

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>91-75</u> DATE: BEGIN <u>3-25-91</u> PAGE <u>1 / 1</u> JOB NO. <u>146448</u> COMPLETE <u>3-25-91</u> Thin Walled Tube ☒ 3" ☐ 6" PROJECT <u>BRAY'S Bayou</u> LOCATION <u>BRAY'S Bayou South Bank</u> ELEVATION OF HOLE _____ MANUFACTURER'S DESIGNATION OF DRILL RIG <u>Drilling - 36</u> GROUNDWATER: DEPTH <u>8' 2"</u> ft., ELEV. _____ ft., at end of Drilling WEATHER <u>Cloudy, Warm</u> DRILLER <u>D. Mitchell</u> LOGGER <u>J. Berg</u>									
0	1	1.5	GRAY	CLAY	STIFF			w/roots	
	2	2.5	"	"	VERY STIFF				
5	3	2.5	"	"	"				
	4	3.0	GRAY + TAN	CLAY	VERY STIFF			w/calc. nod.	
	5	4.5+	TAN	CLAY	hard			w/calc. nod.	
10	6	4.5	"	"	"				
	7	3.5	"	"	very STIFF	Silt			
15	8	3.0	GRAY + TAN	"	"				
	9	3.5	"	"	"				
	10	2.75	"	"	"				
20	11	3.0	GRAY + TAN	"	very STIFF			Slit sided	
	12	3.75	"	CLAY	"				
25	13	4.0	"	"	"			w/calc. nod.	
								Bottom of 91-75 (26')	
30									
35									

Project : Brays and Sims bayou and Fondren Ditch, Houston, Texas
Contract No.DACW64-91-D-0001 Delivery Order No. 0016

SUMMARY OF LABORATORY TEST RESULTS

Boring No. 91-75

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	1.50		Dark gray, clay, stiff, w/ roots	CH	28.9											
2	2-4	1.50		Dark gray, clay, stiff, w/ roots	CH	25.1			69	24							
3	4-6	2.00		Dark gray, clay, very stiff, w/ calcareous nodules	CH	27.5											
4	6-8	2.50		Gray & brown, clay, <u>very stiff</u> , w/ calcareous nodules	CH	24.3	99.9	124.2	62	23	98.9	97.9	97.1		87.9		1.06
5	8-10	3.25		Brown & gray, clay, very stiff, silty, w/ calcareous nodules & ferrous stains	CL	21.3											
6	10-12	3.75		Brown & gray, clay, very stiff, silty, w/ calcareous nodules & ferrous stains	CL	23.0											
7	12-14	2.25		Brown, clay, <u>very stiff</u> , silty, w/ ferrous stains	CL	23.6	100.5	124.2	29	14	100.0	100.0	100.0		97.4		0.86
8	14-16	3.50		Gray, & yellowish brown, clay,silty,very stiff, w/ calcareous nodules,	CL	23.0											
9	16-18	3.50		Gray & yellowish brown, clay, very stiff, silty, w/ calcareous nodules & ferrous stains,	CL	23.6											
10	18-20	2.50		Gray & yellowish brown, clay, very stiff, slickensided	CH	27.1			67	24							
11	20-22	3.00		Gray & yellowish brown, clay, very stiff, w/ calcareous nodules & ferrous stains, slickensided	CH	26.5											
12	22-24	4.00		Gray & yellowish brown, clay, very stiff, w/ calcareous nodules & ferrous stains, slickensided	CH	25.1											
13	24-26	4.00		Gray & yellowish brown, clay, very stiff, w/ calcareous nodules & ferrous stains, slickensided	CH	25.2											

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

Handwritten notes:
2000
10/10
2000
same
yields PST.

JOB NO. 14G487

DATE 7/01/91

PROJECT BRAYS BAYOU, SIMS BAYOU AND FONDREN DITCH

BORING NO. 91-75

SAMPLE NO. 4

DEPTH 6-8 ft

SPECIMEN NO. 1

CLASSIFICATION

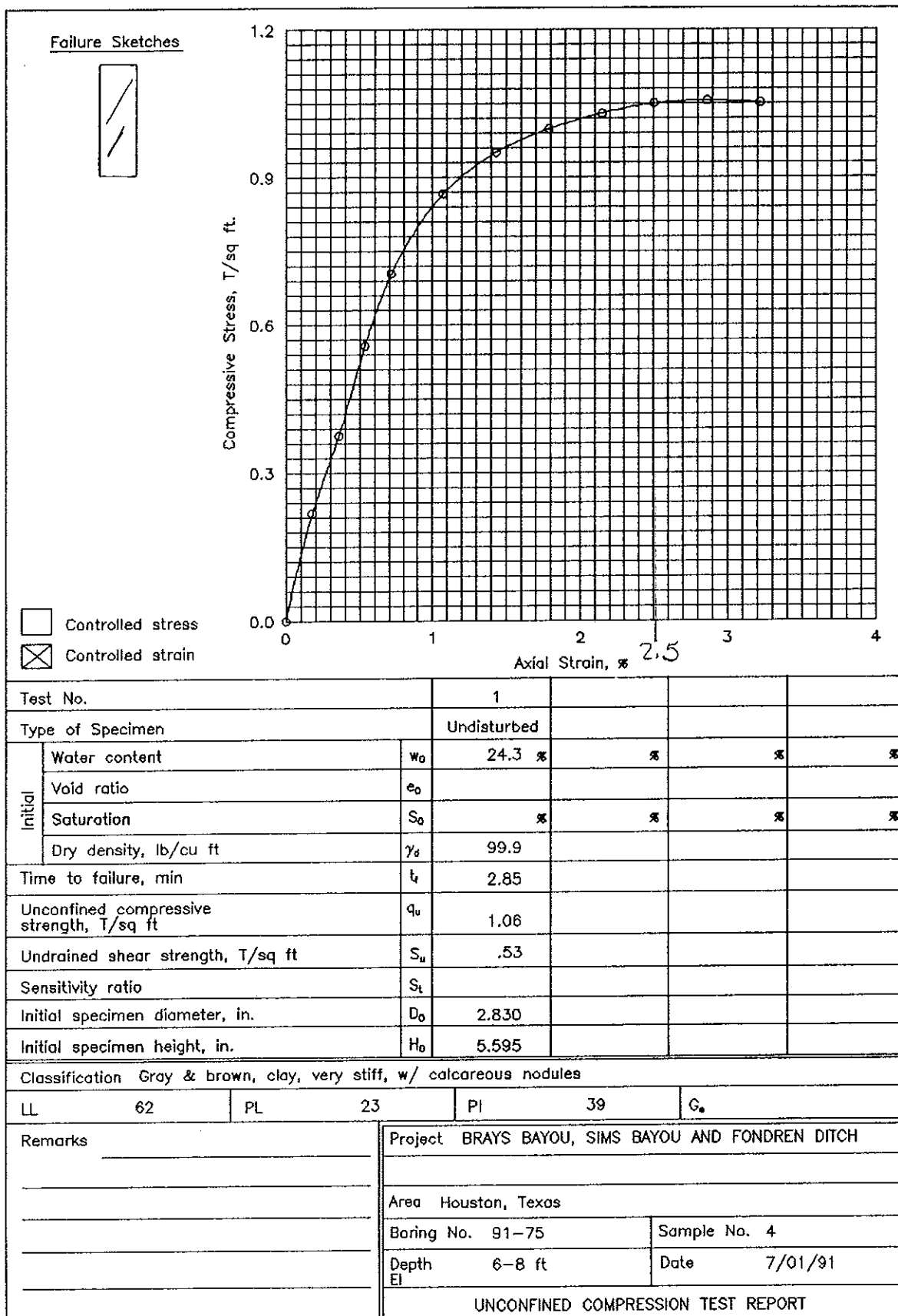
Gray & brown, clay, very stiff, w/ calcareous nodules

Tare No.	P-14	Height	5.595 in.
Tare plus Wet Specimen	822.40 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	669.77 gm	Initial Area	6.290 sq in.
Water Weight	152.63 gm	Volume	35.194 cu in.
Tare Weight	42.52 gm	Volume of Solids	cu in.
Wet Specimen	1146.92 gm	Void Ratio	
Dry Specimen	922.46 gm	Saturation	%
Water Content	24.33 %	Dry Density	99.9 lb/cu ft
Specific Gravity of Solids			
LL = 62	PL = 23	PI = 39	

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
.3	10.	.010	25.0	19.1	.002	6.30	.219
.4	20.	.020	43.0	32.9	.004	6.31	.376
.6	30.	.030	64.0	49.0	.005	6.32	.558
.8	40.	.040	81.0	62.0	.007	6.34	.705
1.2	60.	.060	100.0	76.6	.011	6.36	.867
1.5	80.	.080	110.0	84.3	.014	6.38	.951
1.9	100.	.100	116.0	88.9	.018	6.40	.999
2.2	120.	.120	120.0	91.9	.021	6.43	1.030
2.5	140.	.140	123.0	94.2	.025	6.45	1.051
2.8	160.	.160	124.0	95.0	.029	6.48	1.056
3.1	180.	.180	124.0	95.0	.032	6.50	1.052



JOB NO. 14G487

DATE 7/01/91

PROJECT BRAYS BAYOU, SIMS BAYOU AND FONDREN DITCH

BORING NO. 91-75

SAMPLE NO. 7

DEPTH 12-14 ft

SPECIMEN NO. 1

CLASSIFICATION

Brown, clay, very stiff, silty, w/ ferrous stains

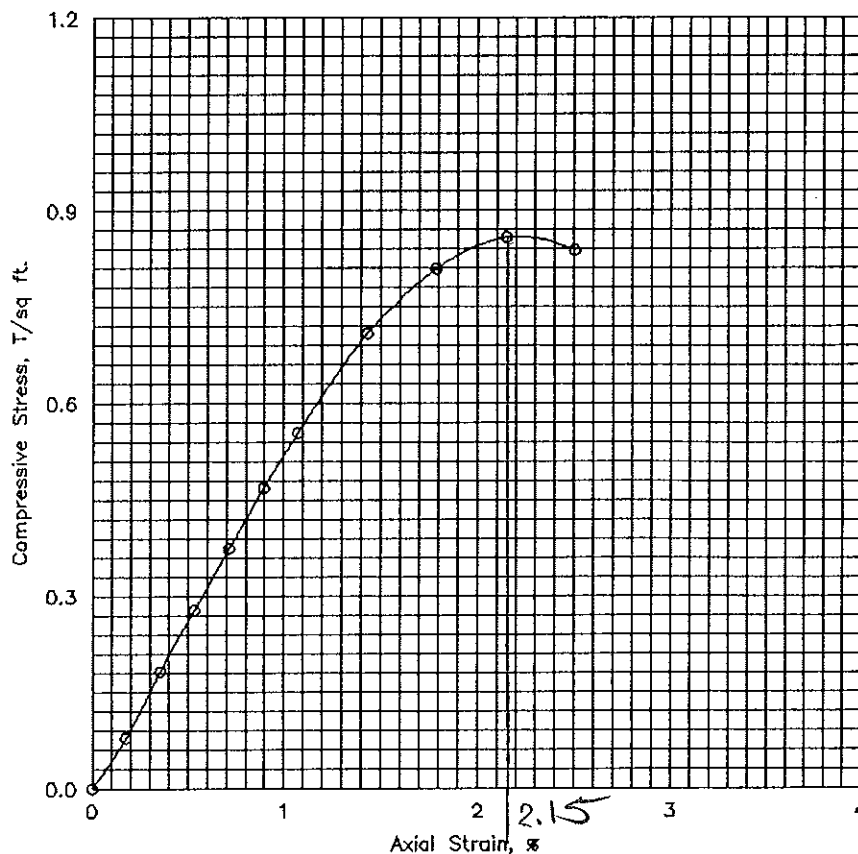
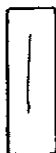
Tare No.	GE-7	Height	5.595 in.
Tare plus Wet Specimen	680.13 gm	Average Diameter	2.830 in.
Tare plus Dry Specimen	558.53 gm	Initial Area	6.290 sq in.
Water Weight	121.60 gm	Volume	35.194 cu in.
Tare Weight	42.58 gm	Volume of Solids	cu in.
Wet Specimen	1147.73 gm	Void Ratio	
Dry Specimen	928.82 gm	Saturation	%
Water Content	23.57 %	Dry Density	100.5 lb/cu ft
Specific Gravity of Solids			
LL = 29	PL = 14	PI = 15	

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
.3	10.	.010	9.0	6.9	.002	6.30	.079
.4	20.	.020	21.0	16.1	.004	6.31	.183
.6	30.	.030	32.0	24.5	.005	6.32	.279
.8	40.	.040	43.0	32.9	.007	6.34	.374
1.0	50.	.050	54.0	41.4	.009	6.35	.469
1.1	60.	.060	64.0	49.0	.011	6.36	.555
1.5	80.	.080	82.0	62.8	.014	6.38	.709
1.9	100.	.100	94.0	72.0	.018	6.40	.809
2.2	120.	.120	100.0	76.6	.021	6.43	.858
2.5	140.	.140	98.0	75.1	.025	6.45	.838

Failure Sketches



☐ Controlled stress
☒ Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	w_0	23.6 %	%	%
	Void ratio	e_0			
	Saturation	S_0	%	%	%
	Dry density, lb/cu ft	γ_d	100.5		
Time to failure, min		t_f	2.17		
Unconfined compressive strength, T/sq ft		q_u	.86		
Undrained shear strength, T/sq ft		S_u	.43		
Sensitivity ratio		S_t			
Initial specimen diameter, in.		D_0	2.830		
Initial specimen height, in.		H_0	5.595		
Classification Brown, clay, very stiff, silty, w/ ferrous stains					
LL	29	PL	14	PI	15
Remarks		Project BRAYS BAYOU, SIMS BAYOU AND FONDREN DITCH Area Houston, Texas Boring No. 91-75 Sample No. 7 Depth 12-14 ft Date 7/01/91 EI			
UNCONFINED COMPRESSION TEST REPORT					