

DRILLING LOG

DIVISION
South Atlantic

Hole No. SH-56

INSTALLATION
Savannah River, GA

SHEET 1
OF 2 SHEETS

1. PROJECT
Savannah Harbor

10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon

LOCATION (Coordinates or Station)
See Plan Sta 32+800N. R= "10"

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)
MLW

2. DRILLING AGENCY
Savannah District

12. MANUFACTURER'S DESIGNATION OF DRILL
CME 75

4. HOLE NO. (As shown on drawing title and file number)
SH-56

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN
DISTURBED 3
UNDISTURBED 0

3. NAME OF DRILLER
T. W. Scott

14. TOTAL NUMBER CORE BOXES

6. DIRECTION OF HOLE
 VERTICAL INCLINED _____ DEG. FROM VERT.

15. ELEVATION GROUND WATER

7. THICKNESS OF OVERBURDEN 55.0'

16. DATE HOLE STARTED 4 Feb 78 COMPLETED 4 Feb 78

8. DEPTH DRILLED INTO ROCK 0.0'

17. ELEVATION TOP OF HOLE 0.0 MLW

9. TOTAL DEPTH OF HOLE 55.0' MLW

18. TOTAL CORE RECOVERY FOR BORING

19. SIGNATURE OF INSPECTOR
CHARLES D. GRIFFIN

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 MLW	0'					
	5'					
	10'		Water			
	15'					
	20'					
	25'					
-29.5 -30.0	30'		Bottom of river -29.5' MLW SM - Tan & gray silty sand			

Continued on sheet 2
NOTE: Soils field classified in accordance with Unified Soil Classification System.

BLOWS PER FOOT:
Number required to drive 1 3/8" ID splitspoon w/ 140 lb hammer falling 30"

PROJECT Savannah Harbor **INSTALLATION** Savannah River, GA **SHEET** 2
OF 2 SHEETS

ELEVATION a	DEPTH 30'	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) f
			SM - Tan and gray fine and medium silty sand with some pea size gravel		1	
	35'		Gray			
	40'		Fine to medium sand with shell fragments		2	
	45'		Medium to coarse sand			
	50'		Medium to coarse sand and gravel with shell fragments		3	
-55.0	55'		Bottom of hole -55.0' MLW			

10
14
19
25
31
36
40
46
58
71
68
5
40
31
29
41
37

DRILLING LOG

DIVISION

South Atlantic

INSTALLATION

Savannah River, GA

Hole No. SH-57

SHEET 1 OF 2 SHEETS

1. PROJECT

Savannah Harbor

10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon
11. DATUM FOR ELEVATION SHOWN (TBM or MLW)

MLW

2. LOCATION (Coordinates or Station)

See Plan Sta 31+000N, R= 11670"

12. MANUFACTURER'S DESIGNATION OF DRILL

CME 75

3. DRILLING AGENCY

Savannah District

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 3

UNDISTURBED 0

4. HOLE NO. (As shown on drawing title and file number)

SH-57

14. TOTAL NUMBER CORE BOXES

15. ELEVATION GROUND WATER

5. NAME OF DRILLER

T. W. Scott

16. DATE HOLE STARTED COMPLETED

3 Feb 78

3 Feb 78

6. DIRECTION OF HOLE

VERTICAL INCLINED _____ DES. FROM VERT.

17. ELEVATION TOP OF HOLE 0.0 MLW

7. THICKNESS OF OVERBURDEN

55.0'

18. TOTAL CORE RECOVERY FOR BORING

8. DEPTH DRILLED INTO ROCK

0.0'

19. SIGNATURE OF INSPECTOR

CHARLES D. GRIFFIN

9. TOTAL DEPTH OF HOLE

55.0' MLW

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 MLW	0'					
	5'					
	10'					
	15'					
	20'					
	25'					
-26.5			Bottom of River -26.5' MLW		JAR	
			SM- Gray and tan fine to medium silty sand		1	Blows
-30.0	30'		Continued on sheet 2			17
			NOTE: Soils field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/ 140 lb hammer falling 30'

DRILLING LOG (Cont Sheet) LOCATION TOP OF HOLE **0.0 MLW** Hole No. **SH-57**

PROJECT **Savannah Harbor** INSTALLATION **Savannah River, GA** SHEET **2** OF **7** SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	30'		SM - Gray and tan fine to medium silty sand				45
			Medium to coarse sand				44
	35'						51
							50
-37.0							61
	40'		CH - Green fat clay		2		11
							14
	45'						19
							21
	50'						27
					3		20
	55'		with traces of fine sand and mica				24
-55.0							2
							28
							27
							29
							25

Bottom of hole -55.0' MLW

DRILLING LOG

DIVISION
South Atlantic

Hole No. SH-58

1. PROJECT
Savannah Harbor

INSTALLATION
Savannah River, GA

SHEET 1
OF 2 SHEETS

LOCATION (Coordinates or Station)
Sta 27+300S, R= "9"

10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon
11. DATUM FOR ELEVATION SHOWN (TBM or MLW)
MLW

2. DRILLING AGENCY
Savannah District

12. MANUFACTURER'S DESIGNATION OF DRILL
CME 75

4. HOLE NO. (As shown on drawing title and file number)
SH-58

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN
DISTURBED 4 UNDISTURBED 0

3. NAME OF DRILLER
T. W. Scott

14. TOTAL NUMBER CORE BOXES

6. DIRECTION OF HOLE
 VERTICAL INCLINED _____ DEG. FROM VERT.

15. ELEVATION GROUND WATER

7. THICKNESS OF OVERBURDEN 55.5'

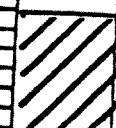
16. DATE HOLE STARTED 30 Jan 77 COMPLETED 30 Jan 77

8. DEPTH DRILLED INTO ROCK 0.0'

17. ELEVATION TOP OF HOLE 0.0 MLW




9. TOTAL DEPTH OF HOLE -55.5' MLW

18. TOTAL CORE RECOVERY FOR BORING
19. SIGNATURE OF INSPECTOR
CHARLES D. GRIFFIN

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'					
	5'		Water			
	10'					
	15'					
	20'					
	25'					
	27.0'		Bottom of river -27.0' MLW			
	30'		CH - Green fat clay	JAR		BLOWS
			Continued on sheet 2	1		4
			NOTE: Soils field classified in accordance with the Unified Soil Classification System.			7

BLOWS PER FOOT:
Number required to drive
1 3/8" ID splitspoon w/
140 lb hammer falling 30"

OBJECT Savannah Harbor INSTALLATION Savannah River, GA SHEET 2 OF 9 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS	
	30'		CH - Green fat clay				18	
	35'		SM - Gray medium and coarse silty sand		2		21	
	40'		Medium silty sand				20	
	45'						20	
			CH - Green hard clay		3		31	
	50'						38	
							60	
	55'				4		61	
							49	
							60	
							5	
							63	
							71	
							82	
							79	
							80	
			BOTTOM OF HOLE - 55.5' MLW					

DRILLING LOG

DIVISION
South Atlantic

Hole No. SH-59

SHEET 1
OF 2 SHEETS

1. PROJECT Savannah Harbor		INSTALLATION Savannah River, GA	
2. LOCATION (Coordinates or Station) Sta 24+900N, R="7"		10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon	
3. DRILLING AGENCY Savannah District		11. DATUM FOR ELEVATION SHOWN (TBM or MLW) MLW	
4. HOLE NO. (As shown on drawing title and file number) SH-59		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
5. NAME OF DRILLER T. W. Scott		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 4 UNDISTURBED: 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		14. TOTAL NUMBER CORE BOXES	
7. THICKNESS OF OVERBURDEN 56.0'		15. ELEVATION GROUND WATER	
8. DEPTH DRILLED INTO ROCK 0.0'		16. DATE HOLE STARTED: 31 Jan 78 COMPLETED: 31 Jan 78	
9. TOTAL DEPTH OF HOLE -56.0'		17. ELEVATION TOP OF HOLE 0.0 MLW	
		18. TOTAL CORE RECOVERY FOR BORING %	
		19. SIGNATURE OF INSPECTOR CHARLES D. GREEN	

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'					
	5'		Water			
	10'					
	15'					
	20'					
	25'					
	26.0'		Bottom of river -26.0' MLW		JAR	BLOWS
	30'		SM - Gray and tan fine and medium silty sand		1	10
			Continued on sheet 2			1
NOTE: Soils field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/ 140 lb hammer falling 30'

DRILLING LOG (Cont Sheet)

FROM TOP OF HOLE


0.0 MLW

Hole No. SH-59

PROJECT Savannah Harbor

INSTALLATION Savannah River, GA

SHEET 2 OF 2 SHEETS

ELEVATION a	DEPTH 30' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
			SM - Gray and tan fine and medium silty sand				16
							19
							19
	35'		Gray fine silty sand				20
							28
	40'						19
							17
			CH - Green fat clay, soft, with fine sand		2		15
							17
	45'						21
			Greenish gray with thin fine sand lenses		3		18
							19
	50'		Green				27
							25
							20
							23
	55'		Fat clay with thin sand lenses and some traces of fine mica		4		20
			Bottom of hole -56.0' MLW				

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah, GA	HAIC No. SH-79
1. PROJECT Savannah Harbor Comprehensive Study		SHEET 1 OF 1 SHEETS		
2. LOCATION (Coordinates or Station) X-872.025, Y-756.210 (off-set 60' N)		10. SIZE AND TYPE OF BIT 1 3/8" I.D. Splitspoon, 5"		
3. DRILLING AGENCY Savannah District		11. DATUM FOR ELEVATION SHOWN (TBM or MLW) MLW		
4. HOLE NO. (As shown on drawing title and file number) SH-79		12. MANUFACTURER'S DESIGNATION OF DRILL Sprague & Henwood		
5. NAME OF DRILLER T.W. Scott		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		DISTURBED 4 UNDISTURBED		
7. THICKNESS OF OVERBURDEN 51.2'+		14. TOTAL NUMBER CORE BOXES		
8. DEPTH DRILLED INTO ROCK 0.0'		15. ELEVATION GROUND WATER		
9. TOTAL DEPTH OF HOLE 51.2'		16. DATE HOLE STARTED 9 Nov 82 COMPLETED 9 Nov 82		
		17. ELEVATION TOP OF HOLE 0.0' MLW		
		18. TOTAL CORE RECOVERY FOR BORING		
		19. SIGNATURE OF INSPECTOR James Arthur, Geologist		

ELEVATION 0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
-37.5'	35		Water			Note: Water depth was determined by length of drill rods and maybe less than shown due to rods sinking through soft material. Strong currents prevented use of weighted tape.
			Bottom of Harbor 37.5'			
-42.2'	40		MH-Grayish green plastic silt		1	Note: 35.0' scale of 0 change. 37.5' to 42.2' weight of hammer drove splitspoon.
-45.2'	45		Green, clayey, compact		2	
-48.2'			With trace of fine sand		3	
-49.7'	50		With some thin gray streaks of fine sand			
-51.2'			With increase in fine sand.		4	
			Bottom of Hole: 51.2'			
			Note: Soils field classified in accordance with the Unified Soil Classification System.			Blows Per Foot: Number required to drive 1 3/8" ID splitspoon w/140 lb. hammer falling 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	Hole No. SH-266
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5 1/2" FISHTAIL	SHEET 1 OF 1 SHEETS
2. LOCATION (Coordinates or Station) X-865516 Y-758723 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number)		SH-266	13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED: 6 UNDISTURBED: 0
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES	0
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	N/A
7. THICKNESS OF OVERBURDEN			16. DATE HOLE	STARTED: 8 JAN 92 COMPLETED: 8 JAN 92
8. DEPTH DRILLED INTO ROCK			17. ELEVATION TOP OF HOLE	0.0'
9. TOTAL DEPTH OF HOLE			18. TOTAL CORE RECOVERY FOR BORING	N/A %
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0.0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) f
	35		Water			BLOWS Scale change at 35.0'. Set 6" diameter casing by own weight to 48.6'.
	-38.8'		Bottom of Harbor 38.8'			
	40		(MH) Dark grey to black clayey SILT.		1	Weight of hammer drove splitspoon from 38.8' to 47.8'. Jar sample 2 at change of material from approx. 47.2' to 47.8'.
	-47.2'		(CH) Olive-grey fat CLAY. Trace of silt.		2	
	-49.3'		Trace of fine sand.		3	
	50					
	-55.3'		Some silt.		4	
	55					
	-59.8'		Bottom of Boring 59.8'		5	
	60		NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.		6	
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".





DRILLING LOG	DIRECTION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-866086 Y-758441 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-267		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 6 UNOISTURBED: 0	
5. NAME OF DRILLER DOUGLAS LAROCHE		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.6 (Water 43.1')		16. DATE HOLE STARTED: 8 JAN 92 COMPLETED: 8 JAN 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.6'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc. If significant)	BLOWS
0.0	0				JAR		
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 49.6'.	
			Bottom of Harbor 43.1'				
-43.1'	45		(MH) Dark grey to black clayey SILT.		1	Weight of rods drove splitspoon to 46.9'. Cont'd. drive to 47.6' w/four blows. 0	
-46.5'			Layer of coarse sand.		2		4
-46.7'			(CH) Olive-grey, fat CLAY. Trace of fine sand & silt.		3		10
	50				4	Jar Sample #2 taken at material change from approx. 46.7' to 47.6'.	15
	55				5		20
					6		25
	60		Bottom of Boring 59.6'				24
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.							BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-866693 Y-757588 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBH or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-268			BURDEN SAMPLES TAKEN DISTURBED: 4 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.0' (Water 43.0')			16. DATE HOLE STARTED: 14 NOV 91 COMPLETED: 14 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.05'			18. TOTAL CORE RECOVERY FOR BORING N/A	
19. SIGNATURE OF INSPECTOR DAVID CHRIS LEETH, Geologist				

ELEVATION 0.0	DEPTH 0	LEGEND e	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
			Water				
	40						
-43.0'			Bottom of Harbor 43.0'				
-44.5'	45		(SW) Grey, fine to large grained, well graded SAND. Saturated, no odor.		1		20
			(M4) Green, fat SILT. Some clay. Dry, mild organic odor.		2		10
							36
-50.0'	50						15
					3		22
							21
							22
	55						19
							14
							17
-60.5'	60						14
			Bottom of Boring 60.5'		4		27
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	MOLE NO. SH-273
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail		SHEET 1 OF 1 SHEETS
2. LOCATION (Coordinates or Station) X-869914 Y-755945 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314		
4. HOLE NO. (As shown on drawing title and file number) SH-273		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 6
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES N/A		UNDISTURBED 0
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 60.4' (Water 45.4')		16. DATE HOLE		STARTED 7 JAN 92
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'		COMPLETED 7 JAN 92
9. TOTAL DEPTH OF HOLE 60.4'		18. TOTAL CORE RECOVERY FOR BORING N/A		X
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0'	0						
-45.4'	45		Bottom of Harbor 45.4'			Scale change at 45.0'. set 6" casing by own weight to 46.9'.	
			(CL) Dark olive-grey, lean CLAY.		1		16
	50				2		17
					3		16
	55				4		21
			(CH) Dark olive-grey, fat CLAY.		5		21
-55.9'					6		23
-57.4'			(SC) Dark olive-grey, fine clayey SAND.				18
-58.9'			(CH) Dark olive-grey, fat CLAY. Some fine sand.				9
-60.4'	60		Bottom of Boring 60.4'				12
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	17

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION VANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 1/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X-870921 Y-756016 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-275		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN : DISTURBED 5 ; UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.2' (Water 46.7')		16. DATE HOLE : STARTED 7 JAN 92 ; COMPLETED 7 JAN 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.2'		18. TOTAL CORE RECOVERY FOR BORING N/A x	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0'	0	.					
	45		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 44.2'.	
-46.7'		••••	(SP) Brown, coarse, poorly graded SAND. Trace of silt.		1		16
-48.2'		▨	(CL) Dark olive-grey, lean CLAY.		2		38
	50						22
					3		22
	55						20
-55.7'		▨	(SC) Dark olive-grey, fine clayey SAND.		4		24
							14
							18
-60.2'	60	▨			5		24
			Bottom of Boring 60.2'				
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.							
BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".							

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" Fishtail	
2. LOCATION (Coordinates or Station) X-872985 Y-755933 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-279		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.7' (Water 44.9')		16. DATE HOLE STARTED 24 NOV 91 COMPLETED 24 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.7'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0						
	40		Water			Scale changed at 40.0'. Set 6" diameter casing by own weight to 47.8'.	
-44.9'	45		Bottom of Harbor 44.9'				
-47.2'			(SP) Tan, poorly graded coarse SAND.		1	Weight of rods drove splitspoon from 44.9' to 47.2'.	0
-50.2'	50		(CL) Olive-grey, silty, lean CLAY.		2		38
-51.7'			Trace of fine sand.				22
-55.7'	55		(SC) Olive-grey, fine clayey SAND. Trace of silt.		3		48
-56.2'			(CH) Olive-grey & grey, fat CLAY. Trace of silt & fine sand.		4		42
-57.7'			Olive-grey, some silt & fine sand.				19
-59.2'	60		(CL) Olive-grey, silty lean CLAY. Trace of fine sand.		5		20
-60.7'			Bottom of Boring 60.7'				22
							27
							23

Continued on sheet #2
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.

BLOWS PER FOOT:
Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-873207 Y-755300 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-280			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 9 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.8' (Water 40.3')			16. DATE HOLE STARTED 10 MAR 92 COMPLETED 10 MAR 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.8'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. / JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0						
			Water				
	40		Bottom of Harbor 40.3'			Scale change at 40.0'. Set 6" diameter casing by own weight to 48.3'.	
-40.3'			(SP) Grey, medium, poorly graded SAND. Trace of silt & small shell fragments.		1	Weight of rods drove splitspoon from 40.3' to 42.6'. Cont'd. drive to 43.3'. Jar sample 1 from 40.3' to 43.3'.	0 5
-44.8'	45		(SC) Very dark grey to black, medium to coarse clayey SAND. Trace of small shell fragments.		2	Weight of rods drove splitspoon from 46.3' to 47.8'.	1
-46.3'			(CH) Very dark grey to black, fat CLAY. Some fine sand.		3	Jar sample 5 from change of material at approx. 48.8' to 49.3'.	11
-47.8'			(SC) Very dark grey to black, fine clayey SAND. Some fine gravel.		4		0
-48.8'			(CH) Olive-grey, fat CLAY. Trace of fine sand.		5		10
	50				6		10
							13
-52.3'			(SC) Olive-grey, fine clayey SAND.		7		18
	55						13
							10
-56.8'			(CH) Olive-grey, fat CLAY. Some fine sand & light grey streaks.		8		11
					9		22
-59.8'	60		Bottom of Boring 59.8'				
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	




DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coord/notes or Station) X=874328 Y=755643 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-282			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 6 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.3' (WATER 43.4')			16. DATE HOLE STARTED 24 NOV 91 COMPLETED 24 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.3'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY JAR	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0						
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.9'.	
-43.4'			Bottom of Harbor 43.4'				
	45		(SP) Greyish-tan, poorly graded coarse SAND. Trace of fine gravel & silt.		1		0
-46.8'			Grey.			Weight of rods drove splitspoon from 43.4' to 45.3'.	23
-48.3'			Light grey.		2	Began using Florigel drilling mud at 49.8'.	24
	50						39
-51.3'			(CL) Dark olive-grey, silty lean CLAY. Trace of fine sand.		3		26
-52.8'			Some fine sand.				40
-54.3'			(SC) Dark olive-grey, clayey fine SAND. Some silt.		4		18
-55.8'			(CH) Light & dark olive-grey, fat CLAY. Trace of silt.		5		20
-57.3'			Some silt & fine sand.				23
-58.8'			(SC) Dark olive-grey, fine clayey SAND. Some silt.		6		29
-60.3'	60						29
			Bottom of Boring 60.3'				
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X-874081 Y-754828 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-283		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.8' (WATER 39.4')			16. DATE HOLE STARTED 25 NOV 91 COMPLETED 25 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.8'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY J A R	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g BLOWS
			Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 46.0'.
	35					
			Bottom of Harbor 39.4'			
-39.4'	40		(MH) Dark grey to black, clayey SILT. Very soft & wet.		1	Weight of rods drove splitspoon from 39.4' to 45.8'. 0
	45					
-45.8'			(CH) Dark olive-grey, fat CLAY. Trace of silt & fine sand.		2	28
			Some fine sand.			22
-48.8'						31
-50.3'	50		(SC) Dark olive-grey, fine clayey SAND. Trace of silt.		3	29
						23
						16
-54.8'	55		Several grey fat clay layers up to 0.1' thick.		4	24
						18
-57.8'			No grey fat clay layers.			20
	60				5	21
-60.8'			Bottom of Boring 60.8'			
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION ANNAAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-875276 Y-754990 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-286		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 4 UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.9' (Water 44.9')		16. DATE HOLE STARTED 18 MAR 92 COMPLETED 18 MAR 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.9'		18. TOTAL CORE RECOVERY FOR BORING N/A	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)
0.0	0		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.5'. BLOWS
	40					
-44.9'	45		(CH) Olive-grey, fat CLAY. Thin layer about 0.2' thick of very dark grey, fine to medium silty sand with some small shell fragments from 44.9' to approx. 45.1'.		1	
			Trace of fine sand in thin streaks & lenses.		2	
-50.9'	50		(SC) Olive-grey, fine clayey SAND.		3	
-52.4'			Several streaks approx. 0.1' thick of light grey fat clay from 56.9' to 58.4'.		4	
-56.9'	55					
-59.9'	60		Bottom of Boring 59.9'			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			

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SAVANNAH HARBOR BORING LOGS

From Station 0+000

To

Station 24+000

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah River, GA	SHEET 1 OF 2 SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon	
2. LOCATION (Coordinates or Station) See Plan Sta 11+800E. R= "7"		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL CMB 75	
4. HOLE NO. (As shown on drawing title and file number) SH-60		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0	
5. NAME OF DRILLER T. W. Scott		14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DES. FROM VERT.		15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 55.5'		16. DATE HOLE STARTED: 2 Feb 78 COMPLETED: 2 Feb 78	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0 MLW	
9. TOTAL DEPTH OF HOLE 55.5' MLW		18. TOTAL CORE RECOVERY FOR BORING 3	
19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN			

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 MLW	0'	c	d	e	f	g
	5'		Water			
15.0	15'		Bottom of river -15.0' MLW		JAR	Blows
	18.0'		Probable soft silt to 18.0'			
	20'		SM - Greenish gray silty fine sand, soft, with pockets of silt and fine shell fragments. Weight of hammer pushed rods with splitspoon from -15.0' to -22.5'		1	
	25'				2	
-30.0	30'		Continued on sheet 2			
NOTE: Soils field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/ 140 lb hammer falling 30"

DRILLING LOG (Cont Sheet)


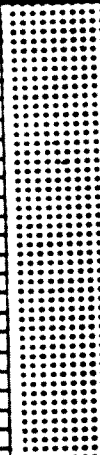
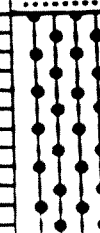
FROM TOP OF HOLE

Hole No. **SH-60**

PROJECT
Savannah Harbor

INSTALLATION
**0 0 MLW
Savannah River, GA**

SHEET **2**
OF 2 SHEETS

ELEVATION a	DEPTH 30'	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. ERY e	BOX OR SAMPLE NO. JAR f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	30'		SM - Greenish gray silty fine sand with shell fragments			
	35'		Fine to medium sand			
-37.5			SP - Light gray poorly graded sand and pea size gravel		3	
	40'					
	45'				4	
-49.5			SM - Gray silty fine and medium sand with shell fragments.		5	
	50'					
-55.5	55'		Bottom of hole -55.5' MLW			

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DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah River, GA	SHEET 1 OF 2 SHEETS
1. PROJECT Savannah Harbor LOCATION (Coordinates or Station) Sta 11+800E, R= "7"		10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon	
2. DRILLING AGENCY Savannah District		11. DAYUM FOR ELEVATION KNOWN (TW or MLW) MLW	
4. HOLE NO. (As shown on drawing title and file number) SH-61		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
3. NAME OF DRILLER T. W. Scott		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 3 UNDISTURBED: 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		14. TOTAL NUMBER CORE BOXES	
7. THICKNESS OF OVERBURDEN 55.0'		15. ELEVATION GROUND WATER	
8. DEPTH DRILLED INTO ROCK 0.0'		16. DATE HOLE STARTED: 1 Feb 78 COMPLETED: 1 Feb 78	
9. TOTAL DEPTH OF HOLE -55.0' MLW		17. ELEVATION TOP OF HOLE 0.0 MLW	
		18. TOTAL CORE RECOVERY FOR BORING 3	
		19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN	

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'					
	5'		Water			
	10'					
	15'					
			Bottom of river -17.5' MLW		JAR	BLOWS
	20'	|||||	OL - Black silt, very soft			0
		|||||	NOTE: Weight of hammer pushed rods with splitspoon from -17.5' to 32.5'		1	0
	25'	|||||				0
		|||||				0
	30'	|||||				0
			Continued on sheet 2			
			NOTE: Soils field classified in accordance with the Unified Soil Classification System			
						BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/

DRILLING LOG (Cont Sheet)

FROM TOP OF HOLE

0.0 MLW

Hole No. SH-61

PROJECT
Savannah Harbor

INSTALLATION
Savannah River, GA

SHEET 2
OF 2 SHEETS

ELEVATION a	DEPTH 7ft	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. ERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) f	BLOWS
			OL - Black soft silt				0
	35'		SM - Gray silty fine sand with soft silt lenses		2		4
	40'						1
	45'						1
							7
							5
							9
							8
							6
	50'						11
							14
			Gray slightly clayey silty sand with some fine shell fragments		3		40
	55'						48
			Bottom of hole -55.0' MLW				

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Savannah River, GA		SHEET 1 OF 2 SHEETS	
1. PROJECT Savannah Harbor				10. SIZE AND TYPE OF BIT: 3/8" ID solid spoon			
LOCATION (Coordinates or Station) Sta 1+500 N, R="5"				11. DATUM FOR ELEVATION SHOWN (TBM or BBL)			
DRILLING AGENCY Savannah District				12. MANUFACTURER'S DESIGNATION OF DRILL MTV CME 75			
4. HOLE NO. (As shown on drawing title and file number) SH-62				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4	
5. NAME OF DRILLER T. W. Scott				14. TOTAL NUMBER CORE BOXES		UNDISTURBED 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER			
7. THICKNESS OF OVERBURDEN 56.0'				16. DATE HOLE STARTED 13 Feb 78		COMPLETED 13 Feb 78	
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0 MLW			
9. TOTAL DEPTH OF HOLE -56.0' MLW				18. TOTAL CORE RECOVERY FOR BORING			
				19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN			

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 MLW	0'					
	5'		Water			
	10'					
	15'					
	20'					
	25'					
	30'					

Continued on sheet 2

NOTE: Soils field classified in accordance with the Unified Soil Classification System.

BLOWS PER FOOT:
Number required to drive 1 3/8" ID solid spoon

DRILLING LOG (Cont Sheet)

Elevation TOP OF HOLE 0.0 MLW

Hole No. SH-62

PROJECT Savannah Harbor

INSTALLATION Savannah River, GA

SHEET 2
OF 2 SHEETS

ELEVATION a	DEPTH 30'	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	Blows
-32.0			Water Bottom of river -32.0' MLW		JAR		
	35'		SM - Gray silty fine sand and soft silt mixture		1		9
							3
							9
	40'		Fine to medium sand with shell fragments		2		10
							10
							14
-42.0			SP - Gray poorly graded sand				24
							44
	45'				3		49
							50
							49
-49.0			SM - Green fine silty sand		4		54
	50'						40
							28
							39
	55'						41
-56.0			Bottom of hole -56.0' MLW				

Hole No. SH-63

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah River, GA	SHEET 1 OF 2 SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon	
2. LOCATION (Coordinates or Station) See Plan Sta O+500N, R= "4"		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
4. HOLE NO. (As shown on drawing title and file number) SH-63		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4 UNDISTURBED 0
5. NAME OF DRILLER T. W. Scott		14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 55.5'		16. DATE HOLE	STARTED 12 Feb 78 COMPLETED 12 Feb 78
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0 MLW	
9. TOTAL DEPTH OF HOLE -55.5' MLW		18. TOTAL CORE RECOVERY FOR BORING %	
		19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN	

ELEVATION e	DEPTH d	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	5'					
	10'		Water			
	15'					
	20'					
	25'					
	30'		Bottom of river -30.0' MLW			
			Continued on sheet 2			
			NOTE: Soils field classified in accordance with the Unified Soil Classification System.	B-137		BLOWS PER FOOT; Number required to drive 1 3/8" ID splitspoon w/ 140 lb hammer falling 30'

DRILLING LOG (Cont Sheet)		TOP OF HOLE		Hole No. SH-63		
PROJECT		INSTALLATION		SHEET 2		
Savannah Harbor		Savannah River, GA		OF 2 SHEETS		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
a	30'	c	Bottom of River -30.0' MLW	e	JAR	g Blows
			SM - Gray silty fine sand		1	9
						2
	35'		Fine to medium sand with shell fragments		2	10
						10
						10
	40'					12
-40.5						19
			SP - Gray poorly graded sand			39
					3	47
						51
	45'					49
						5
						40
-49.5	50'		SM - Green fine silty sand		4	29
						37
						39
-55.5	55'		Bottom of hole -55.5' MLW			44

DRILLING LOG		DIVISION Southeast Atlantic	INSTALLATION Savannah, GA		SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor Comprehensive Study			10. SIZE AND TYPE OF BIT 1 3/8" ID splitspoon		
2. LOCATION (Coordinates or Station) 891,803X, 742,334Y			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Sprague & Henwood		
4. HOLE NO. (As shown on drawing title and file number) SH-81			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 3
5. NAME OF DRILLER T.W. Scott			14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 45.5' +			16. DATE HOLE STARTED		COMPLETED
8. DEPTH DRILLED INTO ROCK 0.0'			23 Nov 82		23 Nov 82
9. TOTAL DEPTH OF HOLE 45.5'			17. ELEVATION TOP OF HOLE 0.0' MLW		
			18. TOTAL CORE RECOVERY FOR BORING %		
			19. SIGNATURE OF INSPECTOR James Arthur, Geologist		

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' MLW	b	c	d	e	f	g
			Water		JAR	
-36.0			Bottom of Harbor 36.0'			Blows
-38.5			MH-Dark greenish gray plastic silt with some fine to medium sand.		1	Note: Weight of drill rods drove splitspoon from 36.0' to 39.5'.
			SM-Dark greenish gray fine to medium silty sand		2	
			Medium to coarse grained with some shell fragments			Note: Hole terminated due to inoperative hoisting cable.
-45.5			Green fine to medium grain		3	47
			Bottom of Hole: 45.5'			
			Note: Soils field classified in accordance with the Unified Soil Classification System.			Blows Per Foot: Number required to drive 1 3/8" ID splitspoon w/140 lb. hammer falling 30".

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 1/8" SPLITSPOON, 5 1/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-876210 Y-753527 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-289		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 7 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 61.0' (Water 40.0')		16. DATE HOLE STARTED 3 DEC 91 COMPLETED 3 DEC 91	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 61.0'		18. TOTAL CORE RECOVERY FOR BORING N/A	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0	0	c					
			Water Bottom of Harbor 40.0'			Scale change at 40.0'. Set 6" diameter casing by own weight to 44.4'.	
-40.0'	40		(SP) Greyish-tan, coarse, poorly graded SAND. Trace of fine gravel & shell fragments.		1	No splitspoon recovery on first drive from 40.0' to 41.5'. Redrove to 41.5' then cont'd. drive to 43.0'. Jar sample #1 from 40.0' to 43.0'.	5
							36
-44.5'	45		(CH) Dark olive-grey, fat CLAY. Trace of silt.		2		22
							16
					3		16
							18
							19
-52.0'	50		Some fine sand.		4	24	
						19	
						21	
-55.0'	55		(SC) Dark olive-grey to grey, clayey fine SAND.		5		17
							21
-58.0'	60		(CH) Dark olive-grey, fat CLAY. Some silt & fine sand.		6		24
							24
					7		32
-61.0'	60		Bottom of Boring 61.0'				
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 1/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X-877255 Y-753105 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 1500	
4. HOLE NO. (As shown on drawing title and file number) SH-291		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 6 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES N/A	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.0' (Water 38.9')		16. DATE HOLE STARTED: 17 NOV 91 COMPLETED: 17 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.0'		18. TOTAL CORE RECOVERY FOR BORING N/A	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
0.0'	0					
	35		Bottom of Harbor 38.9'			BLOWS
-38.9'						Scale change at 35.0'.
-40.5'	40		(SW) Tan, medium to fine grained SAND. 1-2% silt. Saturated, no odor.		1	
-42.0'			Trace of gravel.			22
-43.5'			Shell fragments & trace of clay.			30
-46.5'	45		Grey.		2	37
			(MH) Green, stiff fat SILT. Moist, organic odor.		3	58
	50				4	24
					5	21
	55				6	16
						18
						27
						20
						20
						16
-60.0'	60		Bottom of Boring 60.0'			41
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 1/8" splitspoon, 5/2" fishtail	
1. LOCATION (Coordinates or Station) X=881230 Y=748639 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-303		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 6
			UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.2' (Water 40.7')		16. DATE HOLE	STARTED 9 JAN 92
8. DEPTH DRILLED INTO ROCK 0.0'			COMPLETED 9 JAN 92
9. TOTAL DEPTH OF HOLE 60.2'		17. ELEVATION TOP OF HOLE 0.0'	
		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0'	0						
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.7'.	
	40		Bottom of Harbor 40.7'				
-40.7'			(SP) greyish-tan, coarse, poorly graded SAND. Trace of silt & small shell fragments.		1	No splitspoon recovery on first drive to 42.2'. Redrill to 44.2' then cont'd. drive to 43.7'. Jar sample 1 from 40.7' to 43.7'. Began using Zeogel drilling mud at 51.2'.	9
-43.7'			Some fine gravel.				39
-45.2'	45		Trace of clay.		2		22
-46.7'			(SC) Grey, medium to coarse, clayey SAND. Some fine gravel & small shell fragments.		3		14
-48.2'			Coarse sand, several decomposed wood particles approx. 0.1' thick.				26
-49.7'	50		Medium to coarse sand, trace of fine gravel, no wood particles.				61
-51.2'			Dark olive-grey, fine clayey SAND. Some silt.		4		28
							39
							37
	55				5		33
							32
							24
					6		20
-60.2'	60		Bottom of Boring 60.2'				
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	Hole No. SH-304	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 1/8" splitspoon, 5/2" fishtail		
2. LOCATION (Coordinates or Station) X-881382 Y-748106 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314		
4. HOLE NO. (As shown on drawing title and file number) SH-304			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0		
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 59.9' (Water 41.9')			16. DATE HOLE STARTED 9 JAN 92 COMPLETED 9 JAN 92		
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'		
9. TOTAL DEPTH OF HOLE 59.9'			18. TOTAL CORE RECOVERY FOR BORING N/A %		
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0'	0						
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 44.6'.	
-41.9'			Bottom of Harbor 41.9'				
	45		(SP) Greyish-tan, coarse, poorly graded SAND. Trace of silt.		1	No splitspoon recovery on first drive to 43.4'. Redrove to 43.4' then cont'd. drive to 44.9'. Jar sample 1 from 41.5' to 44.9'.	3
-44.9'			Fine to medium sand.				35
-46.4'			(SC) Dark olive-grey, fine clayey SAND. Some silt.		2		34
	50						40
	55				3		26
							26
					4		53
							44
							38
							32
							26
-59.9'	60		Bottom of Boring 59.9'		5		23
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS	
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 1/8" SPLITSPOON, 5/2" FISHTAIL		
2. LOCATION (Coordinates or Station) X-882201 Y-746811 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314		
4. HOLE NO. (As shown on drawing title and file number) SH-307			BURDEN SAMPLES TAKEN	DISTURBED 6	UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 60.6' (Water 38.8')			16. DATE HOLE STARTED 16 MAR 92 COMPLETED 16 MAR 92		
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'		
9. TOTAL DEPTH OF HOLE 60.6'			18. TOTAL CORE RECOVERY FOR BORING N/A %		
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0						
	35		Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 43.8'. Then pushed with Kelley to 45.3'.	
			Bottom of Harbor 38.8'				
-38.8'	40		(SP) Light brownish-grey, medium to coarse, poorly graded SAND. Some small shell fragments.		1	Weight of rods drove splitspoon from 38.8' to 42.6'.	0
-42.6'			Coarse sand, trace of fine gravel & small shell fragments.			45.6'-47.1' Very soft clay. Last hammer blow drove splitspoon to 47.3', cont'd. drive to 48.6'. Jar sample 3 from 45.6' to 48.6'.	20
-44.1'	45		(SC) Very dark grey to black medium to coarse clayey SAND. Trace of fine gravel & small shell fragments.		2		14
-45.6'			(CH) Grey, fat CLAY. Trace of fine sand.		3		4
	50						11
					4		3
							4
	55				4		4
					5		7
							4
					5		8
							5
-59.1'	60		(SC) Olive, fine, clayey SAND.		6		15
-60.6'			Bottom of Boring 60.6'				
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X-884220 Y-745272 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-312			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 6 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.6' (Water 41.1')			16. DATE HOLE STARTED: 11 JAN 92 COMPLETED: 11 JAN 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.6'			18. TOTAL CORE RECOVERY FOR BORING N/A	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0	.			JAR		
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.1'.	
-41.1'	40		Bottom of Harbor 41.1'				
-44.1'		•••••	(SP) Tannish-grey, poorly graded, fine to medium SAND. Some silt, trace of small shell fragments.		1	Weight of rods drove splitspoon from 41.1' to 44.0', continued drive to 44.1' with one hammer blow.	0
-45.6'	45	•••••	(SM) Grey, fine, silty SAND. Trace of small shell fragments.		2	Began using Zeogel drilling mud at 47.1'.	1
-47.1'		•••••	Trace of clay & mica.				24
-48.6'		•••••	No clay or shell fragments.		3		13
-50.1'	50	•••••	Trace of clay & shell fragments.				40
-53.1'		•••••	Fine to medium sand, large amount of small shell fragments.		4		27
	55	•••••	(SC) Grey, fine, clayey SAND. Trace of mica, some clay layers up to 0.2' thick.		5		26
		•••••					31
		•••••			6		28
		•••••					33
		•••••					18
-60.3'	60	•••••	Olive.				19
-60.6'		•••••					17
			Bottom of Boring 60.6'				
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail		
2. LOCATION (Coordinates or Station) X-885539 Y-744298 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314		
4. HOLE NO. (As shown on drawing title and file number) SH-314		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0		
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 60.8' (Water 38.3')		16. DATE HOLE STARTED: 11 JAN 92 COMPLETED: 11 JAN 92		
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'		
9. TOTAL DEPTH OF HOLE 60.8'		18. TOTAL CORE RECOVERY FOR BORING N/A %		
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.				

ELEVATION 0.0	DEPTH 0.0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
-38.3'	35		Water Bottom of Harbor 38.3'			Scale change at 35.0'. Set 6" diameter casing by own weight to 45.7' & pushed with Kelly to 46.2'.	
-44.3'	40		(SM) Dark grey to black, fine to medium silty SAND. Some clay, trace of small shell fragments.		1	Weight of rods drove splitspoon from 38.3' to 44.0'. Cont'd. drive to 44.3' with one hammer blow.	0
-44.3'	45		(SC) Grey, fine, clayey SAND. Some clay layers up to 0.2' thick, trace of silt.		2		1
-51.8'	50		Trace of small shell fragments.		3		9
-54.8'	55		Medium to coarse clayey sand, some shell fragments & sand layers up to 0.1' thick.		4		8
-56.3'			Same as from 44.3' to 54.8'.				14
-57.8'			Fine, clayey sand, some fine silty sand layers up to 0.3' thick.				14
-59.3'			(SM) Grey, fine silty SAND.		5		58
-60.8'	60		Bottom of Boring 60.8'				22
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	67

DRILLING LOG		DIVISION SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA.		MOIE NO. SH-316		SHEET 1 OF 1 SHEETS	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL					
2. LOCATION (Coordinates or Station) X-886334 Y-743216 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW					
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314					
4. HOLE NO. (As shown on drawing title and file number) SH-316				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 6		UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 0					
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A					
7. THICKNESS OF OVERBURDEN 59.6' (Water 41.6')				16. DATE HOLE		STARTED 13 NOV 91		COMPLETED 13 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'					
9. TOTAL DEPTH OF HOLE 59.6'				18. TOTAL CORE RECOVERY FOR BORING N/A %					
				19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.					

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	0					
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 42.8'.
			Bottom of Harbor 41.6'			
-41.6'			(SC) Grey, fine clayey SAND. Some silt, trace of fine gravel & shell fragments.		1	Began using Veriflo drilling mud at 44.6'.
-43.1'			(SM) Grey, fine to medium silty SAND. Trace of clay & shell fragments.		2	
	45		No clay.			
-46.1'			Trace of clay.		3	
-49.1'			Medium sand.		4	
-52.1'					5	
-58.1'			(SC) Greenish-grey, fine clayey SAND. Some thick clay layers up to 0.2' thick.		6	
-59.6'	60		Bottom of Boring 59.6'			
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG		ISION SOUTH ATLANTIC	INSTALLATIO: SAVANNAH, GA.	SHEET 1 OF 2 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT $1\frac{1}{8}$ "spitspoon, 5/2"fishtail, 4 x 5/2" carboloy bit	
2. LOCATION (Coordinates or Station) X-887004 Y-743916 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-318			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 8 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 1	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 73.5'			16. DATE HOLE STARTED 30 AUG 92 COMPLETED 30 AUG 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 73.5'			18. TOTAL CORE RECOVERY FOR BORING 86 %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0	0.0						
			Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 44.5'.	
-36.0'	35		Bottom of Harbor 36.0'				
			(MD) Dark gray to black clayey SILT, some fine sand.		1	Weight of rods drove spitspoon from 36.0' to 44.4'. No spitspoon recovery from 47.4' to 48.9'. Soil classified from fishtail cuttings.	0
-44.4'	45		(SM) Dark gray fine silty SAND.		2	Grouted hole from 60.5' to 73.5'.	12
-45.9'			Fine to medium sand.				15
-48.9'	50		(SP) Gray fine to medium poorly graded SAND, trace of silt and clay.		3		12
-51.9'			(SM) Gray fine clayey SAND, calcareous.		4		37
-53.4'			(SC) Gray fine clayey SAND, calcareous.		5		41
-54.9'	55		Wash.				23
-59.4'	60				6		30
-60.0'			Continued on sheet 2				
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive $1\frac{1}{8}$ " I.D. spitspoon w/140 lb. hammer falling 30".	

DRILLING LOG (Cont sheet)

ELEVATION TOP OF HOLE
0.0' MLW

Hole No. SH-318

PROJECT
SAVANNAH HARBOR DEEPENING

INSTALLATION
Savannah, Ga.

SHEET 2
OF 2 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
-60.0'	60						
-60.9'			(SC) Gray fine silty SAND, calcareous.				
			(CH) Gray fat CLAY, some fine sand, slightly calcareous. (Wash sample)		7	Began coring at 69.9'. Scale change at 70.0'.	44
-65.4'	65		(SM) Gray fine to medium silty SAND, trace of small shell fragments, slightly calcareous.		8		66
							58
-70.8'	70		(CH) Gray fat clay, very stiff to hard, trace of fine to medium sand in thin lenses, slightly calcareous.	100%		Pull-1 From 69.9', run 1.4' to 71.3' rec 1.4'	50
					Box 1	Pull-2 From 71.3', run 2.2' to 73.5' rec 1.7' C. L. 0.5'	
-73.0'	72			77%			
-73.5'			Core loss.				
			Bottom of Boring 73.5'				
	74						

WASH

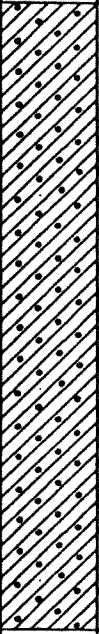
DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coord/Notes or Station) X-889196 Y-742798 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-319		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 8 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.8' (Water 38.8')		16. DATE HOLE STARTED 12 JAN 92 COMPLETED 12 JAN 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.8'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0'	0						
	38		Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 43.9'.	
			Bottom of Harbor 38.8'				
-38.8'	40		(SP) Tan, fine to medium, poorly graded SAND. Trace of silt.		1	No splitspoon recovery on first drive. Redrove 40.3', then cont'd. drive to 41.8'. Jar sample 1 from 38.8' to 41.8'.	8
-41.8'			(MH) Dark grey to black clayey SILT. Some fine to medium sand, trace of wood particles.		2	Began using Zeogel drilling mud at 43.3'.	19
-43.3'			(SM) Dark grey to black, silty, medium to coarse SAND.		3	No splitspoon recovery on drive from 47.8' to 49.3'. Redrove to 49.3' then cont'd. drive to 50.8'. Jar sample 5 from 47.8' to 50.8'.	48
-44.8'	45		(SP) Tannish, light grey, coarse, poorly graded SAND.		4		25
-46.3'			Some fine gravel.				24
-47.8'			(SC) Very dark grey, fine to medium clayey SAND.		5		9
	50						15
							18
							5
-53.5'			(SM) Very dark grey, fine to medium silty SAND.		6		5
-55.3'	55						18
-56.8'			(SC) Dark grey, fine clayey SAND.		7		8
			Some layers of fine to medium silty sand up to 0.3' thick.				8
-58.3'			(SM) Dark grey, fine to medium, silty SAND. Some clay.		8		28
-59.8'	60						18
			Bottom of Boring 59.8'				
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA.		HOLE No. SH-321		SHEET 1 OF 1 SHEETS	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail					
2. LOCATION (Coordinates or Station) X=890781 Y=742579 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW					
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 314					
4. HOLE NO. (As shown on drawing title and file number) SH-321				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 6		UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 0					
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A					
7. THICKNESS OF OVERBURDEN 60.0' (Water 40.5')				16. DATE HOLE STARTED 12 JAN 92		COMPLETED 12 JAN 92			
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'					
9. TOTAL DEPTH OF HOLE 60.0'				18. TOTAL CORE RECOVERY FOR BORING N/A					
				19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.					

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0'	0						
-40.5'	40		Water Bottom of Harbor 40.5'			Scale change at 40.0'. Set 6" diameter casing by own weight to 46.2'.	
-43.5'			(SP) Brownish-grey, medium to coarse poorly graded SAND. Trace of shell fragments.		1		0
-45.0'	45		(SM) Dark grey to black, fine to medium silty SAND.		2		5
			(SP) Light grey, coarse, poorly graded SAND. Trace of fine gravel.		3		24
-48.0'			Fine to medium sand, no gravel.			Weight of rods drove splitspoon from 40.5' to 44.6'. Cont'd. drive to 45.0' with 5 hammer blows. Jar sample 2 from approx. 43.5' to 45.0'.	24
-51.0'	50		(SC) Olive, fine clayey SAND.		4		32
							19
							12
							17
							12
							20
							13
-60.0'	60		Bottom of Boring 60.0'		6		15
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5 1/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-892692 Y-742522 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-323		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		UNDISTURBED
		4		0
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.7' (Water 43.2')			16. DATE HOLE	
			STARTED 14 NOV 91 COMPLETED 14 NOV 91	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.7'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0.0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 43.9'.	
			Bottom of Harbor 43.2'				
-43.2'	45		(SC) Olive-grey, fine clayey SAND. Some silt, calcareous.		1	Began using Veriflo drilling mud at 44.7'.	8
							14
					2		16
							18
	50						16
					3		19
							24
	55						19
							19
							22
-59.7'	60		Bottom of Boring 59.7'		4		21
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5 1/2" fishtail	
2. LOCATION (Coordinates or Station) X-894691 Y-742055 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-324			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 5 UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.8' (WATER 43.3')			16. DATE HOLE STARTED 22 FEB 92 COMPLETED 22 FEB 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.8'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY JAR	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0						
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.8'.	
-43.3'			Bottom of Harbor 43.3'				
-44.8'	45		(SC) Very dark grey, fine to medium, clayey SAND. Trace of small shell fragments.		1		0
-46.3'			Medium to coarse sand.				
			(SP) Light grey, fine to medium, poorly graded SAND.		2	Weight of rods drove splitspoon from 43.3' to 44.8'.	5
-49.3'			Trace of silt.			Began using Zeogel drilling mud at 43.3'.	21
-50.8'	50		(SM) Dark grey, fine, silty SAND. Trace of clay & mica.				26
-52.3'			Fine to medium sand. Trace of fine gravel. No clay.		3		17
-53.8'			Trace of wood fibers & clay.				15
-55.3'	55		No wood fibers, clay or gravel.				18
-56.8'			Grey.		4		18
							24
-59.8'	60				5		17
			Bottom of Boring 59.8'				23
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

SAVANNAH HARBOR BORING LOGS

From Station 0+000

To

Station -14+000

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savat Harbor	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X896293 Y742092		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 1		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 3		UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 19.0'		16. DATE HOLE		STARTED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE		COMPLETED 1978
9. TOTAL DEPTH OF HOLE 19.0'		18. TOTAL CORE RECOVERY FOR BORING %		
19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-25.9 MLW	0 b	c	d	e	JAR	g
			SM - Black, slightly clayey silty medium to fine sand		1	NOTE: Because of expansion and compaction of the core during the drilling process, "Bottom of Boring Depth" (column d) may not coincide with Thickness of Overburden (line 7) or total depth of hole (line 9).
			Gray, silty coarse and medium sand			
	5		White		2	
			SP-SM - White, slightly silty medium and coarse sand with 5% fine gravel			
	10		SM - Brown, silty coarse to fine sand with 10% fine gravel		3	
	15		ML - Green, clayey silt with 15% fine sand With 25% fine sand			
			Bottom of Boring 19.0'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

-44.9

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Sav. th Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) x896168 Y742583		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 2		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 2	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 11.7'		16. DATE HOLE	STARTED 1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 31.0' water depth		
9. TOTAL DEPTH OF HOLE 11.7'		18. TOTAL CORE RECOVERY FOR BORING %		
19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-27.6 MLW	0 b	c	d	e		g
	5		SM - Gray, silty, coarse medium sand with 10% fine gravel		1	NOTE: Because of expansion and compaction of the core during the drilling process, "Bottom of Boring Depth" (column d) may not coincide with Thickness of Overburden (line 7) or total depth of hole (line 9).
	10		With 30% fine and coarse gravel With clay seams 20%		2	
			Bottom of Boring 10.0'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Chandel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X898124 Y742031		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 16		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 7
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		UNDISTURBED 0
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 18.0'		16. DATE HOLE		STARTED 30 Aug 78
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE		41.0' water depth
9. TOTAL DEPTH OF HOLE 18.0'		18. TOTAL CORE RECOVERY FOR BORING		18.4' %
		19. SIGNATURE OF INSPECTOR R. V. O'Kelley		

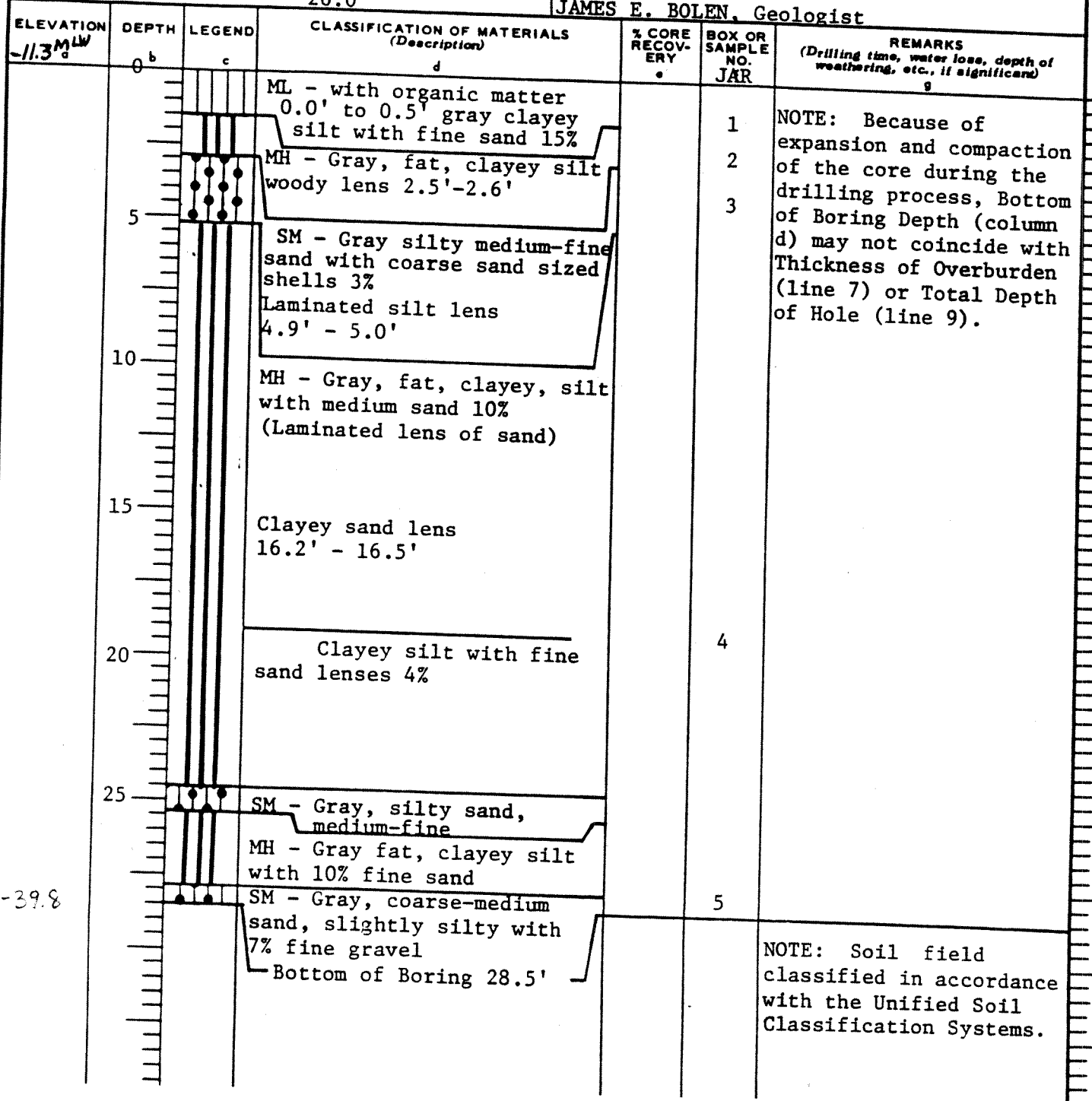
ELEVATION 36.9' MLW	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Dark gray, fine to medium sand with moderate amount of black organic silt and minor wood and shell content		JAR	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Gray, slightly silty with some coarse sand		1	
			Moderately silty with moderate shell content		2	
			Slightly silty minor shell content		3	
	10				4	
	15		MH - Gray, slightly fine, sandy inorganic silt, minor shell content		5	
			SM - Gray, slightly silty, fine to medium sand with some coarse sand and minor shell content Bottom of Boring 18.4'		6	
					7	
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

-59.3

DRILLING LOG	DIVISION	INSTALLATION	Savannah Harbor	SHEET	1
	South Atlantic	Outer Channel		OF	1 SHEETS
PROJECT	Tybee Island Beach Erosion		10. SIZE AND TYPE OF BIT	4" Casing tube	
CONTROL PROJECT			11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	MLW	
LOCATION (Coordinates or Station)	X898021 Y742381		12. MANUFACTURER'S DESIGNATION OF DRILL	Alpine Vibracore	
DRILLING AGENCY	Savannah District		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED	UNDISTURBED
HOLE NO. (As shown on drawing title and file number)	17			4	0
NAME OF DRILLER	Charles Dill		14. TOTAL NUMBER CORE BOXES		
DIRECTION OF HOLE	<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
THICKNESS OF OVERBURDEN	18.0'		16. DATE HOLE	STARTED	COMPLETED
DEPTH DRILLED INTO ROCK	0.0'			30 Aug 78	30 Aug 78
TOTAL DEPTH OF HOLE	18.0'		17. ELEVATION TOP OF HOLE	43.0' water depth	
			18. TOTAL CORE RECOVERY FOR BORING	15.8' %	
			19. SIGNATURE OF INSPECTOR	R. V. O'KELLEY	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
38' MLW	a	b	c	d	e	f
			SM - Gray, silty, fine to medium sand with moderate shell content		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
			MH - Gray, fine, sandy, slightly clayey silt with minor to moderate shell content		2	
	5		SM - Light gray to gray, moderately silty, fine sand		3	
			Light gray, slightly silty, fine to medium		4	
	10		MH - Gray, moderately clayey silt with some vegetative matter. 9.3' to 10.1' layer of fine to medium sand and pebbles		5	
			SM - Light gray to gray slightly silty medium to coarse sand		6	
	15		Light gray, fine to medium		7	
			Sample loss			
			Bottom of Boring 18.0'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X901710 Y742381		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 18		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 26.0'		16. DATE HOLE		STARTED 1978 COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 17.0' water depth		
9. TOTAL DEPTH OF HOLE 26.0'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		



-39.8

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X904550 Y743500		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) =		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 19		13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		16. DATE HOLE		STARTED 30 Aug 78 COMPLETED 30 Aug 78
7. THICKNESS OF OVERBURDEN 29.4'		17. ELEVATION TOP OF HOLE 42.0' water depth		
8. DEPTH DRILLED INTO ROCK 0.0'		18. TOTAL CORE RECOVERY FOR BORING 29.4' %		
9. TOTAL DEPTH OF HOLE 29.4'		19. SIGNATURE OF INSPECTOR R. V. O'KELLEY, Geologist		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-35.2' MLW	0	b	d	.	JAR	
	0	c	SM - Gray, silty, fine to medium sand with high shell content		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Brownish green silty fine sand		2	
	10				3	
	15				4	
	20				5	
	25					
			Bottom of Boring 29.4'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification System.			

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Savannah Harbor		SHEET 1	
1. PROJECT Tybee Island Beach Erosion Control Project		Outer Channel		10. SIZE AND TYPE OF BIT 4" Casing tube		OF 1 SHEETS	
2. LOCATION (Coordinates or Station) X908405 Y742953		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MTW		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore			
3. DRILLING AGENCY Savannah District		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5		UNDISTURBED 0	
4. HOLE NO. (As shown on drawing title and file number) 41		14. TOTAL NUMBER CORE BOXES		15. ELEVATION GROUND WATER			
5. NAME OF DRILLER Charles Dill		16. DATE HOLE		STARTED 9 Sep 78		COMPLETED 9 Sep 78	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		17. ELEVATION TOP OF HOLE 21.0' water depth		18. TOTAL CORE RECOVERY FOR BORING 30.0'			
7. THICKNESS OF OVERBURDEN 27.0'		19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN					
8. DEPTH DRILLED INTO ROCK 0.0'							
9. TOTAL DEPTH OF HOLE 27.0'							

ELEVATION -16.3' MLW	DEPTH 0b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		MH - Black, fine, sandy and clayey silt, silt and sand mixture		1	NOTE: Had 3.0' expansion of sample during drilling.
	5		SM - Gray, fine and medium sand, interbedded with sea shells, silt and sand mixture		2	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	10		SP - Gray, poorly graded medium sand with sea shells and fragments		3	
	15		Gray, soft silt layers		4	
	20		CL - Gray, silty clay, soft		5	
	25		Sand layer		6	
	27.5		Clay and sand mixture Bottom of Boring 27.5'			
NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.						

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Save in Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X909554 Y743848		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 42		13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN		
5. NAME OF DRILLER Charles Dill		DISTURBED 3 UNDISTURBED 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		14. TOTAL NUMBER CORE BOXES		
7. THICKNESS OF OVERBURDEN 10.0'		15. ELEVATION GROUND WATER		
8. DEPTH DRILLED INTO ROCK 0.0'		16. DATE HOLE		
9. TOTAL DEPTH OF HOLE 10.0'		STARTED 9 Sep 78 COMPLETED 9 Sep 78		
		17. ELEVATION TOP OF HOLE 42.0' water depth		
		18. TOTAL CORE RECOVERY FOR BORING 18.0' %		
		19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-35.9 MLW	0 _b	c	d	e		g
			SM - Green, fine cemented silty sand		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Fine, clayey, silty sand with some occasional small pebbles and few fossils		2	
	10		Bottom of Boring 10.0'		3	
-40.9						NOTE: Had 8.0' expansion of sample during drilling.
						NOTE: Soils field classified in accordance with the Unified Soil Classification System.

DRILLING LOG

DIVISION
South Atlantic

Hole No. SH-64

1. PROJECT Savannah Harbor		INSTALLATION Savannah River, GA		SHEET 1 OF 2 SHEETS	
2. LOCATION (Coordinates or Station) See Plan Sta O+500N, R= "4"		10. SIZE AND TYPE 3/8" ID Splitspoon		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	
4. HOLE NO. (As shown on drawing title and file number) SH-64		14. TOTAL NUMBER CORE BOXES		DISTURBED 4 UNDISTURBED 0	
5. NAME OF DRILLER T W Scott		15. ELEVATION GROUND WATER		16. DATE HOLE	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		17. ELEVATION TOP OF HOLE 0.0 MLW		STARTED 11 Feb 78 COMPLETED 11 Feb 78	
7. THICKNESS OF OVERBURDEN 55.0'		18. TOTAL CORE RECOVERY FOR BORING		19. SIGNATURE OF INSPECTOR CHARLES P. CRIEFTIN	
8. DEPTH DRILLED INTO ROCK 0.0'		9. TOTAL DEPTH OF HOLE 55.0' MLW			

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 MLW	0'					
	5'					
	10'		Water			
	15'					
	20'					
	25'					
	30'					

Continued on sheet 2
NOTE: Soils field classified in accordance with the Unified Soil Classification System.

BLOWS PER FOOT:
Number required to drive 3/8" ID splitspoon w/ 140 lb hammer falling 30"

DRILLING LOG (Cont Sheet)

FROM TOP OF HOLE

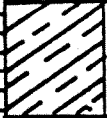
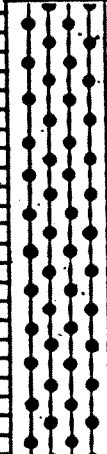
0.0 MLW

Hole No. SH-64

PROJECT Savannah Harbor

INSTALLATION Savannah River, GA

SHEET 2 OF 2 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
-31.0	30'		Bottom of River -30.0' MLW		JAR	Blows
			OH - Black soft silt		1	0
	35'		SM - Gray fine and medium silty sand with shell fragments		2	0 12 8 9 10 14 12 10
-46.0	45'		Gray medium silty sand with a fat clay layer and some gravel		3	16 14
-49.5	50'		Green fine silty sand		4	21 26 38 58
-55.0	55'		Bottom of hole -55.0' MLW			55

1 + 520

DRILLING LOG		DIVISION SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA.		Hole No. SH-325	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail		SHEET 1 OF 1 SHEETS	
2. LOCATION (Coordinates or Station) X-897251 Y-742614 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW			
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314			
4. HOLE NO. (As shown on drawing title and file number)		SH-325		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 7	UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 0			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A			
7. THICKNESS OF OVERBURDEN 60.9' (Water 40.8')				16. DATE HOLE		STARTED 22 FEB 92	COMPLETED 22 FEB 92
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'			
9. TOTAL DEPTH OF HOLE 60.9'				18. TOTAL CORE RECOVERY FOR BORING N/A			
				19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION 0.0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY JAR	BOX OR SAMPLE NO. i	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g	BLOWS
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 44.1'.	
	40		Bottom of Harbor 40.8'				
	40.8'		(SC) Dark grey, fine to medium clayey SAND. Some silt & small shell fragments.		1		0
	42.9'		(CH) Grey, fat CLAY.		2	Weight of rods drove splitspoon from 40.8' to 42.9'.	14
	43.6'		(SC) Dark grey, fine, clayey SAND. Trace of small shell fragments.		3		
	44.4'		Medium to coarse sand, some small to large shell fragments, trace of fine gravel.		4	Began using Zeogel drilling mud at 47.4'.	15
	45.9'		(SP) Light grey, coarse, poorly graded SAND. Trace of fine gravel.			No splitspoon recovery from 53.4' to 54.9'. Wash return same as previous drive.	20
	50						17
	51.9'				5		14
	54.9'		Medium to coarse sand, trace of silt.				18
	55		(SC) Olive-grey, fine clayey SAND. Trace of silt.		6		30
	57.9'		Dark olive-grey, trace of fine gravel & shell fragments.				21
	60				7		14
	60.9'		Bottom of Boring 60.9'				8
							18
							19
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.

DRILLING LOG	DIRECTION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 2 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT $1\frac{3}{8}$ " splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X=898289 Y=742667 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-326		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 9
			UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES N/A	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.5' (Water 14.6')		16. DATE HOLE	STARTED 16 NOV 91
			COMPLETED 16 NOV 91
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.5'		18. TOTAL CORE RECOVERY FOR BORING N/A	
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0 _a	DEPTH 0 _b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO UAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g
0.0	0		Water			BLOWS
	5					
	10					
	14.6'		Bottom of Harbor 14.6'			
-14.6'	15		(SM) Grey, fine to coarse grained SAND. 20% silt & 2-5% shell fragments, saturated, no odor.		1	Weight of hammer drove rods & splitspoon from 14.6' to 30.5'.
	20					
	25					
	30					
-30.0'			Continued on sheet 2			BLOWS PER FOOT: Number required to drive $1\frac{3}{8}$ " I.D. splitspoon w/140 lb. hammer falling 30"

NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.

DRILLING LOG (Cont :et)

ELEVATION TOP OF HOLE
0.0' MLW

PROJECT
SAVANNAH HARBOR DEEPENING

INSTALLATION
Savannah, Ga.

Hole No. SH-326

SHEET 2
OF 2 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
-30.0'	30						
-30.5'			(SM) Cont'd.				
			Some clay.		2	Began drilling with Zeogel drilling mud at 36.5'.	0
	35						2
							16
-36.5'							19
			10% silt w/some gravel. Sulfur odor.		3		26
	40						26
-41.0'							31
			10% shells in lenses.				39
	45				4		38
-45.5'						29	
			(SP) Greyish-white, fine to large grained SAND. 20% shell fragments. Strong sulfur odor in lenses.		5	37	
-48.5'						38	
	50		(SW) Greyish-white, fine to large grained, well graded SAND. 20% gravel & shell fragments in lenses.		6	33	
						50	
-53.0'						46	
	55		(MH) Green, stiff, fat silt, moist, organic odor.		7	41	
-56.0'						16	
			(SP) Grey, large to medium grained SAND. 1-2% shell fragments & trace of silt.		8	24	
-59.0'						24	
-60.5'	60		(MH) Green, stiff, fat SILT. Moist, organic odor.		9	19	
						23	
			Bottom of Boring 60.5'				

DRILLING LOG	SION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 2 SHEETS
PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail, 4 x 5/2" carboly bit	
LOCATION (Coordinates or Station) -898794 Y=742710 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
HOLE NO. (As shown on drawing title and file number) SH-327		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 6 UNDISTURBED 0
NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 1	
DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
THICKNESS OF OVERBURDEN 76.5'		16. DATE HOLE	STARTED 31 AUG 92 COMPLETED 31 AUG 92
DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
TOTAL DEPTH OF HOLE 76.5'		18. TOTAL CORE RECOVERY FOR BORING %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0	0.0	c	d	e		f	g
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.7'.	
-41.5'	40		Bottom of Harbor 41.5'				
-44.7'	45		(SP) Gray coarse poorly graded SAND, trace of silt and small shell fragments.		1	Weight of rods drove splitspoon from 41.5' to 43.2', no recovery. Redrove 41.5' to 43.2' then continued drive to 44.7'.	0 25
-49.7'	50		(CH) Gray fat CLAY, some fine sand and silt, trace of small shells.		2	Grouted hole from 60.9' to 76.5'.	27
-51.2'			Wash.				
-56.2'	55		(SC) Gray fine clayey SAND.		3		32
-57.7'	60		Wash.				
-62.7'			(CH) Gray fat CLAY, some fine sand and silt.		4		27
-64.2'			Wash.				
-65.0'	65		Continued on sheet 2				
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG (Cor. sheet)

ELEVATION TOP OF HOLE
0.0' MLW

PROJECT
SAVANNAH HARBOR DEEPENING

INSTALLATION
Savannah, Ga.

Hole No. SH-327

SHEET 2
OF 2 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
-65.0'	65	c					
			Wash.				
-69.2'	70		(SM) Dark olive gray and black fine to medium silty SAND.			Scale change at 70.0'.	
-70.9'			(SC) Light olive gray fine clayey SAND, some silt, calcareous.		5		60
-72.4'	72		Very stiff.		6		79
-72.7'			Hard.				
-73.1'			Core loss.			Pull-1 From 72.4', run 4.1' to 76.5' rec 0.7' C. L. 3.4'	
	74			17%	Box 1	Waxed sample.	
-76.5'	76		Bottom of Boring 76.5'				
	78						

DRILLING LOG	SION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 5/2" fishtail, 4 x 5/2" carboloy bit	
2. LOCATION (Coordinates or Station) X-898792 Y-742712 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-327A		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 0 UNDISTURBED 1
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 1	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 75.3' (Water 41.0')		16. DATE HOLE STARTED 1 SEP 92 COMPLETED 1 SEP 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 75.3'		18. TOTAL CORE RECOVERY FOR BORING 100 %	
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

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	0.0	.			JAR	
			Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 44.5'.
-41.0'	40		Bottom of Harbor 41.0'			
			Wash.			Cleaned out from 41.0' to 50.5' with 5/2" fishtail. Pushed 3" Shelby tube from 50.5' to 52.5'. Jar sample taken from bottom of tube from 52.3' to 52.5'.
-50.5'	50		(CH) Gray fat CLAY, trace of fine sand, hard.		UD-1	
-52.5'			Wash.			Cleaned out to 60.1'. Pushed 3" diameter Shelby tube from 60.1' to 62.1', but tube remained in hole. Retrieved Shelby tube with core barrel but tube was damaged by bit. Discarded tube. Cleaned out to 70.1', cored from 70.1' to 75.3'.
-70.1'	70		(SC) Dark olive gray and black fine to medium clayey SAND, soft to medium stiff, loose to medium dense, badly broken.			
-71.7'			Olive gray, fine sand, slightly calcareous, very stiff to hard, dense, highly jointed with horizontal breaks at 71.8', 72.7', 73.4', 74.4', 74.8' and 75.0'.	100%	Box 1	From 70.1', run 5.2' to 75.3' rec 5.2'. Waxed samples at 73.4' to 74.4'. Grouted hole from 62.3' to 75.3'.
-75.3'			Bottom of boring 75.3'			
	80					
	90					

NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.

DRILLING LOG		D ⁰ N SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA.		Hole No. SH-328	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 1 1/8" SPLITSPOON, 5/2" FISHTAIL		SHEET 1 OF 1 SHEETS	
2. LOCATION (Coordinates or Station) X-900321 Y-742411 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSJ) MLW			
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314			
4. HOLE NO. (As shown on drawing title and file number) SH-328				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 0			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A			
7. THICKNESS OF OVERBURDEN 60.4' (Water 37.9')				16. DATE HOLE STARTED 27 FEB 92 COMPLETED 27 FEB 92			
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'			
9. TOTAL DEPTH OF HOLE 60.4'				18. TOTAL CORE RECOVERY FOR BORING N/A			
				19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION 0.0	DEPTH 0.0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
	35		Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 38.1'.	
-37.9'			Bottom of Harbor 37.9'				
	40		(SM) Olive, fine, silty SAND.		1	Weight of rods pushed splitspoon from 37.9' to 38.5'.	6
							8
					2		12
	45						13
							15
-46.9'			Olive-grey.				18
	50				3		20
							24
							15
-54.4'	55		(SC) Very dark greyish-brown, fine to medium clayey SAND. Occasional layer of grey, fat clay up to 0.3' thick.		4		24
							17
-57.4'			No clay layers.				32
							25
-60.4'	60		Bottom of Boring 60.4'		5		35
							31

NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.

BLOWS PER FOOT:
Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG	DI ^N SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-901782 Y-742835 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-329		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 4, UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE: <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.7' (Water 50.2')		16. DATE HOLE: STARTED 12 DEC 91, COMPLETED 12 DEC 91	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.7'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			






ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
0.0	0		Water			Scale change at 50.0'. Set 6" diameter casing by own weight to 52.0'.	
			Bottom of Harbor 50.2'				
-50.2'	50		(SC) Dark grey to black, fine to medium clayey SAND. Trace of shell fragments.		1	Weight of rods drove splitspoon to 51.7'.	1
-51.7'			Medium to coarse, some shell fragments & silt.			Began using Zeogel drilling mud at 54.7'.	17
-53.2'			(SP) Light tannish-grey, medium to coarse poorly graded SAND.		2	No recovery from 56.2' to 57.7'. Redrove to 57.7' then cont'd. drive to 59.2'. Jar #3 from 56.2' to 59.2'.	55
-54.7'			Fine to medium sand.				34
-56.2'	55		(SC) Grey, fine to medium clayey SAND. Occasional clay layer up to 0.2' thick.		3		9
-59.2'			Fine sand.		4		33
-60.7'	60		Bottom of Boring 60.7'				18
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIRECTION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	Hole No. SH-332
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL		SHEET 1 OF 1 SHEETS
2. LOCATION (Coordinates or Station) X-905234 Y-743478 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314		
4. HOLE NO. (As shown on drawing title and file number) SH-332		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 60.3' (Water 39.3')		16. DATE HOLE STARTED 12 MAR 92 COMPLETED 12 MAR 92		
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'		
9. TOTAL DEPTH OF HOLE 60.3'		18. TOTAL CORE RECOVERY FOR BORING N/A		
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.		

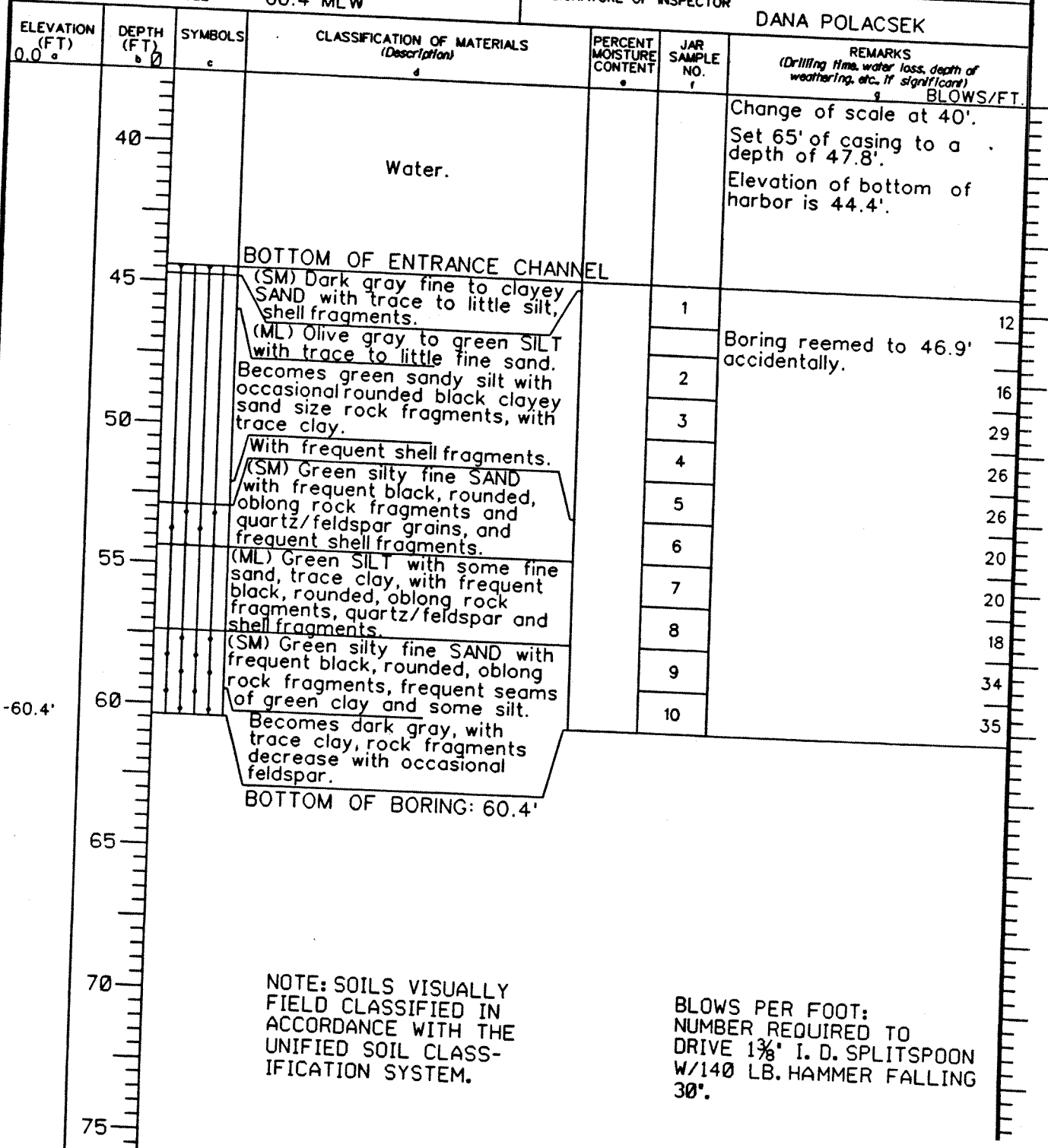
ELEVATION 0.0	DEPTH 0.0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. UJAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
	35		Water			Scale change at 35.0'. Set 6" diameter casing by own weight to 42.6'.	
	-39.3'		Bottom of Harbor 39.3'				
	40		(SM) Very dark grey to black, fine to medium silty SAND. Some clay, trace of small shell fragments.		1	Weight of rods drove splitspoon from 39.3' to 42.3'.	0
	-42.3'		Olive, fine, silty sand, trace of clay, no shell fragments.		2		10
	45				3		13
	-49.8'		trace of small shell fragments.		4		16
	50				5		12
	55					17	13
	-57.3'					14	10
	60		Dark olive-grey, fine, silty SAND. Trace of clay, no shell fragments.			16	24
	-60.3'		Bottom of Boring 60.3'			BLOWS PER FOOT:	25
						Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.

DRILLING LOG	STATION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
		10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
1. PROJECT SAVANNAH HARBOR DEEPENING		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
2. LOCATION (Coordinates or Station) X-907169 Y-743228 GA. EAST		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
3. DRILLING AGENCY SAVANNAH DISTRICT		BURDEN SAMPLES TAKEN	DISTURBED 5 UNDISTURBED 0
4. HOLE NO. (As shown on drawing title and file number) SH-334		14. TOTAL NUMBER CORE BOXES 0	
5. NAME OF DRILLER DAVID JUSTISS		15. ELEVATION GROUND WATER N/A	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		16. DATE HOLE	STARTED 12 DEC 91 COMPLETED 12 DEC 91
7. THICKNESS OF OVERBURDEN 59.7' (Water 40.2')		17. ELEVATION TOP OF HOLE 0.0'	
8. DEPTH DRILLED INTO ROCK 0.0'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
9. TOTAL DEPTH OF HOLE 59.7'		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS h
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 46.4'.	
	40		Bottom of Harbor 40.2'				
-40.2'	40		(MH) Dark grey to black clayey SILT. Trace of fine sand.		1	Weight of rods drove splitspoon to 44.7'.	0
-44.7'	45		(CH) Grey, fat CLAY. Some silt & fine sand.		2		3
-47.7'	50		Trace of silt & fine sand.		3		5
	55				4		4
-58.2'	60		Layer of olive sandy clay at approx. 59.6'-59.7'.		5		3
-59.7'	60		Bottom of Boring 59.7'				4
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	5

DRILLING LOG		DIVISION SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA		Hole No. SH 424	
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 5 1/2" FISHTAIL		SHEET 1		OF 1 SHEETS	
2. LOCATION (Coordinates or Station) GA X-1065109.89, Y-744050.79		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500			
3. DRILLING AGENCY SAVANNAH DISTRICT		13. TOTAL NO. OF SOIL SAMPLES TAKEN		DISTURBED 10		UNDISTURBED 0	
4. HOLE NO. (As shown on drawing title and file number) SH 424		14. TOTAL NUMBER CORE BOXES NONE		15. GROUND WATER ELEVATION N/A			
5. NAME OF DRILLER H. FULCHER		16. DATE HOLE		STARTED 1 APR 2002		COMPLETED 1 APR 2002	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		17. ELEVATION TOP OF HOLE -44.4' (HARBOR FLOOR)		18. TOTAL CORE RECOVERY FOR BORING NONE %			
7. THICKNESS OF OVERBURDEN >60.4' MLW		19. SIGNATURE OF INSPECTOR DANA POLACSEK					
8. DEPTH DRILLED INTO ROCK -							
9. TOTAL DEPTH OF HOLE 60.4' MLW							



NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 2 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" I. D. SPLITSPOON		
2. LOCATION (Coordinates or Station) GA X-1059916.7, Y-743356.9		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500 CD-3		
4. HOLE NO. (As shown on drawing title and file number) SH 423		13. TOTAL NO. OF SOIL SAMPLES TAKEN	DISTURBED 10	UNDISTURBED 0
5. NAME OF DRILLER HERMAN		14. TOTAL NUMBER CORE BOXES NONE		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. GROUND WATER ELEVATION N/A		
7. THICKNESS OF OVERBURDEN		16. DATE HOLE STARTED 29 MAR 2002 COMPLETED 29 MAR 2002		
8. DEPTH DRILLED INTO ROCK 0'		17. ELEVATION TOP OF HOLE 0.0' MLW		
9. TOTAL DEPTH OF HOLE 60.4'		18. TOTAL CORE RECOVERY FOR BORING NONE %		
		19. SIGNATURE OF INSPECTOR GREGORY TAYLOR		

ELEVATION (FT)	DEPTH (FT)	SYMBOLS	CLASSIFICATION OF MATERIALS (Description)	PERCENT MOISTURE CONTENT	JAR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS/FT.
0.0	0					Set 65' of casing to a depth of 50.4'. Elevation of bottom of harbor is 45.4'.	
	5						
	10						
	15		Water.				
	20						
	25						
	30						
	35						

CONTINUED ON SHEET *2

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

DRILLING LOG (Cont Sheet)

ELEVATION TOP OF HOLE
0.0' MLW

PROJECT
SAVANNAH HARBOR DEEPENING

INSTALLATION
SAVANNAH, GA

Hole No. SH 423

SHEET 2
OF 2 SHEETS

ELEVATION (FT) a	DEPTH (FT) b	SYMBOLS c	CLASSIFICATION OF MATERIALS (Description) d	PERCENT MOISTURE CONTENT e	JAR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	30					
	35		Water.			
	40					
	45		BOTTOM OF HARBOR			
		Vertical lines	(MH) Green high plasticity SILT.		1	Weight of rods. Reaction with acid.
		Vertical lines	(SM) Green SILTY SAND (fine).		2	
	50	Vertical lines			3	
		Vertical lines	(ML) Green low plasticity SANDY SILT.		4	
		Vertical lines	Shell fragments.		5	
	55	Vertical lines	Wood fragments and fine gravel.		6	
		Vertical lines			7	
		Vertical lines			8	
		Vertical lines	(MH) Gray high plasticity SILT.		9	
	60	Vertical lines	BOTTOM OF BORING		10	
-60.4'						
	65					
	70					
	75					

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON



SAVANNAH HARBOR BORING LOGS

From Station -14+000

To

Station -38+500

SAVANNAH HARBOR BORING LOGS

From Station -14+000

To

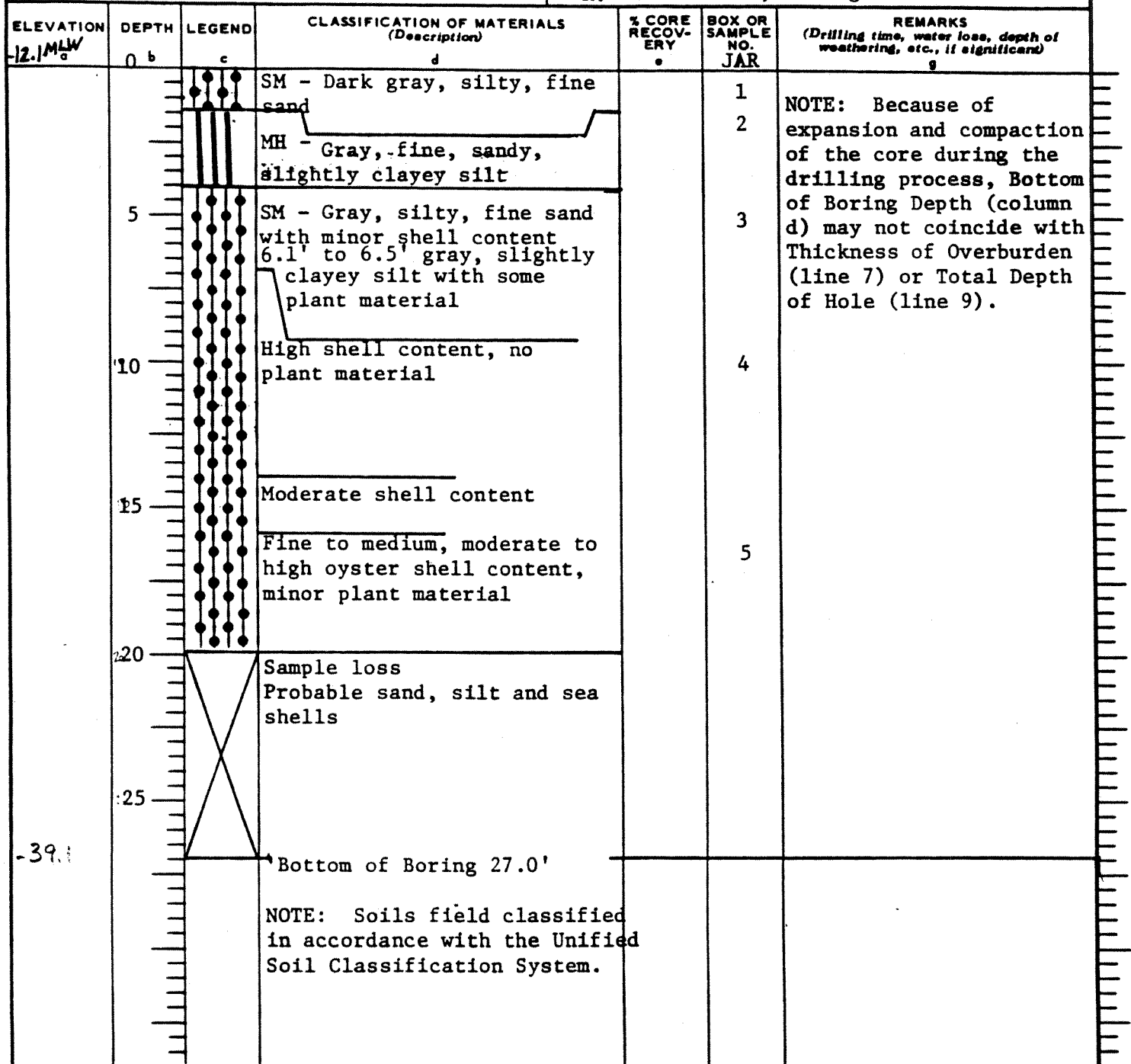
Station -38+500

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Tybee Beach		SHEET 1 OF 1 SHEETS	
1. PROJECT Tybee Island Beach Erosion Control Project				10. SIZE AND TYPE OF BIT 4" Casing tube			
2. LOCATION (Coordinates or Station) X918054 Y737887				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW			
3. DRILLING AGENCY Savannah District				12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore			
4. HOLE NO. (As shown on drawing title and file number) 6				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5	
5. NAME OF DRILLER Charles Dill				14. TOTAL NUMBER CORE BOXES		UNDISTURBED 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				16. DATE HOLE		STARTED 26 Aug 78	
7. THICKNESS OF OVERBURDEN 25.8'				17. ELEVATION TOP OF HOLE		COMPLETED 26 Aug 78	
8. DEPTH DRILLED INTO ROCK 0.0'				18. TOTAL CORE RECOVERY FOR BORING		16.0' water depth	
9. TOTAL DEPTH OF HOLE 25.8'				19. SIGNATURE OF INSPECTOR R. V. O'Kelley, Geologist			

ELEVATION -4.1 MLW	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			SM - Dark gray to black, organic, silty, fine sand		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Gray, moderate to high shell content		2	
			Moderately silty, minor shell content		3	
	10		MH - Dark gray, slightly sandy, slightly clayey silt		4	
			SM - Gray, moderately silty fine to medium sand with high shell content		5	
			Minor to moderate shell content			
			Moderate to high shell content			
			Slightly to moderately silty minor shell content			
	15		Silty			
			MH - Gray, moderately clayey to clayey silt			
	20					
	25					
			Bottom of Boring 25.8'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification System.			

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DRILLING LOG		DIVISION South Atlantic	INSTALLATION Tybee Beach	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X917106 Y739104		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 7		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 19.9'		16. DATE HOLE	STARTED 26 Aug 78	COMPLETED 26 Aug 78
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 15.0' water depth		
9. TOTAL DEPTH OF HOLE 19.9'		18. TOTAL CORE RECOVERY FOR BORING 19.9' %		
		19. SIGNATURE OF INSPECTOR R. V. O'KELLEY, Geologist		



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DRILLING LOG		DIVISION South Atlantic	INSTALLATION Tybee Beach	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X912931 Y 741022		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 9		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4	DISTURBED 0	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 30.0'		16. DATE HOLE STARTED	1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 9.0' water depth		
9. TOTAL DEPTH OF HOLE 30.0'		18. TOTAL CORE RECOVERY FOR BORING %		
19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist				

ELEVATION -4.1' MLW	DEPTH φ	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Gray, green, silty, medium-fine sand Brown silt lens 1.3'-1.5'		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Slightly silty, coarse-medium sand with shells 18%		2	
	10		Core loss 6.0'-16.0'			
	15					
	18		SM - Coarse-medium sand slightly silty with shells 18%		3	
	20		MH- Brown, fat, clayey silt with medium sand inter-layered 20%		4	
	24.7		SM - Gray, silty, medium-fine sand with alternating lenses of fat silt 30% and with shells 5% (24.7'-25.3' shells 35%)			
	28.0		Bottom of Boring 28.0'			
						NOTE: Soils field classified in accordance with the Unified Classification Systems.

-32.1

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Tybee Beach	SHEET OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X910352 Y741718		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 10		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 6	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 28.0'		16. DATE HOLE	STARTED	COMPLETED
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 8.0' water depth		
9. TOTAL DEPTH OF HOLE 28.0'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-1.8' MLW	0	c	d	*	JAR	g
	0	●●●●●	SM - Green, silty, medium sand with shells 5%		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	1	●●●●●	Black, very silty		2	
	2	●●●●●	Black, fine, very silty		3	
	3	●●●●●	Gray			
	4	●●●●●	Black, clayey silt seams: 5.7' (1/2"), 6.5' (1 1/2"), 7.9-8.0, 8.9-9.0', 9.6-9.7'			
	5	●●●●●	MH - Black, fat, clayey silt		4	
	6	●●●●●	SM - Green, silty, medium-fine sand with silt seams: 11.8' to 12.0', 12.5' to 12.9'		5	
	7	●●●●●	MH - Gray, fat, clayey silt with sand lenses 35%			
	8	●●●●●	SM - Gray, silty, medium-fine sand with fine gravel sized shells 10%		6	
	9	●●●●●	MH - Gray, fat, clayey silt with fine sand lenses 15%			
	10	●●●●●	Bottom of Boring 25.2'			
	11		NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					

DRILLING LOG

DIVISION
South Atlantic

INSTALLATION Savannah Harbor
Outer Channel

SHEET 1
OF 1 SHEETS

1. PROJECT Tybee Island Beach Erosion
Control Project

10. SIZE AND TYPE OF BIT 4" Casing tube
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)
MLW

2. LOCATION (Coordinates or Station)
X911318 Y742641

12. MANUFACTURER'S DESIGNATION OF DRILL
Alpine Vibracore

3. DRILLING AGENCY
Savannah District

4. HOLE NO. (As shown on drawing title
and file number) 11

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN
DISTURBED 2 UNDISTURBED 0

5. NAME OF DRILLER
Charles Dill

14. TOTAL NUMBER CORE BOXES

6. DIRECTION OF HOLE
 VERTICAL INCLINED _____ DEG. FROM VERT.

15. ELEVATION GROUND WATER

7. THICKNESS OF OVERBURDEN 19.0'

16. DATE HOLE STARTED 1978 COMPLETED 1978

8. DEPTH DRILLED INTO ROCK 0.0'

17. ELEVATION TOP OF HOLE 15.0' water depth

9. TOTAL DEPTH OF HOLE 19.0'

18. TOTAL CORE RECOVERY FOR BORING 18.7' %

19. SIGNATURE OF INSPECTOR

JACK M. KEETON, Geologist

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)
-8.7' MLW	0 b	c	d	e	JAR	g
	5		SM - Gray, slightly silty, fine - medium grained sand		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	10		6.0' to 18.7' with inter-bedded lenses of gray MH		2	
	15					
-27.4			Bottom of Boring 18.7'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X920478 Y737507		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 14		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 7	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 18.7'		16. DATE HOLE	STARTED 1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 40.0' water depth		
9. TOTAL DEPTH OF HOLE 18.7'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION -38.9' MLW	DEPTH 0 _b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Light brown and gray, mottled, silty medium - fine sand with shells 10%		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		SC - Gray, clayey, medium sand, with gravel sized shells 15%		2	
	10		SM - Gray, fine sand, highly silty with shells 10%		3	
	15		SC - Gray, clayey, medium-fine sand		4	
	16.0'		SM - Gray, silty, medium - fine sand with shells, silt seams at 16.0', 16.9', 17.4'		5	
	18.2'		SM - Gray, silty, medium - fine sand with shells, silt seams at 16.0', 16.9', 17.4'		6	
	20		Coarse-medium		7	
	21.6' to 21.7'		Silty fine sand			
	21.6' to 21.7'		Silt seam			
	22.3'		Bottom of Boring			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems			

-61.2

Hole No. 15 Run 1

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X925182 Y733137		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 15 Run 1		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 16.0'		16. DATE HOLE	STARTED 29 Aug 78	COMPLETED 29 Aug 78
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 17.0' water depth		
9. TOTAL DEPTH OF HOLE 16.0'		18. TOTAL CORE RECOVERY FOR BORING 12.5 %		
		19. SIGNATURE OF INSPECTOR R. V. O'KELLEY		

ELEVATION MLW -15.6'	DEPTH 0'	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Gray, very slightly silty, fine sand with minor shell content		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Slightly silty		2	
	10		Silty with minor to moderate shell content. 11.6 to 11.8 thin gray, soft, slightly clayey silt layer		3	
	15		Bottom of Boring 16.0'		4	
-31.6'			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing Tube		
2. LOCATION (Coordinates or Station) Y925100 Y732928		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 15 Run 2		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER CHARLES DILL		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER	16. DATE HOLE	STARTED 8 Sep 78
7. THICKNESS OF OVERBURDEN 17.0'		17. ELEVATION TOP OF HOLE	30.0' water depth	
8. DEPTH DRILLED INTO ROCK 0.0'		18. TOTAL CORE RECOVERY FOR BORING	19.6' %	
9. TOTAL DEPTH OF HOLE 17.0'		19. SIGNATURE OF INSPECTOR R. V. O'KELLEY		

ELEVATION MLW 28.6'	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			SM - Gray, silty, medium to coarse sand with minor shell and wood content		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Moderate shell content		2	
			Fine to medium sand with minor coarse sand and minor to moderate shell content		3	
	10				4	
	15		Fine sand with moderate to high shell content and some fossil fragments.			
-48.2			19.3 to 19.6 large fragment of gray, fossiliferous limestone			
			Bottom of Boring 19.6'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Sava. h Harbor Outer Channel		SHEET 1 OF 1 SHEETS	
1. PROJECT Tybee Island Beach Erosion Control Project				10. SIZE AND TYPE OF BIT 4" Casing tube			
2. LOCATION (Coordinates or Station) X920108 Y738867				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW			
3. DRILLING AGENCY Savannah District				12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore			
4. HOLE NO. (As shown on drawing title and file number) 29		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4		UNDISTURBED 0	
5. NAME OF DRILLER Charles Dill				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER			
7. THICKNESS OF OVERBURDEN 19.0'				16. DATE HOLE STARTED 1978 COMPLETED 1978			
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 43.0' water depth			
9. TOTAL DEPTH OF HOLE 19.0'				18. TOTAL CORE RECOVERY FOR BORING %			
				19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist			

ELEVATION -38.7 ^{MLW}	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			SM - 0.0' to 0.4' black Gray, silty, coarse to fine sand		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		SM-SC - Gray, silty, coarse -fine sand with clay; with shells 7%		2	
	10		SC - Green, clayey, fine sand, dense, stiff with shells 5%		3	
	15				4	
	20					
	25					
			Bottom of Boring 27.5'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

- 60.2

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project	10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X918803 Y739124	11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District	12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 30	13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 5	DISTURBED 5	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill	14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.	15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 23.0'	16. DATE HOLE 1978	STARTED 1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'	17. ELEVATION TOP OF HOLE 28.0' water depth		
9. TOTAL DEPTH OF HOLE 23.0'	18. TOTAL CORE RECOVERY FOR BORING %		
	19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-24.5 MLW	0 b	c	d	e	JAR	g
	0		MH - with organic matter 0.0' to 0.5'		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Gray-green, fat clayey silt with fossiliferous silty sand lenses 20%			
	5		SM - Gray, slightly silty, medium sand with gravel sized shells 10%			
	10		SM-SC - Gray, slightly clayey, silty, coarse - medium sand		2	
	15		SC - Gray, clayey, coarse-medium sand with shells 20%		3	
	20		MH - Gray-green, fat clayey silt with coarse sand and shell inclusions 15%		4	
	20		woody (fibrous) lenses 17.0', 17.9', and 24.3'			
	25		SM - Gray, silty, medium - fine sand		5	
-53.7			MH - Green, fat, clayey silt			
			Bottom of Boring 29.2'			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X917131 Y740977		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 31		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 3	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 18.0'		16. DATE HOLE STARTED 1978 COMPLETED 1978		
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 29.0' water depth		
9. TOTAL DEPTH OF HOLE 18.0'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
26.6 ^{MLW}	0 b	c	d	e	JAR	g
	0		SM - Gray, silty, medium - fine sand with shells 15%		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Gray, silty, fine sand with alternating silt lenses 15%		2	
	10					
	15		ML - Gray, sandy (fine) silt			
	20		SM - Gray, silty, medium-fine sand with alternating silt lenses 15%			
			Fine sand, slightly silty Gray (MH) lenses: 22.2', 22.5'		3	
-49.3			Bottom of Boring 22.7'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Savannah Harbor		SHEET 1 OF 1 SHEETS	
1. PROJECT Tybee Island Beach Erosion Control Project				10. SIZE AND TYPE OF BIT 4" Casing tube			
2. LOCATION (Coordinates or Station) X917682 Y741749				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW			
3. DRILLING AGENCY Savannah District				12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore			
4. HOLE NO. (As shown on drawing title and file number) 32				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				16. DATE HOLE		STARTED 2 Sep 78	COMPLETED 2 Sep 78
7. THICKNESS OF OVERBURDEN 27.3'				17. ELEVATION TOP OF HOLE 45.0' water depth			
8. DEPTH DRILLED INTO ROCK 0.0'				18. TOTAL CORE RECOVERY FOR BORING 27.3' %			
9. TOTAL DEPTH OF HOLE 27.3'				19. SIGNATURE OF INSPECTOR R. V. O'KELLEY			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-44.1	0	MLW				
	5		SM - Gray, slightly silty, fine to medium sand with minor to moderate shell content		1	
	10		Moderately silty with moderate to high shell content		2	NOTE: Sample expanded approximately 7.3' during drilling.
	15				3	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	20		Grayish green, silty, fine, minor shell fragments		4	
	25				5	
	27.3		Bottom of Boring 27.3'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

-71.4

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Savannah Harbor		SHEET 1	
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		Outer Channel		OF 1 SHEETS	
2. LOCATION (Coordinates or Station) X914419 Y741984		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore			
3. DRILLING AGENCY Savannah District		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4		UNDISTURBED 0	
4. HOLE NO. (As shown on drawing title and file number) 33		14. TOTAL NUMBER CORE BOXES		15. ELEVATION GROUND WATER			
5. NAME OF DRILLER Charles Dill		16. DATE HOLE		STARTED 1978		COMPLETED 1978	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		17. THICKNESS OF OVERBURDEN 26.0'		17. ELEVATION TOP OF HOLE 20.0' water depth			
		8. DEPTH DRILLED INTO ROCK 0.0'		18. TOTAL CORE RECOVERY FOR BORING %			
		9. TOTAL DEPTH OF HOLE 26.0'		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist			

ELEVATION -19.9 MLW	DEPTH c 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			SM - Gray, fine sand slightly silty		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Black 3.8' to 5.1' with black silt lenses 15%		2	
			MH - Black, fat, clayey silt with organic matter and fine and medium sand lenses 20%			
			SM - Gray, medium and fine sand, slightly silty, gray silt lenses: 17.3' - 17.7' 19.2' - 19.5' 20.2' - 20.5'		3	
			SM-SC - Dark green, silty fine sand, slightly clayey, dense		4	
			Bottom of Boring 26.3'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

-46.2

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS	
1. PROJECT Tybee Island Beach Erosion Control Project			10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X912402 Y743816			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 34			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill			14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 12.0'			16. DATE HOLE STARTED 1978 COMPLETED 1978		
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 40.0' water depth		
9. TOTAL DEPTH OF HOLE 12.0'			18. TOTAL CORE RECOVERY FOR BORING %		
			19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

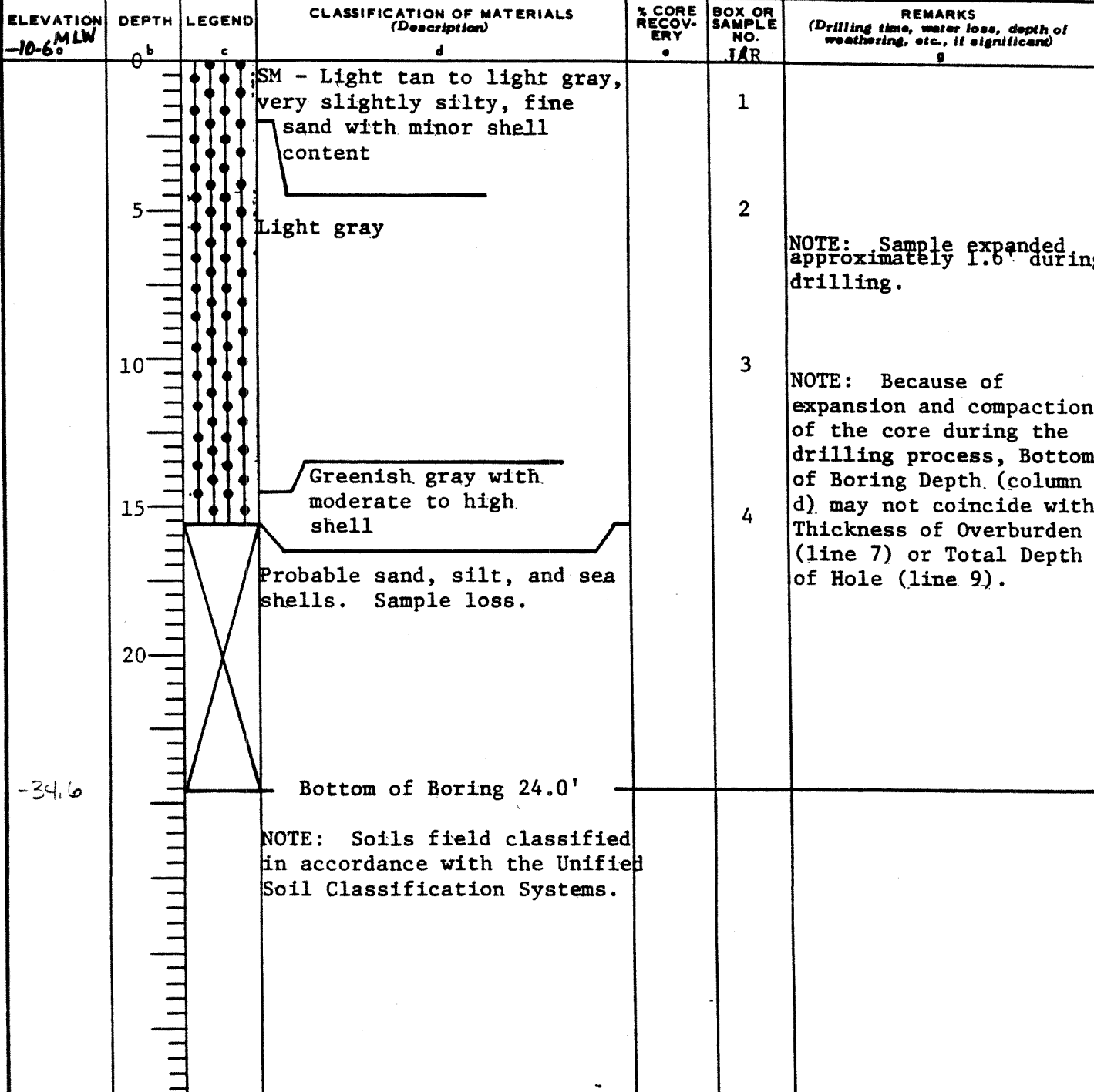
ELEVATION -39.1' MLW	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			SM - Black, silty, medium fine sand with shells, with organic fines MH - Gray laminated fat clayey silt SM - Gray coarse-medium sand slightly silty with shells, Fat silt lenses: 2.0'-2.3', 3.1', 3.4'-5.4' SC - Dark green, clayey, fine sand, stiff, dense		1 2 3 4	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
-55.0			Bottom of Boring 16.7'			
NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.						

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X 923953 Y 743.165		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 35		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 20.0'		16. DATE HOLE STARTED	8 Sep 78	COMPLETED 8 Sep 78
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 44.0' water depth		
9. TOTAL DEPTH OF HOLE 20.0'		18. TOTAL CORE RECOVERY FOR BORING 20.0' %		
		19. SIGNATURE OF INSPECTOR CHARLES D. GRIFFIN		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-39.3 MLW	0 b	c	d	e	TAR	g
	0		SM - Gray, silty, fine and medium sand with some shells and fragments		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		SP - Gray, poorly graded medium sand		2	
	10		SM - Gray, silty, fine sand with shells and fragments		3	
	15		SM - Gray, silty, fine sand with shells and fragments		4	
	20		Gray, medium to coarse sand, silty with sea shells Bottom of Boring 20.0'		5	
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

-59.2

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" casing tube		
2. LOCATION (Coordinates or Station) X927794 Y729908		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 37		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 24.0'		16. DATE HOLE STARTED 8 Sep 78	COMPLETED 8 Sep 78	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 17.0' water depth		
9. TOTAL DEPTH OF HOLE 24.0'		18. TOTAL CORE RECOVERY FOR BORING 15.6' %		
		19. SIGNATURE OF INSPECTOR R. V. O'KELLEY		



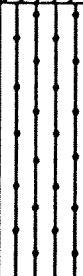
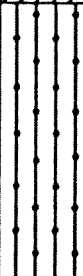


-34.6

DRILLING LOG		DIVISION SOUTH ATLANTIC		INSTALLATION SAYANNAH, GA.		SHEET 1 OF 1 SHEETS	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL			
2. LOCATION (Coordinates or Station) X-910126 Y-743419 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW			
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314			
4. HOLE NO. (As shown on drawing title and file number) SH-337				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 7	
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 0		UNDISTURBED 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A			
7. THICKNESS OF OVERBURDEN 63.6'				16. DATE HOLE		STARTED 17 MAR 92	
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'		COMPLETED 17 MAR 92	
9. TOTAL DEPTH OF HOLE 63.6'				18. TOTAL CORE RECOVERY FOR BORING N/A			
				19. SIGNATURE OF INSPECTOR MICHAEL BAILEY			

ELEVATION 0.0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO UAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) f	BLOWS
			Water			Scale change at 40.0'.	
	40		Bottom of Harbor 43.6'				
-43.6'			(SM) Dark grey to black, fine grained silty SAND. Some shells & clay.		1	Weight of rods drove splitspoon to 45.6'; following drives are from this depth.	0
-44.0'	45		(SC) Olive, fine grained, clayey SAND. Some silt, trace of black, rounded & generally flat course grained sand to fine grained gravel.		2		13
					3		16
	50						10
							15
-53.1'	55		Dark olive.		4		22
			Some black coarse sand to fine gravel.				16
						10	
-58.6'			(CH) Grey to olive-grey, fat CLAY. Trace of sand layers.		5	14	
-59.4'	60		(SC) Dark olive-grey to black, fine to medium grained, clayey SAND.		6	15	
					7	20	
						19	
-63.6'	65		Bottom of Boring 63.6'				
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	


DRILLING LOG	DIRECTION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5 1/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-913565 Y-742978 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-341		BURDEN SAMPLES TAKEN: DISTURBED 4, UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.3' (Water 45.3')		16. DATE HOLE: STARTED 12 MAR 92, COMPLETED 12 MAR 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.3'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0 _a 0	DEPTH 0 _b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
			Water			Scale change at 45.0'. Set 6" diameter casing by own weight to 46.2'.	
-45.3'	45		Bottom of Harbor 45.3'		1		5
			(SC) Olive, fine clayey SAND. Some silt.				20
	50				2		14
							21
-52.8'	55		(SM) Olive, fine silty SAND. Some clay.		3		18
							16
							17
							24
							17
-60.3'	60		Bottom of Boring 60.3'		4		12
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		ON SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 5/2" fishtail, 4 x 5/2" carbide bit	
2. LOCATION (Coordinates or Station) X-915614 Y-742618 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-343			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN : DISTURBED 0 : UNDISTURBED 3	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VER.:			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 78.3' (Water 43.3')			16. DATE HOLE : STARTED 2 SEP 92 : COMPLETED 2 SEP 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 78.3'			18. TOTAL CORE RECOVERY FOR BORING %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. OR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)
0.0	0.0	a	d	e	UAR	f
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 44.3'.
-43.3'			Bottom of Harbor 43.3'			
-48.3'			Wash.			Cleaned out from 43.3' to 48.3' with fishtail. Pushed 3" Shelby tube from 48.3' to 50.3'. Jar sample taken from bottom of tube.
-50.3'	50		(SC) Gray coarse clayey SAND, some fine gravel.		UD-1	
			Wash.			Cleaned out to 58.3'. Pushed 3" Shelby tube from 58.3' to 60.3'. Jar sample taken from bottom of tube.
-58.3'			Wash.			
-60.3'	60		(SC) Olive fine clayey SAND, some silt, calcareous.		UD-2	
			Wash.			Cleaned out to 68.3'. Pushed 3" Shelby tube from 68.3' to 70.3'. Jar sample taken from bottom of tube.
-68.3'			Wash.			
-70.3'	70		(SC) Dark olive gray to black fine to medium clayey SAND.		UD-3	
			Wash.			Cleaned out to 78.3' to core, but barreling up in casing at 58.0'. Pulled tool and grouted hole.
-78.3'	80		Bottom of Boring 78.3'			
	90		NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			

DRILLING LOG		ON SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA.		SHEET 1 OF 1 SHEETS	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 5 7/8" roller rock bit			
2. LOCATION (Coordinates or Station) X-915609 Y-742602 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW			
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314			
4. HOLE NO. (As shown on drawing title and file number) SH-343A		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 0		UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 1			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A			
7. THICKNESS OF OVERBURDEN 82.0' (Water)				16. DATE HOLE STARTED 3 SEP 92 COMPLETED 3 SEP 92			
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'			
9. TOTAL DEPTH OF HOLE 82.0'				18. TOTAL CORE RECOVERY FOR BORING 92 %			
				19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

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	0.0	c	d	e	UAR	f
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 48.3'.
-43.5'			Bottom of Harbor 43.5'			
	50		Wash.			
	60					
	70					
-78.3'	80		(SC) Olive gray and black fine clayey SAND, slightly calcareous.	92%	Box 1	Pull-1 From 78.3', run 2.7' to 81.0' rec 2.5' C. L. 0.2'
-80.8'			Core loss.			Waxed sample from 78.3' to 79.4' and 79.4' to 80.6'.
-81.0'			No recovery, Shelby tube remained in hole.			Pushed 3" Shelby tube from 81.0' to 82.0'. Tube broke at 82.0'. Grouted hole.
-82.0'	82		Bottom of Boring 82.0'			
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X=917219 Y=740840 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-345		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 7
				UNDISTURBED 0
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 61.0' (Water 41.5')			16. DATE HOLE	
			STARTED 9 DEC 91	
			COMPLETED 9 DEC 91	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 61.0'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0.0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 46.4'.	
	40		Bottom of Harbor 41.5'				
-41.5'			(SC) Dark grey to black, fine to medium clayey SAND. Trace of small shell fragments.		1	Weight of rods drove splitspoon from 41.5' to 44.4', cont'd. drive to 44.5' with one blow.	0
-44.5'	45		(SM) Dark grey, fine to medium, silty SAND. Trace of clay & small shell fragments.		2	Began using Zeogel drilling mud at 46.0'.	1
-46.0'			Medium to coarse sand.				17
-47.5'			Trace of fine gravel.		3		21
-49.0'			(CH) Dark grey, fat CLAY. Trace of fine sand.		4		28
-50.5'	50		(SP) Fine, grey, poorly graded SAND. Trace of silt.		5		6
							75
							51
-53.5'	55		(SM) Grey, medium to coarse silty SAND.		6		28
							40
							39
-58.0'			Some clay.				22
-59.5'	60		(CH) Dark grey, fat CLAY. Some medium to coarse sand in layers up to 0.2' thick.		7		14
-61.0'			Bottom of Boring 61.0'				
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.							

DRILLING LOG	DIV: South Atlantic	INSTALLATION Savannah, Ga.	SHEET OF SHEETS
1. PROJECT Savannah Harbor Deepening		10. SIZE AND TYPE OF BIT 1 3/8" ID, Spitspoon,	
2. LOCATION (Coordinates or Station) UTM, X-517607.47, Y-3543282.92		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Falling-314	
4. HOLE NO. (As shown on drawing title and file number) SH-347		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER D. Justiss		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.8' (Water 40.3')		16. DATE HOLE STARTED MAR 9 1992 COMPLETED MAR 9 1992	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.8'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR PG J. ARTHUR	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
			WATER			SCALE CHANGE AT 40.0'. SET 6" DIAMETER CASING BY OWN WEIGHT TO 41.9'.	
-40.3	40		BOTTOM OF HARBOR 40.3'		DRAYS		Blows
-43.3			(SM) DARK GRAY FINE SILTY SAND, TRACE OF SMALL SHELL FRAGMENTS.		1	BEGAN USING ZEEGL DRILLING DRILLING MUD AT 41.8'	16
-44.8			(SD) LIGHT GRAY FINE TO MEDIUM POORLY GRADED SAND, TRACE OF SILT.		2		4
-46.3	45		TRACE OF SMALL SHELL FRAGMENTS.				34
			MEDIUM TO COARSE SAND.		3		24
	50						37
							41
							41
-52.3			GRAY, TRACE OF FINE GRAVEL AND CLAY.		4		27
-53.8			LARGE AMOUNT OF DECAYED WOOD PARTICLES.				10
-55.3	55		LIGHT GRAY COARSE POORLY GRADED SAND, TRACE OF SILT.				13
-56.8			GRAY, SOME FINE GRAVEL, LARGE AMOUNT OF DECAYED WOOD PARTICLES, TRACE OF CLAY.				25
-58.3							16
-59.7'	60		(SC) DARK GRAY COARSE CLAYEY SAND, LARGE AMOUNT OF SMALL SHELL FRAGMENTS.		5		14
-59.8'			OLIVE GRAY FINE CLAYEY SAND, NO SHELL FRAGMENTS.				
			BOTTOM OF BORING 59.8'				

NOTE: Soils field classified in accordance with the Unified Soil Classification System

BLOWS PER FOOT:
Number required to drive 1 3/8" ID spitspoon w/140 lb hammer falling 30".

DRILLING LOG		D' "ON SOUTH ATLANTIC		INSTALLATION SAVANNAH, GA.		SHEET 1 OF 1 SHEETS	
1. PROJECT SAVANNAH HARBOR DEEPENING				10. SIZE AND TYPE OF BIT 1 1/8" SPLITSPOON, 5 1/2" FISHTAIL			
2. LOCATION (Coordinates or Station) X-920912 Y-737502 GA. EAST				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW			
3. DRILLING AGENCY SAVANNAH DISTRICT				12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314			
4. HOLE NO. (As shown on drawing title and file number) SH-350				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS				14. TOTAL NUMBER CORE BOXES 0			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER N/A			
7. THICKNESS OF OVERBURDEN 59.9' (Water 41.9')				16. DATE HOLE		STARTED 13 DEC 91 COMPLETED 13 DEC 91	
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 0.0'			
9. TOTAL DEPTH OF HOLE 59.9'				18. TOTAL CORE RECOVERY FOR BORING N/A %			
				19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
0.0	0	c	d	e		g BLOWS
	40		Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 45.7'.
	41.9'		Bottom of Harbor 41.9'			
-41.9'			(SM) Dark grey, fine to medium, silty SAND. Trace of clay & small shell fragments.		1	19
-43.4'			Fine to medium, trace of clay.			8
-46.0'			(SC) Dark grey, fine to medium clayey SAND. Some small shell fragments.		2	14
-47.9'			Grey.			20
	50				3	23
						20
-53.9'			(SM) Grey, fine to medium silty SAND. Some shell fragments, trace of clay.		4	14
-55.4'			Medium to coarse sand.			25
	55					38
						36
-58.4'			(SC) Olive-grey, fine clayey SAND. Trace of shell fragments.		5	23
-59.9'						19
	60		Bottom of Boring 59.9'			
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" ID SPLITSPOON	
2. LOCATION (Coordinates or Station) X-518637.86 Y-3541812.31			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1400	
4. HOLE NO. (As shown on drawing title and file number) SH-353			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 8 UNDISTURBED	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 60.8'			16. DATE HOLE STARTED 17 MARCH 92 COMPLETED 17 MARCH 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE	
9. TOTAL DEPTH OF HOLE 60.8'			18. TOTAL CORE RECOVERY FOR BORING	
			19. SIGNATURE OF INSPECTOR <i>Michael Bailey</i>	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
			WATER			SCALE CHANGE AT 40.0'	
	40		BOTTOM OF HARBOR 41.5'		JAR		BLOWS
			(SM) DARK TO VERY DARK GRAY FINE GRAINED SILTY SAND TRACE CLAY AND MKA; 0.1' DARK GRAY FAT CLAY AT 41.3'		1		20
	45		(CH) DARK GRAY FAT CLAY SOME SAND VERY SOFT AND WET		2	NO SAMPLE FROM 44.3-45.8 ON FIRST DRIVE, CONTINUED TO 47.3 WITHOUT CLEANOUT. NO SAMPLE ON CONTINUED DRIVE, DROVE SPLITSPOON TO 48.8 WITHOUT CLEANOUT AND FULL SAMPLE WAS RECOVERED. INTERPRETED 44.3 TO 48.8 WITH THIS SAMPLE.	20
			(SM) DARK GRAY FINE TO MEDIUM GRAINED SILTY SAND TRACE CLAY AND SHELL FRAG.		3		5
			SOME SHELL FRAGMENTS AND CLAY				13
	50						28
			GRAY FINE TO MEDIUM GRAINED SILTY SHELLY SAND SOME FINE TO MEDIUM GRAINED GRAVEL		4		13
					5		14
	55		(CH) DARK GRAY FAT CLAY SOME SILT, SAND AND SHELL		6		10
			(SM) GRAY TO DARK GRAY FINE TO MEDIUM SILTY SAND SOME SHELL FRAGMENTS TRACE CLAY		7		33
							34
							33
	60		DARK GRAY				39
					8		27
			BOTTOM OF HOLE 60.8'				
	65		NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.				

BLOWS PER FOOT
Number recorded for 1 3/8" ID SPT using 60 lb hammer falling 50'.

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah, Ga.	SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor Deepening		10. SIZE AND TYPE OF BIT 3/8" I.D. Splitspoon	
2. LOCATION (Coordinates or Station) UTM X-518940.20, Y-3541275.46		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW 5 1/2" Fishtail	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Falling-314	
4. HOLE NO. (As shown on drawing title and file number) SH-355		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 6 UNDISTURBED 0	
5. NAME OF DRILLER D. Justiss		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.6' (Water 41.6')		16. DATE HOLE STARTED MAR 8 1992 COMPLETED MAR 8 1992	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.6'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR J. ARTHUR	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS h
	0		WATER			SCALE CHANGE AT 40.0'. SET 6" DIAMETER CASING BY OWN WEIGHT TO 44.7'. RE-SET CASING TO 47.2'. BEGAN USING ZEOGEL DRILLING MUD AT 41.6.	
-41.6'	40		BOTTOM OF HARBOR 41.6'		27MS		13 WMS
-44.1'			(SC) DARK GRAY FINE CLAYEY SAND, SOME SMALL SHELL FRAGMENTS & SILT.		1	WEIGHT OF RODS DROVE SPLITSPOON FROM 41.6' TO 44.1'.	0
-45.6'	45		(SM) GRAY FINE TO MEDIUM SILTY SAND, SOME SMALL SHELL FRAGMENTS, TRACE OF CLAY.		2	NO SPLITSPOON RECOVERY ON FIRST DRIVE FROM 48.6' TO 50.1'. RE-DROVE TO 51.1' THEN CONT'D DRIVE TO 51.6'. JAR SAMPLE # 2 FROM 48.6' TO 51.6'.	19
-47.1'			NO CLAY OR SHELL FRAGMENTS, LIGHT GRAY.				37
-48.6'			GRAY, LARGE AMOUNT OF SMALL SHELL FRAGMENTS, TRACE OF CLAY.		3		20
-51.6'	50						13
-53.1'			(SC) GRAY FINE TO MEDIUM CLAYEY SAND TRACE OF SMALL SHELL FRAGMENTS.		4		28
-54.6'			(SP) LIGHT GRAY FINE POORLY GRADED SAND, TRACE OF SILT.		5		20
-56.1'	55		GRAY. LIGHT GRAY.				43
							55
							38
							44
-60.6'	60				6		68
			BOTTOM OF BORING 60.6'				
NOTE: Soils field classified in accordance with the Unified Soil Classification System				BLOWS PER FOOT: Number required to drive 3/8" ID splitspoon w/140 lb hammer falling 30".			

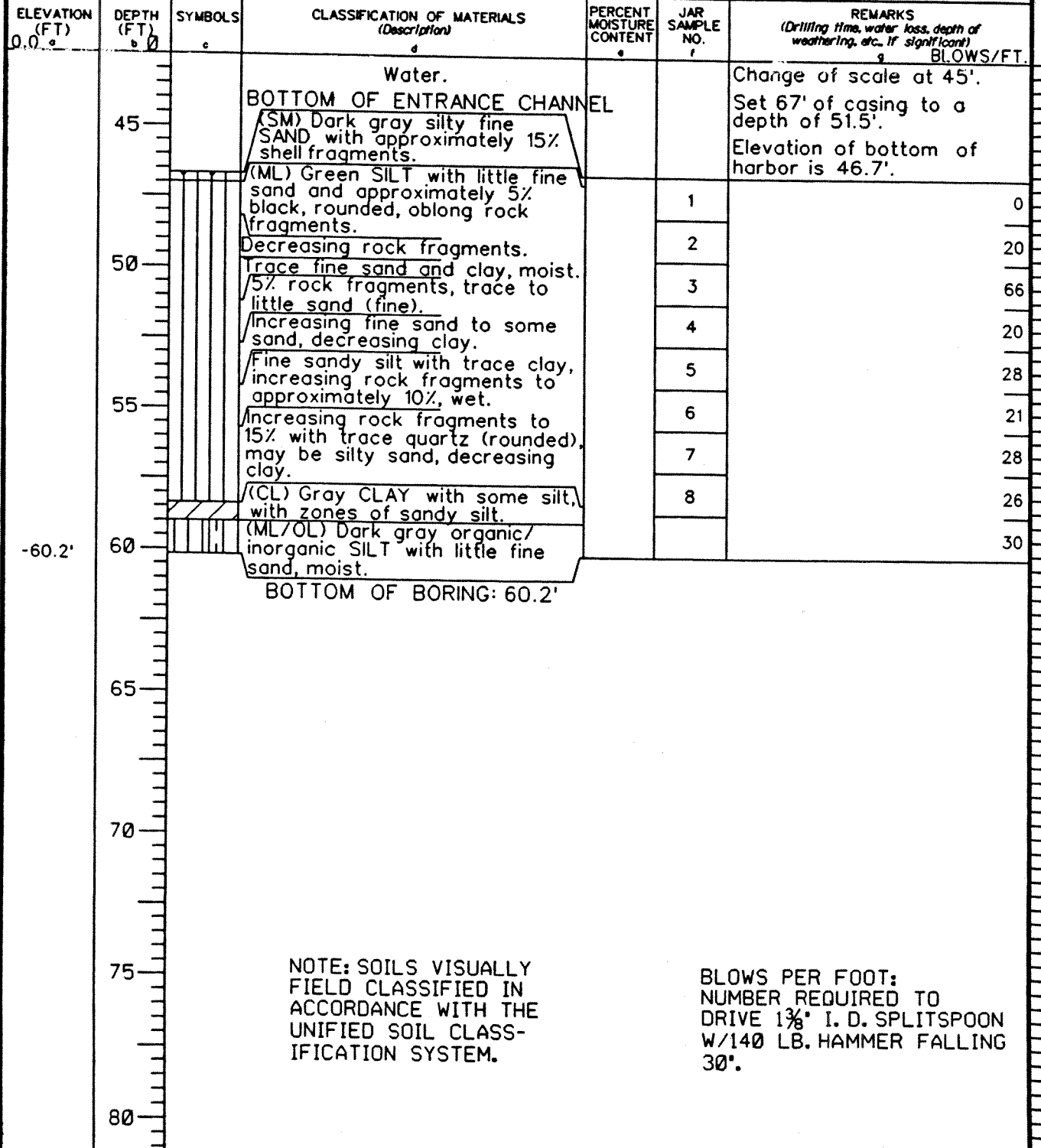
DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah, Ga.	SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor Deepening			10. SIZE AND TYPE OF BIT 1 3/8" I.D. Splitspoon	
2. LOCATION (Coordinates or Station) LTM, X-519450.26, Y-3540915.24			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Falling-314	
4. HOLE NO. (As shown on drawing title and file number) SH-357			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 7 UNDISTURBED 0
5. NAME OF DRILLER D. Justiss			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.7' (Water, 37.2')			16. DATE HOLE STARTED FEB 26 1992 COMPLETED FEB 26 1992	
8. DEPTH DRILLED INTO ROCK 0.0			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.7'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR J. ARTHUR	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
			WATER			SCALE CHANGE AT 35.0'. SET 6" DIAMETER CASING BY OWN, WEIGHT TO 40.3'. ADVANCED CASING TO BOTTOM OF MOST DRIVES DURING CLEANOUT.	
-37.2'	35		BOTTOM OF HARBOR 37.2'		JARS		Blows
-40.2'	40		(SP) LIGHT GRAY FINE POORLY GRADED SAND, TRACE OF SILT.		1	NO SPLITSPOON RECOVERY ON FIRST ATTEMPT FROM 37.2' TO 38.7'. RE-DRIVE TO 38.7' THEN CONT'D DRIVE TO 40.2'. SAMPLE #1 FROM 37.2' TO 40.2.	7 49 52
			LIGHT BROWNISH GRAY, TRACE OF CLAY.		2	NO SPLITSPOON RECOVERY ON FIRST ATTEMPT FROM 40.2' TO 41.7'. RE-DRIVE TO 41.7' THEN CONT'D DRIVE TO 43.2' BUT ENCOUNTERED SOFT ZONE AND SPLITSPOON CONTINUED	4 38
-44.7'	45		(SC) VERY DARK GRAY TO BLACK FINE CLAYEY SAND.		3	43.5'. CONT'D WITH DRIVE TO 44.7' BUT SAMPLE RECOVERY FROM 40.2' TO 44.7' WAS POOR. WASH RETURN CONTAINED FINE SAND & TRACE OF CLAY.	9 2
-49.2'			(MH) VERY DARK GRAY TO BLACK CLAYEY SILT, SOME FINE SAND.		4		10
-50.7'	50		(SM) LIGHT GRAY FINE TO COARSE SILTY SAND, TRACE OF CLAY, FINE GRAVEL & SMALL SHELL FRAGMENTS.		5		25
-52.2'			MEDIUM TO COARSE SAND. FINE TO MEDIUM SAND.				29
-53.7'							47
-56.7'	55						100/0.9
-59.7'	60		(SP) GRAY FINE TO MEDIUM POORLY GRADED SAND, TRACE OF SILT.		6		96
					7		80
			BOTTOM OF BORING 59.7'				
			NOTE: Soils field classified in accordance with the Unified Soil Classification System			Number required to drive 1 3/8" ID splitspoon w/140 lb hammer falling 30".	

DRILLING LOG	DIVISION: South Atlantic	INSTALLATION: Savannah, Ga.	SHEET 1 OF 2 SHEETS
1. PROJECT: Savannah Harbor Deepening		10. SIZE AND TYPE OF BIT: 3/8" I.D. Splitspoon	
2. LOCATION (Coordinates or Station): UTM, X-519983.93, Y-3540168.91		11. DATUM FOR ELEVATION SHOWN (TBM or MSL): MLW 5 1/2" Fishtail	
3. DRILLING AGENCY: Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL: Falling-314	
4. HOLE NO. (As shown on drawing title and file number): SH-360		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 5, UNDISTURBED 0	
5. NAME OF DRILLER: D. Justiss		14. TOTAL NUMBER CORE BOXES: 0	
6. DIRECTION OF HOLE: <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER: N/A	
7. THICKNESS OF OVERBURDEN: 60.9' (Water 42.9')		16. DATE HOLE: STARTED MAR 8 1992, COMPLETED MAR 8 1992	
8. DEPTH DRILLED INTO ROCK: 0.0'		17. ELEVATION TOP OF HOLE: 0.0'	
9. TOTAL DEPTH OF HOLE: 60.9'		18. TOTAL CORE RECOVERY FOR BORING: N/A	
		19. SIGNATURE OF INSPECTOR: J. G. J. ARTHUR	

ELEVATION e	DEPTH a b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OF SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	Blows
	40		WATER			SCALE CHANGE AT 40.0'. SET 6" DIAMETER CASING BY OWN WISHT TO 45.1'. BEGAN USING ZEOGEL DRILLING MUD AT 42.9'.	
-42.9'			BOTTOM OF HARBOR 42.9'		JARS		Blank
-45.9'	45		(SM) VERY DARK GRAY TO BLACK FINE SILTY SAND.		1	WEIGHT OF HAMMER DRIVE SPLITSPOON FROM 42.9' TO 45.9'.	0
-47.4'			LIGHT GRAY TO GRAY, FINE TO MEDIUM SAND, SOME SMALL SHELL FRAGMENTS, TRACE OF FINE GRAVEL.			MADE FRESH BATCH OF ZEOGEL DRILLING MUD AT 47.4'.	7
			(SC) GRAY FINE CLAYEY SAND, SOME SILT, TRACE OF SMALL SHELL FRAGMENTS.		2		5
-50.0'	50		(CH) GRAY FAT CLAY.		3		8
							7
							10
							9
-56.9'	55		TRACE OF SMALL SHELL FRAGMENTS & FINE SAND.		4		11
-57.7'			NO SHELL FRAGMENTS OR SAND.				12
							11
-60.9'	60		BOTTOM OF BORING 60.9'		5		10
			NOTE: Soils field classified in accordance with the Unified Soil Classification System			BLOWS PER FOOT: Number required to drive 3/8" ID splitspoon w/140 lb hammer falling 30".	

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 5 1/2" FISHTAIL		
2. LOCATION (Coordinates or Station) GA X-1067890.07, Y-743670.07		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 425		13. TOTAL NO. OF SOIL SAMPLES TAKEN	DISTURBED 9	UNDISTURBED 0
5. NAME OF DRILLER W. HERMAN		14. TOTAL NUMBER CORE BOXES NONE		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. GROUND WATER ELEVATION N/A		
7. THICKNESS OF OVERBURDEN >60.2' MLW		16. DATE HOLE STARTED 2 APR 2002 COMPLETED 2 APR 2002		
8. DEPTH DRILLED INTO ROCK -		17. ELEVATION TOP OF HOLE -46.7' (HARBOR FLOOR)		
9. TOTAL DEPTH OF HOLE 60.2' MLW		18. TOTAL CORE RECOVERY FOR BORING NONE %		
		19. SIGNATURE OF INSPECTOR DANA POLACSEK		



NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 5 1/2" FISHTAIL		
2. LOCATION (Coordinates or Station) 32° 19' 19" N, 80° 47' 34" W		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500		
4. HOLE NO. (As shown on drawing title and file number) SH426		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 13	UNDISTURBED -
5. NAME OF DRILLER H. FOLCHER		14. TOTAL NUMBER CORE BOXES -		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER -		
7. THICKNESS OF OVERBURDEN > 65.8'		16. DATE HOLE STARTED 10 APR 02 COMPLETED 10 APR 02		
8. DEPTH DRILLED INTO ROCK -		17. ELEVATION TOP OF HOLE 46.3' (BOTTOM HARBOR)		
9. TOTAL DEPTH OF HOLE 65.8'		18. TOTAL CORE RECOVERY FOR BORING -		
		19. SIGNATURE OF INSPECTOR [Signature]		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		WATER			NOT TO SCALE UP TO 45'
	15		20' DEEP OF FRESH WATER CHANNEL		1	GET 20' TO 25' TO BOTTOM OF CHAN
	20		CLAY SAND		2	RECOVERED SAMPLES 46.3'
	25		CLAY SAND		3	
	30		CLAY SAND		4	
	35		CLAY SAND		5	
	40		CLAY SAND		6	
	45		CLAY SAND		7	
	50		CLAY SAND		8	
	55		CLAY SAND		9	
	60		CLAY SAND		10	
	65		CLAY SAND		11	
	70		CLAY SAND		12	
	75		CLAY SAND		13	
	80		CLAY SAND		14	
	85		CLAY SAND		15	
	90		CLAY SAND		16	
	95		CLAY SAND		17	
	100		CLAY SAND		18	
	105		CLAY SAND		19	
	110		CLAY SAND		20	
	115		CLAY SAND		21	
	120		CLAY SAND		22	
	125		CLAY SAND		23	
	130		CLAY SAND		24	
	135		CLAY SAND		25	
	140		CLAY SAND		26	
	145		CLAY SAND		27	
	150		CLAY SAND		28	
	155		CLAY SAND		29	
	160		CLAY SAND		30	
	165		CLAY SAND		31	
	170		CLAY SAND		32	
	175		CLAY SAND		33	
	180		CLAY SAND		34	
	185		CLAY SAND		35	
	190		CLAY SAND		36	
	195		CLAY SAND		37	
	200		CLAY SAND		38	
	205		CLAY SAND		39	
	210		CLAY SAND		40	
	215		CLAY SAND		41	
	220		CLAY SAND		42	
	225		CLAY SAND		43	
	230		CLAY SAND		44	
	235		CLAY SAND		45	
	240		CLAY SAND		46	
	245		CLAY SAND		47	
	250		CLAY SAND		48	
	255		CLAY SAND		49	
	260		CLAY SAND		50	
	265		CLAY SAND		51	
	270		CLAY SAND		52	
	275		CLAY SAND		53	
	280		CLAY SAND		54	
	285		CLAY SAND		55	
	290		CLAY SAND		56	
	295		CLAY SAND		57	
	300		CLAY SAND		58	
	305		CLAY SAND		59	
	310		CLAY SAND		60	
	315		CLAY SAND		61	
	320		CLAY SAND		62	
	325		CLAY SAND		63	
	330		CLAY SAND		64	
	335		CLAY SAND		65	
	340		CLAY SAND		66	
	345		CLAY SAND		67	
	350		CLAY SAND		68	
	355		CLAY SAND		69	
	360		CLAY SAND		70	
	365		CLAY SAND		71	
	370		CLAY SAND		72	
	375		CLAY SAND		73	
	380		CLAY SAND		74	
	385		CLAY SAND		75	
	390		CLAY SAND		76	
	395		CLAY SAND		77	
	400		CLAY SAND		78	
	405		CLAY SAND		79	
	410		CLAY SAND		80	
	415		CLAY SAND		81	
	420		CLAY SAND		82	
	425		CLAY SAND		83	
	430		CLAY SAND		84	
	435		CLAY SAND		85	
	440		CLAY SAND		86	
	445		CLAY SAND		87	
	450		CLAY SAND		88	
	455		CLAY SAND		89	
	460		CLAY SAND		90	
	465		CLAY SAND		91	
	470		CLAY SAND		92	
	475		CLAY SAND		93	
	480		CLAY SAND		94	
	485		CLAY SAND		95	
	490		CLAY SAND		96	
	495		CLAY SAND		97	
	500		CLAY SAND		98	
	505		CLAY SAND		99	
	510		CLAY SAND		100	

BLOWS PER FOOT:
 NUMBER REQUIRED TO DRIVE
 1 3/8" ID SPLITSPOON w/ 140 LB.
 HAMMER FALLING 30"

NOTE: SOILS USUALLY FIELD
 CLASSIFIED IN ACCORDANCE
 WITH THE UNIFIED SOIL
 CLASSIFICATION SYSTEM,

X-10101-00

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 5 1/2" FISHTAIL	
2. LOCATION (Coordinates or Station) #32° 12' 29" N, 80° 48.3427' W		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MELLS M.L.W.	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500	
4. HOLE NO. (As shown on drawing title and file number) 5H427		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 9
5. NAME OF DRILLER W. HERMAN		14. TOTAL NUMBER CORE BOXES -	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER -	
7. THICKNESS OF OVERBURDEN > 60.0'		16. DATE HOLE	STARTED 2 APR 02 COMPLETED 2 APR 02
8. DEPTH DRILLED INTO ROCK -		17. ELEVATION TOP OF HOLE -46.5' (HARBOR FLOOR)	
9. TOTAL DEPTH OF HOLE 60.0'		18. TOTAL CORE RECOVERY FOR BORING - %	
19. SIGNATURE OF INSPECTOR Dan P. [Signature]			

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	40		WATER			NOTE CHANGE OF SCALE AT 40'
	45		BOTTOM OF ENTRANCE CHANNEL			SET 65' OF CASING TO A DEPTH OF 48.8'
			(SM) DL GRAY SILTY F. SAND w/ LITTLE M. SAND, w/ SHELL FRAGS. FINES, SHELL FRAGS ABSENT		1	ELEV. BOT HARBOR = 46.5'
	50		At 46.7' BECOMES DL GRAY TO GRAY F.M. SAND w/ LITTLE C. SAND AND SILT, w/ ABUNDANT SHELL FRAGS (~15-20%)		2	CIRCULATION LOST, AFTER SAMP. 3 ADD 3' OF 19 CASING (TOTAL NOW 67')
			At 50', BECOMES GRAY w/ DEC. C. SAND & TR. TO LITTLE SILT, AT 50.5' LAYER (26") OF ABUNDANT SHELL FRAGS, BLK. ROUNDED ROUNDED RK FRAGS & TR. / SPAR GRAINS w/ A SANDS w/ LITTLE SILT		3	
			FINES TO MOD. F. SAND w/ SREQ. SHELL FRAGS (RK FRAGS ESSENTIALLY ABSENT)		4	
			(SP-SM) OLIVE GRAY F. SAND w/ TR. SILT TO SAND, w/ SHELL FRAGS (F.M. SAND SIZE) ABOUT 15%.		5	
			(SP) GRAY F. SAND w/ TR. TO NO SILT, w/ F. SANDS & SHELL FRAGS (~15%) & BLK ROUNDED RK FRAGS (~8%), w/ OCCAS. SCAMS OR PARTINGS OF GRAY SILT w/ LITTLE CLAY		6	
			WET (SS. 5-570)		7	
			57-58.5, PARTINGS OF CLAY ABSENT, SHELL FRAGS DEC.		8	
			58.5-60.0 SILT MAX. SLIGHTLY, TR. TO NO SHELL OR RK FRAGS. WET		9	
	60		BORING COMPLETED TO A DEPTH OF 60.0' BELOW M.L.W. ON 2 APR 02			
			Number required to drive 1 3/8" ID splitspoon w/ 140 lb. hammer falling 30".			NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

X-100-10-11-12-70

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 2 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" I. D. SPLITSPOON		
2. LOCATION (Coordinates or Station) GA X-1079781, Y-734658		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 428		13. TOTAL NO. OF SOIL SAMPLES TAKEN	DISTURBED 15	UNDISTURBED 0
5. NAME OF DRILLER ROUNTREE		14. TOTAL NUMBER CORE BOXES NONE		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. GROUND WATER ELEVATION N/A		
7. THICKNESS OF OVERBURDEN		16. DATE HOLE STARTED 1 MAY 2002		
8. DEPTH DRILLED INTO ROCK		17. ELEVATION TOP OF HOLE 0.0' MLW		
9. TOTAL DEPTH OF HOLE 63.9'		18. TOTAL CORE RECOVERY FOR BORING NONE %		
		19. SIGNATURE OF INSPECTOR GREGORY TAYLOR		

ELEVATION (FT) a	DEPTH (FT) b	SYMBOLS c	CLASSIFICATION OF MATERIALS (Description) d	PERCENT MOISTURE CONTENT e	JAR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g BLOWS/FT. h
0.0	0					Set 67' of casing to a depth of 50.8'. Elevation of bottom of harbor is 44.1'.
	5					
	10					
	15		Water.			
	20					
	25					
	30					

CONTINUED ON SHEET *2

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

ELEVATION (FT)	DEPTH (FT)	SYMBOLS	CLASSIFICATION OF MATERIALS (Description)	PERCENT MOISTURE CONTENT	JAR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	30		Water.			
	35					
	40		BOTTOM OF HARBOR (ML) Soft, low plasticity SILT, trace oblong shell fragments up to 1mm, acid reaction, wet, dark brown.			
	45		(SM) Quartz grained fine SAND with some silt and trace of oblong shell fragments up to 1mm, acid reaction, moist, dark brown.		1	Lost first sample, 12
	45		(SP) POORLY GRADED SAND, fine quartz grains, with a trace of medium sand size muscovite flakes, HCL reaction, moist, gray		2	blows were (0-2-2), (9-5-7)
	50		(SC) Quartz grained fine SAND, with some clay, and few shell fragments up to 10mm, HCL reaction, moist, dark gray.		3	resampled same depth. 43
	50		(SP) POORLY GRADED SAND, fine to medium quartz sand, some shell fragments up to 30mm, few fines, HCL reaction, moist, green to gray.		4	(9-22-21)
	55		Few shell fragments up to 5mm.		5	13
	55		Some shell fragments up to 20mm.		6	(8-6-7)
	60		No fines, a little shell fragments up to 10mm.		7	37
	60		Some shell fragments up to 10mm, no fines.		8	(14-20-17)
	65		(ML) Very hard low plasticity SILT with a little fine to coarse sub angular siltstone gravel up to 25mm, weak HCL reaction, dry, moderately cemented, green.		9	44
	65		BOTTOM OF BORING		10	(8-21-23)
	70				11	40
	75				12	(14-19-21)
					13	38
					14	(14-16-22)
					15	35
						(12-16-19)
						40
						(14-20-20)
						44
						(19-21-33)
						35
						(18-18-17)
						40
						(14-20-20)
						70
						(18-21-49)
						Refusal, 100 blows/0.3'

-63.9'

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 5 1/2" FISHTAIL		
2. LOCATION (Coordinates or Station) GA X-1081319.70, Y-732544.68		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 429		13. TOTAL NO. OF SOIL SAMPLES TAKEN	DISTURBED 10	UNDISTURBED 0
5. NAME OF DRILLER H. FULCHER		14. TOTAL NUMBER CORE BOXES NONE		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. GROUND WATER ELEVATION N/A		
7. THICKNESS OF OVERBURDEN >61.4' MLW		16. DATE HOLE	STARTED 3 APR 2002	COMPLETED 3 APR 2002
8. DEPTH DRILLED INTO ROCK -		17. ELEVATION TOP OF HOLE -46.4' (HARBOR FLOOR)		
9. TOTAL DEPTH OF HOLE 61.4' MLW		18. TOTAL CORE RECOVERY FOR BORING NONE %		
		19. SIGNATURE OF INSPECTOR DANA POLACSEK		

ELEVATION (FT) 0.0	DEPTH (FT) 0	SYMBOLS o	CLASSIFICATION OF MATERIALS (Description) d	PERCENT MOISTURE CONTENT e	JAR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g BLOWS/FT.
	45		Water.			Change of scale at 45'. Set 67' of casing to a depth of 50.7'. Elevation of bottom of harbor is 46.4'.
			BOTTOM OF ENTRANCE CHANNEL			
		||||	(SM) Dark gray SILTY FINE SAND, moist.		1	0
	50	||||	Becomes fine sand with trace to little silt, wet.		2	13
		||||	(SP) Dark gray FINE SAND with trace silt, trace mica flakes, wet.		3	58
		||||	Coarsens to fine to medium sand, gray with occasional seam or layer dark gray silt with trace to no clay.		4	42
	55	||||	With trace shell fragments about 2-4mm, up to 1 cm long.		5	31
		||||	With trace to little clayey sand, silt seams, partings absent, with approximately 10% shell fragments and black rounded rock fragments.		6	31
		||||	With trace to no clayey sand, rock fragments essentially absent, shell fragments to approximately 7%.		7	43
	60	||||	Shell fragments decreased to <5%, with occasional layer of silt with trace clay.		8	56
		||||	Fines to mostly fine sand, shell fragments decreased, silt layers absent.		9	67
		||||			10	58
	65		BOTTOM OF BORING: 61.4'			
	70					
	75					
	80					

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT:
NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 1 3/8" I. D. SPLITSPOON		
2. LOCATION (Coordinates or Station) GA X-1082022, Y-730922		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 430		13. TOTAL NO. OF SOIL SAMPLES TAKEN		DISTURBED 15 UNDISTURBED 0
5. NAME OF DRILLER ROUNTREE		14. TOTAL NUMBER CORE BOXES NONE		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. GROUND WATER ELEVATION N/A		
7. THICKNESS OF OVERBURDEN		16. DATE HOLE		STARTED 3 MAY 2002 COMPLETED 3 MAY 2002
8. DEPTH DRILLED INTO ROCK		17. ELEVATION TOP OF HOLE 0'		
9. TOTAL DEPTH OF HOLE 65.6' MLW		18. TOTAL CORE RECOVERY FOR BORING NONE		
		19. SIGNATURE OF INSPECTOR		

ELEVATION (FT)	DEPTH (FT)	SYMBOLS	CLASSIFICATION OF MATERIALS (Description)	PERCENT MOISTURE CONTENT	JAR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS/FT.
0.0	0		Water.			Change of scale at 45'. Set 67' of casing to a depth of 50.6'.	
	45		(ML) Low plasticity SILT, trace fine quartz sand and trace shell fragments up to 1mm, HCL reaction, wet, brown to black.		1	Elevation of bottom of harbor is 45.5'.	7 (0-0-7)
			(SP) POORLY GRADED SAND, fine to medium quartz with trace fines and few shell fragments up to 2mm, HCL reaction, moist, tan to brown.		2		37 (11-19-18)
	50		Medium sand, tan to gray. Medium to coarse sand. Trace shell fragments up to 2mm.		3		77 (12-30-47)
			(SW) WELL GRADED SAND, fine to coarse quartz with few shell fragments up to 3mm, HCL reaction, moist, gray.		4		30 (8-15-15)
			(SW) WELL GRADED SAND, fine to coarse quartz with few shell fragments up to 3mm, HCL reaction, moist, gray.		5		29 (8-14-15)
	55		(SW) WELL GRADED SAND, fine to coarse quartz with few shell fragments up to 3mm, HCL reaction, moist, gray.		6		30 (8-14-16)
			(SP) POORLY GRADED SAND, medium to coarse quartz with few shell fragments up to 3mm, HCL reaction, moist, gray.		7		39 (9-16-23)
			(SW) WELL GRADED SAND, fine to coarse quartz with few shell fragments up to 30mm, HCL reaction, moist, gray.		8		31 (11-16-15)
	60		(SW) WELL GRADED SAND, fine to coarse quartz with few shell fragments up to 30mm, HCL reaction, moist, gray.		9		38 (14-20-18)
			(SP) POORLY GRADED SAND, fine quartz with few fines and few shell fragments up to 5mm, HCL reaction, moist, gray.		10		56 (11-25-31)
			(SP) POORLY GRADED SAND, fine quartz with few fines and few shell fragments up to 5mm, HCL reaction, moist, gray.		11		62 (23-30-32)
	65		Fine to medium quartz sand, no fines.		12		51 (14-25-26)
-65.6'			Green, fissil partially cemented silt to siltstone, weak HCL reaction (Miocene).		13		66 (16-32-34)
			Green, fissil partially cemented silt to siltstone, weak HCL reaction (Miocene).		14		100/0.6
			Green, fissil partially cemented silt to siltstone, weak HCL reaction (Miocene).		15	Refusal.	
	70						
	75						
	80						

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT: NUMBER REQUIRED TO DRIVE 1 3/8" I. D. SPLITSPOON W/140 LB. HAMMER FALLING 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION Savannah GA	SHEET 1 OF 2 SHEETS
1. PROJECT SAVANNAH HARBOR		10. SIZE AND TYPE OF BIT 1 3/8" ID SPLITSPON		
2. LOCATION (Coordinates or Station) X = 1081962 Y = 733684 GA		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Falling 1500		
4. HOLE NO. (As shown on drawing title and file number) SH438		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 29	UNDISTURBED 0
5. NAME OF DRILLER HERMAN		14. TOTAL NUMBER CORE BOXES N/A		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 43.5'		16. DATE HOLE	STARTED 25 JUN 02	COMPLETED 25 JUN 02
8. DEPTH DRILLED INTO ROCK 0'		17. ELEVATION TOP OF HOLE 0		
9. TOTAL DEPTH OF HOLE 60.3'		18. TOTAL CORE RECOVERY FOR BORING N/A %		
		19. SIGNATURE OF INSPECTOR		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			Change of scale to 1" = 5ft			Set 37' casing to a depth of -19.8
	15		Start of sampling 16.8			water
	20		(SP) 16.8 - 25.8 Sand, poorly graded, fine, wet, grey to green 19.8 - 21.2 trace shell frags, few black heavy minerals		1	20 (6-10-10)
					2	32 (14-14-18)
					3	37 (20-24-18)
					4	33 (4-10-23)
	25				X	20 (6-10-10)
					5	23 (10-12-11)
			(SM) 25.8 - 30.3 Sand, silty, fine grained etc with some silt, few shell fragments, few black heavy minerals wet, dark gray		6	2 (0-0-2)
					7	6 (4-2-4)
	30		30.3 - 31.8 no heavy minerals little shell fragments		8	1 (1-0-1)
					9	4 (2-2-2)
			(CL) clay, silty/clay with little silt few fine grain etc Sand f. shell fragments, gray 31.8 - 34.0'		10	11 (2-3-8)
					11	6 (4-3-3)
	35		(SP) 34 - 34.8 Sand, poorly graded fine to med etc with few fines, few shell fragments, greens gray, moist		12	23 (4-9-14)
			34.8 - 43.0 little shell fragments		13	37 (12-16-21)
					14	49 (15-22-22)
	40				15	17

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

Continued on sheet NO. 2

BLOWS PER FOOT:
Number required to drive 1 3/8" ID splitspoon w/140 hammer falling 30".

DRILLING LOG (Cont Sheet)

ELEVATION TOP OF HOLE

0

Hole No. SH 438

PROJECT

Savannah Harbor

INSTALLATION

Savannah Ga

SHEET 2

OF 2 SHEETS

ELEVATION a	DEPTH 4/b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
					15	(10-8-9)
					16	2 (3-1-1)
			(CH) 43-44.5 clay, high plasticity firm, moist, green to gray		17	23 (2-12-11)
	45		(SP) 44.5-48.3 Sand, poorly graded fine to med & 1/2, few fines few shell fragments, moist gray to green		18	10
					19	(4-5-5)
					20	13 (4-4-9)
					21	34 (12-14-20)
	50		48.3-49.8 - no shells med & 1/2 grain sand		22	26 (3-7-19)
					23	50
			49.8-51.3 trace shell fragments		24	(19-22-28)
			51.3-60.3 trace black heavy minerals tan - gray		25	49 (17-26-23)
	55				26	48 (20-22-26)
					27	48 (11-21-27)
					28	43 (15-19-24)
	60				29	54 (13-16-38)
					29	59 (17-26-33)

End of Boring at -60.3'

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

BLOWS PER FOOT:
Number required to drive 1 3/8" ID splitspoon w/140 hammer falling 30".

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Ga	SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" ID Split Spoon		
2. LOCATION (Coordinates or Station) Ga X = 1071524 Y = 742060		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 439		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 11	UNDISTURBED 0
5. NAME OF DRILLER Rountree		14. TOTAL NUMBER CORE BOXES None		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER NA		
7. THICKNESS OF OVERBURDEN		16. DATE HOLE STARTED 7 MAY 02 COMPLETED 7 MAY 02		
8. DEPTH DRILLED INTO ROCK 0'		17. ELEVATION TOP OF HOLE 0'		
9. TOTAL DEPTH OF HOLE 60'		18. TOTAL CORE RECOVERY FOR BORING None %		
		19. SIGNATURE OF INSPECTOR		

ELEVATION ○ a	DEPTH ○ b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	40		Change of scale 1" = 5'			Set 62 feet of casing to a depth of -47.9'
	45		Start of sampling at -43.5'			Water
			Clay, low plasticity, soft, a little fine etc sand, few shell fragments up to 5mm HCL RXN, wet, dark gray (CL)		1	15 (2-6-9)
			Sand, poorly graded, fine grained etc with a little mica, magnet, gray (SP)		2	35 (7-12-23)
					3	57 (15-29-28)
					4	20 (2-6-14)
					5	22 (17-11-11)
	50		Silt, low plasticity, firm, some fine grained etc sand, HCL RXN, moist green (ML) - Miocene		6	31 (0-5-16)
					7	35 (0-12-14)
	55				8	28 (5-13-15)
					9	42 (7-12-30)
					10	27 (3-8-16)
	60				11	31 (4-9-22)
			End of Boring at -60'			

BLOWS PER FOOT:
 Number required to drive
 1 3/8" ID splitspoon w/140 lb
 hammer falling 30".

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Ga	SHEET 1 OF 2 SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" ID split Spoon		
2. LOCATION (Coordinates or Station) Ga X=1084686 Y=729887		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 440		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 29	UNDISTURBED 0
5. NAME OF DRILLER Herman		14. TOTAL NUMBER CORE BOXES None		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER NA		
7. THICKNESS OF OVERBURDEN 45'		16. DATE HOLE STARTED 27 Jun 02 COMPLETED 27 Jun 02		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 0'		
9. TOTAL DEPTH OF HOLE 60.7'		18. TOTAL CORE RECOVERY FOR BORING None %		
		19. SIGNATURE OF INSPECTOR		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			Change scale to 1" = 5'			Set 37 feet of casing to a depth of 19.5'
	15'		Start of Sampling at 15.7'			Water
			(SP) 15.7-26.2 Sand, poorly graded fine etc, trace black heavy minerals, moist, green to gray		1	99 (0-28-71)
					2	96 (90-73-23)
	20'				3	32 (15-16-16)
					4	37 (11-19-18)
					5	45 (13-21-24)
	25'				6	34 (8-12-22)
					7	19 (11-12-7)
			lost sample		X	weight of rods 0 (0-0-0)
			(CL) 27.7-29.2 clay, low, plasticity, soft with little shells upto 7mm, wet gray		8	7 (3-3-4)
	30'		29.2-35.2 No shells		9	weight of rods 0 (0-0-0)
					10	weight of rods 0 (0-0-0)
					11	2 (2-1-1)
	35'		35.2-36.7 trace fine grained etc sand, little shell fragments upto 10mm		12	2 (1-1-1)
					13	14 (4-3-9)
			(SP) 36.7-45.7 Sand, poorly graded fine grain etc, little shell fragments upto 10mm, few fines, moist, gray		14	35 (4-10-25)
	40'				15	27 (8-11-16)
			Continued on sheet No. 2			

BLOWS PER FOOT:
Number required to drive 1 3/8" ID splitspoon w/140 lb hammer falling 30".

NOTE: SOILS USUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

DRILLING LOG (Cont Sheet)

ELEVATION TOP OF HOLE

0

Hole No. SH 440

PROJECT
Savannah Harbor

INSTALLATION
Savannah Ga

SHEET 2
OF 2 SHEETS

ELEVATION a	DEPTH 40b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
					16	43 (14-21-22)
					17	39 (11-21-18)
					18	34 (14-16-18)
	45				19	10 (7-4-6)
			(CH) 45.7-47.2 Clay, high plasticity firm, few shell fragments upto 5mm, moist, gray		20	8 (2-4-4)
			47.2-48.7- trace shells upto 1mm		21	12 (3-4-8)
	50		48.7-50.2 No shells, trace fine etc Sand		22	17 (5-7-10)
			50.2-53.2 No Sand		23	20 (6-7-13)
					24	26 (7-11-15)
			(CL) 53.2-54.7 Clay, low plasticity, firm little fine to med etc Sand, moist gray		25	55 (11-24-31)
	55		(SP) Sand, poorly graded fine to medium grain etc, little fines few shell fragments upto 5mm moist, gray (54.7-56.2)		26	49 (16-21-28)
			56.2-59.2 fine sand, few fines few shell fragments upto 5mm		27	52 (25-26-26)
					28	14 (5-6-8)
	60		59.2-60.7 little fines		29	16 (4-6-10)
			End of Boring at 60.7'			

NOTE: SOILS VISUALLY
CLASSIFIED IN ACCORDANCE
WITH THE UNIFIED SOIL
CLASSIFICATION SYSTEM.

BLows PER FOOT:

Number required to drive
1 3/8" ID splitspoon w/140 lb.

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah Ga	SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" ID Split Spoon	
2. LOCATION (Coordinates or Station) Ga X=1075854 Y=738637		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 1500	
4. HOLE NO. (As shown on drawing title and file number) SH 441		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 12 UNDISTURBED: 0	
5. NAME OF DRILLER Herman		14. TOTAL NUMBER CORE BOXES None	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER NA	
7. THICKNESS OF OVERBURDEN 15'		16. DATE HOLE STARTED: 26 Jun 02 COMPLETED: 26 Jun 02	
8. DEPTH DRILLED INTO ROCK 0'		17. ELEVATION TOP OF HOLE 0'	
9. TOTAL DEPTH OF HOLE 60.5'		18. TOTAL CORE RECOVERY FOR BORING None %	
		19. SIGNATURE OF INSPECTOR	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			Change of Scale 1" = 5'			Set 70 feet of casing to a depth of 53'
	45		Start of sampling at 45.5'			Water weight of Rods
		||||	(MH) 45.5-46.5 silt, high plasticity, very soft, wet black		1	0
		.....	(SP) 46.5-48.5 Sand, poorly graded, fine grain & 2, few fines, trace muscovite, moist, black to gray		2	(0-0-0) 28 (6-12-16)
	50	.....	48.5 to 53.0 No muscovite, few black heavy minerals (fine sand size) trace fines tan to gray		3	11 (9-6-5)
		.....	53-60.5' trace shell fragments upto 2mm		4	17 (4-11-6)
		.....			5	3 (0-1-2)
		SS			6	20 (2-4-16)
		.....			7	43 (26-17-26)
		.....			8	41
		.....			9	(15-22-29)
		.....			10	47 (5-22-25)
	60	.....	60.5-62 little fines		11	35 (10-15-20)
		||||	(SM) 62-63.5 Sand, silty, fine to medium with some silt, moist, friable when dry green (Miocene)		12	32 (11-16-16)
			End of Boring at 63.5'			45 (12-19-26)

BLOWS PER FOOT:

Number required to drive
1 3/8" ID splitspoon w/140 lb.
hammer falling 30".

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

SAVANNAH HARBOR BORING LOGS

From Station -38+500

To

Station -60+000

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X942790 Y720190		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 12		13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN	DISTURBED 3	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 24.0'		16. DATE HOLE	STARTED 1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 41.0' water depth		
9. TOTAL DEPTH OF HOLE 24.0'		18. TOTAL CORE RECOVERY FOR BORING %		
19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV- ERY	BOX OR SAMPLE NO. OR PAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-37.3 ^d	0 ^b	a, b, c	SM - Gray, silty, medium- fine sand	•	1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		ML - Green, sandy (fine) silt with 10% stiff, dense interlayered with silty fine sand 0.3'-0.9'		1	
	10		With 5% fine sand			
	15					
	20				2	
	25		SC - Green, brown, clayey, fine sand, stiff, dense		3	
	30		Bottom of Boring 30.0'			
-67.3			NOTE: Soils classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing Tube	
2. LOCATION (Coordinates or Station) X943184 Y720585		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore	
4. HOLE NO. (As shown on drawing title and file number) 13		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: _____ UNDISTURBED: _____	
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 25.0'		16. DATE HOLE STARTED: 1978 COMPLETED: 1978	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 40.0' water depth	
9. TOTAL DEPTH OF HOLE 25.0'		18. TOTAL CORE RECOVERY FOR BORING %	
		19. SIGNATURE OF INSPECTOR JACK M. KEETON, Geologist	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-36.0 MLW	0 b	c	d	e	JAR	g
	0		SM - Gray, fine to coarse sand with shells		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9). Bottom depth logged 10.1'
	5		Dark green, fine, silty sand dense		2	
	10					NOTE: Only one sample tube was found labeled No. 13. It was 10.1' long.
						Bottom of Boring 25.0'
						NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS	
1. PROJECT Tybee Island Beach Erosion Control Project			10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X928228 Y728160			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 20			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 2 UNDISTURBED 0
5. NAME OF DRILLER Charles Dill			14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 13.2'			16. DATE HOLE		STARTED 1978 COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 45.0' water depth		
9. TOTAL DEPTH OF HOLE 13.2'			18. TOTAL CORE RECOVERY FOR BORING %		
			19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-41.6 MLW	0		OH - Black, organic fat, clayey silt		JAR 1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		SM - Gray, silty, medium-fine sand with beach shells 10% with clay 2.0' to 5.0' and 6.0' to 6.5' green, fat silt lenses (hard, dense) 6.7' to 6.8', 7.2' to 7.6'		JAR 2	
	10		Slightly silty coarse-medium sand with gravel sized shells 15%, silt lenses 14.0' - 14.2' 14.4'-14.6'			
-56.3	15		Bottom of Boring 14.7'			
NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.						

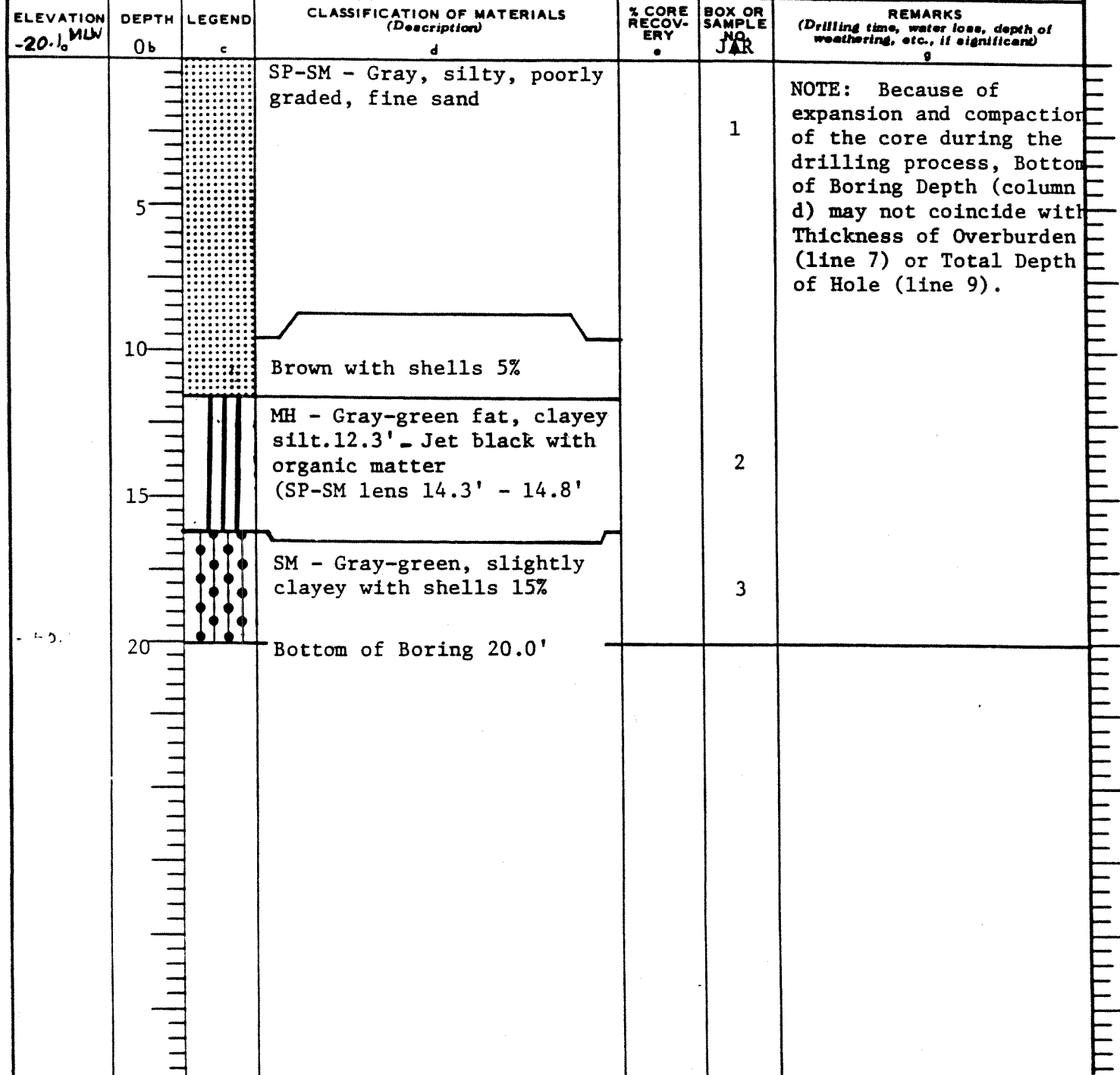
DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X929903 Y728142		11. DATUM FOR ELEVATION SHOWN (TBM & MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 21		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 30.0'		16. DATE HOLE	STARTED 1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 18.0' water depth		
9. TOTAL DEPTH OF HOLE 30.0'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
-15.7 MLW	0'	c	d	e	f	g
	0-3.3'	●●●●●	SM - Gray, silty, fine sand with shells 5% Black clayey silt lens 3.3'		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	3.3-3.4'	●●●●●	-3.4'		2	
	3.4-10'	|||||	MH - Gray-green, fat clayey silt with fine sand inclusion 30%		3	
	10-15'	●●●●●	SM-SC - Green, silty, medium-fine sand with clay and with fine-coarse gravel sized shells 15%		4	
	15-19.5'	●●●●●	SM - Green, silty, medium-fine sands with shells 15%			
	19.5-30.0'	|||||	MH - Gray-green fat, clayey silt with fine sand inclusions 30%			
	30.0'		Bottom of Boring 19.5'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project			10. SIZE AND TYPE OF BIT 4" Casing tube	
2. LOCATION (Coordinates or Station) X931818 Y726132			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore	
4. HOLE NO. (As shown on drawing title and file number) 22			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 2 UNDISTURBED: 0	
5. NAME OF DRILLER Charles Dill			14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 16.1'			16. DATE HOLE STARTED 1978 COMPLETED 1978	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 42.0' water depth	
9. TOTAL DEPTH OF HOLE 16.1'			18. TOTAL CORE RECOVERY FOR BORING %	
			19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist	

ELEVATION -40.7 ^a MLW	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			OH - Black organic silt, fat			NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		SM - Gray, silty, medium-fine sand with fine-coarse gravel sized shells 15%		1	
	10		Low silt percent with 5% shells, medium grained		2	
	15		Silty coarse-medium sand woody layer 14.9' to 15.1'			
			Bottom of Boring 16.1'			
-56.8			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) y932751 Y726479		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 23		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 3	UNDISTURBED 0
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 20.0'		16. DATE HOLE	STARTED 1978	COMPLETED 1978
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 21.0' water depth		
9. TOTAL DEPTH OF HOLE 20.0'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		



DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	Hole No. 24	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project			10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X933730 Y725002			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 24			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		
5. NAME OF DRILLER Charles Dill			DISTURBED 5 UNDISTURBED 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			14. TOTAL NUMBER CORE BOXES		
7. THICKNESS OF OVERBURDEN 17.0'			15. ELEVATION GROUND WATER		
8. DEPTH DRILLED INTO ROCK 0.0'			16. DATE HOLE		
9. TOTAL DEPTH OF HOLE 17.0'			STARTED 31 Aug 1978 COMPLETED 31 Aug 1978		
			17. ELEVATION TOP OF HOLE 30.0' water depth		
			18. TOTAL CORE RECOVERY FOR BORING 17.4'		
			19. SIGNATURE OF INSPECTOR R. V. O'Kelley		

ELEVATION -27.9' MLW	DEPTH 0b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Gray, silty, fine sand with minor shell content		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		MH - Gray inorganic, fine sandy, slightly clayey silt with minor shell content. Fine sand in thin lenses		2 3	
	10		SM - Silty, fine sand with moderate shell content		4	
	15		Slightly silty, fine to medium sand with some coarse sand and pebbles and very minor shell content		5	
			Bottom of Boring 17.4'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing Tube		
2. LOCATION (Coordinates or Station) Y936197 Y725334		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 25		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 6 UNDISTURBED 0		
5. NAME OF DRILLER Charles Dill		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 23.0'		16. DATE HOLE STARTED 1978 COMPLETED 1978		
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 30.0' water depth		
9. TOTAL DEPTH OF HOLE 23.0'		18. TOTAL CORE RECOVERY FOR BORING %		
		19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist		

ELEVATION -26.9' MLW	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Black, gray, fine sand slightly silty with shells 2%		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		MH - Gray fat, clayey silt with fine sand lenses 15%		2	
			ML - Gray, clayey silt with fine sand 20%		3	
	10		MH - gray, fat clayey silt			
			SC - Gray, clayey, medium - fine sand		4	
	15		SM-SC - Gray, silty, medium fine sand with clay and with gravel sized shells 10%		5	
	20		SM - Gray, slightly silty, medium sand with gravel sized shells 15%		6	
			Bottom of Boring 22.6'			
	25		NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

-49.5

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project			10. SIZE AND TYPE OF BIT 4" Casing tube	
2. LOCATION (Coordinates or Station) X937625 Y723929			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore	
4. HOLE NO. (As shown on drawing title and file number) 26			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 3 UNDISTURBED 0	
5. NAME OF DRILLER Charles Dill			14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 15.5'			16. DATE HOLE STARTED 1978 COMPLETED 1978	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 42.0' water depth	
9. TOTAL DEPTH OF HOLE 15.5'			18. TOTAL CORE RECOVERY FOR BORING %	
19. SIGNATURE OF INSPECTOR JAMES E. BOLEN, Geologist				

ELEVATION MLW -40.40	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
		•••••	SM - Gray, slightly silty, coarse sand with gravel sized shells 5%		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5	•••••	ML - Dark green, clayey silt with fine sand 25%		2	
	20		Bottom of Boring 20.0'		3	
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

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DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Harbor Outer Channel	SHEET 1 OF 1 SHEETS
1. PROJECT Tybee Island Beach Erosion Control Project		10. SIZE AND TYPE OF BIT 4" Casing tube		
2. LOCATION (Coordinates or Station) X940129 Y721707		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Alpine Vibracore		
4. HOLE NO. (As shown on drawing title and file number) 28		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER CHARLES DILL		14. TOTAL NUMBER CORE BOXES		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 17.0'		16. DATE HOLE	STARTED 1 Sep 78	COMPLETED 1 Sep 78
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 43.0' water depth		
9. TOTAL DEPTH OF HOLE 17.0'		18. TOTAL CORE RECOVERY FOR BORING 18.2' %		
		19. SIGNATURE OF INSPECTOR R. V. O'KELLEY		

ELEVATION MLW 41.3 ^a	DEPTH 0 ^b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SM - Gray, silty, fine sand with moderate shell content		1	NOTE: Because of expansion and compaction of the core during the drilling process, Bottom of Boring Depth (column d) may not coincide with Thickness of Overburden (line 7) or Total Depth of Hole (line 9).
	5		Fine to medium with high shell content		2	
	10		Moderately silty with moderate shell content		3	
	15		Slightly silty, medium to coarse with some fine sand and moderate shell content		4	
-59.5			Moderately silty, fine to medium with some coarse sand and pebbles and minor to moderate shell content			
			Bottom of Boring 18.2'			
			NOTE: Soils field classified in accordance with the Unified Soil Classification Systems.			

DRILLING LOG	REGION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 1/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-928104 Y-729183 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-361		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 6
5. NAME OF DRILLER DAVID JUSTISS		UNDISTURBED 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		14. TOTAL NUMBER CORE BOXES 0	
7. THICKNESS OF OVERBURDEN 60.4' (Water 40.9')		15. ELEVATION GROUND WATER N/A	
8. DEPTH DRILLED INTO ROCK 0.0'		16. DATE HOLE	STARTED 21 FEB 92
9. TOTAL DEPTH OF HOLE 60.4'		COMPLETED 21 FEB 92	
		17. ELEVATION TOP OF HOLE 0.0'	
		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0 _a 0	DEPTH 0 _b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. JAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g	BLOWS
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 42.0'.	
	40		Bottom of Harbor 40.9'				
-40.9'			(SM) Grey & olive-grey, fine silty SAND.		1	Made new batch of Zeogel drilling mud at 42.4'.	25
-42.5'			(SC) Dark grey, fine clayey SAND. Some silt.		2	No splitspoon recovery on first attempt on drive from 42.4' to 43.9'. Redrove to 43.9' then cont'd. drive to 45.4'. Jar sample 2 from 42.4' to 45.4'.	25
-45.4'	45		(CH) Dark grey, fat CLAY. Trace of silt.		3	No recovery on first attempt from 51.4' to 52.9'. Redrove to 52.9' then cont'd. drive to 54.4'. Jar sample 5 from 51.4' to 54.4'.	36
							7
							7
-51.4'	50		(SC) Dark grey fine to medium clayey SAND. Some small to large shell fragments.		4		10
					5		8
							14
							13
							20
-58.9'	55		(SM) Dark grey, fine, silty SAND. Trace of clay & small shell fragments.		6		9
-60.4'	60		Bottom of Boring 60.4'				40
						BLOWS PER FOOT: Number required to drive 1 1/8" I.D. splitspoon w/140 lb. hammer falling 30".	
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah, Ga.	SHEET OF SHEETS
1. PROJECT Savannah Harbor Deepening			10. SIZE AND TYPE OF BIT 1 3/8" I.D. Splitspoon,	
2. LOCATION (Coordinates or Station) UTM. X-520898.53, Y-3539342.23			11. DATUM FOR ELEVATION SHOWN (TBM, or MSL) MLW 5 1/2" Fishtail	
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Failing-314	
4. HOLE NO. (As shown on drawing title and file number) SH- 365			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 6 UNDISTURBED 0	
5. NAME OF DRILLER D. Justiss			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.0' (Water 43.5')			16. DATE HOLE STARTED MAR 7 1992 COMPLETED MAR 7 1992	
8. DEPTH DRILLED INTO ROCK 0.0			17. ELEVATION TOP OF HOLE 0.0	
9. TOTAL DEPTH OF HOLE 60.0'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR J. ARTHUR	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	h
	0		WATER			SCALE CHANGE AT 40.0'. SET 6" DIAMETER CASING BY OWN WEIGHT TO 44.6'.	
	40						
	43.5		BOTTOM OF HARBOR 43.5'		JAMS		Blows
	45		(SM) DARK GRAY FINE SILTY SAND.		1	BEGAN USING ZEOGEL DRILLING MUD AT 43.5'.	28
	46.5		GRAY, FINE TO MEDIUM SAND, TRACE OF SMALL SHELL FRAGMENTS.				17
	48.0		SOME SMALL SHELL FRAGMENTS & WOOD, TRACE OF FINE GRAVEL.		2	NO SPLITSPOON RECOVERY ON FIRST DRIVE FROM 54.0' TO 55.5'. RE-DRIVE TO 55.5' THEN CONTINUED DRIVE TO 57.0'. JAM SAMPLE #4 FROM 54.0' TO 57.0'.	15
	49.5		NO WOOD OR GRAVEL, TRACE OF SMALL SHELL FRAGMENTS.				24
	50		MEDIUM TO COARSE SAND.				22
	51.0						18
	52.5		FINE TO MEDIUM SAND, TRACE OF CLAY.		3		28
	54.0		(SC) GRAY MEDIUM CLAY/SAND, SOME SMALL SHELL FRAGMENTS.		4		11
	55		(SM) LIGHT GRAY FINE TO MEDIUM SILTY SAND, SOME SMALL SHELL FRAGMENTS.		5		6
	57.0						24
	58.5		MEDIUM TO COARSE SAND		6		19
	60.0		BOTTOM OF BORING 60.0'				
NOTE: Soils field classified in accordance with the Unified Soil Classification System				BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/140 lb hammer falling 30".			

DRILLING LOG	0' ^N SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X=932387 Y=726387 GA. EAST		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-367		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 2 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS		14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 46.7' (WATER 40.7')		16. DATE HOLE STARTED 24 FEB 92 COMPLETED 24 FEB 92	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 46.7'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.			

ELEVATION 0.0	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY JAR	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g	BLOWS
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 46.7'.	
-40.7'	40		Bottom of Harbor 40.7'				
-42.2'			(SM) Grey fine silty SAND.		1	Began using Zeogel drilling mud at 42.2'.	21
			Light gray, fine to medium sand, some small to large shell fragments.			Note: Boring terminated at 46.7' due to shipping traffic and heavy fog.	18
-45.2'	45		Trace of small shell fragments.		2		24
-46.7'			Bottom of Boring 46.7'				20
	50						
	55						
	60						
NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		D ^r ^{3N} SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" splitspoon, 5/2" fishtail	
2. LOCATION (Coordinates or Station) X-932393 Y-726375 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL FAILING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-367A			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 3 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.5' (WATER 40.9')			16. DATE HOLE STARTED 25 FEB 92 COMPLETED 25 FEB 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.5'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e JAR	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS h
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 41.2'.	
	40		Bottom of Harbor 40.9'				
	45		Wash			40.9'-46.0': See companion log SH-367 for description. Began using Zeogel drilling mud at 40.9'. Cleaned out to 46.0' with fishtail.	
	46.0'		Bottom of Wash 46.0'				
	47.5'		(SM) Light grey fine to medium silty SAND, some small shell fragments. Gray, trace of small shell fragments.		1	Began splitspooning at 46.0'.	26
	50						20
	52.0'		Light grey, medium sand.				14
	53.5'		Medium to coarse sand.		2		18
	55.0'		Grey, fine to medium sand.				17
	58.0'		Some small shell fragments, trace of clay.				31
	59.5'		Bottom of Boring 59.5'		3		30
	60						12
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				14
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIRECTION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X-932930 Y-725430 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-368			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 61.0' (Water 43.0')			16. DATE HOLE STARTED 21 FEB 92 COMPLETED 21 FEB 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 61.0'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO. UJAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS
0.0	0	c	d	e			
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 44.4'.	
	40		Bottom of Harbor 43.0'				
-43.0'			(SM) Grey, fine silty SAND. Some small to large shell fragments.		1	Weight of rods drove splitspoon from 43.0' to 44.0'. Began using Zeogel drilling mud at 44.5'.	8
-46.0'	45		Trace of small shell fragments.				28
-49.0'			Some fine gravel & small to large shell fragments.		2		28
-50.5'	50		No gravel, trace of small shell fragments.				16
-52.0'			(SP) Grey, fine, poorly graded SAND. Trace of silt.		3		29
-55.0'	55		(SM) Grey, medium to coarse silty SAND. Trace of fine gravel & small to large shell fragments.		4	24	
-58.0'			Fine to medium sand.			18	
-59.8'	60		(SP) Grey, fine to medium, poorly graded SAND. Trace of silt, small shell fragments & coarse gravel.		5	20	
-61.0'			Bottom of Boring 61.0'			19	
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			28	
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	31

DRILLING LOG		DIV: South Atlantic	INSTALLATION Savannah, Ga.	SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor Deepening		10. SIZE AND TYPE OF BIT 1 3/8" I.D. Splitspoon		
2. LOCATION (Coordinates or Station) UTM, X- 523009.46, Y- 3538226.61		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW 5 1/2" Fishtail		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Failing-314		
4. HOLE NO. (As shown on drawing title and file number) SH- 373		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 6	UNDISTURBED 0
5. NAME OF DRILLER D. Justiss		14. TOTAL NUMBER CORE BOXES 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	16. DATE HOLE	
7. THICKNESS OF OVERBURDEN 60.8' (Water 44.3')		STARTED MAR 7 1992	COMPLETED MAR 7 1992	
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0'		
9. TOTAL DEPTH OF HOLE 60.8'		18. TOTAL CORE RECOVERY FOR BORING N/A		
		19. SIGNATURE OF INSPECTOR J. G. J. ARTHUR		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	BLOWS
	40		WATER			SCALE CHANGE AT 40.0'. SET 6" DIAMETER CASING BY OWN WEIGHT TO 47.1.	
-44.3'			BOTTOM OF HARDEN 44.3'		JALS		
-45.8'	45		(SP) GRAYISH BROWN MEDIUM TO COARSE POORLY GRADED SAND, SOME SMALL SHELL FRAGMENTS, TRACE OF FINE GRAVEL SILT.		1	WEIGHT OF RODS DRIVE SPLITSPOON FROM 44.3' TO 44.8'	6
			(SM) DARK GRAY FINE TO MEDIUM SILTY SAND, TRACE OF SMALL SHELL FRAGMENTS.		2	BEGAN USING ZEOGEL DRILLING MUD AT 47.3'	38
-48.8'			(SP) GRAY FINE POORLY GRADED QUARTZ GRAVEL, SHELL, SOME FINE TO COARSE SAND, TRACE OF SILT.		3	NO SPLITSPOON RECOVERY ON FIRST DRIVE FROM 48.8' TO 50.7'. RE-DRIVE TO 50.7' THEN CONT'D WITH DRIVE TO 51.8'	24
-51.8'	50		(CH) GRAY FAT CLAY.		4	JAL SAMPLE #3 FROM 48.8' TO 51.8'	11
					5		13
	55						31
					6		13
-59.3'	60		(SC) OLIVE FINE CLAYEY SAND, SOME SILT.				16
-60.8'			BOTTOM OF BORING 60.8'				14
							14
							15




NOTE: Soils field classified in accordance with the Unified Soil Classification System

BLOWS PER FOOT:
Number required to drive 1 3/8" ID splitspoon w/140 lb hammer falling 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 1/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X=938464 Y=723217 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSU) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-374			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN : 6 : UNDISTURBED : 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.7' (Water 42.7')			16. DATE HOLE : STARTED 20 FEB 92 : COMPLETED 20 FEB 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.7'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO JAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 43.7'.	
	40		Bottom of Harbor 42.7'				
-42.7'			(SM) Dark grey, fine, silty SAND.		1	No recovery on first splitspoon drive. Redrove first drive to 44.2' then continued drive to 45.7'.	11
-45.7'	45		Fine to medium sand, trace of small to large shell fragments.				12
-47.2'			(GP) Grey, fine poorly graded GRAVEL. Trace of silt, fine sand & small to large shell fragments.		2		19
-48.7'			(SM) Grey, fine to medium, silty SAND. Trace of small shell fragments.		3		8
-51.7'	50		(CH) Dark grey, fat CLAY. Trace of silt.		4		25
					5		6
	55				6		27
							13
							14
							15
							19
-60.7'	60		Bottom of Boring 60.7'				17
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIRECTION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X=941788 Y=720844 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-378			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.8' (Water 44.3')			16. DATE HOLE STARTED: 7 DEC 91 COMPLETED: 7 DEC 91	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 60.8'			18. TOTAL CORE RECOVERY FOR BORING N/A	
			19. SIGNATURE OF INSPECTOR JAMES ARTHUR, P.G.	

ELEVATION 0.0	DEPTH 0	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. UJAR	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g	BLOWS
			Water			Scale change at 40.0'. Set 6" diameter casing by own weight to 46.0'.	
	40		Bottom of Harbor 44.3'				
-44.3'	45		(SM) Tannish grey, fine to medium, silty SAND. Trace of clay & small shell fragments.		1	Made batch of Zeogel drilling mud at 48.8'. Reset casing to 49.0'.	16 21 27
-48.8'			(SP) Light grey, medium to coarse, poorly graded SAND. Large amount of shell fragments (Shell bed).		2		11
-50.3'	50		(SC) Olive-grey, clayey fine SAND. Some shell fragments.		3		17
-51.8'			Some silt, trace of shell fragments.				18
-53.3'			No shell fragments.				13
-54.8'	55		Light olive-grey.		4		6 6
							8
-60.8'	60		Bottom of Boring 60.8'		5		7
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.			BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG		DIV South Atlantic	INSTALLATION Savannah, Ga.	SHEET 1 OF 1 SHEETS
1. PROJECT Savannah Harbor Deepening			10. SIZE AND TYPE OF BIT 1 3/8" ID Splitspoon	
2. LOCATION (Coordinates or Station) UTM, X-524682.71, Y-3537332.29			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW 5 1/2" Fishtail	
3. DRILLING AGENCY Savannah District			12. MANUFACTURER'S DESIGNATION OF DRILL Failing-314	
4. HOLE NO. (As shown on drawing title and file number) SH-379			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER D. Justiss			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 59.9' (Water 43.4')			16. DATE HOLE STARTED MAR 6 1992 COMPLETED MAR 6 1992	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 59.9'			18. TOTAL CORE RECOVERY FOR BORING N/A	
			19. SIGNATURE OF INSPECTOR <i>J. Arthur</i> J. ARTHUR	

ELEVATION e	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	0		Water			SCALE CHANGE AT 40.0'. SET 6" CASING BY OWN WEIGHT TO 45.3'. BEGAN USING ZEOGEL DRILLING MUD AT 43.4'.	
-43.4'			BOTTOM OF HARBOR 43.4'		JARS		Blows
-46.4'	45		(SM) DARK GRAY FINE TO MEDIUM SILTY SAND, SOME SMALL SHELL FRAGMENTS.		1	POOR SAMPLE RECOVERY FROM 52.4' TO 53.9'. NO SAMPLE RECOVERY ON FIRST DRIVE FROM 53.9' TO 55.4'. REDROVE TO 55.4' THEN CONTINUED WITH DRIVE TO 56.9'. HAD CHANGE OF MATERIAL AT APPROXIMATELY 55.4'.	1
-47.9'			TRACE OF FINE QUARTZ GRAVEL.				31
			NO GRAVEL.		2		9
-50.9'	50		TRACE OF FINE QUARTZ GRAVEL.			ONE HAMMER BLOW DROVE SPLITSPOON FROM APPROXIMATELY 57.9' TO 58.7'. CONT'D DRIVE TO 59.9'. JTM SAMPLE #5 FROM 56.9' TO 59.9'.	17
-52.4'			LARGE AMOUNT OF SMALL SHELL FRAGMENTS. (SEE REMARKS)				16
-53.9'			MOSTLY SMALL SHELL FRAGMENTS SOME FINE GRAVEL. (SEE REMARKS)		3		12
-55.4'	55		(SC) OLIVE FINE CLAYBY SAND.		4		8
					5		76
-59.9'	60		BOTTOM OF BORING 59.9'				46
			NOTE: Soils field classified in accordance with the Unified Soil Classification System				2
						BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/140 lb hammer falling 30".	12

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING			10. SIZE AND TYPE OF BIT 1 3/8" SPLITSPOON, 5 1/2" FISHTAIL	
2. LOCATION (Coordinates or Station) X=946435 Y=719092 GA. EAST			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT			12. MANUFACTURER'S DESIGNATION OF DRILL Failing 314	
4. HOLE NO. (As shown on drawing title and file number) SH-383			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 6 UNDISTURBED 0	
5. NAME OF DRILLER DAVID JUSTISS			14. TOTAL NUMBER CORE BOXES 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 61.0'			16. DATE HOLE STARTED 19 FEB 92 COMPLETED 19 FEB 92	
8. DEPTH DRILLED INTO ROCK 0.0'			17. ELEVATION TOP OF HOLE 0.0'	
9. TOTAL DEPTH OF HOLE 61.0'			18. TOTAL CORE RECOVERY FOR BORING N/A %	
			19. SIGNATURE OF INSPECTOR MICHAEL BAILEY	

ELEVATION 0 _a	DEPTH 0 _b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO UAR	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	BLOWS
			Water Bottom of Harbor 46.0'			Scale change at 45.0'. Zeogel drilling mud used throughout hole. Tide reading of -1.0' MLW at 13:45 obtained by radio from Cockspar Island gauge.	
-46.0'	45		(SM) Dark grey, fine grained, silty SAND. Trace of calcareous shell fragments.		1	Weight of rods drove splitspoon 0.4' before first drive.	30
-47.5'							47
-50.5'	50		Some calcareous shell fragments up to 3/4" in size.		2		7
-52.0'			(SP) Light grey, coarse grained, poorly graded shelly SAND. Trace of silt & fine to medium sand.		3		8
-53.5'					4		9
	55		(SM) Dark grey, fine grained silty SAND. Some calcareous shell fragments.		5	No sample recovered from 55.0' to 56.5'. No cleanout, cont'd. drive to 58.0'.	14
-58.0'			Trace of calcareous shell fragments.		6		13
-61.0'	60		Bottom of Boring 61.0'				30
			NOTE: Soils visually field classified in accordance with the Unified Soil Classification System.				29
						BLOWS PER FOOT: Number required to drive 1 3/8" I.D. splitspoon w/140 lb. hammer falling 30".	23

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah	SHEET # OF 1 SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" ID Split Spoon		
2. LOCATION (Coordinates or Station) Sta X=1090762 Y=225184		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Fallon 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 431		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 15	UNDISTURBED 0
5. NAME OF DRILLER Rosenberg		14. TOTAL NUMBER CORE BOXES 15		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER NA		
7. THICKNESS OF OVERBURDEN		16. DATE HOLE STARTED 8 MAY 02 COMPLETED 8 MAY 02		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 0'		
9. TOTAL DEPTH OF HOLE 71.1'		18. TOTAL CORE RECOVERY FOR BORING None %		
		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 a	0 b	c	d	e	f	g
						Set 69 feet of casing to a depth of 59.6'
	45		Start of Sampling at -47.1'		1	Water weight of solids (0-0-0) 21 (6-10-11) 15 (7-8-11) 32 (8-13-19) 15 (11-8-8) 32 (11-16-16) 21 (11-11-10) 15 (1-2-8) 20 (8-14-16) 24 (8-9-15) 24 (5-12-14) 22 (11-14-18) 23 (12-16-17) 32 (4-12-19) 35 (16-23-22) 26 (20-27-28)
			2 1/2" sand, green, fractured, etc. (ML)		2	
	50				3	
					X	
					4	
	55				5	
					6	
					7	
	60				8	
					9	
					10	
					11	
	65				12	
					13	
					14	
	70		at 70.1' 3" sand, tan & black, hard little fine gr. sand, moist green to black (ML) - Miocene -		15	
			End of Boring at -71.1'			

BLOWS PER FOOT:
Number required to drive 1 3/8" ID splitspoon w/140 lb. hammer falling 30".

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Savannah Ga	SHEET 1 OF SHEETS
1. PROJECT Savannah Harbor		10. SIZE AND TYPE OF BIT 1 3/8" split spoon		
2. LOCATION (Coordinates or Station) Ga X=1092182 Y=724114		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW		
3. DRILLING AGENCY Savannah District		12. MANUFACTURER'S DESIGNATION OF DRILL Falling 1500		
4. HOLE NO. (As shown on drawing title and file number) SH 432		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 15	UNDISTURBED
5. NAME OF DRILLER Rantree		14. TOTAL NUMBER CORE BOXES None		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN		16. DATE HOLE		
8. DEPTH DRILLED INTO ROCK		STARTED 10 MAY 02	COMPLETED 10 MAY 02	
9. TOTAL DEPTH OF HOLE 70.5'		17. ELEVATION TOP OF HOLE 0'		
		18. TOTAL CORE RECOVERY FOR BORING None %		
		19. SIGNATURE OF INSPECTOR		

ELEVATION 0'	DEPTH 0'	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			change of scale 1" = 5'			Set 69 feet of casing to a depth of -53'
	45		Start of Sampling at -45'			water
			45-46" silty, high plasticity, very soft, HCL RXN wet, black (MH)		1	weight of rods 0
			Sand, poorly graded, fine to med etc with little fines and few shell fragments upto 15mm HCL RXN, moist, gray (SP)		2	(0-0-0) 9
			likely same as above and below		3	(3-4-5) 5
	50		Sand, poorly graded, fine to med etc with little fines and few shell fragments upto 15mm HCL RXN, moist, gray (SP)		3	(4-5-2) 18
			52.5-57 = some fines and trace shells upto 2mm		4	(5-6-12) 19
			57 to 69 = No shells		5	(3-6-13) 17
	55				6	(12-11-6) 19
					7	(5-5-14) 61
					8	(11-32-29) 44
					9	(8-20-24) 44
	60				10	(14-27-17) 40
					11	(10-21-19) 31
					11	(4-9-22) 36
					12	(10-21-15) 23
	65				13	(6-11-12) 32
					14	(5-16-16) 28
					15	(8-11-17) 66
	70		Silt, low plasticity, Hard, little fine to green sand, moist, green to black (ML) [Miocene]			(15-27-39)
			End of Boring at 70.5'			
			BLOWS PER FOOT:			
			Number required to drive 1 3/8" ID splitspoon w/140 lb hammer falling 30".			

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

DRILLING LOG	DIVISION South Atlantic	INSTALLATION SAVANNAH DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT SAVANNAH HARBOR DEEPENING		10. SIZE AND TYPE OF BIT 1 3/8" ID SPLITSPOON 5 1/2"	
2. LOCATION (Coordinates or Station) X-1100591 Y-719751		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) FISHTAIL MLLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 1500	
4. HOLE NO. (As shown on drawing title and file number) SH-433		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 8
5. NAME OF DRILLER HORACE FULCHER		14. TOTAL NUMBER CORE BOXES	UNDISTURBED 0
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 61.4' (46.4' WATER)		16. DATE HOLE STARTED 14 MAY 2002 COMPLETED 14 MAY 2002	
8. DEPTH DRILLED INTO ROCK 0-0'		17. ELEVATION TOP OF HOLE 0-0'	
9. TOTAL DEPTH OF HOLE 61.4'		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR W. Delaw P.G.	

ELEVATION D. 0 a	DEPTH 0 b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			WATER			NOTES: SCALE CHANGE AT 45-0'. SET 6" CASING TO BOTTOM OF CHANNEL AND MIXED FLORIGEL DRILLING MUD.
-46.4'	45		Bottom of Channel: 46.4'		JAR	BLOWS
-47.9'			(SP) GREY, FINE GRAINED, POORLY GRADED SAND, SLIGHTLY SILTY, WITH A LITTLE SHELL FRAGMENTS.		1	27
			(SP-SM) GREY, FINE TO MEDIUM GRAINED POORLY GRADED SILTY SAND. A LITTLE SHELL FRAGMENT		2	14
-50.9'	50		(SM) GREY, FINE TO MEDIUM GRAINED SILTY SAND WITH A LITTLE SHELL FRAGMENT		3	NOTE: POOR RECOVERY FROM 50.9' TO 52.4'
			(SM) GREY, FINE TO MEDIUM GRAINED SILTY SAND WITH A LITTLE SHELL FRAGMENT		4	23
-55.4'	55		FINE TO COARSE GRAINED, SHELLY		5	4
			(CH) DARK GRAY, VERY PLASTIC, VERY FAT CLAY WITH OCCASSIONAL FINE TO COARSE GRAINED SAND LENS AND FREQUENT VERY FINE GRAINED SAND LAMINAE (VARVE)		6	19
-58.1'			(SM-H) GREEN, VERY FINE GRAINED FAT SILTY SAND, SLIGHTLY PLASTIC TOP OF MIDDLE: 58.1'		7	3
					8	18
-61.4'	60		Bottom of Boring: 61.4'			25
			NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.			25
						BLOWS PER FOOT NUMBER REQUIRED TO DRIVE 1 3/8" I.D. SPLITSPOON WITH 140 lb. HAMMER FALLING 30"

SAVANNAH HARBOR BORING LOGS

From Station -60+000

To

Station -85+000

DRILLING LOG

DIVISION
SOUTH ATLANTIC

Hole No. SH-400

INSTALLATION
SAVANNAH, GA.

SHEET 1
OF 1 SHEETS

1. PROJECT
SAVANNAH HARBOR DEEPENING FEASIBILITY STUDY

10. SIZE AND TYPE OF BIT 1 3/8" I.D. SPLITSPOON 5/16"
11. DATUM FOR ELEVATION SHOWN (TBM or MSL) FISHHAIL
MLW

2. LOCATION (Coordinates or Station)
LAT: 31° 57' 44.2169" ; LONG: 80° 42' 41.0623"

12. MANUFACTURER'S DESIGNATION OF DRILL
FALLING 314

3. DRILLING AGENCY
SAVANNAH DISTRICT

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN
DISTURBED 6 UNDISTURBED 0

4. HOLE NO. (As shown on drawing title and file number)
SH-400

14. TOTAL NUMBER CORE BOXES 0

5. NAME OF DRILLER
P. BOUNTREE

15. ELEVATION GROUND WATER N/A

6. DIRECTION OF HOLE
 VERTICAL INCLINED _____ DEG. FROM VERT.

16. DATE HOLE STARTED 30 SEP 97 COMPLETED 30 SEP 97

7. THICKNESS OF OVERBURDEN 60.4' (INC. 52.9' WATER)

17. ELEVATION TOP OF HOLE 0.0' MLW

8. DEPTH DRILLED INTO ROCK 0.0'

18. TOTAL CORE RECOVERY FOR BORING N/A %

9. TOTAL DEPTH OF HOLE 60.4'

19. SIGNATURE OF INSPECTOR
J. [Signature], P.G.

ELEVATION MLW	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	0		WATER			Blows
	50		BOTTOM OF OCEAN 52.9'			SCALE CHANGE AT 50.0'
-52.9'			(SP) GRAY FINE POORLY GRADED QUARTZ SAND TRACE OF FINE TO COARSE SAND SIZE SMALL FRAGMENTS, CALCAREOUS. (SEE REMARKS) 54.4'	1, 1	1	NO RECOVERY ON FIRST DRIVE. 1st DRIVE 52.9' TO 54.4' THEN CONT'D DRIVE TO 55.9'. RECOVERED BOTH DRIVES.
-54.4'	55		(SM) GRAY FINE TO MEDIUM SILTY QUARTZ SAND, 15% FINE TO COARSE SAND SIZE SMALL FRAGMENTS, TRACE OF FINE GRAVEL SIZE SHELL FRAGMENTS, CALCAREOUS. 55.9'	1	2, 3, 4	
-55.9'			(SP) GRAY COARSE POORLY GRADED QUARTZ SAND, 40% FINE GRAVEL SIZE SHELL FRAGMENTS, CALCAREOUS. 57.0'		5	BROKEN USING ZOOGL DARNING MUD AT 55.9'.
-57.0'	60		(SM) OLIVE GRAY FINE SILTY QUARTZ SAND, SLIGHTLY CALCAREOUS. 58.9'		6	
-58.2'			DARK OLIVE GRAY, TRACE OF CLAY.			
-60.4'			BOTTOM OF BORING 60.4'			

NOTE: Soils field classified in accordance with the Unified Soil Classification System.

Blows per 1/2 Foot
NUMBER REQUIRED TO DRIVE 1 3/8" I.D. SPLITSPOON w/140lb HAMMER FALLING 30".

N 716 730.2 E 1107 482.0 STA -65 +000 R 300

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA	SHEET 1
1. PROJECT SAVANNAH HARBOR DEEPENING FEASIBILITY STUDY		10. SIZE AND TYPE OF BIT 1 3/8" I.D. SPLIT SPOON, 5/16"	OF 1 SHEETS
2. LOCATION (Coordinates or Station) LAT: 31° 57' 18.738" N, LONG: 80° 41' 57.4161" W		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW	
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 314	
4. HOLE NO. (As shown on drawing title and file number) SH-401		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 7
5. NAME OF DRILLER P. ROUNTREE		14. TOTAL NUMBER CORE BOXES	UNDISTURBED 0
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A	
7. THICKNESS OF OVERBURDEN 60.4' (INCL. 49.9' WATER)		16. DATE HOLE	STARTED 30 SEP 97
8. DEPTH DRILLED INTO ROCK 0.0'		COMPLETED 30 SEP 97	
9. TOTAL DEPTH OF HOLE 60.4'		17. ELEVATION TOP OF HOLE 0.0' MLW	
		18. TOTAL CORE RECOVERY FOR BORING N/A	
		19. SIGNATURE OF INSPECTOR J. Cotton, P.G.	

STA-69+96.5, L-05

E: 1111794.8

N: 714170.3

ELEVATION MLW.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
52.0	0		WATER			SCALE CHANGE AT 45.0'. Blows
45.0	45		BOTTOM OF OCEAN 49.9'			SBT 6" DIAMETER STEEL CASING TO 53.2'. BEGAN USING ZBOGEL DRILLING MUD AT 49.9'.
51.4	51.4		(SP) GRAY MEDIUM TO COARSE POORLY GRADED QUARTZ SAND, TRACE OF FINE QUARTZ GRAVEL, 20% SHELL FRAGMENTS, CALCAREOUS.			
52.9	52.9		51.4 FINE TO MEDIUM GRAINED, TRACE OF SHELL FRAGMENTS.		1	CASING BEGAN 27 10 17
54.4	54.4		NO GRAVEL.		2	DROPPING WITH 15 20 34 54
55.9	55.9		54.4 FINE GRAINED.	0.4	3	CLEANOUT BEGINNING AT 57.4'. 14 34 21 55
57.4	57.4		55.9 COARSE GRAINED, SOME FINE QUARTZ GRAVEL AND SHELL FRAGMENTS.		4	14 16 36 52
58.9	58.9		58.9 (SC) VERY DARK OLIVE GRAY FINE CLAYEY SAND, SOME SILT, SLIGHTLY CALCAREOUS.	0.4	5	5 10 15 25
60.4	60.4		BOTTOM OF BORING 60.4'		6	3 5 9 29 62
	65				7	13 12 9 17

NOTE: Soils field classified in accordance with the Unified Soil Classification System.

BLOWS PER 1/2 FOOT
NUMBER REQUIRED TO DRIVE 1 3/8" I.D. SPLIT SPOON W/140 LB HAMMER FALLING 30".

DRILLING LOG		DIVISION SOUTH ATLANTIC	INSTALLATION SAVANNAH, GA.	SHEET 1
1. PROJECT SAVANNAH HARBOR DEEPENING FEASIBILITY STUDY		10. SIZE AND TYPE OF BIT 1 3/8" I.D. SPLITSPOON 5/8"		
2. LOCATION (Coordinates or Station) LAT: 31° 56' 52.4257" Lon: 80° 41' 1.9911"		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) FISH TAIL MLW		
3. DRILLING AGENCY SAVANNAH DISTRICT		12. MANUFACTURER'S DESIGNATION OF DRILL FALLING 314		
4. HOLE NO. (As shown on drawing title) and file number SH-402		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 8	UNDISTURBED 0
5. NAME OF DRILLER C. ROBBINS		14. TOTAL NUMBER CORE BOXES 0		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER N/A		
7. THICKNESS OF OVERBURDEN 60.3' (END. 48.3' WATER)		16. DATE HOLE STARTED 6 OCT 97 COMPLETED 6 OCT 97		
8. DEPTH DRILLED INTO ROCK 0.0'		17. ELEVATION TOP OF HOLE 0.0' MLW		
9. TOTAL DEPTH OF HOLE 60.3'		18. TOTAL CORE RECOVERY FOR BORING N/A		
		19. SIGNATURE OF INSPECTOR J. P. G.		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant) g
			WATER			
	45		BOTTOM OF OCEAN 48.3'			SCALE CHANGE AT 45.0'. SET 6" DIAMETER STEEL CASING TO 53.1'. BEGAN USING ZEOCEL DRILLING MUD AT 51.3.
48.3'			(SP) GRAY MEDIUM TO COARSE POORLY GRADED SAND, TRACES OF FINE QUARTZ GRAVEL AND SHELL FRAGMENTS, SLIGHTLY CALcareOUS.	1	1	
49.8'	50		GRAY TO LIGHT GRAY, FINE TO MEDIUM GRAINED, NO GRAVEL, CALcareOUS.	2	2	
51.3'			LIGHT GRAY/MEDIUM GRAINED SLIGHTLY CALcareOUS.	3	3	
52.8'			GRAY, MEDIUM TO COARSE GRAINED, TRACES OF FINE QUARTZ/GRAVEL.	4	4	NO SPLITSPOON RECOVERY ON FIRST ATTEMPT FROM 54.3 TO 53.5. NB-
54.3'	55		(SC) DARK OLIVE GRAY FINE CLAYEY SAND, SLIGHTLY CALcareOUS.	5	5	DRIVE TO 55.8' THEN CONT'D DRIVE TO 57.1'. CHANGE UP MATERIAL AT 57.1'.
55.8'				6	6	
57.1'				7	7	
60.3'	60		BOTTOM OF BORING 60.3'	8	8	

N: 711, 612, 0 E 1, 110, 089.2 STA -74 + 980, 4

NOTE: Soils field classified in accordance with the Unified Soil Classification System.

Blows per 1/2 FOOT
NUMBER REQUIRED TO DRIVE 1 3/8" I.D. SPLITSPOON 02/14066 HAMMER FALLING 30'.

0	56	11
10	13	23
12	36	55
12	16	13
10	13	9
8	18	22
8	10	11
6	9	11