

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>			1. PROJECT <u>NASA Channel, Clear Creek, Texas</u>		SHEET <u>OF</u>	
DRILLING LOG			2. LOCATION (Coordinates or Station) <u>Tide /2.5 @12:05 Sta. 30/00</u>			
4. HOLE NO. (As shown on drawing title and file No.) 3ST-2			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
10. SIZE AND TYPE OF BIT <u>Shelby Tube - 3"</u>			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		9. TOTAL DEPTH OF HOLE <u>17.5</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u>3 Jars</u> UNDISTURBED <u>3 Cont</u>			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
17. ELEV. TOP OF HOLE			18. TOTAL CORE RECOVERY FOR BORING (%)		16. DATE HOLE STARTED <u>6 June</u> COMPLETED <u>6 June 1962</u>	
19. SIGNATURE OF INSPECTOR						
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
0.0	3.2	-0.7	Water			
3.2	5.0	-2.5	Gray mucky silt, v/soft 3" ST penetrated to 5.0 w/ kelly			Jar 1
5.0	7.5	-5.0	Gray silty mucky clay v/soft 3" ST penetrated to 7.5 w/weight of kelly			Jar 2
7.5	10.0	-7.5	3" ST penetrated to 10.0 w/weight of kelly and 5' rod			Jar 3
10.0	12.5	-10.0	Same as above, to gray tan clay v/stiff, ch @ 10.5			Cont. 1 4.00
12.5	15.0	-12.5	Gray brown sandy clay trace of cal nod v/stiff			Cont. 2 3.00
15.0	17.5	-15.0	Gray brown sandy clay w/thin streaks of fine cal nod v/stiff			Cont. 3 3.00
			Bottomed in above Water 3.2			

10.5
3.2
7.3

NASA CHANNEL IN CLEAR LAKE
INVEST OF CHANNEL DREDGING

TEST DATA SUMMARY

Sheet 1 of 3

FEATURE Log of Soil Boring

BORING NO.	SAMPLE NO.	DEPTH OR ELEV. OF SAMPLE	LABORATORY CLASSIFICATION	MECHANICAL ANALYSIS				ATTERBERG LIMITS		SPECIFIC GRAVITY G	NATURAL WATER CONTENT %	NATURAL DRY DENSITY LBS./CU. FT.	COMPACTION DATA		SHEAR DATA						PERMEABILITY		CONSOLIDATION DATA				REMARKS					
				GRAVEL %	SAND %	FINES %	D ₁₀ *	LL	PL				OPTIMUM WATER %	MAXIMUM DRY DENSITY LBS./CU. FT.	INITIAL e	DRY DENSITY LBS./CU. FT.	w, %	w _p , %	s, %	TYPE TEST	SPECIMEN SIZE INCHES	TEST	σ _{vm} T./SQ. FT.	σ ₁ T./SQ. FT.	c T./SQ. FT.	φ DEGREES		e	k FT./MIN.	p ₀ T./SQ. FT.	p _c T./SQ. FT.	c _c
3ST-1	62	0.0	Test Done By Div.																													
		12.0																														
	4081	15.0	CL	0	14	86	3.00	49.5	20.0		23.9	104.3																				
	4082	17.50	Same as #4081				3.25				17.7	115.4																				
3ST-2	62	0.0	Test Done By Div.																													
		12.5																														
	4083	15.0	CL	0	21	79	4.50	34.2	13.0		17.7	117.2																				
	4084	17.5	Same as #4083				3.50				22.7	106.5																				
3ST-3	62	0.0	TEST DONE BY DIV.																													
		12.5																														
	4085	15.0	CL	0	17	83	3.75	42.2	15.0		19.6	112.8																				
	4086	17.5	SAME AS #4085				4.25				18.8	111.1																				
3ST-4	62	0.0	TEST DONE BY DIV.																													
		12.5																														
	4087	15.0	CL	0	23	77	0.0	33.9	12.0		42.1	67.5																				
	4088	17.5	SAME AS #4087				0.0				39.3	51.0																				
3ST-5	62	0.0	TEST DONE BY DIV.																													
		13.5																														
	4089	16.0	CL	0	21	79		35.4	13.0		42.5	76.2																				
	4090	18.5	SAME AS #4089								45.5																					
3ST-6	62	0.0	TEST DONE BY DIV.																													
		15.0																														
	4091	17.0	CL	0	16	84		35.5	13.0		44.2																					

* Values at Pressure T/SQ. FT.

- Triaxial Compression
UC - Unconfined Compression

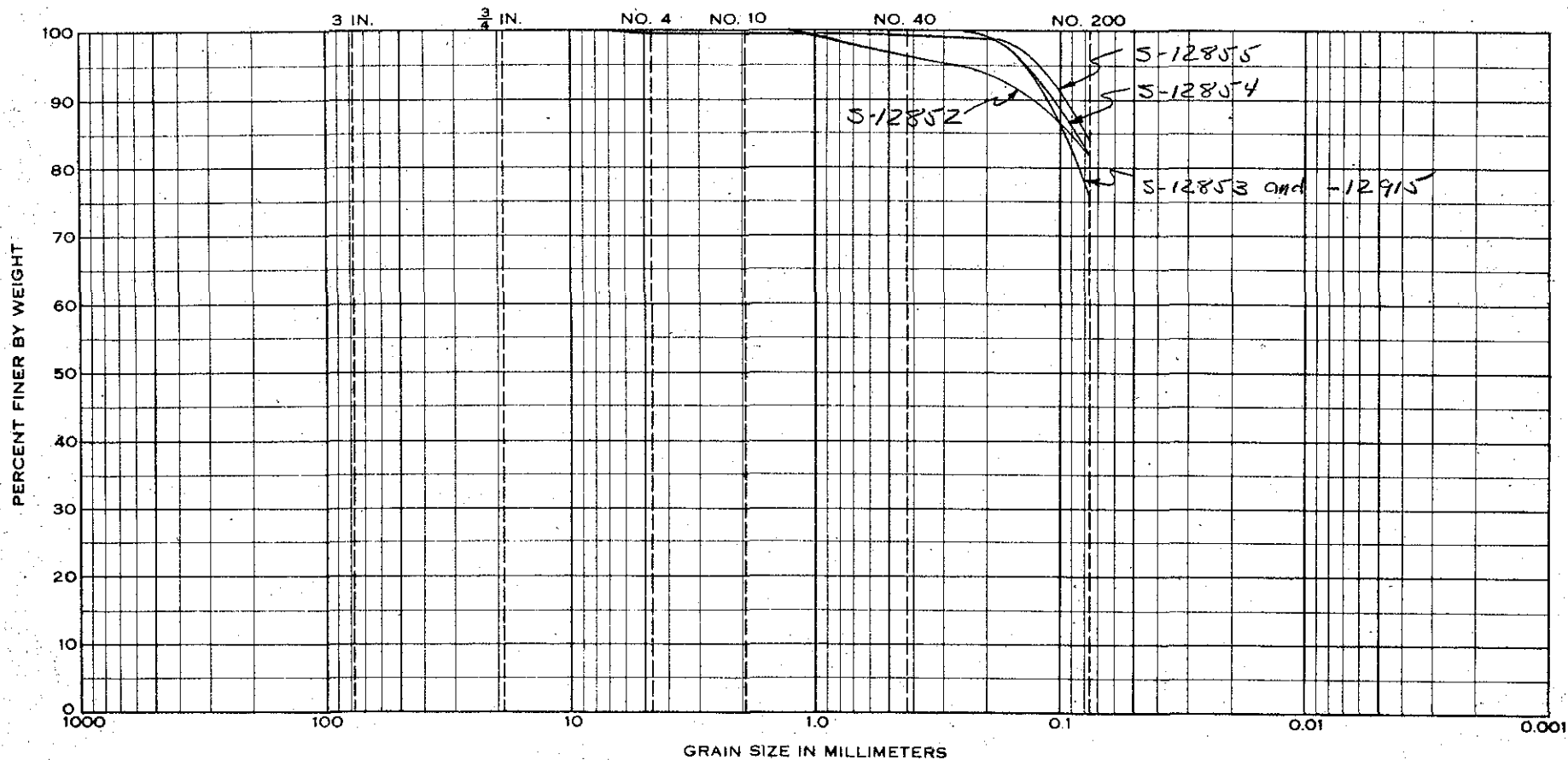
DS - Direct Shear
UU - Unconsolidated Undrained

- Consolidated Drained
CU - Consolidated Undrained

Results of Tests of Foundation Materials

Hole No.	SWD Sample No.	Depth, Feet	Type of Sample	Mechanical Analysis			Limits		Natural Conditions		Pocket Penetrometer, tsf	Classification
				Gr	Sa	Fi	LL	PI	Water Content %	Dry Density Lbs/cu.ft.		
3ST-1	S-12849	3.5 - 7.5	Jar						59.7	-	-	Dk.gray CLAY(CL). (v/soft)
	S-12850	7.5 - 10.0	Jar						43.0	-	-	Dk.gray CLAY(CL). (soft)
	S-12851	10.0 - 12.5	ST						21.7	107	2.75	Gray and yellow CLAY(CH), very stiff.
3ST-2	S-12852	3.2 - 5.0	Jar	0	18	82	68	16	88.0	-	-	Gray CLAY(CH). (v/so)
	S-12853	5.0 - 7.5	Jar	0	24	76	38	16	41.3	-	-	Dk.gray sandy CLAY(CL). (v/so)
	S-12854	7.5 - 10.8	Jar	0	18	82	41	16	74.1	-	-	Dk.gray CLAY(CL). (v/so)
	S-12855	10.8 - 12.5	ST	1	14	85	37	10	22.2	106	2.5	Gray and brownish-yellow CLAY(CL), very stiff.
	S-12915	15.5 - 16.0	Jar	0	23	77	34	13	34.5	-	-	Dk.gray sandy CLAY(CL), few shells.
3ST-3	S-12856	3.7 - 8.0	Jar						43.4	-	-	Dk.gray CLAY(CL).
	S-12857	8.0 - 10.0	Jar						43.4	-	-	Dk.gray CLAY(CL).
	S-12858	10.0 - 12.5	ST						24.4	102	2.5	Olive and gray CLAY(CH), very stiff.
3ST-4	S-12859	2.3 - 6.0	Jar						46.3	-	-	Dk.gray CLAY(CL). v/soft
	S-12860	6.0 - 10.0	Jar						52.5	-	-	Dk.gray CLAY(CL). v/soft
	S-12861	10.0 - 12.5	ST						37.1	82	0.25	Dk.gray CLAY(CL), very stiff.
3ST-5	S-12862	3.5 - 6.0	Jar						49.2	-	-	Dk.gray CLAY(CL).
	S-12863	6.0 - 8.5	Jar						57.3	-	-	Dk.gray CLAY(CL).
	S-12864	8.5 - 11.0	Jar						55.9	-	-	Dk.gray CLAY(CL).
	S-12865	11.0 - 13.0	ST						54.1	69.3	0.25+	Dk.gray CLAY(CL), soft.
3ST-6	S-12866	4.0 - 8.0	Jar						44.6	-	-	Dk.gray CLAY(CH).
	S-12867	8.0 - 10.0	Jar	0	10	90	45	12	47.9	-	-	Dk.gray CLAY(CL).
	S-12868	10.0 - 12.5	Jar						41.8	-	-	Gray CLAY(CL).
	S-12869	12.5 - 15.0	Jar						41.2	-	-	Gray CLAY(CL).
3ST-7	S-12870	4.0 - 8.0	Jar	0	13	87	65	14	79.9	-	-	Dk.gray CLAY(CH).
	S-12871	8.0 - 10.0	Jar						40.5	-	-	Dk.gray CLAY(CL).
	S-12872	10.0 - 12.0	Jar	3	14	83	42	11	40.5	-	-	Dk.gray CLAY(CL).
	S-12873	12.0 - 14.0	ST						26.7	99	1.25	Red and gray CLAY(CH), stiff.
3ST-8	S-12874	4.2 - 8.0	Jar						42.6	-	-	Dk.gray CLAY(CL).
	S-12875	8.0 - 10.0	Jar						42.6	-	-	Dk.gray CLAY(CL).
	S-12876	10.0 - 12.5	Jar						36.6	-	-	Dk.gray CLAY(CL).
3ST-9	S-12877	4.5 - 7.0	Jar						116.3	-	-	Dk.gray CLAY(CH).
	S-12878	7.0 - 10.0	Jar						40.3	-	-	Dk.gray CLAY(CL).
	S-12879	10.0 - 12.5	ST	1	32	67	28	13	24.6	103	0.5	Gray sandy CLAY(CL), medium consistency.
	S-12880	12.5 - 15.0	ST	0	9	91	56	13	28.7	96	1.5	Greenish-gray CLAY(CH), stiff.

U. S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Elev or Depth	Classification	NatWC	LL	PL	PI	
S-12852	3.2-5.0	CLAY (CH)		68	16	52	
-12853	5.0-7.5	Sandy CLAY (CL)		38	16	22	
-12854	7.5-10.8	CLAY (CL)		41	16	25	
-12855	10.8-12.5	CLAY (CL)		37	10	17	
-12915	15.5-16.0	Sandy CLAY (CL)		34	13	21	

GRADATION CURVES							Project NASA Clear Lake Channel
							FOUNDATION MATERIAL
							Area GALVESTON DISTRICT
							Boring No. 357-2
							Date

PLATE NO. 1