

U.S. ARMY CORPS OF ENGINEERS

DEPTH, FEET	SAMPLE NO.	PEN./TORVANE	SPT.-BLOW COUNT	BORING NO. <u>99-13</u> DATE: BEGIN <u>5-2-99</u> PAGE <u>1 / 2</u>				
				JOB NO. <u>1140114808</u> COMPLETE <u>5-2-99</u> Thin Walled Tube				
PROJECT <u>Neches River Saltwater Barrier</u>				LOCATION <u>N=875912.67</u> <u>E=3543856.36</u>				
ELEVATION OF HOLE <u>-3.1</u>				MANUFACTURER'S DESIGNATION OF DRILL RIG <u>DNR75W/Barge Track Bury</u>				
GROUNDWATER: DEPTH <u>*</u> ft., ELEV. <u>*</u> ft., at end of Drilling				WEATHER <u>Sunny</u>				
DRILLER <u>Dempsey Gearen</u>				LOGGER <u>Imj Mostanand</u>				
				COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0	1	0.00		Gray	Clay	V-soft		* 5 1/2' of water - w/decayed wood & roots
	2	0.00		Gray	clay	V-soft		- w/decayed wood
5	3	0.00		Gray	Clay	V-soft		- w/decayed wood - set 10' of casing Total casing below mud line
	4	2 23		Gray	silt	loose	clay	- w/Sand - set 5' of casing Total casing below mud line
	5	3 22		Gray	silt	loose	clay	- w/Sand
10	6	3 45		Gray	Sand	loose	silt	
15	7	3 25		Gray	Sand	loose	silt	- w/clayey silt pkts
20	8	3 57		Gray	Sand	M.Dense	silt	- w/clayey silt pkts
25	9	3.75		olive gray	Clay	V-stiff	silt	- w/Fer stains & silt sms
	10	4.00		olive gray	Clay	V-stiff	silt	- w/Fer stains & silt sms
	11	2.25		olive gray & Yellowish Brown	Clay	V-stiff	silt	- w/Fer stains & silt sms
30	12			Yellowish Brown & Gray	silt	M.Dense	Sand	
	13	6 15		Yellowish Brown & Gray	silt	M.Dense	Sand	
35								

Mud line

(16)

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			COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
-35-	14	1.75	Yellowish Gray & Gray	Clay	stiff	silt	-w/silt sms
	15	4.50	Reddish Brown	clay	Hard	silt	-w/fer stains & silt sms
-40-	16	2.75	Red	clay	V-stiff		-w/calc nod & fer stains & silt PKts & silt sms
	17	2.75	Red & Gray	clay	V-stiff		-w/calc & fer stains, 43-44 -w/calc nod & fer stains, silt
-45-	18	3.25	Reddish Brown & Gray	clay	V-stiff		-w/fer nod & fer stains, SLKS
	19	3.25	Reddish Brown & Gray	clay	V-stiff		-w/fer nod & fer stains, SLKS
	20	3.50	Reddish Brown & Gray	clay	V-stiff		-w/calc nod & fer stains, SLKS
-50-	21	3.25	Red & Gray	clay	V-stiff		-w/calc nod & fer stains, SLK
	22	2.75	Red & Gray	clay	V-stiff		-w/fer stains & silty clay layer, SLKS
-55-	23	3.00	Reddish Brown	clay	V-stiff		-w/fer stains, SLKS
	24	2.50	Reddish Brown	clay	V-stiff	silt	-w/fer stains
-60-	25	2.50	Reddish Brown	clay	V-stiff	silt	-w/fer stains & clay layer
-65-							J: Jar sample * 5 1/2 of water
-70-							

SUMMARY OF LABORATORY TEST RESULTS

Contract No. DACW64-98-D-0002 Delivery Order No. 0010

Boring No. 99-13

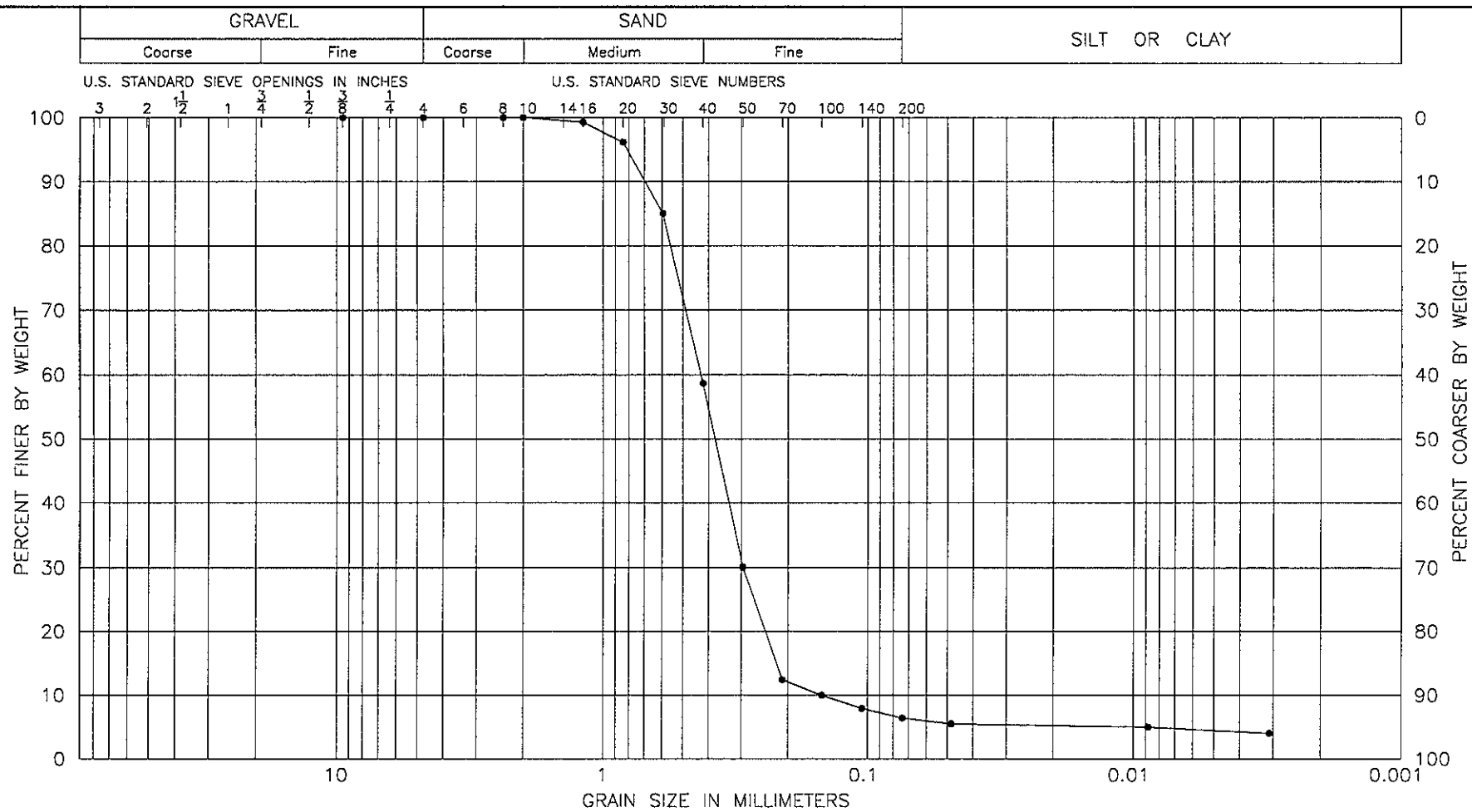
S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	Mc (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	P L (%)	Mechanical Analysis % Passing					Specific Gravity	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2	0.00		Clay, w/decayed wood & root, Very soft, Gray	C H	102.3											
2	2 - 4	0.00		Clay, w/decayed wood & root, Very soft, Gray	C H	98.3											
3	4 - 6	0.00		Clay, w/decayed wood & root, Very soft, Gray	C H	93.1											
4	6-7.5		5	Clayey Silt, w/sand, Loose, Gray	M L	40.4											
5	8.5-10		4	Clayey Silt, w/sand, Loose, Gray	M L	46.2											
6	11-12.5		9	Sand, w/silt, Loose, Gray	SP-SM						100.0	100.0	58.7	10.0	6.4		
7	16-17.5		7	Silty Sand, w/clayey silt pockets, Loose, Gray	S M												
8	21-22.5		12	Silty Sand, w/clayey silt pockets, Medium dense, Gray	S M						100.0	100.0	71.6	15.1	12.3		
9	24-26	3.75		Silty Clay, w/fer stains & silt seams, Very stiff, Olive gray	C L	19.7											
10	26-28	4.00		Silty Clay, w/fer stains & silt seams, Very stiff, Olive gray	C L	20.5											
11	28-30	2.25		Silty Clay, w/fer stains & silt seams, Very stiff, Olive gray	C L	23.0											
12	30-32			Silty Sand, Medium dense, Yellowish brown & gray	S M												
13	32-33.5		24	Silty Sand, Medium dense, Yellowish brown & gray	S M						100.0	100.0	100.0	93.5	45.0		
14	36-38	1.75		Silty Clay, w/silt seams, Stiff, Yellowish gray & gray	C L	21.8	101.3	123.4	40.0	18.0							1.14
15	38-4	4.50+		Silty Clay, w/fer stains & silt seams, Hard, Reddish brown	C L	24.1											
16	40-42	2.75		Clay, w/calc nod & fer stains silt seams & silt pockets, Very stiff, Red	C H	22.5											
17	42-44	2.75		Clay, w/calc nod clay stone & fer stains, silks, Very stiff, Red & gray	C H	36.2											
18	44-46	3.25		Clay, w/fer nod & fer stains, silks, Very stiff, Reddish brown & gray	C H	34.7											
19	46-48	3.25		Clay, w/calc nod & fer stains, silks, Very stiff, Reddish brown & gray	C H	39.0											
20	48-50	3.50		Clay, w/calc nod & fer stains, silks, Very stiff, Reddish brown & gray	C H	32.6	87.2	115.6	79.0	27.0							2.16

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

SUMMARY OF LABORATORY TEST RESULTS

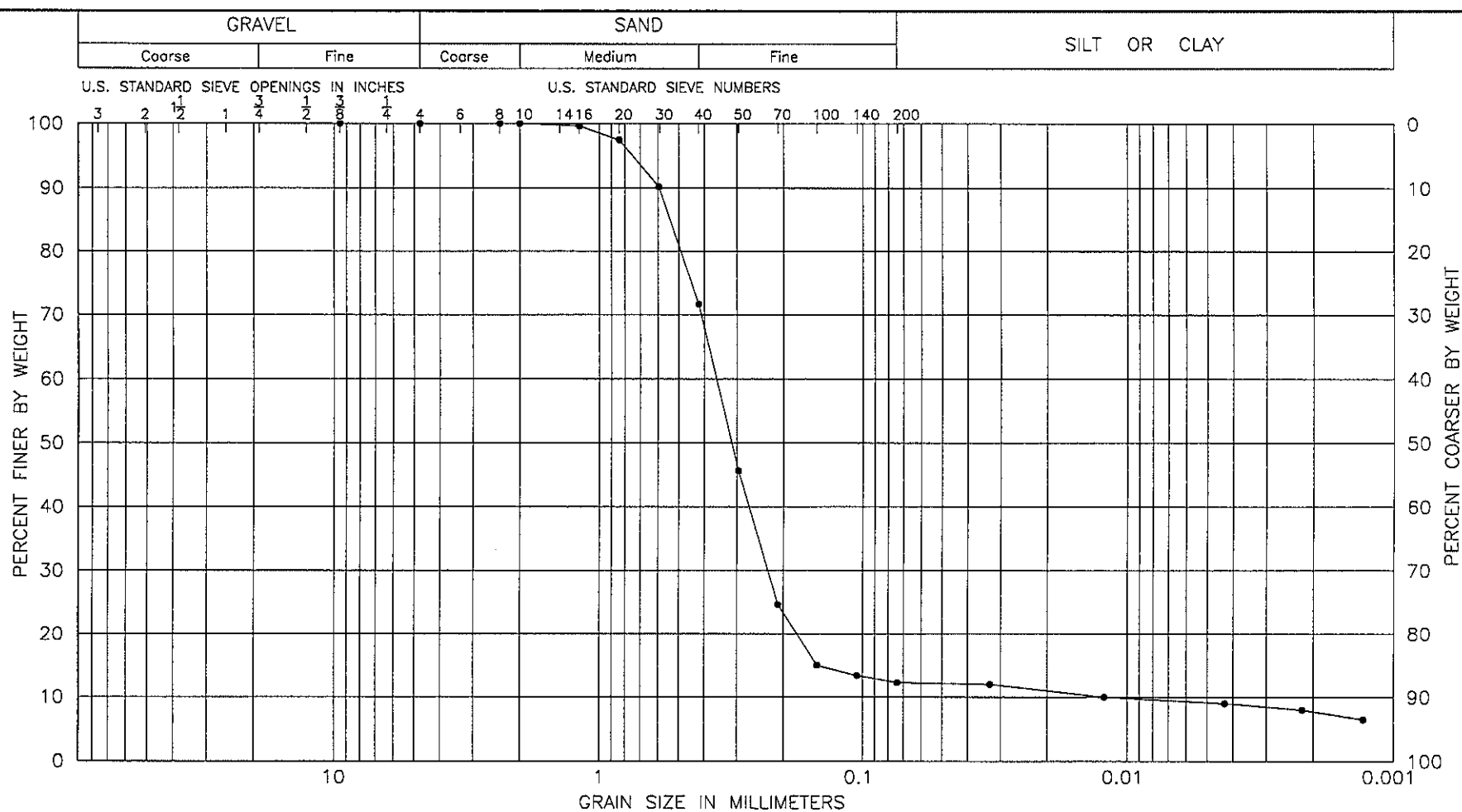
Boring No. 99-13

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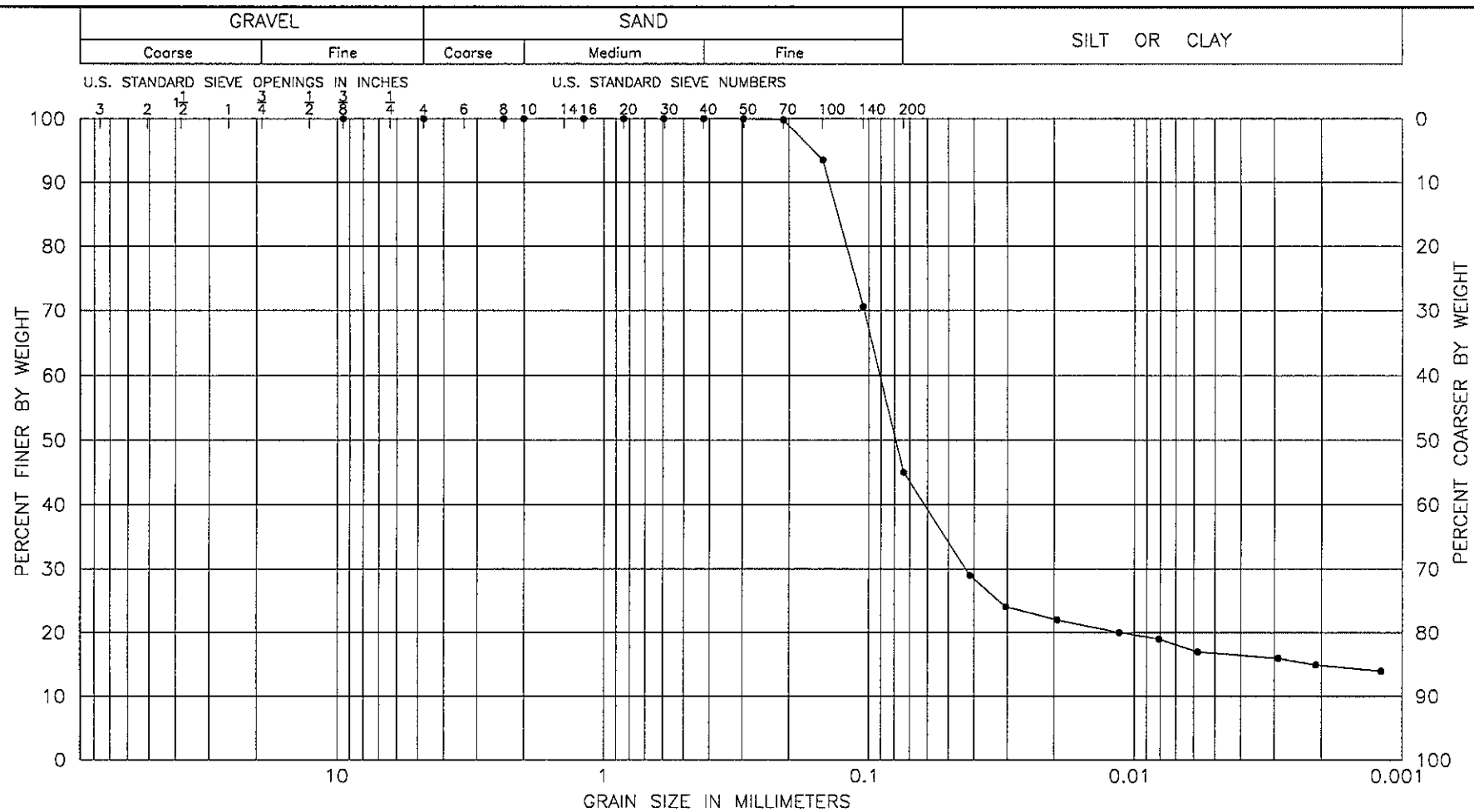
LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
•••••	99-13	6	11-12.5	Sand, w/silt, loose, gray

GRAIN SIZE DISTRIBUTION CURVES



LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
•••••	99-13	8	21-22.5	Silty sand, w/clayey silt pockets, medium dense, gray

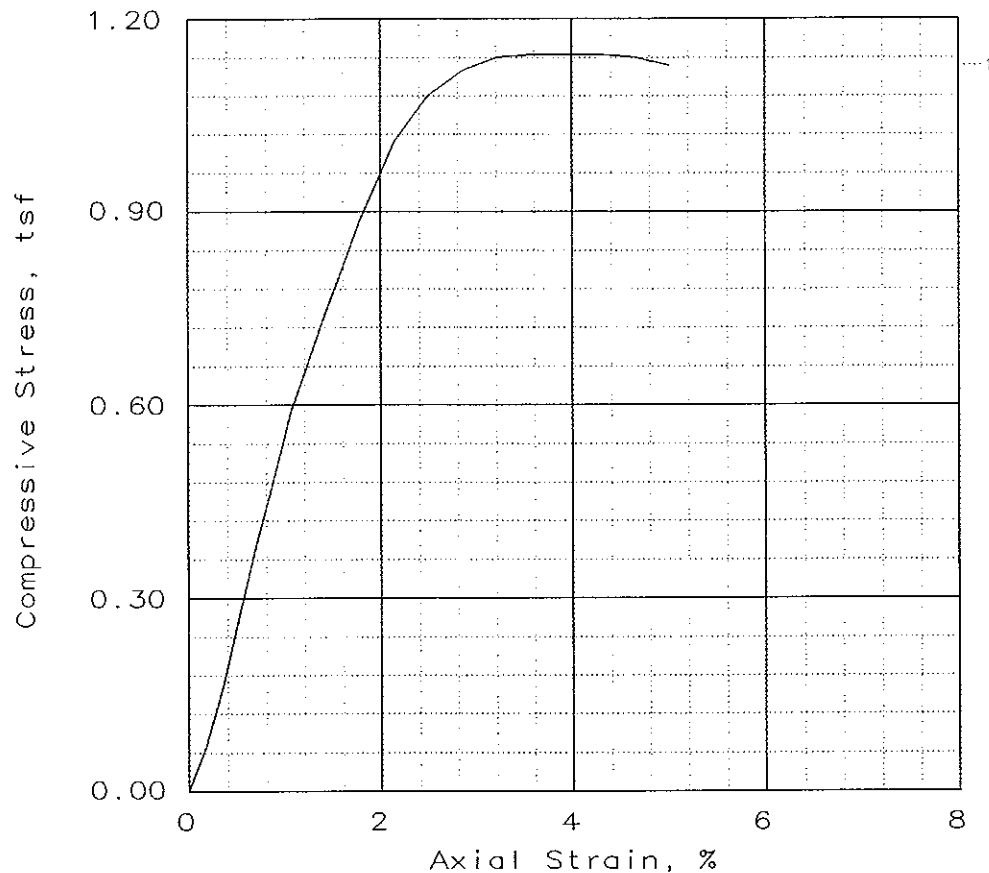
GRAIN SIZE DISTRIBUTION CURVES



LEGEND	BORING NO.	SAMPLE NO.	DEPTH FT.	SAMPLE DESCRIPTION
•••••	99-13	13	32-33.5	Silty sand, medium dense, yellowish brown & gray

GRAIN SIZE DISTRIBUTION CURVES

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, tsf	1.14			
Undrained shear strength, tsf	0.57			
Failure strain, %	3.6			
Strain rate, %/min	1.07			
Water content, %	21.8			
Wet density, pcf	123.4			
Dry density, pcf	101.3			
Saturation, %	89.8			
Void ratio	0.6508			
Specimen diameter, in	2.83			
Specimen height, in	5.60			
Height/diameter ratio	1.98			

Description: Silty Clay, w/silt sms, Stiff, Yellowish gray&gray

LL = 40	PL = 18	PI = 22	ASS. GS= 2.68	Type: Undisturbed
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Project No.: 1140114810

Date: 6-05-99

Remarks:

Assumed Specific gravity

Client: U.S Army Corps of Engineers

Galveston office District

Project: Neches River Saltwater Barrier

Location: Boring No. 99-13

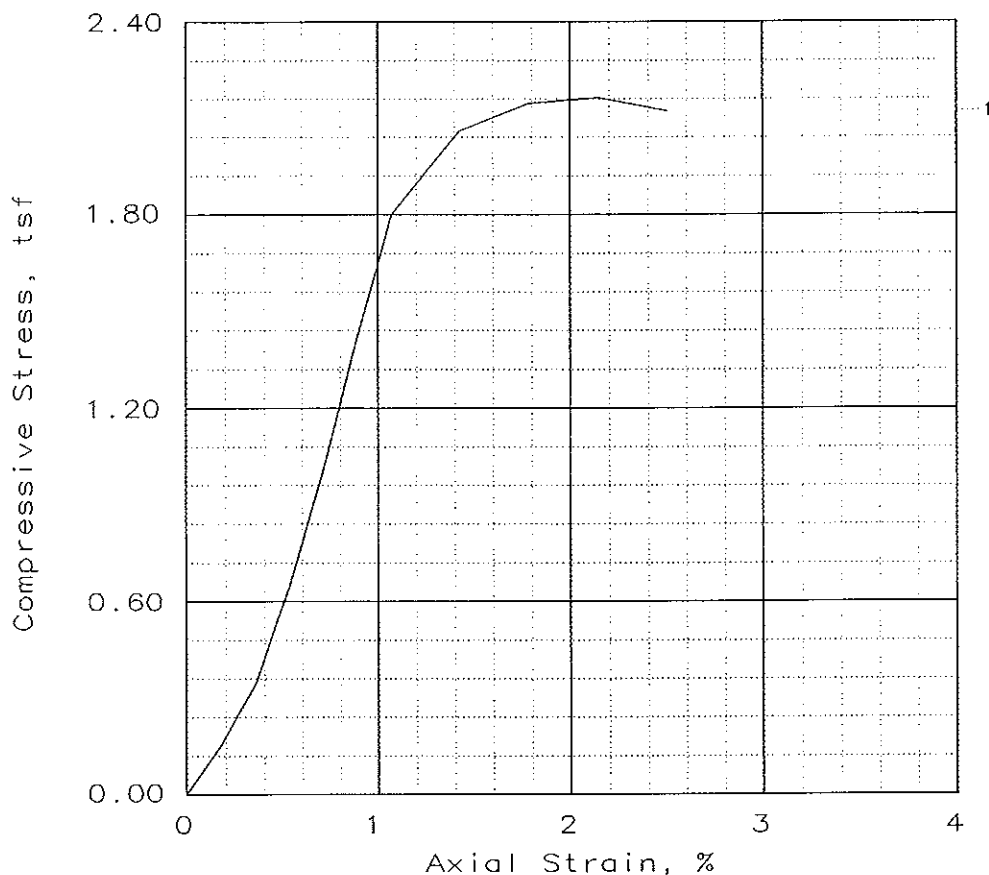
Sample No. 14 Depth: 36-38 ft

UNCONFINED COMPRESSION TEST

GEOTEST ENGINEERING, INC.

Fig. No.: _____

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1		
Unconfined strength, tsf	2.16		
Undrained shear strength, tsf	1.08		
Failure strain, %	2.1		
Strain rate, %/min	1.07		
Water content, %	32.6		
Wet density, pcf	115.6		
Dry density, pcf	87.2		
Saturation, %	95.1		
Void ratio	0.9188		
Specimen diameter, in	2.83		
Specimen height, in	5.60		
Height/diameter ratio	1.98		

Description: Clay, w/calc nod & fer stains, silks, V s, Rdish Bn&

		ASS. GS= 2.68	Type: Undisturbed
Project No.: 1140114810	Client: U.S Army Corps of Engineers Galveston office District Project: Neches River Saltwater Barrier Location: Boring No. 99-13 Sample No. 20 Depth: 48-50 ft		
Date: 6-05-99 Remarks: Assumed Specific gravity			
Fig. No.: _____	UNCONFINED COMPRESSION TEST GEOTEST ENGINEERING, INC.		