Project: Port Arthur Boat Basin

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-98-D-0002 Delivery order No. 0106

Boring No. 03-93

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	0.50		Clay,w/ferrous nodules,Medium stiff,Yellowish brown & Gray	C H	29.9											
2	2 - 4	1.00		Clay,w/ferrous nodules,Stiff,Yellowish brown & Gray	C H	28.2											
3	4 - 6	1.25		Silty Clay,w/ferrous nodules & silt seams,Stiff, Yellowish brown & Gray	C L	21.4	99.9	121.2	47.0	20.0							
4	6 - 8	0.75		Sandy Clay,w/sand seams,Medium stiff, Yellowish brown & Gray	C L	21.2											
5	8-9.5		9	Silty Sand,w/clay seams,Loose,Brown	S M	25.0											
6	13-14.5		20	Silty Sand,Medium dense,Brown	S M	28.5											
7	18 - 20	1.00		Silty Clay,w/sand & silt partings,Stiff,Yellowish brown & Gray	C L	28.9											
8	20 - 22	1.00		Silty Clay,w/sand & silt partings,Stiff,Yellowish brown & Gray	C L	22.1											
9	22 - 24	0.50		Silty Clay,w/sand & silt partings,Medium stiff, Yellowish brown	C L	30.8	85.9	112.3	48.0	20.0							0.60
10	24 - 26	0.50		Silty Clay,w/sand & silt partings,Medium stiff, Yellowish brown	C L	30.1											
11	26 - 28	0.50		Silty Clay,w/sand & silt partings,Medium stiff, Yellowish brown	C L	21.2											
12	28 - 30	0.50		Silty Clay,w/silt seams,Medium stiff,Gray	C L	32.1											
13	30 - 32	0.50		Silty Clay,w/silt seams,Medium stiff,Gray	C L	32.7											
14	32 - 34	0.50		Clay,w/silt seams,Medium stiff,Gray	C H	35.5											
15	34 - 36	1.00		Clay,w/silt seams,Stiff,Gray	C H	34.5	83.2	111.9	52.0	20.0							1.06
16	36 - 38	1.00		Clay,w/silt seams,Stiff,Gray	C H	41.2											
17	38 - 40	1.00		Clay,w/silt seams,Stiff,Gray	C H	47.2											
18	40 - 42	1.25		Clay,Stiff,Gray	C H	49.8											
19	42 - 44	1.25		Clay,Stiff,Gray	C H	49.5											
20	44 - 46	1.25		Clay,w/silt seams,Stiff,Olive gray	C H	41.0											

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

Project: Port Arthur Boat Basin

SUMMARY OF LABORATORY TEST RESULTS

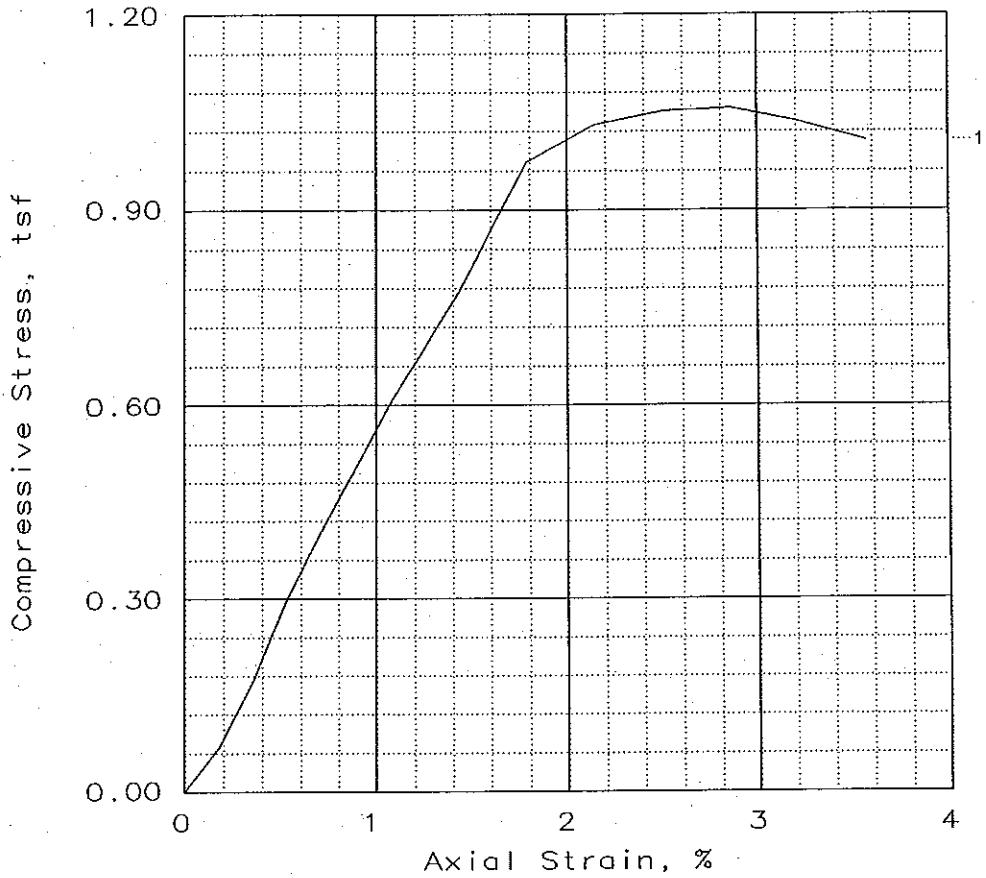
Contract No. DACW64-98-D-0002 Delivery order No. 0106

Boring No. 03-93

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	46 - 48	1.25		Clay,w/silt seams,Stiff,Olive gray	C H	33.2											
22	48 - 50	1.25		Clay,w/shell fragments,Stiff,Olive gray	C H	32.6											
23	50 - 52	1.25		Clay,w/shell fragments,Stiff,Olive gray	C H	43.2											
24	52 - 54	1.25		Clay,w/shell fragments,Stiff,Olive gray	C H	41.2											
25	54 - 56	1.25		Clay,Stiff,Olive gray	C H	42.3											
26	56 - 58	1.25		Clay,w/silt seams,Stiff,Gray	C H	53.0											
27	58 - 60	1.25		Clay,w/silt partings,Stiff,Gray	C H	42.1											

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

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	1.06			
Undrained shear strength, tsf	0.53			
Failure strain, %	2.9			
Strain rate, %/min	1.07			
Water content, %	34.5			
Wet density, pcf	111.9			
Dry density, pcf	83.2			
Saturation, %	92.5			
Void ratio	0.9878			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Clay,w/silt seams, Stiff,Gray

LL = 52	PL = 20	PI = 32	ASS. GS= 2.65	Type: Undisturbed

Project No.: 11401272106

Date: 10-06-2003

Remarks:

Client: U.S Army Corps of Engineers
Galveston District Office

Project: Port Arthur Boat Basin

Location: Boring No. 03-93
Sample No. 15 Depth: 34-36 ft.

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: ——

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 03-93 DATE: BEGIN 7-31-03 PAGE 1 / 2
JOB NO. 11401272100 COMPLETE 7-31-03 Thin Walled Tube
PROJECT Port Arthur Boat Basin ■ 3" ☐ 6"
LOCATION N = 13,897,414.772, E = 3,574,537.990
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing 36
GROUNDWATER: DEPTH ** ft., ELEV. ____ ft., at end of Drilling
WEATHER Cloudy & Hot
DRILLER Dempsey Gearen LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
mud line — 0		1	0.50	Yish Brown & Gray	Clay	M.stiff		**5'-3" of Water -w/Fer nod
		2	1.00	Yish Bn & gray	Clay	stiff		-w/Fer nod
5		3	1.25	Yish Bn & Gray	Clay	Stiff	Silt	-w/silt sms & Fer nod
		4	0.75	Yish Bn & gray	Clay	M.stiff	Sand	-w/sand sms
	X	5	3 4 5	Brown	Sand	Loose	Silt	-w/clay sms
10								
	X	6	5 9 11	Brown	Sand	M.Dense	Silt	
15								
		7	1.00	Yish Brown & gray	Clay	stiff	Silt	-w/sand & silt partings
20		8	1.00	Yish Bn & gray	Clay	Stiff	Silt	-w/sand & silt sms
		9	0.50	Yish Brown	Clay	M.stiff	Silt	-w/sand & silt sms
25		10	0.50	Yish Brown	Clay	M.stiff	Silt	-w/sand & silt sms
		11	0.50	Yish Brown	Clay	M.stiff	Silt	-w/sand & silt sms
		12	0.50	Gray	Clay	M.stiff	Silt	-w/silt sms
30		13	0.50	Gray	Clay	M.stiff	Silt	-w/silt sms
		14	0.50	Gray	Clay	M.stiff		-w/silt sms
35		15	1.00	Gray	Clay	Stiff		-w/silt sms

U.S. ARMY CORPS OF ENGINEERS

BORING NO. 03-93 DATE: BEGIN 7-31-03 PAGE 2 / 2
JOB NO. 1140127210 COMPLETE 7-31-03 Thin Walled Tube
PROJECT Port Arthur Boat Basin ■ 3" ☐ 6"
LOCATION N = 13,897,414.772, E = 3,574,537.990
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing 36
GROUNDWATER: DEPTH ** ft., ELEV. ____ ft., at end of Drilling
WEATHER Cloudy & Hot
DRILLER Dempsey Cearen LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
35								
		16	1.00	Gray	Clay	stiff		-w/silt sms
		17	1.00	Gray	Clay	stiff		-w/silt sms
40								
		18	1.25	Gray	Clay	stiff		
		19	1.25	Gray	Clay	stiff		
45		20	1.25	olive gray	Clay	stiff		-w/silt sms
		21	1.25	olive gray	Clay	stiff		-w/silt sms
		22	1.25	olive gray	Clay	stiff		-w/shell Fragments.
50								
		23	1.25	olive gray	Clay	stiff		-w/shell Fragments
		24	1.25	olive gray	Clay	stiff		-w/shell Fragments
55		25	1.25	olive gray	Clay	stiff		
		26	1.25	Gray	Clay	stiff		-w/silt sms
		27	1.25	Gray	Clay	stiff		-w/silt partings
60								Depth below mudline tide reading 2-2
65								
70								

GEOTEST ENGINEERING, INC.