
.6	30.	.030	52.0	39.8	.005	6.32	.453
.8	40.	.040	57.0	43.7	.007	6.34	.496
1.0	50.	.050	62.0	47.5	.009	6.35	.539
1.1	60.	.060	66.0	50.6	.011	6.36	.572
1.5	80.	.080	73.0	55.9	.014	6.38	.631
1.8	100.	.100	81.0	62.0	.018	6.40	.698
2.2	120.	.120	87.0	66.6	.021	6.43	.746
2.5	140.	.140	93.0	71.2	.025	6.45	.795
2.8	160.	.160	100.0	76.6	.029	6.48	.852
3.2	180.	.180	107.0	82.0	.032	6.50	.908
3.5	200.	.200	114.0	87.3	.036	6.52	.964
3.8	220.	.220	121.0	92.7	.039	6.55	1.019
4.2	240.	.240	128.0	98.0	.043	6.57	1.074
4.5	260.	.260	135.0	103.4	.046	6.60	1.129
4.8	280.	.280	141.0	108.0	.050	6.62	1.174
5.2	300.	.300	149.0	114.1	.054	6.65	1.236
5.6	320.	.320	155.0	118.7	.057	6.67	1.281
5.9	340.	.340	162.0	124.1	.061	6.70	1.334
6.2	360.	.360	168.0	128.7	.064	6.72	1.378
6.5	380.	.380	175.0	134.0	.068	6.75	1.430
6.8	400.	.400	182.0	139.4	.071	6.77	1.482
7.6	450.	.450	197.0	150.9	.080	6.84	1.588
8.5	500.	.500	209.0	160.1	.089	6.91	1.669
9.3	550.	.550	216.0	165.5	.098	6.98	1.708

10.1	600.	.600	218.0	167.0	.107	7.05	1.706
10.5	620.	.620	217.0	166.2	.111	7.07	1.692

Job No. 14G790

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	20.6 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	106.6			
Time to failure, min		t_f	9.33			
Unconfined compressive strength, T/sq ft		q_u	1.71			
Undrained shear strength, T/sq ft		S_u	.85			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Reddish brown,Clay,Stiff,Sandy,w/sand partings

LL	40	PL	18	PI	22	G_s	

Remarks

Project Colorado River Locks

Area GIWW at Colorado River, Texas

Boring No. 94-133 | Sample No. 12

Depth El 25-27 ft. | Date 10/10/94

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G790 DATE 10/10/94

PROJECT Colorado River Locks

AREA GIWW at Colorado River, Texas

BORING NO. 94-133 SAMPLE NO. 16 DEPTH 33-35 ft.

SPECIMEN NO. 1

CLASSIFICATION
Reddish brown,Clay,Stiff,w/sand partings

Tare No.	GE-4	Height	5.595 in.
Tare plus Wet Specimen	276.36 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	223.93 gm	Initial Area	6.290 sq in.
Water Weight	52.43 gm	Volume	35.194 cu in.
Tare Weight	42.57 gm	Volume of Solids	cu in.
Wet Specimen	1145.14 gm	Void Ratio	
Dry Specimen	888.33 gm	Saturation	%
Water Content	28.91 %	Dry Density	96.2 lb/cu ft
Specific Gravity of Solids			

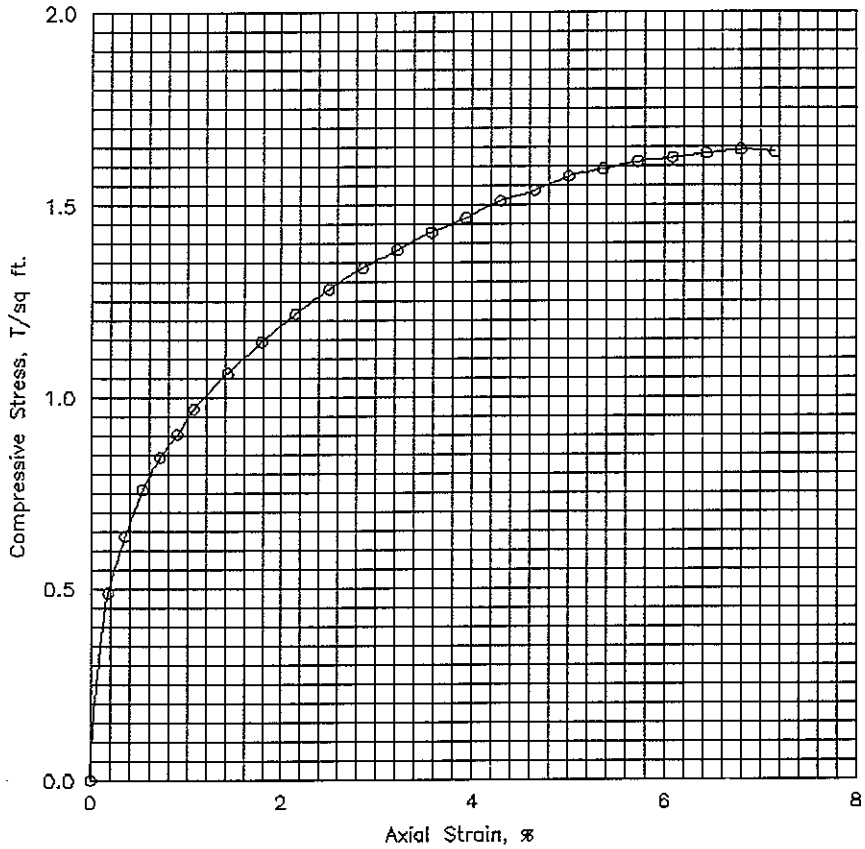
LL = 58 PL = 22 PI = 36

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	56.0	42.9	.002	6.30	.490
.5	20.	.020	73.0	55.9	.004	6.31	.638
.6	30.	.030	87.0	66.6	.005	6.32	.759
.8	40.	.040	97.0	74.3	.007	6.34	.844
1.0	50.	.050	104.0	79.7	.009	6.35	.904
1.1	60.	.060	112.0	85.8	.011	6.36	.971
1.5	80.	.080	123.0	94.2	.014	6.38	1.063
1.8	100.	.100	133.0	101.9	.018	6.40	1.145
2.2	120.	.120	142.0	108.8	.021	6.43	1.218
2.5	140.	.140	150.0	114.9	.025	6.45	1.282
2.8	160.	.160	157.0	120.3	.029	6.48	1.337
3.2	180.	.180	163.0	124.9	.032	6.50	1.383
3.5	200.	.200	169.0	129.5	.036	6.52	1.429
3.8	220.	.220	174.0	133.3	.039	6.55	1.466
4.2	240.	.240	180.0	137.9	.043	6.57	1.511
4.5	260.	.260	184.0	140.9	.046	6.60	1.538
4.8	280.	.280	189.0	144.8	.050	6.62	1.574
5.2	300.	.300	192.0	147.1	.054	6.65	1.593
5.5	320.	.320	195.0	149.4	.057	6.67	1.612
5.8	340.	.340	197.0	150.9	.061	6.70	1.622
6.2	360.	.360	199.0	152.4	.064	6.72	1.633
6.4	380.	.380	201.0	154.0	.068	6.75	1.643
6.8	400.	.400	201.0	154.0	.071	6.77	1.636

Job No. 14G790

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	28.9 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	96.2			
Time to failure, min		t_f	6.45			
Unconfined compressive strength, T/sq ft		q_u	1.64			
Undrained shear strength, T/sq ft		S_u	.82			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Reddish brown,Clay,Stiff,w/sand partings

LL	58	PL	22	PI	36	G_s	

Remarks

Project Colorado River Locks

Area GIWW at Colorado River, Texas

Boring No. 94-133 | Sample No. 16

Depth El 33-35 ft. | Date 10/10/94

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE

JOB NO. 14G790 DATE 10/11/94

PROJECT Colorado River Locks

AREA GIWW at Colorado River, Texas

BORING NO. 94-133 SAMPLE NO. 19 DEPTH 39-41 ft.

SPECIMEN NO. 1

CLASSIFICATION
Reddish brown,Clay,Stiff,Silty,w/sand partings

Tare No.	P-207	Height	5.595 in.
Tare plus Wet Specimen	290.77 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	244.12 gm	Initial Area	6.290 sq in.
Water Weight	46.65 gm	Volume	35.194 cu in.
Tare Weight	42.87 gm	Volume of Solids	cu in.
Wet Specimen	1195.09 gm	Void Ratio	
Dry Specimen	970.20 gm	Saturation	%
Water Content	23.18 %	Dry Density	105.0 lb/cu ft
Specific Gravity of Solids			

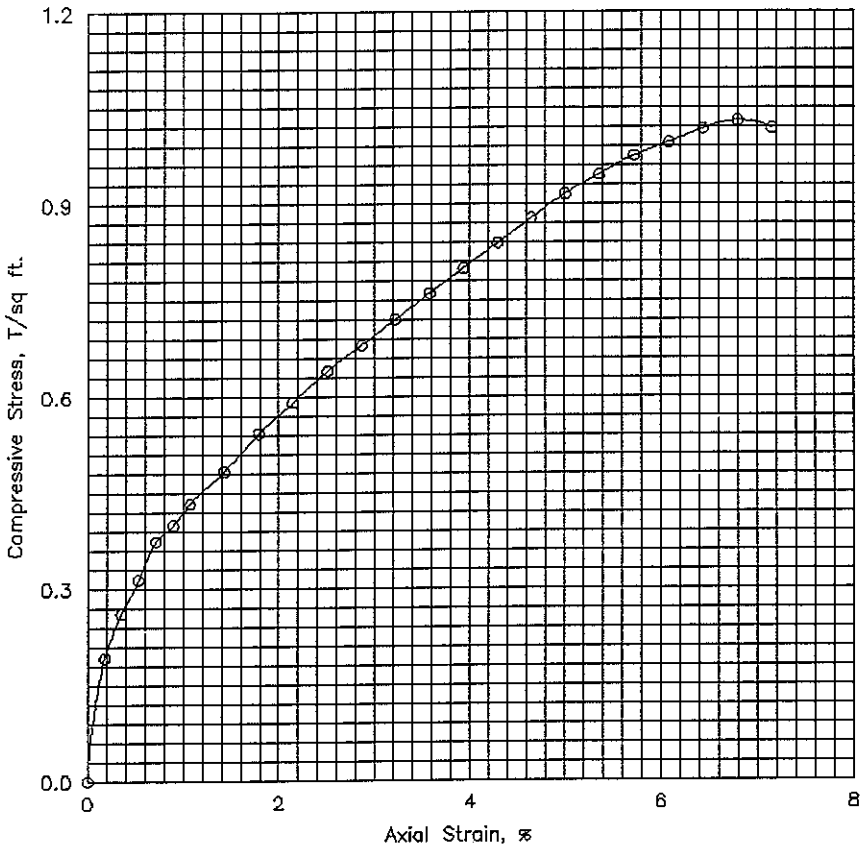
LL = 39 PL = 18 PI = 21

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	22.0	16.9	.002	6.30	.193
.4	20.	.020	30.0	23.0	.004	6.31	.262
.6	30.	.030	36.0	27.6	.005	6.32	.314
.8	40.	.040	43.0	32.9	.007	6.34	.374
.9	50.	.050	46.0	35.2	.009	6.35	.400
1.1	60.	.060	50.0	38.3	.011	6.36	.434
1.5	80.	.080	56.0	42.9	.014	6.38	.484
1.8	100.	.100	63.0	48.3	.018	6.40	.543
2.1	120.	.120	69.0	52.9	.021	6.43	.592
2.5	140.	.140	75.0	57.4	.025	6.45	.641
2.8	160.	.160	80.0	61.3	.029	6.48	.681
3.2	180.	.180	85.0	65.1	.032	6.50	.721
3.5	200.	.200	90.0	68.9	.036	6.52	.761
3.8	220.	.220	95.0	72.8	.039	6.55	.800
4.1	240.	.240	100.0	76.6	.043	6.57	.839
4.4	260.	.260	105.0	80.4	.046	6.60	.878
4.8	280.	.280	110.0	84.3	.050	6.62	.916
5.1	300.	.300	114.0	87.3	.054	6.65	.946
5.4	320.	.320	118.0	90.4	.057	6.67	.975
5.7	340.	.340	121.0	92.7	.061	6.70	.996
6.1	360.	.360	124.0	95.0	.064	6.72	1.017
6.4	380.	.380	126.0	96.5	.068	6.75	1.030
6.7	400.	.400	125.0	95.8	.071	6.77	1.018

Job No. 14G790

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	23.2 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	105.0			
Time to failure, min		t_f	6.42			
Unconfined compressive strength, T/sq ft		q_u	1.03			
Undrained shear strength, T/sq ft		S_u	.51			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Reddish brown,Clay,Stiff,Silty,w/sand partings

LL	39	PL	18	PI	21	G_s	

Remarks

Project Colorado River Locks

Area GIWW at Colorado River, Texas

Boring No. 94-133 | Sample No. 19

Depth El 39-41 ft. | Date 10/11/94

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 3659

PLATE XI-2

Geotest Engineering, Inc.

PLATE