U.S. ARMY CORPS OF ENGINEERS

BORING NO. 97-26 DATE: BEGIN 6-27-97 PAGE 1 / 1
JOB NO. 114002G134 COMPLETE 6-27-97 Thin Walled Tube
PROJECT Upper Basin Detention Area C ■ 3" □ 6"
LOCATION along Brays Bayou
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Marsh Buggy K4x4, F-36
GROUNDWATER: DEPTH 0 ft., ELEV. ft., at end of Drilling
WEATHER PARTLY CLOUDY SUNNY & HOT
DRILLER Dempsey Gearon LOGGER John Gentry

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	1.0	GRAY	CLAY	STIFF		-w/ROOTS 0'-2'
		2	1.5	GRAY	CLAY	STIFF		
5		3	1.5	GRAY	CLAY	STIFF		
		4	2.5	GRAY	CLAY	VERY STIFF		▼BROWN 6'-10' -w/Calc Nods 6'-14'
		5	2.5	GRAY	CLAY	VERY STIFF		-w/Fe Nods 6'-14'
10		6	2.25	GRAY	CLAY	VERY STIFF		REDDISH BROWN 10'-12'
		7	3.25	REDDISH BROWN	CLAY	VERY STIFF		-w/SILTY SAND(S) 10'-12' ▼GRAY 12'-28'
15		8	2.25	REDDISH BROWN	CLAY	VERY STIFF		-w/SLICKEN SIDED 14'-16'
		9	2.75	REDDISH BROWN	CLAY	VERY STIFF		-w/SILTY SAND(S) 16.5'-21'
		10	3.25	REDDISH BROWN	CLAY	VERY STIFF		
20		11	2.5	REDDISH BROWN	CLAY	VERY STIFF		
		12	3.0	REDDISH BROWN	CLAY	VERY STIFF		
25		13	3.5	REDDISH BROWN	CLAY	VERY STIFF		-w/Calc Nods 24'-28'2"
		14	3.5	REDDISH BROWN	CLAY	VERY STIFF		
		15	1.5	LT GRAY	CLAY	STIFF	SANDY	▼YELLOW 28'2"
30		16	1.75	LT GRAY	CLAY	STIFF	SANDY	
		17		LT GRAY	SAND	MEDIUM DENSE	SILTY	▼YELLOW 32'-35'
	X	18	8 to 3	LT GRAY	SAND	MEDIUM DENSE	SILTY	
35								

GEOTEST ENGINEERING, INC.

Project: Brays Bayou PDM

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-95-D-0007 Delivery Order No. 0035

Boring No. 97-26

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		
1	0 - 2	1.00		Clay,w/grass roots,Stiff,Gray	C H	26.3											
2	2 - 4	1.50		Clay,Stiff,Gray	C H	24.5											
3	4 - 6	1.50		Clay,Stiff,Gray	C H	28.4											
4	6 - 8	2.50		Clay,w/calc & fer nod,slickensided,Very stiff, Gray & Brown	C H	26.9											
5	8 - 10	2.50		Clay,w/calc & fer nod,slickensided,Very stiff, Gray & Brown	C H	25.2											
6	10 - 12	2.25		Clay,w/calc&fer nod&sand seams,slickensided, Very stiff,Gray & Brown	C H	25.9	96.7	121.8	59.0	22.0							
7	12 - 14	3.25		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	27.9											
8	14 - 16	2.25		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	27.5											
9	16 - 18	2.75		Clay,w/calc & fer nod & silt seams,slickensided, Very stiff,Reddish brown	C H	25.0	98.2	122.7	53.0	21.0	100.0	99.1	98.5	98.4	98.1		2.45
10	18 - 20	3.25		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	25.7											
11	20 - 22	2.50		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	28.1											
12	22 - 24	3.00		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	18.5											
13	24 - 26	3.50		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	19.2											
14	26 - 28	3.50		Clay,w/calc & fer nod,slickensided,Very stiff, Reddish brown	C H	19.6											
15	28 - 30	1.50		Silty Clay,Stiff,Yellowish gray	C L	15.6											
16	30 - 32	1.75		Silty Clay,Stiff,Yellowish gray	C L	17.4											
17	32-33.5			Silty Sand,Medium dense,Gray	S M						100.0	100.0	100.0	82.4	33.6		
18	33.5-35		23	Silty Sand,Medium dense,Gray	S M												

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. 114008613 DATE 7/8/97

PROJECT Brays Bayou PDM

AREA Houston, Texas

BORING NO. 97-26 SAMPLE NO. 9 DEPTH 16-18 ft

SPECIMEN NO. 1

CLASSIFICATION
Clay,w/calc&fer nod&silt seams,slickensided,Very stiff,Reddish brown

Tare No.	HP10	Height	5.595 in.
Tare plus Wet Specimen	446.49 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	365.71 gm	Initial Area	6.290 sq in.
Water Weight	80.78 gm	Volume	35.194 cu in.
Tare Weight	42.94 gm	Volume of Solids	cu in.
Wet Specimen	1133.73 gm	Void Ratio	
Dry Specimen	906.79 gm	Saturation	%
Water Content	25.03 %	Dry Density	98.2 lb/cu ft

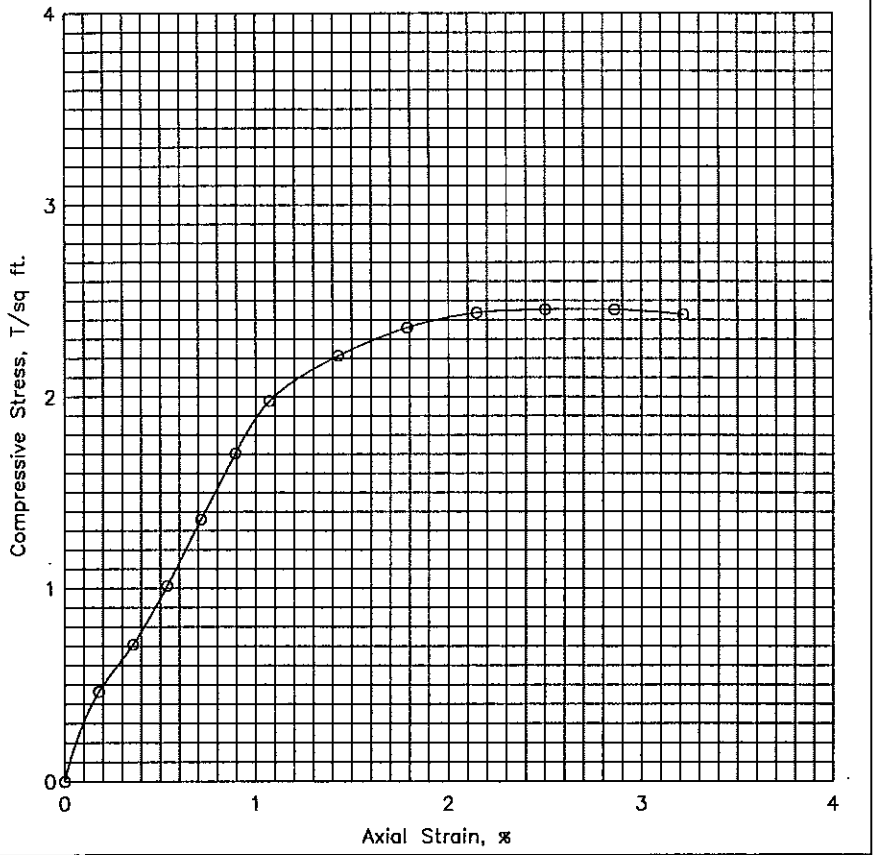
Specific Gravity of Solids
LL = 53 PL = 21 PI = 32

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	53.0	40.6	.002	6.30	.464
.4	20.	.020	81.0	62.0	.004	6.31	.708
.6	30.	.030	116.0	88.9	.005	6.32	1.012
.8	40.	.040	156.0	119.5	.007	6.34	1.358
.9	50.	.050	196.0	150.1	.009	6.35	1.703
1.1	60.	.060	228.0	174.6	.011	6.36	1.978
1.4	80.	.080	256.0	196.1	.014	6.38	2.213
1.7	100.	.100	274.0	209.9	.018	6.40	2.359
2.1	120.	.120	284.0	217.5	.021	6.43	2.437
2.4	140.	.140	287.0	219.8	.025	6.45	2.453
2.7	160.	.160	288.0	220.6	.029	6.48	2.453
3.0	180.	.180	286.0	219.1	.032	6.50	2.427

Job No. 114008613

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.			1			
Type of Specimen			Undisturbed			
Initial	Water content	w_0	25.0 %	%	%	%
	Void ratio	e_0				
	Saturation	S_0	%	%	%	%
	Dry density, lb/cu ft	γ_d	98.2			
Time to failure, min		t_f	2.40			
Unconfined compressive strength, T/sq ft		q_u	2.45			
Undrained shear strength, T/sq ft		S_u	1.23			
Sensitivity ratio		S_t				
Initial specimen diameter, in.		D_0	2.830			
Initial specimen height, in.		H_0	5.595			

Classification Clay,w/calc&fer nod&silt seams,slickensided,Very stiff,Reddish brown

LL	PL	PI	G_s
53	21	32	

Remarks

Project Brays Bayou PDM

Area Houston, Texas

Boring No. 97-26 | Sample No. 9

Depth El 16-18 ft | Date 7/8/97

UNCONFINED COMPRESSION TEST REPORT

ENG FORM 3659
1 JUN 65

PLATE XI-2