

U.S. ARMY CORPS OF ENGINEERS  
GEOTECHNICAL BORING DATA

BKM

PROJECT NAME Victoria Ship Channel

LOG OF BORING NO. 90-29

LOCATION/STATION 25+00 Left

DATE/TIME STARTED 06/15/90 @ 1:30 pm

DATE/TIME COMPLETED " " 2:30 "

TIDE ELEVATION + 2.3' MLT DATUM

WATER DEPTH 4.0' Top of Boring  
+2.3 - 4.0 = -1.7

DEPTH FROM WATER SURFACE  
TO BOTTOM OF BORING 27.5' 4.0  
- 2.3

1.7

WEATHER Clear & Sunny

DRILL RIG MANUFACTURE  
MODEL NO. CF-5

DRILLER Dempsey Gearen  
LOGGER Arif Lazandis

DRILLERS/LOGGERS COMMENTS \_\_\_\_\_  
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DEPTH, FEET	SAMPLE NO.	PEN. / TORVANE SPT. - BLOW COUNT	BORING NO. <u>90-29</u>		DATE: BEGIN <u>06/15/90</u> COMPLETE <u>06/15/90</u>		
			JOB NO. <u>146404</u>		LOGGER <u>Aris</u> PAGE <u>213</u>		
			PROJECT <u>Victoria Ship Channel</u>		LOCATION/STATION/ELEVATION: <u>Sta. 25+00 / E.L. +2.3' MLT</u>		
			DEPTH: AUGERED _____		WASHED <u>23.5'</u>		CORED _____
GROUNDWATER READINGS							
TIME	DEPTH	TIME	DEPTH	TIME	DEPTH	N	
FIRST							
CONSIS- TENCY	COLOR	MINOR	MAJOR	MODIFICATION			
0	1	0.25	v/soft	Gray	Silty	CLAY	-w/shells VC, MG, LL, PL, TV
	2	0.25	"	"	"	"	"
5	3	1.50	Stiff	"	VC, MG	"	-w/calcareous nodules; 6.5" sample, disturbed
	4	2.50	v/stiff	Gray & Tan	"	"	-w/calcareous nodules; 9.5" sample
	5	2.50	"	Tan	"	"	-w/calcareous nodules
10	6	2.50	"	Gray & Tan	"	"	-w/calcareous nodules; 11" sample
	7	0.75	Firm	"	"	"	-w/calcareous nodules & tan sand layer; 9.5" sample
15	X 8	6/6/7	M/Dense	Gray & Tan		SAND	—
20	X 9	6/8/13	"	Gray & Yellowish		"	— MA
	X 10	5/10/9	"	"		"	—
25							Bottom of Boring

CONTINUED:  YES  NO

Project : VICTORIA SHIP CHANNEL, TEXAS

**SUMMARY OF LABORATORY TEST RESULTS**

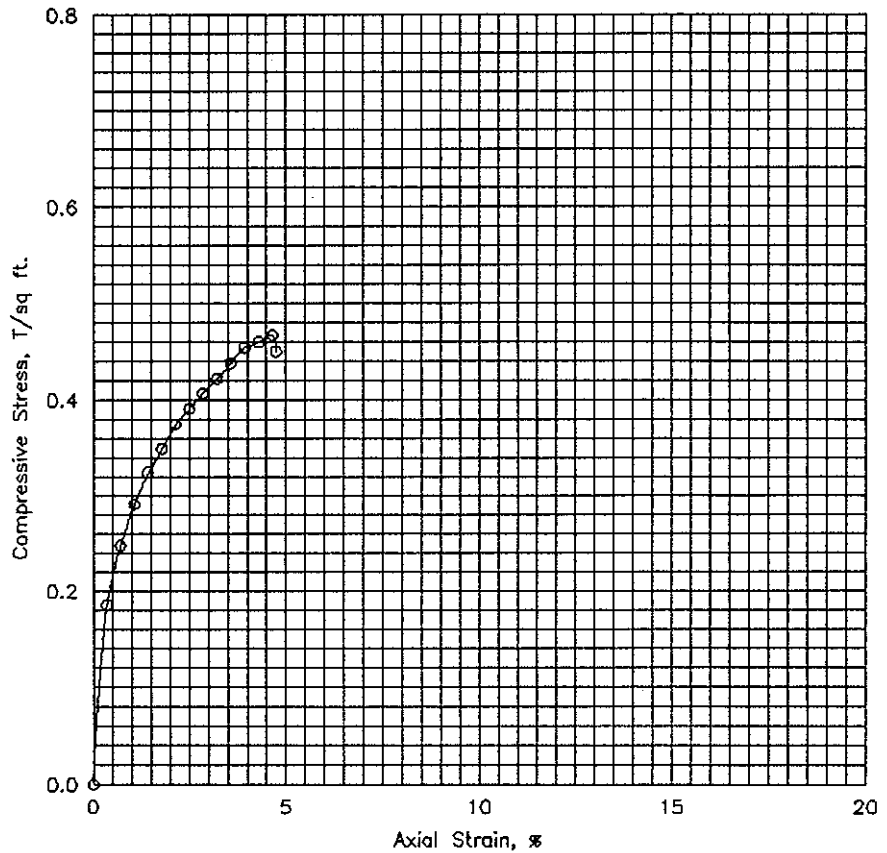
Boring No. 90-29

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)	L L (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2	0.25		Gray, CLAY, soft, slightly silty, with shell fragments	CH	32.0											
2	2 - 4	0.25		Gray, CLAY, soft, slightly silty, with shell fragments	CH	37.0										0.20	
3	4 - 6	1.50		Gray and green, CLAY, stiff, with calcareous nodules, slickensided	CH	44.6	76.6	110.7	97	32	98.8	98.2	97.9	97.3	96.9		0.47
4	6 - 8	2.50		Gray and yellowish brown, CLAY, very stiff, with calcareous nodules, slickensided	CH	42.4											
5	8 - 10	2.50		Gray and yellowish brown, SILTY CLAY, very stiff, with calcareous nodules, slickensided	CL	25.9											
6	10 - 12	2.50		Gray and brown, SILTY CLAY, very stiff, with calcareous nodules and fissures	CL	27.1	97.3	123.7	42	16	100.0	99.7	99.1	98.4	93.7		0.56
7	12 - 14	0.75		Dark and yellowish gray, SILTY CLAY, firm, with silt and calcareous nodules	CL	26.9										0.25	
8	14 - 14.5		13	Gray, SILTY SAND, medium dense	S M						98.6	98.4	98.2	86.6	21.3		
9	19 - 20.5		21	Gray and yellowish, SILTY SAND, medium dense, with shell fragments, and calcareous nodules	S M												
10	22 - 23.5		19	Gray and yellowish, SILTY SAND, medium dense, with shell fragments, and calcareous nodules	S M												

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

Job No. 14G404

Failure Sketches

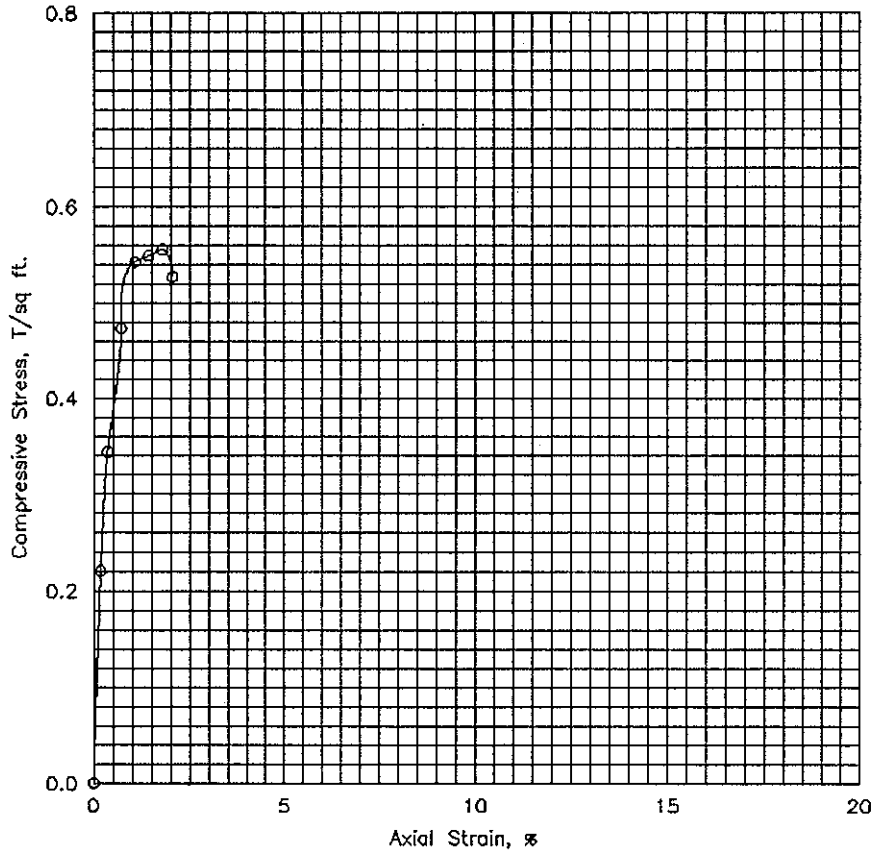


- Controlled stress
- Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	$w_0$	44.6 %	%	%
	Void ratio	$e_0$			
	Saturation	$S_0$	%	%	%
	Dry density, lb/cu ft	$\gamma_d$	76.6		
Time to failure, min		$t_f$	4.37		
Unconfined compressive strength, T/sq ft		$q_u$	.47		
Undrained shear strength, T/sq ft		$S_u$	.23		
Sensitivity ratio		$S_t$			
Initial specimen diameter, in.		$D_0$	2.815		
Initial specimen height, in.		$H_0$	5.590		
Classification Gray and green, CLAY, stiff, w/calcareous nodules, slickensided					
LL	97	PL	32	PI	65
				$G_o$	
Remarks		Project CHANNEL TO VICTORIA, TEXAS			
		Area Channel to Victoria in San Antonio Bay, Texas			
		Boring No. 90-29		Sample No. 3	
		Depth 4-6 ft		Date 7/19/90	
		UNCONFINED COMPRESSION TEST REPORT			

Job No. 14G404

Failure Sketches



- Controlled stress
- Controlled strain

Test No.		1			
Type of Specimen		Undisturbed			
Initial	Water content	$w_0$	27.1 %	%	%
	Void ratio	$e_0$			
	Saturation	$S_0$	%	%	%
	Dry density, lb/cu ft	$\gamma_d$	97.3		
Time to failure, min		$t_f$	1.68		
Unconfined compressive strength, T/sq ft		$q_u$	.56		
Undrained shear strength, T/sq ft		$S_u$	.28		
Sensitivity ratio		$S_t$			
Initial specimen diameter, in.		$D_0$	2.825		
Initial specimen height, in.		$H_0$	5.590		

Classification Gray and brown, Silty CLAY, stiff, w/calcareous nodules & fissures

LL	42	PL	16	PI	26	$G_s$
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Remarks \_\_\_\_\_  
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Project CHANNEL TO VICTORIA, TEXAS  
 Area Channel to Victoria in San Antonio Bay, Texas  
 Boring No. 90-29 Sample No. 6  
 Depth 10-12 ft Date 7/19/90  
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UNCONFINED COMPRESSION TEST REPORT