

DEPARTMENT OF THE ARMY				HOLE NO. <u>3ST-20</u>		
DIVISION <u>Southwestern</u>				1. PROJECT <u>Viola Ship Channel</u>		
INSTALLATION <u>Galv Dist. Eng Div</u>				2. LOCATION (Coordinates or Station) <u>208' North of centerline Sta. 1559+00</u>		
DRILLING LOG				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>		
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-20</u>				5. NAME OF DRILLER <u>Ross</u>		
6. DIRECTION OF HOLE				7. THICKNESS OF OVERBURDEN		
☐ VERTICAL ☐ INCLINED		DEGREES WITH VERTICAL		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>47.5</u>		
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER		
DISTURBED		UNDISTURBED		16. DATE HOLE		
17. ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		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	5.2		Water			
5.2	8.5		Gray silty sand v/soft med grained w/some shell			Cont. 1
8.5	10.0		Washed same as above			No sample
10.0	12.0		Gray sandy clay v/soft w/some shell No test 1 blow drove from 10.0 to 12.0			Jar 1
12.0	15.0		Washed same as above			No sample
15.0	17.0		Gray green sandy clay stiff w/ silty sand pockets, w/some shell w/some cal nod			Cont. 2 1.00
17.0	18.5		Washed, same as above			No sample
18.5	20.0		18.5-19.0 No count 19.0-19.5 9 blows 19.5-20.0 5 blows Gray green sandy clay w/silty sand pockets w/cal nod w/some shell			Jar 2
20.0	23.0		Washed same as above			No sample
23.0	25.0		Light gray sandy clay v/stiff w/silty sand pockets w/cal nod			Cont. 3 2.50
25.0	28.0		Washed, same as above			No sample
28.0	30.0		Light gray sandy clay stiff w/silty sand pockets w/cal nod			Cont. 4 1.75
30.0	33.0		Washed, same as above			No sample
33.0	35.0		Light gray sandy clay stiff w/cal nod w/silty sand pockets			Cont. 5 1.00
35.0	40.0		Washed from 35.0-to 36.5 same as above from 36.5 to 40.0 same as below			No sample
40.0	41.5		Light gray silty sand med grained w/cal nod No test 100 blows penetrated 0.3'			Jar 3
41.5	46.0		Washed, same as above			No sample
46.0	47.5		46.0-46.5 No count 46.5-47.0 100 blows 47.0-47.5 No count Light gray silty sand med grained w/cal nod No test 100 blows to penetrate 0.5'			Jar 4
			continued			

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____ DRILLING LOG			1. PROJECT Viola Ship Channel		SHEET _____ OF _____	
			2. LOCATION (Coordinates or Station)			
4. HOLE NO. (As shown on drawing title and file No.)			3. DRILLING AGENCY			
5. NAME OF DRILLER						
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL _____			7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
9. TOTAL DEPTH OF HOLE						
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED _____ UNDISTURBED _____			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
16. DATE HOLE STARTED _____ COMPLETED _____						
17. ELEV. TOP OF HOLE			18. TOTAL CORE RECOVERY FOR BORING (%)		19. SIGNATURE OF INSPECTOR	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)		% CORE RECOVERY	BOX OR SAMPLE NO.
			Tide gage 2.3' @ 7:40 AM Water depth 5.2' Tide gage 2.5' @ 5:30 P.M.			REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galveston District</u>			1. PROJECT <u>Viola Channel</u>		SHEET 1 OF	
DRILLING LOG			2. LOCATION (Coordinates or Station) <u>194° N Q</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-1</u>			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			5. NAME OF DRILLER <u>Smith</u>		7. THICKNESS OF OVERBURDEN	
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		8. DEPTH DRILLED INTO ROCK	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED			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>19 Jan</u> COMPLETED <u>19 Jan 62</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	2.5		Fine gray & brown silty cl. sand Spoil			Jar #1
2.5	5.0		Same as above			Jar #2
5.0	10.0		Wash, same as above			
10.0	12.5		Gray sand, medium to coarse grained w/clay laminae. Spoil material			Cont #1
12.5	20.0		Wash, same as above			
20.0	22.5		Same as above w/CaCO ₃ nod.			Jar #3
22.5	28.5		Wash, same as above w/gravel			
28.5	31.0		Greenish gray sandy clay w/alternate sand laminae. Sandy clay hard, sand v/stiff w/cal nod			Cont #2
31.0	40.0		Wash, same as above			
40.0	41.5		Greenish gray sand packed w/many thin bentonitic clay laminae w/small CaCO ₃ nodules. Could not push past 41.5			Jar #4
41.5	46.0					No sample
46.0	48.5		From a very stiff gray sandy cl. to a gray silty cl. sand at 47.0			Cont #3
48.5	52.5		Hard packed gray silty sand			No sample
52.5	54.0		Hard packed gray silty sand			Jar #5
54.0	60.0		Same as above w/some sand stone nod.			No sample
60.0	62.5		Hard packed gray silty cl. sand w/some cal & sand stone nod.			Cont #4
Bottomed at 62.5' Water at 12.0' Weight of hammer 140# Drop distance 30"						

DEPARTMENT OF THE ARMY DIVISION Southwestern INSTALLATION Galv Dist, Eng Div			1. PROJECT Viola Ship Channel		SHEET OF	
DRILLING LOG			2. LOCATION (Coordinates or Station) Sta. 1470/00 centerline			
4. HOLE NO. (As shown on drawing title and file No.) 3ST-2			3. DRILLING AGENCY U. S. Army Corps of Engineers			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		9. TOTAL DEPTH OF HOLE 47.0	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
17. ELEV. TOP OF HOLE			18. TOTAL CORE RECOVERY FOR BORING (%)		16. DATE HOLE STARTED 8 Jan COMPLETED 8 Jan 1962	
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	35.0		Water			
35.0	37.0		Dark gray silty sand w/some v/soft clay			Jar 1
37.0	38.0		Light gray tan silty sand, soft w/small clay pockets			Cont. 1 0.25
38.0	40.0		Same as above			Washed
40.0	41.5		Light gray silty sand w/sandy clay pockets w/cal nod			Jar 2
40.0	41.5		40.0-40.5 No count 40.5-41.0 27 blows 41.0-41.5 28 blows Light gray silty sand w/sandy clay pockets w/cal nod			Jar 2
41.5	45.5		Same as above			Washed
45.5	47.0		Light gray sandy clay w/silty sand layers w/cal nod w/some gravel 45.5-46.0 No count 46.0-46.5 48 blows 46.5-47.0 52 blows			Jar 3
			Hole bottomed in above Weight of hammer 140# Drop Distance 30" Tide gage 1.1 @ 9:20 AM Water depth 35.2 Tide gage 0.9 @ 1:15 PM			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galveston District</u>			1. PROJECT <u>Channel to Viola</u>		SHEET 1 OF	
DRILLING LOG			2. LOCATION (Coordinates or Station) <u>Sta 1475+00 130' N Q</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-3</u>			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
5. NAME OF DRILLER <u>Smith</u>			6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			
7. THICKNESS OF OVERBURDEN			8. DEPTH DRILLED INTO ROCK		9. TOTAL DEPTH OF HOLE <u>52.5'</u>	
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
16. DATE HOLE STARTED <u>20 Jan</u> COMPLETED <u>20 Jan 62</u>			17. ELEV. TOP OF HOLE			
18. TOTAL CORE RECOVERY FOR BORING (%)			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	2.5		Brown & gray silty Cl. sand w/grass roots			Jar #1
2.5	13.0		Very loose packed silty Cl. sand w/decayed veg. No resistance to push			No sample
13.0	15.0		13.5-14.0 5 blows 14.0-14.5 9 blows Fine brown & gray silty Cl. sand w/decayed veg.			Jar #2
15.0	18.0		Med brown & gray silty sand w/some small gravels			No sample
18.0	20.0		Same as above			Cont #1
20.0	25.0		Same as above			No sample
25.0	27.5		Very stiff gray Cl. sand w/cal nod			Cont #2 3.75
27.5	30.0		Hard brown sandy cl. w/sand stone nod.			Cont #3 4.50
30.0	32.5		Same as above			Cont #4 4.50
32.5	35.0		Hard gray sandy Cl w/cal nod.			Cont #5 4.50
35.0	38.0		Fine to med. gray hard packed sand w/cal nod.			No sample
38.0	40.0		Med. gray silty cl. sand w/cal nod			Jar #3
40.0	42.5		Hard gray sandy cl. w/cal nod			Cont #6 4.50
42.5	44.0		Hard gray Cl. sand w/cal nod			Cont #7
44.0	48.0		Hard packed gray silty sand w/cal nod.			No sample
48.0	50.0		48.5-49.0 30 blows 49.0-49.5 70 blows Hard packed gray silty sand			Jar #4
50.0	52.5		Hard packed gray silty Cl. sand w/sandstone nod.			Cont #8
			Bottom at 52.5' Water at 7.0' Weight of Hammer 140# Drop distance 30"			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>				1. PROJECT <u>Viola Ship Channel</u>		SHEET <u>OF</u>	
DRILLING LOG				2. LOCATION (Coordinates or Station) <u>Sta. 1480+00 centerline</u>			
4. HOLE NO. (As shown on drawing title and file No.)				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				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED				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>30 Dec</u> COMPLETED <u>30 Dec 1961</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	34.7		Water				
34.7	39.0		Dark gray gray sandy clay v/soft			Jar 1	
39.0	41.5		Same as above, w/some sandstone nod			Washed	
41.5	43.0		Light gray sandy clay v/stiff w/silty sand pockets, w/caliche w/cal nod 41.5-42.0 No count 42.0-42.5 14 blows 42.5-43.0 27 blows			Jar 2	
43.0	45.0		Gray silty sand med grained w/some clay pockets			Jar 3	
45.0	47.0		Light gray sandy clay hard w/caliche layers w/some gravel			Jar 4	
			Bottomed in above Weight of hammer 140# Drop Distance - 30"				

DEPARTMENT OF THE ARMY Western Salveston District DRILLING LOG Shown on drawing (Title and File No.)		1. PROJECT Viola Channel		SHEET 1 OF 2		
		2. LOCATION (Coordinates or Station) Sta 1484+00 150' N E				
		3. DRILLING AGENCY U. S. Army Corps of Engineers				
		5. NAME OF DRILLER Smith				
DIRECTION OF HOLE ☐ INCLINED ☒ DEGREES WITH VERTICAL		7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE 54.5'		
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL				
13. OVERBURDEN SAMPLES TAKEN UNDISTURBED		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE STARTED 22 Jan COMPLETED 22 Jan 62		
ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		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	2.5		Fine brown & gray silty sand w/sandy cl. parts & grass roots			Jar #1
2.5	5.5		Same as above			No sample
5.5	8.0		Fine gray & brown silty sand w/sandy cl. parts			Jar #2
8.0	10.0		8.5-9.0 6 blows 9.0-9.5 7 blows Fine damp brown silty cl sand			Jar #3
10.0	12.5		Same as above			Cont #1
12.5	15.0		Fine light brown wet silty sand			Jar #4
15.0	18.0		Same as above			No sample
18.0	20.0		18.5-19.0 17 blows 19.0-19.5 20 blows Very fine gray silty sand w/thin layers of hard sandy cl.			Jar #5
20.0	21.5		Same as above			No sample
21.5	24.0		Fine gray silty sand with layers (0.5) of hard gray cl. sand w/cal nod			Cont #2 4.50
24.0	27.0		Wash, same as above			No sample
27.0	29.5		Very fine gray silty cl. sand, Hard packed			Cont #3
29.5	31.0		Same as above			No sample
31.0	32.5		31.5-32.0 35 blows 32.0-32.5 76 blows Very fine hard packed gray silty sand			Jar #6
32.5	35.0		Same as above			No sample
35.0	37.0		Very fine gray silty sand Hard packed			Cont #4
37.0	38.0		Same as above			No sample
38.0	40.0		38.5-39.0 42 blows 39.0-39.5 75 blows Hard packed gray silty sand w/thin cemented sand seams			Jar #7

DEPARTMENT OF THE ARMY			1. PROJECT Viola Channel		SHEET 2F 2	
DIVISION _____			2. LOCATION (Coordinates or Station)			
INSTALLATION _____			3. DRILLING AGENCY			
DRILLING LOG			5. NAME OF DRILLER			
4. HOLE NO. (As shown on drawing title and file No.)			7. THICKNESS OF OVER-BURDEN			
6. DIRECTION OF HOLE			8. DEPTH DRILLED INTO ROCK		9. TOTAL DEPTH OF HOLE	
☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL						
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
DISTURBED			UNOBTAINED		16. DATE HOLE	
					STARTED COMPLETED	
17. ELEV. TOP OF HOLE			18. TOTAL CORE RECOVERY FOR BORING (%)		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)
40.0	43.0		Wash, same as above			No sample
43.0	45.0		Very fine gray silty sand			Jar #8
45.0	47.0		45.5-46.0 29 blows 46.0-46.5 39 blows Very fine gray silty sand w/thin layers of Cl. sand & Cal nod.			Jar #9
47.0	50.0		Wash, same as above			No sample
50.0	52.0		50.5-51.0 14 blows 51.0-51.5 15 blows Very fine gray silty sand			Jar #10
52.0	53.0		Wash, same as above			No sample
53.0	54.5		Same as above with layers (0.5) of hard Cl. sand & cal. nod. Bottom at 54.5' Weight of hammer 140# Drop distance 30" Water at 13.0'			Cont #5

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Calv Dist, Eng Div</u> DRILLING LOG				1. PROJECT <u>Viola Ship Channel</u>		SHEET <u> </u> OF <u> </u>	
				2. LOCATION (Coordinates or Station) <u>Sta. 1490/00 5.0 N centerline</u>			
4. HOLE NO. (As shown on drawing title and file No.)				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL <u> </u>				5. NAME OF DRILLER <u>Ross</u>		9. TOTAL DEPTH OF HOLE <u>47.0</u>	
10. SIZE AND TYPE OF BIT		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER		16. DATE HOLE STARTED <u>30 Dec</u> COMPLETED <u>30 Dec 1961</u>	
17. ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		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	34.1 35.8		Water				
35.8	39.0		Black gray sandy clay v/soft			Jar 1	
39.0	40.0		Light gray tan sandy clay stiff w/silty sand pockets w/cal nod			Jar 2	
40.0	42.0		Same as above			Washed	
42.0	43.5		Light gray rust sandy clay hard w/silty sand pockets w/caliche			Cont. 1 4.5'	
43.5	45.5		Light gray silty sand w/cal nod w/clay pockets			Washed	
45.5	47.0		Light gray silty sand med grained w/cal nod w/clay pockets			Jar 3	
			45.5-46.0 No count 46.0-46.5 37 blows 46.5-47.0 31 blows				
			Bottomed in above Weight of hammer 140# Drop Distance - 30" Tide gage 1.6 @ 7:50 AM Tide gage 1.7 @ 3:40 PM				

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>				1. PROJECT <u>Viola Ship Channel</u>		SHEET <u> </u> OF <u> </u>	
DRILLING LOG				2. LOCATION (Coordinates or Station) <u>Corpus Christi Sta 1495400 79.0' N centerline</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-7</u>				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL <u> </u>				5. NAME OF DRILLER <u>Ross</u>		7. THICKNESS OF OVERBURDEN <u> </u>	
10. SIZE AND TYPE OF BIT <u>Shelby Tube - 3"</u>		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <u> </u>		8. DEPTH DRILLED INTO ROCK <u> </u>		9. TOTAL DEPTH OF HOLE <u>20.0</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </u>		14. TOTAL NO. CORE BOXES <u> </u>		15. ELEV. GROUND WATER <u> </u>		16. DATE HOLE STARTED <u>3 Jan 62</u> COMPLETED <u>3 Jan 62</u>	
17. ELEV. TOP OF HOLE <u> </u>		18. TOTAL CORE RECOVERY FOR BORING (%) <u> </u>		19. SIGNATURE OF INSPECTOR <u> </u>			
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	3.5		Water				
3.5	5.5		Rust silty sand med grained w/some sandstone nod			Jar 1	
5.5	7.5		Washed, same as above				
7.5	9.0		Brown silty sand med grained w/some pea gravel w/some sandstone nod 7.5-8.0 No count 8.0-8.5 15 blows 8.5-9.0 38 blows			Jar 2	
9.0	10.0		Light gray clay w/cal nod w/sandstone nod			No sample	
10.0	12.0		Light gray sandy clay v/stiff w/cal nod w/sandstone nod w/silty sand layers			Cont. 1 2.00	
12.0	15.5		Same as above to 14.5 from 14.5 to 15.5 same as below			Washed	
15.5	17.0		Light gray silty sand fine grained 15.5-16.0 No count 16.0-16.5 6 blows 16.5-17.0 12 blows			Jar 3	
17.0	20.0		Same as above			Washed	
			Bott				

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u> DRILLING LOG				1. PROJECT <u>Viola Ship Channel</u>		SHEET <u> </u> OF <u> </u>	
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-7</u>				2. LOCATION (Coordinates or Station) <u>Corpus Christi Sta 1495/00 79.0' N centerline</u>			
3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>				5. NAME OF DRILLER <u>Ross</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL <u> </u>				7. THICKNESS OF OVERBURDEN <u> </u>		8. DEPTH DRILLED INTO ROCK <u> </u>	
10. SIZE AND TYPE OF BIT <u>Shelby Tube - 3"</u>				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <u> </u>		9. TOTAL DEPTH OF HOLE <u>20.0</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </u>				14. TOTAL NO. CORE BOXES <u> </u>		15. ELEV. GROUND WATER <u> </u>	
17. ELEV. TOP OF HOLE <u> </u>				18. TOTAL CORE RECOVERY FOR BORING (%) <u> </u>		16. DATE HOLE STARTED <u>3 Jan 62</u> COMPLETED <u>3 Jan 62</u>	
19. SIGNATURE OF INSPECTOR <u> </u>							
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	3.5		Water				
3.5	5.5		Rust silty sand med grained w/some sandstone nod			Jar 1	
5.5	7.5		Washed, same as above				
7.5	9.0		Brown silty sand med grained w/some pea gravel w/some sandstone nod 7.5-8.0 No count 8.0-8.5 15 blows 8.5-9.0 38 blows			Jar 2	
9.0	10.0		Light gray clay w/cal nod w/sandstone nod			No sample	
10.0	12.0		Light gray sandy clay v/stiff w/cal nod w/sandstone nod w/silty sand layers			Cont. 1 2.00	
12.0	15.5		Same as above to 14.5 from 14.5 to 15.5 same as below			Washed	
15.5	17.0		Light gray silty sand fine grained 15.5-16.0 No count 16.0-16.5 6 blows 16.5-17.0 12 blows			Jar 3	
17.0	20.0		Same as above Bott			Washed	

DEPARTMENT OF THE ARMY DIVISION <u>Western</u> INSTALLATION <u>Galv Dist. Eng Div</u>			1. PROJECT <u>Viola Ship Channel</u>		SHEET <u>OF</u>	
DRILLING LOG			2. LOCATION (coordinates or Station) <u>Corpus Christi, Sta. 1500/00</u>			
4. HOLE NO. (As shown on drawing title and file No.) 3ST-8			3. DRILLING AGENCY U. S. Army Corps of Engineers			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			5. NAME OF DRILLER Ross		9. TOTAL DEPTH OF HOLE 47.0	
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
17. ELEV. TOP OF HOLE			18. TOTAL CORE RECOVERY FOR BORING (%)		16. DATE HOLE STARTED 29 Dec COMPLETED 29 Dec 1961	
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	37.3		Water			
37.3	39.0		Black gray clay v/soft w/sand w/some gravel			Jar 1
39.0	41.0		Light gray sandy clay plastic w/calc nod w/silty sand pockets			Cont. 1 1.00
41.0	45.5		Washed, silty sand w/clay pockets w/small gravel w/cal nod			Jar 2
45.5	47.0		Light gray gray silty sand w/layers of clay w/sandstone and cemented sand pockets			Jar 3
			45.5-46.0 No count			
			46.0-46.5 22 blows			
			46.5-47.0 20 blows			
			Bottomed in above			
			Weight of hammer 140#			
			Drop Distance - 30"			
			Tide gage 1.6 @ 7:50 AM			
			Tide gage 1.5 @ 2:45 PM			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>			1. PROJECT <u>Viola Ship Channel</u>		SHEET <u> </u> OF <u> </u>	
DRILLING LOG			2. LOCATION (coordinates or Station) <u>Sta. 1505/00 83.0 N centerline</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-9</u>			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL <u> </u>			7. THICKNESS OF OVERBURDEN <u> </u>		8. DEPTH DRILLED INTO ROCK <u> </u>	
10. SIZE AND TYPE OF BIT <u> </u>			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <u> </u>		9. TOTAL DEPTH OF HOLE <u>46.5</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </u>			14. TOTAL NO. CORE BOXES <u> </u>		15. ELEV. GROUND WATER <u> </u>	
17. ELEV. TOP OF HOLE <u> </u>			18. TOTAL CORE RECOVERY FOR BORING (%) <u> </u>		16. DATE HOLE STARTED <u>2 Jan</u> COMPLETED <u>2 Jan 1962</u>	
19. SIGNATURE OF INSPECTOR <u> </u>						
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	9.3 11.0		Water			
11.0	14.0		Gray silty sand plastic w/shell w/some clay			Cont. 1 0.50
14.0	13.3 15.0		Same as above			Washed
15.0	17.0		Gray sandy clay v/soft w/shell No test 1 blow drove tube 0.7' 2nd blow drove tube below 17'			Jar 1
17.0	20.0		Same as above			Washed
20.0	22.0		Gray sandy clay soft w/shell w/silty sand pockets			Cont. 2 0.25
22.0	23.3 25.0		Same as above			Washed
25.0	27.0		Gray silty sand v/soft w/some clay pockets w/shell w/some gravel			Cont. 3 0.0
27.0	30.0		Same as above			Washed
30.0	32.0		Gray silty sand coarse grained w/gravel washed sample No recovery 30.0-30.5 No count 30.5-31.0 3 blows 31.0-31.5 4 blows 31.5-32.0 No count			Jar 2
32.0	35.0		Same as above			Washed
35.0	37.0		Gray silty sand med grained w/gravel Washed sample No test 100 blows penetrated less than 0.5'			Jar 3
37.0	40.0		Gray silty sand w/gravel w/some sandstone nod w/some clay balls			Washed
40.0	41.5		Light gray clay hard w/silty sand layers w/caliche and cal nod 40.0-40.5 No count 40.5-41.0 48 blows 41.0-41.5 79 blows			Jar 4
41.5	45.0		Same as above			Washed
45.0	44.2 46.5		Light gray hard w/sandy clay pockets w/caliche and cal nod 45.0-45.5 No count 45.5-46.0 25 blows 46.0-46.5 42 blows			Tide gage 0.2 9:30 AM Tide gage 1.3 4:50 PM
			Hole bottomed in above			
			Weight of hammer 140# Drop Distance = 30"			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist. Eng Div</u>				1. PROJECT <u>Viola Ship Channel</u>		SHEET <u>1</u> OF <u>1</u>	
DRILLING LOG				2. LOCATION (Coordinates or Station) <u>Corpus Christi, Sta. 1510400</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-10</u>				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL				7. THICKNESS OF OVER-BURDEN		8. DEPTH DRILLED INTO ROCK	
10. SIZE AND TYPE OF BIT				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		9. TOTAL DEPTH OF HOLE <u>47.0</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER		16. DATE HOLE STARTED <u>29 Dec</u> COMPLETED <u>29 Dec 1961</u>	
17. ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		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	37.6		Water				
37.6	38.5		Dark gray gray clay w/sand w/gravel			Jar 1	
38.5	40.0		Light gray sandy clay stiff w/silty sand pockets w/gravel w/cal nod			Cont. 1 1.00	
40.0	45.5		Gray silty sand w/clay pockets w/some gravel			Washed	
45.5	47.0		Gray silty sand w/clay pockets bottom 1.0' light gray clay hard w/layers of fractured sandstone and cemented sand w/cal nod			Jar 2	
			45.5-46.0 No count				
			46.0-46.5 22 blows				
			46.5-47.0 34 blows				
			Bottomed in above				
			Tide gage 1.6 @ 7:50 AM				
			Tide gage 1.5 @ 2:45 PM				
			Weight of hammer 140#				
			Drop Distance 30"				

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>			1. PROJECT <u>Viola Ship Channel</u>		SHEET <u> </u> OF <u> </u>	
DRILLING LOG			2. LOCATION (Coordinates or Station) <u>Corpus Christi, Sta 1515+00 90' N. centerline</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-11</u>			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL <u> </u>			7. THICKNESS OF OVER-BURDEN <u> </u>		8. DEPTH DRILLED INTO ROCK <u> </u>	
10. SIZE AND TYPE OF BIT <u> </u>			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <u> </u>		9. TOTAL DEPTH OF HOLE <u>47.0</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </u>			14. TOTAL NO. CORE BOXES <u> </u>		15. ELEV. GROUND WATER <u> </u>	
17. ELEV. TOP OF HOLE <u> </u>			18. TOTAL CORE RECOVERY FOR BORING (%) <u> </u>		16. DATE HOLE STARTED <u>28 Dec</u> COMPLETED <u>28 Dec 1961</u>	
19. SIGNATURE OF INSPECTOR <u> </u>						
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	8.3		Water			
8.3	10.0		Gray sandy clay soft w/shell			Cont. 1 0.25
10.0	13.0		Gray sandy clay soft w/some shell			Cont. 2 0.25
13.0	15.0		Same as above			Washed
15.0	17.0		Gray sandy clay soft w/shell w/clay pockets			Cont. 3 0.25
17.0	20.0		Same as above			Washed
20.0	22.0		Gray sandy clay plastic w/shell			Cont. 4 0.75
22.0	25.0		Same as above w/some cemented sand nod			Washed
25.0	27.0		Gray sandy clay v/soft w/some shell w/some cemented sand nod			Cont. 5 0.0
27.0	30.5		Gray silty sand w/sandy clay layers w/some shell, w/some cemented sand nod			Washed
30.5	32.0		Gray silty sand w/small gravel w/some cemented sand nod 30.5-31.0 No count 31.0-31.5 11 blows 31.5-32.0 14 blows			Jar 1
32.0	35.0		Same as above			Washed
35.0	36.5		Gray sandy gravel w/some sandstone nod 35.0-35.5 No count 35.5-36.0 16 blows 36.0-36.5 20 blows			Jar 2
36.5	39.5		Same as above			Washed
39.5	41.5		Light gray clay hard w/some cemented sand nod			Cont. 6 4.00
41.5	45.0		Same as above			Washed
45.0	47.0		Light gray clay hard w/cemented sand nod w/silty sand pockets w/some gravel			Cont. 7 4.50+
			Bottomed in above Weight of hammer 140# Drop Distance - 30" Tide gage 1.8 @ 8:35 AM Tide gage 1.5 @ 4:00 PM			

No

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>			1- PROJECT <u>Viola Ship Channel</u>		SHEET <u>OF</u>	
DRILLING LOG			2- LOCATION (coordinates or Station) <u>Sta. 1525/00 Corpus Christi 110 N centerline</u>			
4- HOLE NO. (As shown on drawing title and file No.) <u>3ST-13</u>			3- DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6- DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			7- THICKNESS OF OVER-BURDEN		8- DEPTH DRILLED INTO ROCK	
10- SIZE AND TYPE OF BIT			11- DATUM FOR ELEVATION SHOWN (TBM or MSL)		12- MANUFACTURER'S DESIGNATION OF DRILL	
13- TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED _____ UNDISTURBED _____			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>19 Dec</u> COMPLETED <u>19 Dec 1961</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	17.5		Water			
17.5	20.0		Gray silty sand v/soft w/some shell w/some clay			Cont. 1 0.0
20.0	22.0		Gray silty sand v/soft w/shell			Cont. 2 0.00
22.0	25.0		Washed, same as above			No sample
25.0	26.5		Washed sample gray silty sand med grained 25.0-25.5 No count 25.5-26.0 6 blows 26.0-26.5 6 blows			No recovery Jar 1
26.5	30.0		Washed, same as above from 29.0 to 30.0 some gravel			No sample
30.0	31.5		Washed, sample gray silty sand med grained w/small gravel 30.0-30.5 No count 30.5-31.0 74 blows 31.0-31.5 85 blows			No recovery Jar 2
31.5	35.0		Washed, same as above From 34.5-to 35.0 light gray clay pockets			No sample
35.0	37.0		No recovery, washed sample gray silty sand w/small gravel w/small cemented sand nodules			Jar 3
37.0	40.0		Washed, same as above			No sample
40.0	41.5		Light gray gray silty sand med. grained w/some clay 40.0 -40.5 No count 40.5-41.0 33 blows 41.0-41.5 37 blows			jar 4 4
41.5	45.5		Washed, same as above			No sample
45.5	47.0		Gray silty sand med grained w/some small cemented sand nod 45.5-46.0 No count 46.0-46.5 No test, 46.5-47.0 No count			No recovery Jar 5
No			Hole bottomed in above Tide gage 1.3 @ 8:35 AM Water depth 17.5 Tide gage 2.1 @ 3.00 P.M.			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist. Eng Div</u>				1. PROJECT <u>Viola Channel</u>		SHEET OF	
DRILLING LOG				2. LOCATION (Coordinates or Station) <u>Corpus Christi, Sta. 1530/00 5' south centerline</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-14</u>				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL <u>✓</u>				5. NAME OF DRILLER <u>Ross</u>		7. THICKNESS OF OVERBURDEN	
10. SIZE AND TYPE OF BIT		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		8. DEPTH DRILLED INTO ROCK		9. TOTAL DEPTH OF HOLE <u>47.5</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED _____ UNDISTURBED _____				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>20 Dec</u> COMPLETED <u>20 Dec 1961</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	36.5		Water				
36.5	39.0		Gray silty sand medium grained w/some shell			Jar 1	
39.0	41.5		Washed, same as above				
41.5	43.5		Gray sandy clay plastic w/some shell w/gravel w/cemented sand nodules w/clay pockets			Cont. 1 0.50	
43.5	46.0		Same as above, becoming more sandier at 45.5			No sample	
46.0	47.5		Sandy gravel w/clay pockets 46.0-46.5 No count 46.5-47.0 16 blows 47.0-47.5 13 blows			Jar 2	
			Hole bottomed at 47.5 Weight of hammer 140# Drop Distance - 30" Tide gage 2.1 @ 10:45 AM Water depth 36.5 Tide gage 2.3 @ 4:50 P.M.				

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Calv Dist, Eng Div</u> DRILLING LOG			1. PROJECT <u>Viola Channel</u> 2. LOCATION (Coordinates or Station) <u>centerline</u> <u>Corpus Christi Sta. 1535+00 110' N</u> 3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u> 4. NAME OF DRILLER <u>251</u>		SHEET <u>OF</u> 5. NAME OF DRILLER	
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-15</u> 6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			7. THICKNESS OF OVERBURDEN <u>35</u> 8. DEPTH DRILLED INTO ROCK <u>47.0</u> 9. TOTAL DEPTH OF HOLE <u>47.0</u>			
10. SIZE AND TYPE OF BIT 11. DATUM FOR ELEVATION SHOWN (TBM or MSL) 12. MANUFACTURER'S DESIGNATION OF DRILL			13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </u> 14. TOTAL NO. CORE BOXES <u> </u> 15. ELEV. GROUND WATER <u> </u> 16. DATE HOLE STARTED <u>13 Dec</u> COMPLETED <u>13 Dec 1961</u>			
17. ELEV. TOP OF HOLE <u> </u> 18. TOTAL CORE RECOVERY FOR BORING (%) <u> </u> 19. SIGNATURE OF INSPECTOR <u> </u>						
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	10.0		Water Tide gage 2.7 @ 8:50-AM			
10.0	12.0		Gray silty sand v/soft w/shell Tide gage 2.3 @ 3:25 PM			
12.0	15.0		Washed, same as above Tide gage 2.1 @ 9:15 AM			
15.0	17.0		Gray sandy clay w/some shell No test tube went to bottom of test avg wt			
17.0	20.0		Washed, same as above			
20.0	22.0		Gray sandy clay v/soft w/some shell			
22.0	25.0		Washed, same as above			
25.0	27.0		First 0.5 same as above Gray silty sand med grained w/some shell,			
27.0	30.0		Washed same as above			
30.0	31.5		Gray silty sand med grained w/pea gravel washed sample 30.0-30.5 No count 30.5-31.0 43 blows 31.0-31.5 46 blows			
31.5	34.5		Washed, same as above			
34.5	36.0		Gray silty sand med grained w/gravel w/clay pockets 34.5-35.0 No count 35.0-35.5 5 blows 35.5-36.0 9 blows			
36.0	37.0		Washed, Gray silty sand w/gravel - No recovery 36.0-36.5 17 blows 36.5-37.0 15 blows			
37.0	40.0		Washed			
40.0	42.0		Washed, gray silty sand			
42.0	43.5		Light gray silty sand med grained 42.0-42.5 No count 42.5-43.0 35 blows 43.0-43.5 80 blows			
43.5	45.5		Washed, same as above			
45.5	47.0		Light gray silty sand w/clay pockets w/gravel 45.4-46.0 No count 46.0-46.5 32 blows 46.5-47.0 67 blows			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Calv Dist, Eng Div</u> DRILLING LOG		1. PROJECT <u>Viola Channel</u>		SHEET <u> </u> OF <u> </u>	
2. LOCATION (coordinates or station) <u>Corpus Christi, Sta. 1540+00 centerline</u>		3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-16</u>		5. NAME OF DRILLER <u>Ross</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		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </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>20 Dec</u> COMPLETED <u>20 Dec 1961</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	39.0		Water			
39.0	40.5		Light gray gray sandy silt v/soft w/some gravel going into a sandy clay at bottom of sample			Jar 1
40.5	42.0		Light gray sandy clay hard w/clay seams w/cemented sand nod			Cont. 1 4.00
42.0	45.5		Same as above			Washed
45.5	47.0		Top half of sample Light gray sandy clay hard w/cemented sand nod Bottom half of sample Light gray sandy clay w/cemented sand nod w/silty sand pockets			Cont. 2 4.54
			Bottomed at 47.0 Tide gage 2.1 @ 10:45 AM Water depth 39.0 Tide gage 2.3 @ 4:50 PM			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u>				1. PROJECT <u>Viola Ship Channel</u>		SHEET OF	
DRILLING LOG				2. LOCATION (coordinates or Station) <u>230' N. of centerline Sta. 1545+00</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-17</u>				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL				5. NAME OF DRILLER <u>Ross</u>		7. THICKNESS OF OVERBURDEN	
8. DEPTH DRILLED INTO ROCK		9. TOTAL DEPTH OF HOLE <u>47.5</u>		10. SIZE AND TYPE OF BIT		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	
12. MANUFACTURER'S DESIGNATION OF DRILL		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED UNDISTURBED		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
16. DATE HOLE STARTED <u>8 Dec</u> COMPLETED <u>8 Dec 1961</u>		17. ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		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	4.5		Water				
4.5	8.0		Gray silty sand v/soft med grained w/shell			Cont. 1	0.0
8.0	10.0		Washed same as above			No sample	
10.0	12.0		Gray sandy clay v/soft w/shell No test 1 blow drove tube past test			Jar 1	
10.0	15.0		Washed, same as above			No sample	
15.0	17.0		Gray sandy clay v/soft w/shell No test 1 blow drove tube past test			Jar 2	
17.0	20.0		Washed, same as above			No sample	
20.0	22.0		Gray sandy clay soft w/shell			Cont. 2	0.25
22.0	25.0		Washed, same as above			No sample	
25.0	27.0		Light gray sandy clay soft bottom 0.5 ft. gray silty sand coarse grained			Cont. 3	0.25
27.0	30.0		Washed, same as above			No sample	
30.0	32.0		Gray silty sand w/pea gravel w/shell No recovery washed sample 30.0-30.5 No count 30.5-31.0 5 blows 31.0-31.5 11 blows 31.5-32.0 No count			Jar 3	
32.0	35.0		Washed, same as above			No sample	
35.0	36.5		35.0-35.5 No count 35.5-36.0 16 blows 36.0-36.5 19 blows Gray silty sand w/pea gravel some clay at bottom of sample			Jar 4	
36.5	40.0		Washed light gray sandy clay w/cemented sand layers			No sample	
40.0	41.5		Light gray sandy clay v/stiff w/cemented sand layers			Cont. 4	3.00
41.5	45.5		Washed, same as above			No sample	
45.5	47.5		Light gray sandy clay hard w/cemented sand layers			Cont. 5	4.50
Bottomed in above Tide gage 3.7 @ 8:15 AM Tide gage 2.6 at 4:15 P.M. Water depth 4.5							

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galy Dist, Eng Div</u>				1. PROJECT <u>Viola Ship Channel</u>		SHEET <u> </u> OF <u> </u>	
DRILLING LOG				2. LOCATION (Coordinates or Station) <u>525 N centerline Sta. 1550+00</u>			
3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>				5. NAME OF DRILLER <u>Ross</u>			
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-18</u>				7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL				9. TOTAL DEPTH OF HOLE <u>47.5</u>			
10. SIZE AND TYPE OF BIT <u>Shelby Tube - 3"</u>				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED <u> </u> UNDISTURBED <u> </u>				14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
16. DATE HOLE STARTED <u>6 Dec</u> COMPLETED <u>6 Dec 1961</u>							
17. ELEV. TOP OF HOLE				18. TOTAL CORE RECOVERY FOR BORING (%)		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	9.4	9.4	Water			
10.0	13.0		Gray sandy clay v/soft w/shell			Cont. 1
13.0	15.0		Washed, same as above			No sample
15.0	17.0		Gray sandy clay v/soft w/shell			Cont. 2
17.0	20.0		Washed, same as above			No sample
20.0	22.0		Gray sandy clay v/soft w/shell w/clay pockets			Cont. 3 0.0
22.0	25.0		Washed, same as above			No sample
25.0	27.0		Light gray sandy clay v/stiff w/cal nod			Cont. 4 2.00
27.0	30.0		Washed, same as above			No sample
30.0	32.0		Light gray sandy clay plastic w/silty sand pockets			Cont. 5 0.50
32.0	35.0		Washed, gray silty sand w/some pea gravel w/shell			No sample
35.0	36.5		35.0-35.5 No count 35.5-36.0 11 blows 36.0-36.5 15 blows			No recovery
36.5	40.0		Washed from 35.0 to 40.0 after drive test from 35.0-36.5 Gray silty sand w/shell and gravel about to 37.0 Light gray clay w/gravel from 37.0- to 40.0			Jar 1
40.0	42.0		Brown tan sandy clay hard w/cal nod			Cont. 6 4.50
42.0	45.5		Washed, same as above			No sample
45.5	47.5		Light gray sandy clay v/stiff w/silty sand pockets w/cal nod			Cont. 7 3.50
Bottomed in above Tide gage 2.3' @ 7:55 A.M. Water depth 9.4' Tide gage 2.2' @ 3.00 P.M.						

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist, Eng Div</u> DRILLING LOG			1. PROJECT <u>Viola Ship Channel</u>		SHEET OF	
4. HOLE NO. (As shown on drawing title and file No.) 3ST-19			2. LOCATION (Coordinates or Station) Sta. 1556/00 <u>Corpus Christi 520 Ft. N. centerline</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>		5. NAME OF DRILLER <u>Ross</u>	
10. SIZE AND TYPE OF BIT <u>Shelby Tube - 3"</u>			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED UNDISTURBED			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
16. DATE HOLE STARTED 1 Dec COMPLETED 2 Dec 1961			17. ELEV. TOP OF HOLE			
18. TOTAL CORE RECOVERY FOR BORING (%)			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	4.7 7.00		Water			
7.0	10.0		Gray silty sand v/soft med grained w/shell			Cont. 1 0.0
10.0	11.5 14.0		Washed, same as above			No sample
14.0	16.0		Gray sandy clay soft w/shell w/silty sand pockets			Cont. 2 0.25
16.0	19.0		Washed, same as above			No sample
19.0	21.0		Gray sandy clay plastic w/some shell and cal nod			Cont. 3 0.75
21.0	24.0		Washed, same as below			No sample
24.0	26.0		Light gray-gray sandy clay hard w/cal nod w/some gravel			Cont. 4 4.50/
26.0	29.0		Washed, same as above, several sandstone nodules found on top of following sample washed from this area			No sample
29.0	31.0		Light gray rust sandy clay v/stiff w/cal nod			Cont. 5 3.75
31.0	31.7 34.0		Washed, light gray rust sandy clay w/cal nod			No sample
34.0	37.7 40.0		Washed, gray silty sand med grained w/cal nod			Jar 1
40.0	42.0		Light gray rust sandy clay stiff w/cal nod becoming sandy clay			Cont. 6 1.50
42.0	45.0		Washed, light gray rust sandy clay w/cal nod			No sample
45.0	47.5 45.2		Light gray rust sandy clay plastic w/cal nod			Cont. 7 0.50
Bottomed in above at 47.5 Tide gage 2.1' at 8:00 AM Water depth 6.8' Tide gage 2.1' @ 1:50 P.M. Tide gage 2.3' @ 12:30 P.M. Water 7.0'						

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galv Dist. Eng Div</u> DRILLING LOG				HOLE NO. <u>3ST-20</u>	
				1. PROJECT <u>Viola Ship Channel</u>	
				SHEET <u> </u> OF <u> </u>	
2. LOCATION (Coordinates or Station) <u>208' North of centerline Sta. 1559+00</u>				3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>	
				5. NAME OF DRILLER <u>Ross</u>	
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-20</u>				7. THICKNESS OF OVER-BURDEN	
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL				8. DEPTH DRILLED INTO ROCK	
10. SIZE AND TYPE OF BIT <u>Shelby Tube - 3"</u>				12. MANUFACTURER'S DESIGNATION OF DRILL	
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)				9. TOTAL DEPTH OF HOLE <u>47.5</u>	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
DISTURBED		UNDISTURBED		16. DATE HOLE STARTED <u>5 Dec</u> COMPLETED <u>5 Dec 1961</u>	
17. ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		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	5.2		Water			
5.2	8.5		Gray silty sand v/soft med grained w/some shell			Cont. 1
8.5	10.0		Washed same as above			No sample
10.0	12.0		Gray sandy clay v/soft w/some shell No test 1 blow drove from 10.0 to 12.0			Jar 1
12.0	15.0		Washed same as above			No sample
15.0	17.0		Gray green sandy clay stiff w/ silty sand pockets, w/some shell w/some cal nod			Cont. 2 1.00
17.0	18.5		Washed, same as above			No sample
18.5	20.0		18.5-19.0 No count 19.0-19.5 9 blows 19.5-20.0 5 blows Gray green sandy clay w/silty sand pockets w/cal nod w/some shell			Jar 2
20.0	23.0		Washed same as above			No sample
23.0	25.0		Light gray sandy clay v/stiff w/silty sand pockets w/cal nod			Cont. 3 2.50
25.0	28.0		Washed, same as above			No sample
28.0	30.0		Light gray sandy clay stiff w/silty sand pockets w/cal nod			Cont. 4 1.75
30.0	33.0		Washed, same as above			No sample
33.0	35.0		Light gray sandy clay stiff w/cal nod w/silty sand pockets			Cont. 5 1.00
35.0	40.0		Washed from 35.0-to 36.5 same as above from 36.5 to 40.0 same as below			No sample
40.0	41.5		Light gray silty sand med grained w/cal nod No test 100 blows penetrated 0.3'			Jar 3
41.5	46.0		Washed, same as above			No sample
46.0	47.5		46.0-46.5 No count 46.5-47.0 100 blows 47.0-47.5 No count Light gray silty sand med grained w/cal nod No test 100 blows to penetrate 0.5'			Jar 4
			continued			

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____			1. PROJECT Viola Ship Channel		SHEET _____ OF _____	
			2. LOCATION (coordinates or Station)			
DRILLING LOG			3. DRILLING AGENCY			
			5. NAME OF DRILLER			
4. HOLE NO. (As shown on drawing title and file No.)						
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED			7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
DEGREES WITH VERTICAL					9. TOTAL DEPTH OF HOLE	
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
DISTURBED			UNDISTURBED		16. DATE HOLE STARTED COMPLETED	
17. ELEV. TOP OF HOLE			18. TOTAL CORE RECOVERY FOR BORING (%)		19. SIGNATURE OF INSPECTOR	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)		% CORE RECOVERY	BOX OR SAMPLE NO.
			Tide gage 2.3' @ 7:40 AM Water depth 5.2' Tide gage 2.5' @ 5:30 P.M.			REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

DEPARTMENT OF THE ARMY				HOLE NO. 3ST-20 <i>A</i>		
DIVISION <u>Southwestern</u>			1. PROJECT <u>Viola Ship Channel</u>		SHEET OF	
INSTALLATION <u>Galv Dist, Eng Div</u>			2. LOCATION (<i>Coordinates of Station</i>) <u>Corpus Christi, Sta. 1559/00 110' N centerline</u>			
DRILLING LOG			3. DRILLING AGENCY <u>U. S. Army Corps of Engineers</u>			
4. HOLE NO. (<i>As shown on drawing title and file No.</i>) <u>3ST-20</u>			5. NAME OF DRILLER <u>Reese</u>			
6. DIRECTION OF HOLE			7. THICKNESS OF OVERBURDEN		8. DEPTH DRILLED INTO ROCK	
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			9. TOTAL DEPTH OF HOLE <u>46.5</u>	
10. SIZE AND TYPE OF BIT		11. DATUM FOR ELEVATION SHOWN (<i>TBM or MSL</i>)		12. MANUFACTURER'S DESIGNATION OF DRILL		
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER		
DISTURBED	UNDISTURBED			16. DATE HOLE		
				STARTED <u>12 Jan</u>	COMPLETED <u>12 Jan 1962</u>	
17. ELEV. TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING (%)		19. SIGNATURE OF INSPECTOR		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (<i>Description</i>)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (<i>Drilling time, water loss, depth of weathering, etc., if significant</i>)
0.0	30.0		Water			
30.0	36.5		Gray silty sand v/soft to soft w/shell w/some clay pockets			Jar 1
36.5	37.5		Light gray rust sandy clay v/stiff w/cal nod w/silty sand pockets			Cont. 1 3.00
37.5	40.0		Washed, same as above, except for bottom 0.5' same as below			
40.0	42.0		Light gray silty sand fine grained Washed sample, No test 100 blows to drive tube 0.3'			Jar 2
42.0	45.0		Same as above			Washed
45.0	46.5		45.0-45.5 No count 45.5-46.0 46.blows 46.0-46.5 100 blows Light gray silty sand w/cal nod Washed sample 100 blows from 46.0 to 46.3'			Jar 3
			Completed Tide gage 1.1 @ 9:25 AM Water depth 28.9 Tide gage 1.3 @ 3:00 PM			

DEPARTMENT OF THE ARMY DIVISION <u>Southwestern</u> INSTALLATION <u>Galveston District</u> DRILLING LOG			1. PROJECT <u>Viola Channel</u>		SHEET <u>1</u> OF	
4. HOLE NO. (As shown on drawing title and file No.) <u>3ST-21</u>			2. LOCATION (Coordinates or Station) <u>Sta 1561/50 148' N L</u>			
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED DEGREES WITH VERTICAL			7. THICKNESS OF OVER-BURDEN		8. DEPTH DRILLED INTO ROCK	
10. SIZE AND TYPE OF BIT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED			14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
16. DATE HOLE STARTED <u>26 Jan</u> COMPLETED <u>26 Jan 62</u>			17. ELEV. TOP OF HOLE			
18. TOTAL CORE RECOVERY FOR BORING (%)			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	2.5		Gray sandy clay medium			Cont #1 .50
2.5	5.0		Silty sand very soft clay			Cont #2
5.0	7.5		Silty clayey sand w/broken shell particles			Jar #1
7.5	10.0		Silty clayey sand w/shell particles			Jar #2
10.0	12.5		Silty clayey sand w/shell particles			Cont #3
12.5	15.0		Wash, same as above			No sample
15.0	17.5		Stiff green sandy clay, w/gray silty sand seams			Cont #4 1.75
17.5	20.0		Stiff green sandy clay			Cont #5 2.00
20.0	22.5		Same as below			No sample
22.5	24.5		23.0-23.5 12 blows 23.5-24.0 14 blows gray silty sand, some small gravel & clayey sand			Jar #3
24.5	27.0		Clayey sand gray, green thin layers of silty sand stiff			Cont #6 3.00
27.0	30.0		Wash, same as above			No sample
30.0	32.5		Layers of brown & gray silty sand & gray & brown sandy clay w/cal nod.			Cont #7 4.00
32.5	35.0		Wash, same as above			No sample
35.0	37.5		Same as above			Cont #8 4.50
37.5	41.5		Same as above w/sandstone nodules			Cont #9 4.50
41.5	44.0		Wash, same as above			No sample
44.0	46.0		Hard packed gray silty sand w/small gravel			Jar #4
46.0	47.0					No sample
47.0	49.0		47.5-48.0 14 blows 48.0-48.5 19 blows from as above w/small gravel to hard brown & gray sandy clay at 47.5			Jar #5
Bottom at 49.0 Water @ 5.5' Weight of Hammer 140#, Drop Distance 30"						