				1			Hole No.	TI-03-V-01
DRILL	ING LO	G DI	vision SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT	IL INLE				AND TYPE		4" Dia. Vibr	
2. LOCATION NC COC			on) 727 N 224065 NAD83	MLLW				
3. DRILLING				VIBRA	CORE		ATION OF DRILL SNELL	
4. HOLE NO	.(As shown				L NO. OF ( EN SAMPLE		DISTURBED 8	UNDISTURBED
5. NAME OF LESTER	DRILLER		CRANE OPERATOR		L NUMBER ATION GRO		147 7 (	
6. DIRECTION		E		16. DATE		STAF	147 7 (	COMPLETED: 06/19/03
7. THICKNES					ATION TOP	OF HOLE	0.0' MLLW	
8. DEPTH D	RILLED IN	TO ROCK	0.0'		ATURE OF		FOR BORING N/	A ×
9. TOTAL D	EPTH OF	HOLE	31.5'		LACKE % core	Y AN	D LARRY BE I R	NJAMIN Emarks
ELEVATION MLLW	DEPTH feet	LEGEND c	CLASSIFICATION OF MATERIA (Description)	LS	RECOV- ERY	SAMPLE NO.	(Drilling time	water loss, depth of etc., if significant)
0.0	0 _		0.0'TO 14.0' WATER				Time begin 1318 hrs.	vibracoring:
							Soils describ	oed by Larry vil Engr. Tech.
	_						Derrjainin, Cr	VII Eligi . Tech
-14.0	14.0—	• 1	OCEAN BOTTOM @14.0			14.0' 1	Scale chand	red @26 O'
	_	•••  	SP-SM Gray, fine, poorly graded silty sand, w/sh	ell		14.5	  NOTE: TOP O	F HOLE is de-
		]·••					fined as surf	ace of water ation is made
	_	· • • • • • • • • • • • • • • • • • • •	•				for the tide s top of Hole is	such that s 0.0 EL MLLW.
	16.0 —	}						
	_							RE BORING
		<b>]</b> [		17.5'		17.5'	From 0.0 Ran 17.5	
	10 0		SM Gray, fine elastic sil w/shell fragments.		-	2	T 6	
	18.0		w/ sire ii ii agiiieires.			18.0'	Top of vibr	ogged as be- I►
	=	<del>-</del> - - - -					When Run	Ocean Bottom. = is greater than =
			<b>&gt;</b>				Recovery, is depicted	is greater than the difference as Assumed
	20.0 <u> </u>			19.9'		19.9'	Not Recov	ered.
	=		MH Dark gray elastic si w/shell fragments.	It,		3 [20.4]		<b> </b>
	=			21,0'		21.0'		
			SP-SM Dark gray, fine, pgraded silty sand, w/sh	ell		21.5'		
	22.0-	<b>∮.</b> . • •	fragments.			۷۱.۷		SSIFICATION
	_			22.8'		22.8'	Jar <u>Number</u>	<u>Classification</u>
	_		MH Dark gray elastic si shell fragments.	t, with		5	1 2	SP SC
	=	-		23.8'		23.3' 23.8'	3 4	CH SC
	24.0		SP Tan, medium, poorly graded sand.			6	3 4 5 6	CH SC
	_	,	•			24.3'	7	SM
	<del>-</del>		•				8	SP-SM
			•			26.0'		
	26.0—		•			7		ļ.
			•			26.5;	NOTE: Te	rminated
	29.0	• •	Assumed not Recover	29.0' ed		29.0'	ihole at pr Idepth at	redetermined 17.5'
	31.0 —	1						<u> </u>
	31.5	-	BOTTOM OF HOLE AT	31.5'				
								E
								ļ:
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE					F
		1	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					E
	_	-						F
		]						E
	_	†			DDO ICOT			

Hole No. TI-03-V-02 DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG WILMINGTON DISTRICT OF SHEETS 10. SIZE AND TYPE OF BIT 4" PROJECT Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) LOCATION (Coordinates or Station) COORD E 2400769 N 224628 NAD 83 <u>NC</u> 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-02 0 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 06/19/03 COMPLETED 06/19/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW THICKNESS OF OVERBURDEN N/A (4.5' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN TOTAL DEPTH OF HOLE 24.0 % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW <u>fe€t</u> 0.0 g 0.0' TO 4.5' WATER Time begin vibracoring: 1345 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 4.0-Scale changed @16.0'. OCEAN BOTTOM @4.5 4.5' -4.5 4.5 SM Gray, fine, silty sand, with shell fragments. NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 5.0 6.0 6.3' 6.3 MH Dark gray elastic silt, w/shell fragments. VIBRACORE BORING 2 From 0.0' to 19.5' 6.8 Ran 19.5' Rec: 14.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 8.0-8.5' 8.5 SM Dark gray, fine, silty sand, with shell fragments. When Run is greater than Recovery, the difference is depicted as Assumed 3 9.0 Not Recovered. 10.0' 10.0 10.5 LAB CLASSIFICATION 12.0' 12.0 5 Jar <u>Number</u> <u>Classification</u> 12.5 1 SC SC ŠČ 13.7' ML Dark gray sandy silt, with shell fragments. 4 SC 14.0-5 SC 14.2 SC 15.3' SC SM Gray, fine, silty sand, with shell fragments. 6 15.8 16.0 <u> 17,3'</u> SP-SM Tan, fine, poorly graded silty sand. 17<sup>′</sup>.8′ 19.0' -19.0 19.0 NOTE: Terminated nole at predetermined 21.0 Assumed not Recovered depth at 19.5'. -24.0 24.0 BOTTOM OF HOLE AT 24.0' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

TI-03-V-03 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG WILMINGTON DISTRICT SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" <u>Dia. Vibracore</u> 11. DATUM FOR ELEVATION SHOWNTBM or MSL) LOCATION (Coordinates or Station) COORD E 2402096 N 224229 NAD 83 <u>NC</u> 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-03 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 06/19/03 COMPLETED 06/19/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW THICKNESS OF OVERBURDEN N/A (5.2' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 20.0' BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) BOX OR SAMPLE NO. CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW feet 0.0 0.0'TO 5.2' WATER Time begin vibracoring: 1358 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @5.2 5.2' SP Gray, coarse, poorly graded sand, w/shell fragments. 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 7.0' 7.0 2 VIBRACORE BORING 7.5' From 0.0' to 14.8' Ran 14.8' Rec: 13.8' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 9.0 -9.2 SM Dark gray, fine, silty sand, with shell fragments. 3 When Run is greater than Recovery, the difference is depicted as Assumed 9.7 Not Recovered. 11.0' 11.0 -4 11.5' <u> 12.2</u> SP Gray, coarse, poorly graded sand. 5 12.7 LAB CLASSIFICATION 13.0' 13.0 13.0 SM Dark gray, fine, silty sand. 6 Jar <u>Number</u> <u>Classification</u> 13.5 SP 1 SP 2 SC 3 4 SC 15.0 5 SP SC SC 6 16.0' 7 CL Gray, sandy, lean clay. SC 16.5 17.0\_ 17.4 17.4 SP-SM Grayish tan, fine, poorly graded silty sand. 8 17.9 19.0 NOTE: Terminated nole\_at\_predetermined 19.0\_ Assumed not Recovered depth at 14.8'. -20.0 20.<del>0</del> BOTTOM OF HOLE AT 20.0' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

							Hole No.	TI-03-V-04
DRILL	ING LO	iG DIV	ISION SOUTH ATLANTIC	INSTALLA	TION WILN	MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT	all INLE	T			AND TYPE		4" Dia. Vib	racore
2. LOCATION			,, 3 N 222922 NAD83	MLLW	/			
3. DRILLING	AGENCY	DISTRI		1	CORE	'S DESIGNA	ATION OF DRILL SNELL	
4. HOLE NO	). (As shown		•		L NO. OF ( EN SAMPLE		DISTURBED 3	UNDISTURBED
5. NAME OF LESTER	DRILLER	 IF	CRANE OPERATOR		L NUMBER		147 7 1	
6. DIRECTIO	N OF HOL	E		16. DATE	HOLE	: :STAF : 06	RTED /19/03	COMPLETED : 06/19/03
7. THICKNES	SS OF OVI		DEG. FROM VERT.  N/A (5.6' of Water)		ATION TOP	OF HOLE	0.0' MLLW	,
8. DEPTH D	RILLED IN	TO ROCK	0.0'	19. SIGNA	ATURE OF	INSPECTOR	?	/A
9. TOTAL D	EPTH OF		14.5'	•	% CORE	Y AND BOX OR	LARRY BE	REMARKS
ELEVATION MLLW	DEPTH feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	_S 	RECOV- ERY	SAMPLE NO. f	(Drilling tin weatherin	ne, water loss, depth of g, etc., if significant) g
0.0	0 _		0.0'TO 5.6' WATER				Time begir 1409 hrs.	n vibracoring:
	_						Soils descr Benjamin, (	ibed by Larry Civil Engr. Tech.
	=	-					, ,	-
	5.0 —							
	_	-						OF HOLE is de- face of water
-5.6	5.6		OCEAN BOTTOM @5.6 SP Tan, coarse, poorly	5'		5.6'	and compen for the tide	sation is made 📙
	6.0 —	• • •	graded sand, with shell			1	top of Hole	is 0.0 EL MLLW.
	=		fragments.			6.1'	VIBRACC	RE BORING
							From 0	.0' to 8.9' Rec: 4.3'
	=						Kun 6.9	Rec. 4.5
	7.0 —					 	I sample is	pracore soil logged as be-
	=					7.5'	II ainnina at	Ocean Bottom. is greater than the difference
							Recovery, is depicte	, the difference ed as Assumed
	8.0					2	Not Reco	vered.
	=	,				8.0'		
	_							
		•••						
	9.0 —					9.0'	LAB CLA    Jar	ASSIFICATION
						3	Number	<u>Classification</u>
	_					9.5'	2	SP   E
-9.9	9.9 =			9.9'			3	SP
	=	-	Assumed not Recover	red				
	=	-						
								F
	12.0-							E
								E
	_	1						E
	14.0—	-						<b> </b>
-14.5	14.5							
-14.5	-		BOTTOM OF HOLE AT	14.5'			NOTF: Te	erminated
			SOILS ARE FIELD VISUALLY				hole at p	predetermined
	-		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL				depth at	8.9'.
	=	1	CLASSIFICATION SYSTEM					ļ.
		-						F
	=							F
					DDO IECT	TODO	ALL INILET	LUCUE NO

						I	Hole No.	ΓΙ-03-V-05_
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		IINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT	AIL INLE	ΞT			AND TYPE		4" Dia. Vibro	acore
2. LOCATION			766 N 221877 NAD83	MLLV	N			
3. DRILLING					CORE	S DESIGNA	ATION OF DRILL SNELL	
4. HOLE NO	). (As shown		•		AL NO. OF ( EN SAMPLE		DISTURBED 2	UNDISTURBED O
5. NAME OF LESTER	DRILLER		CRANE OPERATOR		AL NUMBER		117 71	
6. DIRECTIO	N OF HOL	E		16. DATE	HOLE	STAF		COMPLETED : 06/19/03
7. THICKNES	SS OF OVE		DEG. FROM VERT.  N/A (6.6' of Water)		ATION TOP	OF HOLE	0.0' MLLW	
8. DEPTH D			0.0'	19. SIGNA	ATURE OF I	INSPECTOR		
9. TOTAL D	EPTH OF	HOLE	11.5'		ACKEY	AND BOX OR	LARRY BEN	JAMIN emarks
ELEVATION MLLW	DEPTH feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	LS	RECOV- ERY	SAMPLE NO.	(Drilling time,	water loss, depth of etc., if significant)
0.0	0 _		0.0' to 6.6' WATER					vibracoring:
	=						1424 hrs. Soils describ	ed by Larry
							Benjamin, Civ	vil Engr. Tech.
	6.0—							<u> </u>
	=	-					NOTE: TOP O	F HOLE is de-
-6.6	6.6 -		OCEAN BOTTOM @6.	6'		6.6'	fined as surfa	ation is made 📙
			SP Tan, coarse, poorly graded sand, T/shell			1	for the tide s top of Hole is	0.0 EL MLLW.
	7.0 —	• • •	fragments.			7.1'	VIDBACOE	DE DODING
		••••					From 0.0	RE BORING D' to 4.9'
							Ran 4.9'	Rec: 2.5'
	8.0 —	-					Top of yibr	acore soil
	=						∥ainnina at (	ogged as be- Ocean Bottom.
	=					9.0'	Recovery,	is greater than the difference as Assumed
						2	Not Recove	
	9.0-		Assumed not Recover	9.1'		9.5'		
	_		Assumed not necover	eu				
	10.0-	-						SSIFICATION
	=	-					Jar <u>Numbe</u> r	<u>Classification</u>
							1 2	SP E
	11.0							
	11.0							
- 11.5	11.5							<u>_</u>
			BOTTOM OF HOLE AT	11.5'				E
	14.0-	1						E
	=	1	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE					Ē
	_	-	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					E-
	=						 NOTE: Ter	minated
		]					hole at pr	edetermined 4.9'.
							aepth at	4.9°.
								E
		1						<u>E</u>
	=	1						F
	=	1						F
								F
	_				DDO IECT	TODO	ΛII	HOLE NO

								Hole No.	TI-03-V-06
DRILL	ING LC	)G	DIVI	SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT	all inle	- T				AND TYPE		4" Dia. Vibro	
2. LOCATION	N (Coordinat	es or St			MLLW	M FOR EL	EVATION S	SHOW <b>N</b> BM or MSL)	
NC COC		240	40	31 N 221629 NAD83		FACTURER' CORE	'S DESIGNA	ATION OF DRILL SNELL	
WILMI	<u>NGTON</u>			•	13. TOTA	ND. OF TEN SAMPLE		DISTURBED	UNDISTURBED
4. HOLE NO and file n			wing	TI-03-V-06		L NUMBER		<u>: 2</u> xes N/A	_ :
5. NAME OF LESTER	GAUGH			CRANE OPERATOR	15. ELEV	ATION GRO		11777	
6. DIRECTION	N OF HOL		)	DEG.FROM VERT.	16. DATE	HOLE		19/03	COMPLETED 06/19/03
7. THICKNES	SS OF OV	ERBURD	DEN	N/A (4.7' of Water)		ATION TOP		$0.0'\mathrm{MLLW}$ FOR BORING N/,	Δ %
8. DEPTH D				0.0'	19. SIGNA	ATURE OF	INSPECTOR	?	4 "
9. TOTAL D	EPTH OF	HOLE		13.2'		LACKE // core	BOX OR		NJAMIN Emarks
ELEVATION MLLW	feet	LEGE	.ND	CLASSIFICATION OF MATERIAL ( <i>Description</i> ) d		RECOV- ERY	SAMPLE NO.	(Drilling time, weathering, e	water loss, depth of etc., if significant) g
0.0	0 -			0.0'TO 4.7' WATER				Time begin 1438 hrs.	vibracoring:
								Soils describ	ed by Larry vil Engr. Tech.
								Benjamin, CN	ni Engr. Tech.
	4.0 —	-							<u> </u>
	_							NOTE: TOD OF	
				OOF AND DOTTON A 4	7.1			fined as surfo and compensor	F HOLE is de-
-4.7	4.7		•	OCEAN BOTTOM @4.7 SP Tan, coarse, poorly			4.7'	√for the tide s	such that
	5.0 —		٠.	sand, T/shell fragments.			1		
	=		• •				5.2'	VIBRACOR	E BORING
		<b>]</b>	• -					From 0.0 Ran 8.5	' to 8.5' Rec: 2.5'
	=		•					I Kull 0.5	Nec. 2.5
	6.0	<b></b>	.					Top of vibr	acore soil ogged as be-
	=	<b> </b> ,	•					Il ainnina at C	Joean Bottom. II
		],	• :				6.5'	Recovery, t	s greater than the difference as Assumed
	=	<b>]</b>	•				2	Not Recove	ered.
	7.0 —	<b>-</b>	• .		7.2'		7.0'		
	_			Assumed not Recover	ed				
					0 0				
								LAB CLAS	SSIFICATION
	8.0 —							Jar	
	_	-						Number 1	Classification SP
								2	SP
	9.0								
	-								
	11.0 -								-
								NOTE: Ter	
	=							depth at	edetermined 8.5'
17.0	13.0 —								
-13.2	13.2			BOTTOM OF HOLE AT	13.2'				-
	-								E
	_ 			COIL C   405   5:5: 0   1::5: ::					<b> </b>
		4		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE					E
	= = =	1		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					E
	_	-							-
	=								E
	<u> </u>	1				200 1507			1101.5.110

Hole No. TI-03-V-07 DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG WILMINGTON DISTRICT of 1 SHEETS 10. SIZE AND TYPE OF BIT 4" PROJECT D<u>ia. Vibracore</u> TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) LOCATION (Coordinates or Station) MLLW NC COORD E 2402867 N 220177 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-07 0 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 06/19/03 COMPLETED 06/19/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW THICKNESS OF OVERBURDEN N/A (4.8' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 10.4 % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY <u>fe€t</u> 0.0 MLLW g 0.0' TO 4.8' WATER Time begin vibracoring: 1504 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 4.0 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 4.8' OCEAN BOTTOM @4.8' SP Tan, coarse, poorly
graded sand, with shell -4.8 1 fragments. VIBRACORE BORING 5.3 From 0.0' Ran 5.6' to 5.6' Rec: 2.4' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 6.0-When Run is greater than Recovery, the difference is depicted as Assumed 6.5' 2 Not Recovered. 7.0 7.2' 7.0' Assumed not Recovered LAB CLASSIFICATION 8.0 Jar <u>Number</u> <u>Classification</u> SP 1 2 SM 9.0 10.0--10.4 | 10.4 BOTTOM OF HOLE AT 10.4' NOTE: Terminated hole at predetermined depth at 5.6'. SOILS ARE FIELD VISUALLY 11.0 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-07 ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

TI-03-V-08 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG WILMINGTON DISTRICT of 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) COORD E 2402857 N 220133 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-08 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED 06/19/03 COMPLETED 06/19/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW THICKNESS OF OVERBURDEN N/A (7.2' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW feet g 0.0 0.0'TO 7.2' WATER Time begin vibracoring: 1518 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 7.0-OCEAN BOTTOM @7.2' 7.2' -7.2 7.2 • SP Tan, coarse, poorly graded sand, T/shell NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. fragments. 8.0 VIBRACORE BORING From 0.0' Ran 7.5' to 7.5' Rec: 4.5' 9.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 9.0 -2 When Run is greater than Recovery, the difference is depicted as Assumed 9.51 Not Recovered. 10.0 10.5 with shell fragments. LAB CLASSIFICATION 11.0' 11.0 Jar 3 <u>Number</u> <u>Classification</u> . . . SP 1 11.5 11.7 2 SP Assumed not Recovered 3 SP 12.0 13.0 NOTE: Terminated nole at predetermined depth at 7.5'. 14.0 -14.7 14.7 BOTTOM OF HOLE AT 14.7' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECTTOPSAIL INLET HOLE NO.

							Hole No.	TI-03-V-09	_
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	TION WILN	MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	al inle	T			AND TYPE		4" Dia. Vib	racore	1
2. LOCATION			341 N 220562 NAD83	MLLW	/				
3. DRILLING	AGENCY	DISTRI		VIBRA	CORE		ATION OF DRILL SNELL		
4. HOLE NO	. (As shown		•	BURDI	L NO. OF ( EN SAMPLE	S TAKEN	DISTURBED 1	UNDISTURBED	
5. NAME OF LESTER	DRILLER	 1F	CRANE OPERATOR		L NUMBER		117 /-1		-
6. DIRECTIO	N OF HOL	E		16. DATE	HOLE	: : 06		COMPLETED : 06/19/03	
7. THICKNES	SS OF OVI		DEG. FROM VERT.  N/A (4.6' of Water)		ATION TOP	OF HOLE	0.0' MLLW		
8. DEPTH D	RILLED IN	TO ROCK	0.0'	19. SIGNA	ATURE OF	INSPECTOR	?	/A %	-
9. TOTAL D	EPTH OF	HOLE	8.6'	•	LACKE	Y AND Box or	LARRY BE	NJAMIN remarks	ł
ELEVATION MLLW	DEPTH feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	LS	RECOV- ERY	SAMPLE NO. f	(Drilling tin	ne, water loss, depth of g, etc., if significant) g	
0.0	0 _		0.0'TO 4.6' WATER				Time begir 1533 hrs.	n vibracoring:	E
		_					Soils descr	ibed by Larry Civil Engr. Tech.	
	_	-						J	
	4.0	-							F
	_							OF HOLE is de- face of water	E
-4.6	4.6		OCEAN BOTTOM @4.6 SP Tan, coarse, poorly	<u> </u>		4.6'	and compen for the tide	sation is made such that	
	5.0 —	••••	graded sand, with shell fragments.	5.1'		1	top of Hole	is 0.0 EL MLLW.	
	_		Assumed not Recovere	ed		5.1'	VIBRACC	RE BORING	E
								.0' to 4.0' Rec: 0.5'	E
	_								E
	6.0 —	-					sample is	pracore soil logged as be-	E
	_	-					ginning at When Run	Ocean Bottom. is greater than the difference	F
							is depicte	ed as Assumed	
	7.0 —						Not Reco	vered.	E
	_								E
	_								
	_							ASSIFICATION	E
	8.0 —	-				 	LAD CLA		
	_	-					Number 1	<u>Classification</u> SP	E
-8.6	8.6		BOTTOM OF HOLE AT	8.6'			'		
	_								E
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						E
		1	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						F
									E
		1							E
	_								
	=								
		-							Ŀ
		1							
								erminated .	E
							hole at p  depth at	oredetermined   4 N'	F
							Jackii at	1.0.	F
	_	1							E
									E
	_	-			DBO IECT.		AU INILET	-	上

							Hole No.	TI-03-V-9A	_
DRILL	ING LO	iG DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	al inle	Τ			AND TYPE		4'' Dia. Vibr SHOW <b>N</b> TBM or MSD	acore	$\exists$
2. LOCATION			346 N 220561 NAD83	MLLV	٧				
3. DRILLING	AGENCY	DISTRI			CORE	'S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	. (As shown				L NO.OF ( EN SAMPLE		DISTURBED	UNDISTURBED 0	
5. NAME OF	DRILLER	ı			AL NUMBER		147 7 (		_
6. DIRECTION			CRANE OPERATOR	16. DATE		STA	RTED	COMPLETED	1
	ICAL   I		DEG. FROM VERT.	17. ELEV	ATION TOP		/19/03 0.0' MLLW	06/19/03	
7. THICKNES			N/A (4.7' of Water) 0.0'		ATURE OF I		FOR BORING N/	A	χ.
9. TOTAL D	EPTH OF	HOLE	6.7'		ACKEY	AND	LARRY BEN	IJAMIN	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA (Description)	LS	% CORE RECOV- ERY	BOX OR SAMPLE NO.	(Drilling time	REMARKS e, water loss, depth of , etc., if significant)	
<u>M⊾LW</u> 0.0	<u>feet</u> 0_	С	0.0' to 4.7' WATER			f	Time begin	vibracoring:	+
	_						1546 hrs.	oed by Larry	E
							Benjamin, Ci	ivil Engr. Tech.	E
	4.0—	-							F
	-								E
	_						lfined as surf	OF HOLE is de- ace of water	E
-4.7	4.7 <u> </u>		OCEAN BOTTOM @4.7	7 '			for the tide	sation is made such that s 0.0 EL MLLW.	E
	5.0 —	-	NO SAMPLE				top of flole is	S U.U LL MILLW.	<u> </u>
							VIBRACOF	RE BORING	٦E
		1						0' to 2.0' Rec: 0.0'	
	_	-							F
	6.0						Top of vibr	racore soil logged as be- Ocean Bottom is greater tha the difference	
	_						ginning at	Öcean Bottom is greater the	ı. E
		-					Recovery,	the difference d as Assumed	-
-6.7	6./ =		BOTTOM OF HOLE AT	6.7'			Not Recov	ered.	E
									7 E
	_								E
	_	_	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						] <b> </b>
	_		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				LAB CLA	SSIFICATION	]E
							Jar <u>Numbe</u> r	<u>Classification</u>	<b>E</b>
									<b> </b>
	- - - -								IF
									<u> </u>
	_	-							<b>-</b>
	- - - -								E
									E
	=								E
	=	-							F
		]					NOTE: Ter	rminated.	E
							hole at pr Identh at	redetermine 2.0'.	
	- - - - - - - - -	1							E
									F
									E
	=	1							E
		-							F
		1							E
	l .	İ	1		550 1507	T O D O		HOLE NO	

							Hole No.	TI-03-V-10	)_
DRILL	ING LC	G [	SOUTH ATLANTIC	INSTALLA		MINGTO	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	JL INLE				AND TYPE		4" Dia. Vibr	acore	
2. LOCATION	l (Coordinat	es or Sta		MLLW		EVAIION S	SHOW <b>KTBM</b> or MSL)		
3. DRILLING	AGENCY		4405 N 220450 NAD83	<b>I</b>	FACTURER' CORE	'S DESIGN	ATION OF DRILL SNELL		
4. HOLE NO	NGTON . (As shown			13. TOT A	ND. OF EN SAMPLE	OVER-	DISTURBED 2	UNDISTURBED	
and file no 5. NAME OF	umber)		TI-03-V-10		AL NUMBER		_ · _	· · · · · · · · · · · · · · · · · · ·	
LESTER 6. DIRECTION	GAUGH		CRANE OPERATOR	15. ELEV	ATION GRO		147 7 (	001015750	
` ` ` · · · · · · · · · · · · · · · · ·	ICAL   I	_	DEG. FROM VERT			: 06	RTED /19/03	COMPLETED : 06/19/03	
7. THICKNES	S OF OV	ERBURDE	EN N/A (8.4' of Water)		ATION TOP		$\frac{0.0'\mathrm{MLLW}}{\mathrm{FOR}\mathrm{BORING}$	Δ ,	·/
8. DEPTH D			K 0.0' 16.4'	19. SIGN	ATURE OF	INSPECTOR	?		
9. TOTAL DI			01.400/5/047/04.05.444757	•	LACKE Z CORE	BOX OR	R	NJAMIN EMARKS	
ELEVATION MLLW	DEPTH feet	LEGEN	ND CLASSIFICATION OF MATERIA (Description)	ALS	RECOV- ERY	SAMPLE NO.	(Drilling time, weathering,	water loss, depth of etc., if significant)	
0.0	0 _		0.0'TO 8.4' WATER					vibracoring:	F
	_						1558 hrs.   Soils describ	ed by Larry	E
	_	-					Benjamin, Ci	vil Engr. Tech.	F
-8.0	8.0 —								E
]	 -		0.05 AM DOTTOM - 5	4.1		0 41		5 1101 5 T	F
-8.4	8.4		OCEAN BOTTOM @8.  SP Tan, coarse, poorly	4.		8.4' 	NOTE: TOP O  fined as surf  and compens	F HOLE is de- ace of water	E
	_	· · ·	• graded sand.			1	for the tide s	such that s 0.0 EL MLLW.	E
	9.0 <del>-</del>		•			8.9'	Top of flore is	5 U.U EL WILLW.	E
			•				VIBRACOR	RE BORING	Œ
			•				From 0.0		F
	_		•				Ran 8.0	Rec: 2.5'	F
	10.0		•				Top of vibr	acore soil ogged as be-	E
	=		•			10.4	Il ainnina at (	Dcean Bottom.	E
			•				Recovery,	is greater thar the difference	
	_ _			10.9'		2	Not Recov	l as Assumed ered.	F
	11.0-		Assumed not Recove	red		10.9'			▐
						j			E
		-							F
							LAR CLAS	SSIFICATION	ı E
	12.0-	-					Jar	3311 107 (1101)	╠
	=					1	Number 1	<u>Classification</u> SP	Æ
							2	SP	E
	- 13.0 <del>-</del>	-							
	13.0								
	_								
	_								F
	- 14.0-								E
	_	-							F
							NOTE: Ter		E
	_	-					depth at	redetermine 8.0'	E
	16.0—	1							
-16.4	16.4		BOTTOM OF HOLE AT	16.4'					E
		_		•					F
	=								F
		1	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						E
	- - -	-	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						F
		1							
	<u> </u>	1							
	-	1				T 0.0		l	

Hole No. TI-03-V-11 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF SHEETS PROJECT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) LOCATION (Coordinates or Station) COORD E 2405652 N 221065 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-11 0 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 06/19/03 COMPLETED 06/19/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW THICKNESS OF OVERBURDEN N/A (15.3' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 24.6 % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW g 0.0' TO 15.3' WATER Time begin vibracoring: 1614 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 15.0 OCEAN BOTTOM @15.3' -15.3 15.3 NONE NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 17.0 VIBRACORE BORING From 0.0' to 9.3' Rec: 0.0' Ran 9.3' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 19.Q When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 21.0 LAB CLASSIFICATION 23.0 Jar <u>Number</u> <u>Classification</u> -24.6 24.6 BOTTOM OF HOLE AT 24.6' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated nole at predetermined depth at 9.3'.

TI-03-V-11A Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG of 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) LOCATION (Coordinates or Station) NC COORD E 2405649 N 21057 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-11A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 06/19/03 COMPLETED 06/19/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (15.5' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 28.5 % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW feet 0.0 0.0'TO 15.5' WATER Time begin vibracoring: 1638 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 15.0-SP Tan, coarse, poorly graded sand ...: 15.5 OCEAN BOTTOM @15.5' -15.5 15.5 NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 16.0' • |fragments. 17.0 17.5 VIBRACORE BORING 2 18.0' From 0.0' to 13.0' Ran 13.0' Rec: 7.6' T/shell fragments. 18.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 19.0-19.5 When Run is greater than Recovery, the difference is depicted as Assumed 20.0' Not Recovered. 21.01 21.0 4 21.5' 22.5 5 LAB CLASSIFICATION 23.1 23.0 23.0' Assumed not Recovered Jar <u>Number</u> <u>Classification</u> 1 SP 2 SP 3 SP 25.0 4 SP SP 27.0 -28.5 28.5 BOTTOM OF HOLE AT 28.5' NOTE: Terminated nole\_at\_predetermined depth at 13.0'. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

					Hole No.	TI-03-V-12	_
DRILLING LOG DIVISION SOUTH	ATLANTIC	INSTALLA	TION WILM	IINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT TOPSAIL INLET			AND TYPE			oracore	
2. LOCATION (Coordinates or Station) NC COORD E 2405555 N	221223 NAD83	MLLW			SHOW <b>KTBM</b> or MSL	,	
3. DRILLING AGENCY	ZZIZZJ NADOJ		FACTURER'S	S DESIGNA	ATION OF DRILL SNELI	L	
WILMINGTON DISTRICT  4. HOLE NO. (As shown on drawing title and file number)	TI-03-V-12		L NO.OF C N SAMPLE		DISTURBED	UNDISTURBED	
5. NAME OF DRILLER			L NUMBER		147.73		$\exists$
LESTER GAUGHF CRAN  6. DIRECTION OF HOLE	NE OPERATOR	16. DATE	ATION GRO	STAF	RTED	COMPLETED _	-
X VERTICAL   INCLINED	DEG. FROM VERT.		ATION TOP		<u>/19/03</u> 0.0' MLLV	06/19/03 V	$\dashv$
7. THICKNESS OF OVERBURDEN N/A ( $^2$ 8. DEPTH DRILLED INTO ROCK 0.0'	1.9' of Water)					1/A	%
9. TOTAL DEPTH OF HOLE 8.7			TURE OF I			ENJAMIN	
ELEVATION DEPTH LEGEND C	CLASSIFICATION OF MATERIAL ( <i>Description)</i> d	.S	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	(Drilling ti weatherii	REMARKS ime, water loss, depth of ng, etc., if significant) g	
-4.9   4.0   OCE   O.0   O.0	D'TO 4.9' WATER  O'TO 4.9' WATER  NO SAMPLE  SARE FIELD VISUALLY SIFIED IN ACCORDANCE H THE UNIFIED SOIL SSIFICATION SYSTEM				Time begi 1652 hrs. Soils descr Benjamin,  NOTE: TOP fined as surand comper for the tide top of Hole  VIBRACO From C Ran 3.8  Top of vi sample is ginning at When Rur Recovery is depicte Not Reco  LAB CL Jar Number	in vibracoring: ribed by Larry Civil Engr. Tech.  OF HOLE is de- rface of water resation is made es such that is 0.0 EL MLLW  DRE BORING 0.0' to 3.8' ' Rec: 0.0' bracore soil togged as be- to Ocean Bottom is greater that is greater that as Assumed evered.  ASSIFICATION  Classification	
					AII INII E	T	

		- 1		T		ı	Hole No. II-U3-V-IZA
DRILL	ING LO	G DIV	ISOUTH ATLANTIC	INSTALLA	WILN		SHEET 1  OF 1 SHEETS
1. PROJECT	AL INLE	Т			AND TYPE		
2. LOCATION	N (Coordinates	s or Station	547 N 221237 NAD83	MLL V		EVATION S	HOWNTBM or MSL)
3. DRILLING	AGENCY				FACTURER' CORE	S DESIGNA	ATION OF DRILL SNELL
4. HOLE NO	NGTON (As shown (			13. TOTA	L NO. OF (	OVER- S TAKEN	DISTURBED UNDISTURBED 0
and file no.	DRILLER			14. TOTA	L NUMBER	CORE BO	· <u>-</u>
LESTER 6. DIRECTION	GAUGH		CRANE OPERATOR		ATION GRO	UND WATE	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			DEG.FROM VERT.		HOLE ATION TOP	06	/19/03 : 06/19/03
			N/A (3.0' of Water)				O.O'MLLW FOR BORING N/A %
8. DEPTH D 9. TOTAL D			0.0' 7.5'		ATURE OF		LARRY BENJAMIN
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA (Description)		% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
<u>M⊾LW</u> 0.0	feet 0 _	С	0.0' to 3.0' WATER			f	Time begin vibracoring:
							1659 hrs.  Soils described by Larry Benjamin, Civil Engr. Tech.
						7 0.	
-3.0	3.0	••••	OCEAN BOTTOM @3.0 SP Tan, coarse, poorly	) '		3.0'	<u>-</u>
		• • • •	graded sand.			1	NOTE: TOP OF HOLE is de-
		• • •				3.5'	fined as surface of water and compensation is made for the tide such that
		• • •					top of Hole is 0.0 EL MLLW.
	4.0	••••					
							VIBRACORE BORING From 0.0' to 4.5'
		••••					Ran 4.5' Rec: 3.5'
	5.0	• . • . •					Top of yibracore soil
	3.0	• • • •					sample is logged as be- ginning at Ocean Bottom.
		• • •				5.5'	When Run is greater than Recovery, the difference
		• • •				2	is depicted as Assumed L
	6.0	••••					Not Recovered.
		••••				6.0'	
		•••		6.5'	_		
	$\exists$		Assumed not Recover	ed			
	7.0—						LAB CLASSIFICATION
							Jar Number Classification
-7.5	7.5 —		BOTTOM OF HOLE AT	7 5 1	-		1 SP <b>-</b>
	$\exists$		BOTTOM OF HOLE AT	7.5			2 SP <b>E</b>
			SOILS ARE FIELD VISUALLY				
			CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL				<b> </b>
			CLASSIFICATION SYSTEM				<u> </u>
							[-
							E
							NOTE: Tarminatad
							NOTE: Terminated hole at predetermined
							depth at 4.5'.
							E
							F
							E
							<u></u>
ENG FOR MAR 71	M1836	PREVIOUS	S EDITIONS ARE OBSOLETE.		PROJECT	TOPS INLE	AIL HOLF NO.3 - V - 12 A

				1			Hole No. TI-03-V-105
DRILL	ING LO	iG Div	SOUTH ATLANTIC	INSTALLA		IINGTON	N DISTRICT OF 1 SHEETS
1. PROJECT	al inle	T			AND TYPE		4" Dia. Vibracore
2. LOCATION			n) 114 N 230784 NAD83	MLLW	/		
3. DRILLING	AGENCY			1	FACTURER' CORE	S DESIGNA	ATION OF DRILL SNELL
4. HOLE NO	.(As shown	N DISTI on drawing	•	13. TOTA BURDI	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED UNDISTURBED 0
and file no 5. NAME OF					L NUMBER		XES N/A
LESTER 6. DIRECTION			CRANE OPERATOR		ATION GRO	UND WATE	RTED COMPLETED
		- NCLINED	DEG.FROM VERT.	16. DATE		06	/30/03 06/30/03 0.0' MLLW
7. THICKNES			N/A (6.7' Water)				FOR BORING N/A %
8. DEPTH D			0.0' 14.5'	1	TURE OF		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	•	% CORE RECOV-	BOX OR SAMPLE	REMARKS
MLLW	feæt	с	(Description)		ERY	NO. f	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	0 -		0.0'TO 6.7' WATER				Time begin vibracoring:
		-					Soils described by Larry Benjamin, Civil Engr. Tech.
							Benjamin, environger reem.
	6 -						<u> </u>
	=	-					NOTE: TOP OF HOLE is de-
	-	1	OCEAN BOTTOM @6.7'	6.7'		   6.7'	fined as surface of water and compensation is made
-6.7	6.7		SP - Tan course poorly araded sand				for the tide such that top of Hole is 0.0 EL MLLW.
	7 —		graded Sand			1	_
	_ _ _					7.2'	VIBRACORE BORING
		•					From 0.0' to 7.8'
	8 —						Top of vibracore soil sample is logged as be-
	=						ginning at Ocean Bottom.  When Run is greater than Recovery, the difference
							Recovery, the difference is depicted as Assumed
	9 _					9.0'	Not Recovered.
	9 —						
						2	
	=					9.5'	
	   10 —						LAB CLASSIFICATION
						l i	Jar Number Classification
						 	1 SP
	_ 						2 SP SP SP
	11	] . · · ·				11.0'	
						3	
						11.5'	<u> </u>
	=						
	12 -	]					<u> </u>
	<u>-</u>	ļ		10 [			E
		-	Assumed not Recovered	12.5'			[
	 						NOTE: Terminated
	13 —	1					hole at predetermined depth at 7.8'.
							Juehru ar 7.0.
		1					_
	=	-					Į Ę
	14		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				E
	=	_	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	14.5'			<u> </u>
			BOTTOM OF HOLE AT 1	4.5'			
							ALL INTET HOLE NO

DRILLING LOG DIVISION SOUTH ATLANTIC  INSTALLATION WILMINGTON DISTRICT  10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWN BM or MSU  MULL WINGTON DISTRICT  2. LOCATION (COWNTES or Station) NC COORD E 24/6128 N 230715 NAD83  3. DRILLING ACENCY WILMINGTON DISTRICT  4. HOLE NO. (As shown on drawing title of 1/16 number)  5. NAME OF DRILLER CRANE OPERATOR  6. DIRECTION OF HOLE DEG. FROM VERT.  7. THICKNESS OF OVERBURDEN N/A (7.0' Water)  8. DEPTH DRILLED INTO ROCK  9. TOTAL DEPTH OF HOLE 14.1'  ELEVATION DEPTH OF HOLE 14.1'  ELEVATION DEPTH OF HOLE 14.1'  19. SIGNATURE OF INSPECTOR  BEN LACKEY AND LARRY BENJAMIN  ELEVATION DEPTH LEGEND  10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWN BM or MSU  WILMINGTON DISTRICT  11. DATUM FOR ELEVATION SHOWN BM or MSU  WILMINGTON DISTRICT  11. DATUM FOR ELEVATION SHOWN BM or MSU  WILMINGTON DISTRICT  11. DATUM FOR ELEVATION SHOWN BM or MSU  WILMINGTON DISTRICT  11. DATUM FOR ELEVATION SHOWN BM or MSU  WILMINGTON DISTRICT  12. LANUAR ACTURET'S DESIGNATION OF BRILL  VIBRA CORE  SNELL  VIBRA CORE  SUBJECT SAKETS  OF DATA TO ALL NO. OF OVER-  BUNDEN SAMPLES TAKEN  3. TOTAL NO. OF OVER-  BUNDEN SAMPLES  N/A  15. ELEVATION GROUND WATER  16. DATE HOLE  17. ELEVATION GROUND WATER  18. TOTAL NO. OF OVER-  BUNDEN SAMPLES  18. TOTAL NO. OF OVER-  B
1. PROJECT TOPSAIL INLET 2. LOCATION (Coordinates or Station) NC COORD E 2416128 N 230715 NAD83  3. DRILLING ACENCY WILMINGTON DISTRICT 4. HOLE NO. (As strown on drawing little and rifle number) 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 6. DRECTION OF HOLE     Vertical   Inclined   Deg. From vert  7. THICKNESS OF OVERBURDEN N/A (7.0' Water) 9. TOTAL DEPTH OF HOLE 14. 1' 9. TOTAL DEPTH OF HOLE 14. 1' 15. CLASSIFICATION OF MATERIALS 16. DREPTH OF HOLE 17. OCCAN BOTTOM WATER  18. TOTAL CORE RECOVERY FOR BORING N/A   2. CORE RECOVERY FOR BORING N/A   2. CORE RECOVERY FOR BORING N/A   2. CORE RECOVERY FOR BORING N/A   3. DRECTION DEPTH OF HOLE 14. 1'  BEN LACKEY AND LARRY BENJAMIN  ELEVATION DEPTH GRAPHS  CLASSIFICATION OF MATERIALS  0. O.O' TO 7.0' WATER  19. SIGNATURE OF INSPECTOR  BEN LACKEY AND LARRY BENJAMIN  ELEVATION DEPTH WATER OF OVERHOLE OF INSPECTOR  BEN LACKEY AND LARRY BENJAMIN  CLASSIFICATION OF MATERIALS  0. OCEAN BOTTOM @ 7.0'  10. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the did such that top of Hole is 0.0 EL MLLW.
2. LOCATION (Coordinates or Station) NC COORD E 2416128 N 230715 NAD83  3. DRILLING AGENCY WILMINGTON DISTRICT  4. HOLE, NO. (As shown on drowing title and file aumother)  5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR  6. DIRECTION OF HOLE \( \text{NOTE} \) VERTICAL \( \text{INCANESS} \) NO COONDUSTURED  7. THICKNESS OF OVERBURDEN N/A (7.0' Water)  8. DEPTH DRILLED INTO ROCK D. (14. 11)  8. DEPTH DRILLED INTO ROCK O.0'  9. TOTAL DEPTH OF HOLE 14.1'  ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIALS MILL W  WILMINGTON DISTRICT  14. TOTAL NO. OF OVER-BURDEN N/A 15. ELEVATION OF OROUND WATER N/A  16. DATE HOLE 16. DATE HOLE 17. THICKNESS OF OVERBURDEN N/A (7.0' Water)  18. TOTAL CORE RECOVERY FOR BORING N/A  INCANES OF OVERBURDEN N/A  INCANES OF OVERBURDEN N/A (7.0' Water)  19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN  ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIALS MILL W  WILMINGTON DISTRICT  13. TOTAL NO. OF OVER-BURDEN DISTURBED DISTURBED SINGLE TAKEN  3. OON 0.0' TO 7.0' WATER  15. ELEVATION TO FORD WATER  16. DATE HOLE 16. DATE HOLE 17. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN  REMARKS  RECOV- NO.  17. Time begin vibracoring: 13.31 hrs. Sails described by Larry Benjamin, Civil Engr. Tech.  18. NOTE: TOP OF HOLE is defined as surface of water  19. OCEAN BOTTOM @ 7.0'  10. NOTE: TOP OF HOLE is defined as surface of water  10. NOTE: TOP OF HOLE is defined as surface of water  11. TOTAL DUBLY AND LARRY BENJAMIN  12. MANUFACTURET'S DESIGNATION OF DISTURBED  13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN  2. STATED  2. COMPLETED  3. TOTAL DEPTH OF HOLE 3. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN  3. TOTAL DOC NOTES  3. TOTAL DEPTH OF OVER TAKEN  3. TOTAL DEPTH OF OVER TAKEN  3. TOTAL NO. OF OVER TAKEN  3
3. DRILLING AGENCY WILMINGTON DISTRICT 4. HOLE NO. As shown on drawing fille and file number) 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 6. DIRECTION OF HOLE DEG. FROM VERT. 7. THICKNESS OF OVERBURDEN B. DEPTH DRILLED INTO ROCK 9. TOTAL DEPTH OF HOLE 14.1'  ELEVATION DEPTH LEGEND MIDLW feet 0.00' 0.00' TO 7.0' WATER  CLASSIFICATION OF MATERIALS ACCORE BY REMARKS RECOVERY FOR BORING RECOVERY FOR BORING BY REMARKS RECOVERY FOR BORING BY REMARKS CORE BY REMARKS RECOVERY SAMPLE REMARKS CORE BY REMARKS CORE BY REMARKS RECOVERY FOR BORING BY REMARKS CORE BY REMARKS CORE BY REMARKS CORE BY REMARKS CORE BY REMARKS RECOVERY SAMPLE RENARY SAMPLE RENARY SOIS described by Larry Benjamin, Civil Engr. Tech.  OCEAN BOTTOM @7.0'  Time begin vibracoring: 1331 hrs. Soils described by Larry Benjamin, Civil Engr. Tech.  To the tide such that top of Hole is 0.0 EL MLLW.
4. HOLE NO. (As shown on drowing little and file number)  5. NAME OF DRILLER  LESTER GAUGHF  6. DIRECTION OF HOLE  VERTICAL INCLINED  7. THICKNESS OF OVERBURDEN  8. DEPTH DRILLED INTO ROCK  9. TOTAL DEPTH OF HOLE  LEVATION DEPTH LEGEND  MIDLW feet c  O.0' TO 7.0' WATER  TIME BURDEN SAMPLES TAKEN  3. ONNESTORED  N/A  14. TOTAL NUMBER CORE BOXES  N/A  15. ELEVATION GROUND WATER  N/A  16. DATE HOLE  OG/30/03  OG/30/03  OG/30/03  OG/30/03  17. ELEVATION TOP OF HOLE O.0' MLLW  18. TOTAL CORE RECOVERY FOR BORING N/A  Z. CORE BOX OR  STARTED  OG/30/03  OG/30/03  OG/30/03  17. ELEVATION TOP OF HOLE O.0' MLLW  18. TOTAL CORE RECOVERY FOR BORING N/A  Z. CORE BOX OR  STARTED  OG/30/03  OG
14. TOTAL NUMBER CORE BOXES   N/A
6. DIRECTION OF HOLE    Vertical   Inclined   Deg. From Vert.
DEG. FROM VERT.  7. THICKNESS OF OVERBURDEN  8. DEPTH DRILLED INTO ROCK  9. TOTAL DEPTH OF HOLE  14.1'  CLASSIFICATION OF MATERIALS  (Description)  (Descript
7. THICKNESS OF OVERBURDEN N/A (7.0' Water)  8. DEPTH DRILLED INTO ROCK O.0'  9. TOTAL DEPTH OF HOLE 14.1'  ELEVATION DEPTH LEGEND (Description) MIDLW feet c O.0' TO 7.0' WATER  O.0 O O O O O O O O O O O O O O O O O O
9. TOTAL DEPTH OF HOLE 14.1'  BEN LACKEY AND LARRY BENJAMIN    Classification of Materials (Description)   Cla
ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIALS (Description)  MisLW feet c c 0.0' TO 7.0' WATER  O.O O O O O O O O O O O O O O O O O O
OCEAN BOTTOM @7.0'  OCEAN BOTTOM @7.0'  SP - Tan course poorly graded sand  1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.
OCEAN BOTTOM @7.0'  SP - Tan course poorly graded sand  1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.
OCEAN BOTTOM @7.0'  SP - Tan course poorly graded sand  NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.
-7.0 6.7 SP - Tan course poorly  1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.
-7.0 6.7 - * * graded sand  1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.
-7.0 6.7
-7.0 6.7   for the tide such that top of Hole is 0.0 EL MLLW.
VIBRACORE BORING From 0.0' to 7.1'
9 - Top of yibracore soil
9 - · · ·   I op of vibracore soil   sample is logged as be-   2   ginning at Ocean Bottom.
│
│
Not Recovered.
│
11 - LAB CLASSIFICATION   Jar
3 Number Classification
11.6' 11.5' 1 SP
Assumed not recovered
NOTE: Terminated hole at predetermined depth at 7.1'.
14.1 14.1 14.1 1507 1014 05 HOLE AT 44.1
BUTTOM OF HOLE AT 14.1"
SOILS ARE FIELD VISUALLY  CLASSIFIED IN ACCORDANCE
WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM
FNC FORM18.76 PREVIOUS SETTING ASSOCIATE PROJECT TO PS ALL INLET HOLE NO.

							Hole No. TI-03-V-107	_
DRILL	ING LO	iG DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	SHEET 1 OF 1 SHEETS	
1. PROJECT	al inle	-т					4" Dia. Vibracore	
2. LOCATION	N (Coordinate	es or Station	533 N 229679 NAD83	ML L V		EVATION S	SHOWNTBM or MSL)	
3. DRILLING	AGENCY			1	ifacturer' CORE	S DESIGNA	ATION OF DRILL SNELL	
4. HOLE NO	.(As shown	N DISTE on drawing	· · · · · · · · · · · · · · · · · · ·	13. TOTA	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED UNDISTURBED O	
and file no	DRILLER				L NUMBER		XES N/A	
LESTER 6. DIRECTION			CRANE OPERATOR	15. ELEV	ATION GRO		RTED COMPLETED	-
Ŭ VERT	ICAL   IN	NCLINED	DEG. FROM VERT.				/30/03 06/30/03 0.0' MLLW	
7. THICKNES			N/A (3.5' Water)				FOR BORING N/A %	
8. DEPTH D			0.0' 14.1'		ATURE OF LACKE		R Larry benjamin	
ELEVATION MLoL W	DEPTH feœt	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	_S	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
0.0	0 -		0.0'TO 3.5' WATER				Time begin vibracoring:	E
							1356 hrs. Soils described by Larry	
	=	-					Benjamin, Civil Engr. Tech.	F
	3 —							E
	_						NOTE: TOP OF HOLE is de-	E
-3.5	3.5 <del>-</del>	• •	OCEAN BOTTOM @3.5' SP – Tan course poorly	3.5'		3.5'	fined as surface of water and compensation is made	_
	=	• • • •	graded sand			1	for the tide such that top of Hole is 0.0 EL MLLW.	
	4 -	••••				4.0'		
	_	• • •					VIBRACORE BORING	
							From 0.0' to 4.0' Ran 4.0' Rec: 3.3'	_
		••••					T ( 'l 'l	
	5 —	••••					Top of vibracore soil sample is logged as be-	
	=						ginning at Ocean Bottom. When Run is greater than Recovery, the difference	
	=						is depicted as Assumed	
	6 —	••••				5.5'	Not Recovered.	
						2		E
						6.0'		
	_	•••		6.8'		0.0		E
	7 -		Assumed not Recovered				LAB CLASSIFICATION	
	_	-		7		   	Jar <u>Number</u> <u>Classification</u>	E
-7.5	7.5—		BOTTOM OF HOLE AT	<u>7.5'</u> 7.5'			1 SP 2 SP	
	_		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE					E
	8 —		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					
	_	-						
	=							
		4						E
	=======================================	-						
							NOTE: Terminated hole at predetermined	E
	=						hole at predetermined depth at 4.0'.	E
		-						
								E
	=							E
								E
ENIC EOD					DBO IECT	$T \cap D \subset$	All INI FT HOLE NO.	

							Hole No. TI-03-V-108
DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	SHEET 1 OF 1 SHEETS
1. PROJECT	JL INLE	т					4" Dia. Vibracore
2. LOCATION	l (Coordinate	es or Station		MLLW		EVATION S	HOWN BM or MSL)
3. DRILLING	AGENCY		4584 N 229647 NAD83	1	facturer' CORE	S DESIGNA	ATION OF DRILL SNELL
4. HOLE NO	.(As shown	N DISTE	1111-	13. TOTA	L NO. OF (	OVER-	DISTURBED UNDISTURBED 0
and file no 5. NAME OF			TI-03-V-108	14. TOTA	L NUMBER	CORE BO	
LESTER 6. DIRECTION			CRANE OPERATOR		ATION GRO	UND WATE	147.71
l , ,	ICAL   IN		DEG. FROM VERT.	16. DATE		: 06	730/03 06/30/03 0.0' MLLW
7. THICKNES			N/A (8.0' Water)				FOR BORING N/A %
8. DEPTH DE			0.0'		TURE OF		LARRY BENJAMIN
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of
MLW	fevet	с	(Description) d		ERY	NO.	weathering, etc., if significant)
0.0	0 =		0.0' TO 8.0' WATER				Time begin vibracoring:
		-					Soils described by Larry Benjamin, Civil Engr. Tech.
	=		0.05.11. 5.0.7-7.				
-8.0	8 -		OCEAN BOTTOM @8.0			8.0'	<u> </u>
	=	• • • •	SP - Tan course poorly graded sand			1	NOTE: TOP OF HOLE is de-
						8.5'	fined as surface of water and compensation is made
	=	• • •					for the tide such that top of Hole is 0.0 EL MLLW.
	9 —						
	=	• • •					VIBRACORE BORING
							From 0.0' to 5.0' Ran 5.0' Rec: 3.7'
		• • •				10.01	E
	10 —					10.0'	Top of vibracore soil sample is logged as be-
						2	∥ainnïna at Očĕan Bottom.⊩
						10.5'	When Run is greater than Recovery, the difference is depicted as Assumed
							Not Recovered.
	11 —						
				44 71			
		• •	Assumed not Recovered	11.7'			LAB CLASSIFICATION F
	12 —						Jar –
	=	_					Number Classification
							2 SP
-13.0	- 17 0 -			13.0'			
13.0	J.U		BOTTOM OF HOLE AT 1	3.0'			
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
	_						I E
	= = =	-					_
							NOTE: Terminated
	=	-					hole at predetermined depth at 5.0'.
							E_
	_						E
							_
							E
		-					E.
	=	1					E
		-					<u> </u>
							E
					DDO IFOT		AII INI FT HOLE NO.

		DIV	TISION	INSTALLA	TION	1	Hole No.   -	SHEET 1	7
	ING LO	G	SOUTH ATLANTIC		WILN		I DISTRICT	OF 1 SHEETS	4
	IL INLE			11. DATU	M FOR EL	OF BIT EVATION S	4'' Dia. Vibrac ноw <i>ктви ог изы</i>	ore	+
2. LOCATION NC CC	1 (Coordinate 10RD E	es or Station 24145	584 N 229647 NAD83	MLLW		S DESIGNA	TION OF DRILL		
3. DRILLING WILL	AGENCY MNGTON	J DISTE	RICT	VIBRA	CORE		SNELL		
4. HOLE NO	. (As shown		•	13. TOTA BURDE	L NO.OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED	UNDISTURBED O	
5. NAME OF	DRILLER					CORE BOX	147 7 (		
LESTER 6. DIRECTION			CRANE OPERATOR	16. DATE		OUND WATE	RTED CO	MPLETED	
Ŭ VERT	ICAL   IN	ICLINED	DEG. FROM VERT.				/ <u>30/03 ; 0</u> 0.0' MLLW	6/30/03	
7. THICKNES			11771 1010 17 01017				FOR BORING N/A	;	у.
8. DEPTH D			0.0' 13.0'			INSPECTOR	LARRY BENJA	MINI	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		% CORE RECOV-	BOX OR	REMA	RKS	
MLW	feet	с	(Description) d		ERY	SAMPLE NO. f	(Drilling time, wat weathering, etc., g		
0.0	0 =		0.0'TO 8.0' WATER				Time begin vi 1331 hrs.	bracoring:	F
	_						Soils described	_by L <u>arry</u>	E
	_						Benjamin, Civill	ngr. lech.	F
-8.0	8 <del>-</del>		OCEAN BOTTOM @8.0'			8.0'			E
			SP - Tan course poorly graded sand			1			F
	] =	]					NOTE: TOP OF fined as surface and compensation	HOLE is de-	E
	_						lfor the tide suc	:h that	F
	9						top of Hole is (	J.O EL MILLW.	E
		• • • •					VIBRACORE	BORING	٦Ē
							From 0.0'	to 5.0'	
		•••					Ran 5.0'	Rec: 3.7'	E
	10 -					10.0'	Top of yibrac	ore soil	
						2	Top of vibrac sample is log ginning at Oc	ged as be- ean Bottom.	E
						10.5'	When Run is   Recovery, the	greater thar e difference	
						10.5	is depictéd d Not Recover	ıs Assumed	E
	11						THOU RECOVER		<u> </u>
									E
	_	• •		11.7'					ıЕ
	12 —		Assumed not Recovered				LAB CLASS	IFICATION	
	_					 	Jar <u>Numbe</u> r (	<u>Classification</u>	ΙE
						 	1 2	SP SP	
	=							<u>.</u>	
-13.0	13.0-		BOTTOM OF HOLE AT 1	13.0' 3.0'					E
	=		SOILS ARE FIELD VISUALLY	J.U					<del> </del>
	_		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL						Ė
	=		CLASSIFICATION SYSTEM						F
									F
	=						NOTE: Term	ninated	E
							hole at pre	determine	4
							depth at 3	.9'.	E
									F
									E
									F
	= = =								E
									F
									E
	=								E
									F
1			1		550,507	TARS	AII INII ET HO		

							Hole No. TI-03-V-109
DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	TION WIL IV	MINGTON	SHEET 1 OF 1 SHEETS
1. PROJECT	II INII E	-т			AND TYPE	OF BIT	4" Dia. Vibracore
2. LOCATION	l (Coordinate	es or Station		11. DATU		EVATION S	SHOWN BM or MSL)
NC CC		2283	46 N 2413061 NAD83	1		'S DESIGN	ATION OF DRILL SNELL
WILN	<u>IINGTOI</u>	N DISTE	444-	13. TOTA	CORE NO. OF	OVER-	DISTURBED UNDISTURBED
4. HOLE NO and file nu	umber)	on arawing	TI-03-V-109		EN SAMPLE L NUMBER		: 1 : 0 xes N/A
5. NAME OF LESTER	GAUGH		CRANE OPERATOR	15. ELEV	ATION GRO	OUND WATE	
6. DIRECTION		E NCLINED	DEG.FROM VERT.	16. DATE	HOLE		COMPLETED   COMP
7. THICKNES			N/A (6.1' Water)				FOR BORING N/A %
8. DEPTH DI			0.0'	19. SIGNA	ATURE OF	INSPECTOR	2
9. TOTAL DE	EPTH OF	HOLE	10.0'		LACKE`   % core	<u>Y AND</u> I вох ог	LARRY BENJAMIN REMARKS
ELEVATION MLW	DEPTH feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.S	RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	0 =	-	0.0'TO 6.1' WATER				Time begin vibracoring:
							Soils described by Larry
							Benjamin, Civil Engr. Tech.
	6 —	‡	OCEAN BOTTOM @6.	1'		6.1'	
-6.1	6.1	• • • •	SP - Tan course poorly graded sand				NOTE: TOD OF HOLF:
		· · · .	gradea sana			1	NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made
	_	•••				6.6'	for the tide such that top of Hole is 0.0 EL MLLW.
	7 —	· · · ·					
	=			7.3'			VIBRACORE BORING
	_		Assumed not Recovered				From 0.0' to 3.9' Ran 3.9' Rec: 1.2'
	=						Run 3.9 Rec. 1.2
	8 —					 	Top of vibracore soil sample is logged as be-
	_	-					∥ainnïna at Očĕan Bottom.∥
						 	When Run is greater than Recovery, the difference
	_	-					is depicted as Assumed Not Recovered.
	9 —						
	_	-					
	_						
	_			10 01		 	LAB CLASSIFICATION -
-10.0	10 —		DOTTOM OF HOLE AT 1	10.0'			Jar LAB CLASSIFICATION   E
	_		BOTTOM OF HOLE AT 1	0.0		 	Number Classification
		-	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE			 	1 SP-SM
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
	=						
	_						
	=	-					
		<b></b> ⊒					
	- - -	-					NOTE: Terminated .
							hole at predetermined depth at 3.9'.
		1					
	- - - -	-					
		-					
		<b></b> ⊒					
	=	-					
	=	1					
		}			 	1000	All INI FT HOLE NO.

							Hole No. TI-03-V-110	
DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT SHEET 1 OF 1 SHEETS	
1. PROJECT	JL INLE	т					4" Dia. Vibracore	
2. LOCATION	l (Coordinate	es or Station		MLLW		EVATION S	SHOWN BM or MSL)	
3. DRILLING	AGENCY		)48 N 228399 NAD83	1	FACTURER' CORE	S DESIGNA	ATION OF DRILL SNELL	
4. HOLE NO	.(As shown	N DISTE on drawing	1111-	13. TOTA	L NO. OF (	OVER-	DISTURBED UNDISTURBED 0	
and file no 5. NAME OF			TI-03-V-110	14. TOTA	L NUMBER	CORE BO		
LESTER 6. DIRECTION			CRANE OPERATOR		ATION GRO		RTED COMPLETED	_
	ICAL   IN		DEG. FROM VERT.	16. DATE		: 06	/30/03 06/30/03 0.0' MLLW	_
7. THICKNES			N/A (10.6' Water)				FOR BORING N/A	7.
8. DEPTH DE			0.0' 20.1'		ATURE OF		R Larry benjamin	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)		% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of	
M <u>L</u> W	fevet	С	d		ERY	NO. f	weathering, etc., if significant)	
0.0	0 =		0.0'TO 10.6' WATER				Time begin vibracoring: 1441 hrs.	E
	_						Soils described by Larry Benjamin, Civil Engr. Tech.	E
	=	-						F
	10 -	]	0.05.111.5	0.1				F
-10.6	10.6 =	• •	OCEAN BOTTOM @10. SP – Tan course poorly			10.6'	NOTE: TOP OF HOLE is de-	E
		• • • • •	graded sand			<u>'</u>   11.1'	fined as surface of water and compensation is made for the tide such that	
							top of Hole is 0.0 EL MLLW	· E
	12 <del></del> 					12.5'	VIDDACODE DODINO	¬E
		] · · · ·				2	VIBRACORE BORING From 0.0' to 9.5'	
	_		with tiny shell			13.0'	Ran 9.5' Rec: 7.5'	
			fragments				Top of vibracore soil	
							sample is logged as beginning at Ocean Bottom	ı.   —
				15.2'		   15.2'	When Run is greater that Recovery, the difference	
			SM - Gray fine silty sai T/shell fragments	nd		3	is depicted as Assumed Not Recovered.	F
	16 -		I	16.4'		15.7' 16.4'		╎╠
	=		MH - Dark gray elastic silt with shell fragments	10.4		4		
		-	silt with shell fragments 			16.9'		
	=	- - -		40.4			LAB CLASSIFICATION	1 E
	18 —	- <b>           </b> -	Assumed not Recovered	18.1			Jar	
	=	-					Number Classification  1 SP	
							2 SP	
		1		20.1			3 SC SC SC	E
-20.1	20.1 <u> </u>		BOTTOM OF HOLE AT 2					
	=	-	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE					J E
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					E
		1						<u> </u>
	= = =	-					NOTE: Terminated	E
							hole at predeterminated depth at 9.5'.	э <b>—</b>
	_ 	1					depth at 9.5'.	E
	-	-						F
	_	1						E
	<u> </u>	1						E
	=	-						F
								E
								E
		-						F
		]			<u></u>	1000	All INI FT HOLE NO.	

							Hole No. TI	-03-V-111	_
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		NGTO	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	all inle	-т			AND TYPE			<del></del>	
2. LOCATION	N (Coordinate	es or Station	n) 892 N 226783 NAD83	MLL W		EVATION S	SHOWN <i>TBM or MSL)</i>		
3. DRILLING	AGENCY			1	FACTURER' CORE	S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	. (As shown	N DISTE		13. TOTA	L NO. OF (		DISTURBED	UNDISTURBED	
and file no	umber)		TI-03-V-111		L NUMBER		XES N/A		
LESTER  6. DIRECTION	GAUGH		CRANE OPERATOR		ATION GRO		117 / 1	COMPLETED	_
1		NCLINED	DEG.FROM VERT.	16. DATE		: 06	0.0' MLLW	06/30/03	_
7. THICKNES			N/A (5.0' Water)				FOR BORING N/A	<del>/</del> ;	7.
8. DEPTH D			0.0' 9.5'		ATURE OF			JAMIN	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA		% CORE RECOV-	BOX OR SAMPLE	RE	MARKS water loss, depth of	1
MloLW	feet	c	(Description) d		ERY	NO.	weathering, et	valer loss, depin or tc., if significant)	
0.0	0 =	-	0.0'TO 5.0' WATER				Time begin	vibracoring:	F
							1454 hrs. Soils describe	ed by Larry	E
	=						Benjamin, Civ	II Engr. Tecn.	F
-5.0	5 —		OCEAN BOTTOM @5.0'			5.0'			E
		• •	SP - Tan course poorly graded sand with shell	,			NOTE, TOD OF		E
			fragments			1	NOTE: TOP OF  fined as surfa  and compensa	ice of water	
						5.5'	for the tide su	uch that 0.0 EL MLLW.	E
	6 -			6 01			10p 01 11010 10	0.0 22 102211.	F
			Assumed not Recovered	6.2'			VIBRACORE	E BORING	٦E
							From 0.0 Ran 4.5'		
	_	-					1\\(\text{u}\) 4.5	Nec. 1.2	
	7 -					 	Top of vibro	acore soil ogged as be-	
	=	-					Il ainnina at O	)čěan Bottom.	
							Recovery, t	s greater than he difference	
	=						Not Recove	as Assumed ered.	IE
	8 —	-							] <del>-</del>
									ıE
		-							
							LAR CLAS	SIFICATION	1 E
	9 —						Jar		E
				9.5'			<u>Number</u> 1	<u>Classification</u>	
-9.5	9.5 —		BOTTOM OF HOLE AT				-	SP	E
	10 _	-							-
	10 ==		SOILS ARE FIELD VISUALLY						E
	_		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL						JE
	=		CLASSIFICATION SYSTEM						F
									E
	=	-							F
							NOTE: Teri	minated edetermine	Æ
	=						depth at 4	edetermine 4.5'.	E
	=								=
	=	1							E
									<u> </u>
	=								E
		<b></b> ⊒							<u> </u>
	=	]							E
		1							
	=	-							F
		<u> </u>			DDO IEGE.		 All INLET  +	UOLE NO	上

				l	T.O.	I	Hole No.	-	_
DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	JL INLE	т			AND TYPE		4" Dia. Vib	racore	
2. LOCATION	l (Coordinate:	s or Station	าง	11. DATU MLLW		EVATION S	HOWNTBM or MSL)		
		24119	44 N 226781 NAD83			S DESIGNA	TION OF DRILL		
3. DRILLING WILM	AGENCY IINGTON	DIST	RICT		CORE	OVFR-	SNELL DISTURBED	UNDISTURBED	-
4. HOLE NO. and file no	.(As shown a umber)	on drawing	TI-03-V-112	BURDI	EN SAMPLE	S TAKEN	: 2	0	_
5. NAME OF LESTER	DRILLER	F	CRANE OPERATOR		ATION GRO		117 /1		$\dashv$
6. DIRECTION			CITAIL OF LITATOR	16. DATE		STAF	RTED	COMPLETED	-
X VERTI	ICAL   IN	CLINED	DEG. FROM VERT.				/30/03 0.0' MLLW	06/30/03	4
7. THICKNES			N/A (7.1' Water)					/ A	χ.
9. TOTAL DE			0.0'		ATURE OF			NJAMIN	
			CLASSIFICATION OF MATERIA	•	% CORE	BOX OR		REMARKS	+
ELEVATION   MLL W	DEРТН feюet	LEGEND c	(Description)		RECOV- ERY	SAMPLE NO.	weathering time	ne, water loss, depth of g, etc., if significant)	
0.0	0 _	·	0.0' TO 7.1' WATER					vibracoring:	E
							1505 hrs.	ibed by Larry	E
								Civil Engr. Tech.	-
									E
-7.1	7.1	• •	OCEAN BOTTOM @7			7.1'			
, , ,	/ · · ˈ =	• • •	SP - Tan course poorly graded sand with shell	′		1		OF HOLE is de-	F
	=		fragments			'	fined as sur and compens	face of water sation is made	
						7.6'	for the tide	such that is 0.0 EL MLLW.	F
	8 —						, '		-
	$\exists$						VIBRACO	RE BORING	٦E
	_	••••						.0' to 5.1'	
		• • •					Ran 5.1'	Rec: 3.7'	IE
	9 —	• • •				9.0'	Top of vib	racore soil	
		• • •				2	sample is	racore soil logged as be- Ocean Bottom	
	=	• • • •					When Run	is greater that the difference	n  -
	$\equiv$					9.5'	lis depicte	d as Assumed	E
	10						Not Recov	vered.	
	10 -	• •							īF
	$\equiv$	•••							ΙE
	_	• • • •							
				10.81		 			
	11 —		Assumed not Recovered					ASSIFICATION	
							Jar <u>Numbe</u> r	<u>Classification</u>	
	12 —			10.01		]	1 2	SP SP	
-12.2	12.2		DOTTOM OF HOLE AT	12.2				<u> </u>	
			BOTTOM OF HOLE AT	12.2					
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						JE
	=		CLASSIFICATION SYSTEM						F
	$\equiv$								E
									F
							NOTE: Te	erminated .	F
	$\equiv$						lhole at p Identh at	predetermine 5.1'.	;Œ
								J.1.	F
	=								-
									E
									<u> </u>
									F
									E
									<u> </u>
									E
					PRO IFCT	1	AU INILET		L

				Hole No.	TI-03-V-113
DRILLING LOG DIVISION SOUTH ATLANTIC	INSTALLA	TION WILN	MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT TOPSAIL INLET		AND TYPE			
2. LOCATION (Coordinates or Station)	MLL W		EVATION S	SHOWNTBM or MSL)	
NC COORD E 2410369 N 225368 NAD83  3. DRILLING AGENCY	1	FACTURER'	S DESIGNA	ATION OF DRILL SNELL	
WILMINGTON DISTRICT	13. TOTA	AL NO. OF ( EN SAMPLE	OVER-	DISTURBED	UNDISTURBED
and file number) :   -U3-V-  3		AL NUMBER		ES N/A	<u> </u>
5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR	15. ELEV	ATION GRO		147 7 (	
6. DIRECTION OF HOLE  VERTICAL   INCLINED   DEG. FROM VERT.	16. DATE		: 06	RTED /30/03	:06/30/03
7. THICKNESS OF OVERBURDEN N/A (4.4' Water)				O.O'MLLW	/ Δ
8. DEPTH DRILLED INTO ROCK 0.0'	19. SIGNA	ATURE OF	INSPECTOR	?	· A
9. TOTAL DEPTH OF HOLE 7.8'	•	LACKE	Y AND I вох ог	1	NJAMIN remarks
ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIA (Description)	LS	RECOV-	SAMPLE NO.	(Drilling tim	ne, water loss, depth of g, etc., if significant)
Mlg L W   feet   6			f	Time begin	vibracoring:
				1519 hrs.	bed by Larry
				Benjamin, C	ivil Engr. Tech.
-4.4 4.4 OCEAN BOTTOM @4.4					OF HOLE is de-
Assumed not Recovered			 	and compens	face of water sation is made
				for the tide top of Hole	is 0.0 EL MLLW.
5 —					
					RE BORING
					0' to 3.4' 1' Rec: 0'
6 -				Top of vib	racore soil logged as be-
				Lainnina at	Ocean Bottom II
			 	Recovery,	is greater than the difference
				is depicte Not Recov	d as Assumed   <u> </u>
7 —					
-7.8 7.8 7.8	7.8'				
BOTTOM OF HOLE AT	7.8'			LAB CLA	ASSIFICATION
SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				Jar Number	<u>Classification</u>
WITH THE UNIFIED SOIL  CLASSIFICATION SYSTEM				1	SP
				NOTE: Te	rminated . 📙
				Ihole at p	redetermined 3.4'.
				Jaspan at	· · ·
ENG FORM18.36 PREVIOUS EDITIONS ARE ORGALIETE		PROJECT	I TADS	<u> </u> aii inlet	HOLE NO

							Hole No. TI	-03-V-113	A
DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	JL INLE	T					4" Dia. Vibro		
2. LOCATION				MLL W		EVATION S	HOWNTBM or MSL)		
3. DRILLING	AGENCY		366 N 225365 NAD83	1	ifacturer' CORE	S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	. (As shown	N DISTE on drawing	•	13. TOTA BURDI	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED	UNDISTURBED	
and file no 5. NAME OF	DRILLER			-	L NUMBER			·	
6. DIRECTION			CRANE OPERATOR	15. ELEV	ATION GRO	UND WATE	RTED	COMPLETED	
Ŭ VERT	ICAL   IN	NCLINED	DEG. FROM VERT.				/30/03 <u>:</u> 0.0' MLLW	06/30/03	
7. THICKNES			N/A (4.6' Water)				FOR BORING N/A	4	7.
8. DEPTH DE			0.0' 7.6'		ATURE OF I		: Larry benj	JAMIN	
ELEVATION MLW	DEPTH feœt	LEGEND	CLASSIFICATION OF MATERIAL (Description)		% CORE RECOV- ERY	BOX OR SAMPLE NO.	RE (Drilling time, v	MARKS water loss, depth of tc., if significant)	
0.0	0 -	c	0.0'TO 4.6' WATER			T	Time begin	vibracoring:	-
	_						1527 hrs. Soils describe	9	E
							Benjamin, Civ	il Engr. Tech.	E
		-							F
	4 —								
	_						NOTE: TOP OF fined as surfa	ce of water	E
-4.6	4.6 _		OCEAN BOTTOM @4.6' Assumed not Recovered				and compensa for the tide s	uch that	F
	5 <del>-</del>						top of Hole is	O.O EL MLLW	· E
	_	-					VIBRACORI	F BORING	
		_					From 0.0	' to 3.0'	
	_						Ran 3.0'	Rec: 0'	
	6 —	-				 	Top of vibro	acore soil ogged as be-	
	_	_					∥ainnina at 0	ıčean Bottom	լ.  ├
							Recovery, t	s greater than the difference	
	_	-					Not Recove	as Assumed red.	
	7 —								7 <u>F</u>
	_								
-7.6	7.6 =			7.6'					
	_	-	BOTTOM OF HOLE AT	7.6'		<u> </u>	LAB CLAS	SIFICATION	<b> </b>
			SOILS ARE FIELD VISUALLY				Jar	Olerenii (in aliina	
	_		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				<u>Number</u>	<u>Classification</u>	
	_		CLASSIFICATION SYSTEM						
									J <u> -</u>
	=								E
		-					NOTE: Ter	minated	F
							hole at pr	edetermin:	e <del>[</del>
							depth at	3.0'.	E
									F
	- - - - - - - -								E
	_	1							E
	=	-							F
									E
		1							F
	=	-							F
		]					   Aii   INI FT		F

		DIV	/ISION	INSTALLA	TION	ı	Hole No.	-U3-V	
	ING LO	G July	SOUTH ATLANTIC		WILN		DISTRICT	of 1	SHEETS
1. PROJECT	al inle	T			AND TYPE		4" Dia. Vibr	<u>acore</u>	
2. LOCATION				MLLW	/				
3. DRILLING	AGENCY		362 N 225374 NAD83	1	FACTURER' CORE	S DESIGNA	TION OF DRILL SNELL		
4. HOLE NO	INGTON . (As shown			13. TOTA	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED	UNDISTUR	RBED
and file no	umber)		TI-03-V-113B		L NUMBER		KES N/A		
LESTER	GAUGH		CRANE OPERATOR	15. ELEV	ATION GRO		1 17 / 1		
6. DIRECTION		_	DEG.FROM VERT.	16. DATE			/30/03	COMPLETED 06/30/C	)3
7. THICKNES	SS OF OVE	ERBURDEN	N/A (4.6' Water)				0.0' MLLW	^	X
8. DEPTH D			0.0'	19. SIGNA	TURE OF	INSPECTOR			<i>"</i>
9. TOTAL D	EPTH OF I	HOLE	8.5'		LACKE	AND BOX OR		IJAMIN EMARKS	
ELEVATION MLW	DEPTH feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.S	RECOV- ERY	SAMPLE NO. f	(Drilling time, weathering,	water loss, dept etc., if significal g	th of int)
0.0	0 =	-	0.0'TO 4.6' WATER				Time begin 1531 hrs.	vibracor	ing:
		]					Soils describ	ed by Lai	rry
	=	-					Benjamin, Ci	/IIEngr. 16	ecn.
	4 —	]							
							NOTE TO	E 110: E	, <b> </b>
	_		OCEAN DOTTOM 84 C				NOTE: TOP O  fined as surf  and compens		
-4.6	4.6 =		OCEAN BOTTOM @4.6' Assumed not Recovered				lfor the tide s	such that	_
	5 <del>-</del>						top of Hole is	; 0.0 EL	MLLW. E
		-					VIBRACOR	PE BUDIN	
	_						From 0.0		
							Ran 3.9		
	_ =	-					Top of wibr	acoro s	من الـ
	6 —						Top of vibr sample is I ginning at (	ogged as	s be-
	_	_					When Run Recovery,	is greate	er than
	_						Recovery, is depicted	the diffe Las Assi	rence  - umed  -
							Not Recov	ered.	
	/ -								
		]					LAB CLAS	<del></del> SSIFICATI	
	8 —	-					Jar	3011 107 (11	
				8.5'			Number	<u>Classifica</u>	ıtion
	_		BOTTOM OF HOLE AT 8						
	9 —	-	COIL C. ADE. E.E. 2. 111211111						
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						
	_	-	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						
		-							
		<u> </u>					NOTE: Ter	-minate	d
							hole at pi	redeter	
	=	1					depth at	3.9'.	-
		]							
	=	_							
		]							F
		]							
		-							F
	_ _ _								
		-							-
		]							F
		-			PRO IFOT	1	AII INII ET	Π	

							Hole No. TI-	03-V-113C
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	TION WILN	MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT	AIL INLE	т.					4" Dia. Vibrac	
2. LOCATION	N (Coordinate	es or Station	998 N 225276 NAD83	MLLW	/		HOWNTBM or MSL)	
3. DRILLING	AGENCY			1	FACTURER' CORE	S DESIGNA	ATION OF DRILL SNELL	
4. HOLE NO	MNGTON ). (As shown		•	13. TOTA BURDE	L NO.OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED 1	UNDISTURBED
and file n	DRILLER				L NUMBER		147 7 (	
LESTER 6. DIRECTIO			CRANE OPERATOR	15. ELEV	ATION GRO	UND WATE	RTED CO	MPLETED
Ŭ VERT	ICAL   IN	NCLINED	DEG. FROM VERT.				<u>/02/03 : 0</u> 0.0' MLLW	7/02/03
7. THICKNES			N/A (3.5' Water)				FOR BORING N/A	X
9. TOTAL D			0.0' 7.0'		ATURE OF I		: Larry benj <i>a</i>	AMIN
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA (Description)	LS	% CORE RECOV-	BOX OR SAMPLE	REMA	er loss, depth of
<u>M</u> <u>L</u> W 0.0	fevet	С	ď		ERY	NO. f	weathering, etc.,	-
0.0			0.0'TO 3.5' WATER				Time begin vi 0925 hrs.	_
	_						Soils described Benjamin, Civil (	by Larry Engr. Tech.
	=	-						
	3 -							
_			OCEAN BOTTOM @3.5			3.5'	NOTE: TOP OF	
-3.5	3.5-	• •	SP - Tan course poorly graded sand with shell		-	<u> </u>	fined as surface and compensation for the tide suc	on is made 🗀
			fragments			'	top of Hole is C	D.O EL MLLW.
	4 -					4.0'	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
	=						VIBRACORE From 0.0'	
			_	4.7'				Rec: 1.2'
	5 —		Assumed not Recovered				Top of yibrac	ore soil
		_					sample is log ginning at Oc	aed as be- IH
	_						When Run is	greater than a difference
	=	-					is depicted c	ıs Assumed 🗀
	6 -						Not Recover	ea.
	=							
		-						
-7.0	7.0	-	BOTTOM OF HOLE AT	7.0'			LAB CLASS	IFICATION
	=		BOLLOW OF HOLE AL	7.0		 	Jar <u>Numbe</u> r <u>(</u>	Classification
			SOILS ARE FIELD VISUALLY				1	SP
	=	-	CLASSIFIED IN ACCORDANCE					
	8 -		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					
	=	-						
		1						-
	=	-					NOTE: Term	
							hole at pre	
	=	-					depth at 3.	
		4						
	=	-						
		-						
	=							
	_							
			C EDITIONS ARE ORGALETE		PRO IFOT	 	 AII INLET   HO	I E NO

TI-03-V-113D Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" <u>Dia. Vibracore</u> 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) MLLWNC COORD E 2410102 N 225259 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-113D 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 07/02/03 6. DIRECTION OF HOLE COMPLETED 07/02/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (6.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 10.7 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY  $M \sqcup L W$ fe⊯t 0.0 0 0.0'TO 6.7' WATER Time begin vibracoring: 0938 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @6.7' 6.7' -6.7|6.7 SP - Gray course poorly graded sand with shell fragments 1 VIBRACORE BORING 7.2 From 0.0' to 4.0' Ran 4.0' Rec: 2.8' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 9.0' 9.0' Tan 2 9.5 Assumed not Recovered 9.5' LAB CLASSIFICATION 10 Jar <u>Number</u> Classification SP SP 10.7 -10.7 | 10.7 10.7 BOTTOM OF HOLE AT SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 4.0'.

TI-03-V-114 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) MLLW NC COORD E 2407801 N 214985 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-114 6 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED 07/01/03 COMPLETED 07/01/03 16. DATE HOLE X VERTICAL | INCLINED . DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (36.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 51.5 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY  $M \sqcup L W$ feæt 0.0 0 0.0' TO 36.2' WATER Time begin vibracoring: 0807 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. - 36.2 36.2 OCEAN BOTTOM @36.2' 36.2 SP-SM Gray fine poorly graded silty sand 1 NOTE: TOP OF HOLE is de-36.7' fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 38.0 with shell VIBRACORE BORING fragments 39.0' From 0.0' to 15.3' Ran 15.3' Rec: 15.3' 2 39.51 Top of vibracore soil sample is logged as be-ginning at Ocean Bottom. 40 When Run is greater than Recovery, the difference is depicted as Assumed 41.6 Not Recovered. T/shell fragments 42.0' 42 tan 3 42.5' LAB CLASSIFICATION 44 Jar <u>Number</u> <u>Classification</u> SP-SC SP-SC 45.0 234 SP-SM SP-SM SP-SM 4 45.5 46 48.0 48 5 48.5 |NOTE: Terminated hole at predetermined depth at 15.3'. 50.0 50 6 50.5 -51.5 51.5 BOTTOM OF HOLE AT 51.5 52 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO.

						Hole No. TI-	-03-V-115	
DRILLING	LOG DIVI	SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT TOPSAIL	INLET					4" Dia. Vibra		
2. LOCATION (Cod	oordinates or Station		MLLW	<u>'</u>		HOWNTBM or MSL)		
3. DRILLING AGE	ENCY	647 N 214318 NAD83		facturer' CORE	S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO. (As	GTON DISTE s shown on drawing	•	13. TOTA BURDE	L NO.OF (	OVER- S TAKEN	DISTURBED 4	UNDISTURBED	
and file number  5. NAME OF DRI	ILLER			L NUMBER		147 / (		
6. DIRECTION OF		CRANE OPERATOR  DEG. FROM VERT.	16. DATE		STAF 07	RTED C /01/03	OMPLETED 07/01/03	
7. THICKNESS O		N/A (36.5' Water)				0.0'MLLW FOR BORING N/A		<u> </u>
8. DEPTH DRILLE		0.0'	19. SIGNA	TURE OF	INSPECTOR	?	<u> </u>	<i>-</i>
9. TOTAL DEPTH		45.1'	· I	% CORE	BOX OR		MARKS	-
MLW f∈	eet c	(Description)	.3	RECOV- ERY	SAMPLE NO. f	weathering, etc	ater loss, depth of c., if significant) 9	
0.0 0		0.0'TO 36.5' WATER				Time begin v 0832 hrs. Soils describe Benjamin, Civi	d by Larry	
-36.5 36 38		OCEAN BOTTOM @36 SP-SM Gray medium po graded sand with shell fragments			36.5' 1 37.0'	NOTE: TOP OF fined as surfac and compensat for the tide su top of Hole is	ce of water tion is made ach that	
40		39.5' Tan T/shell fragments			38.5' 2 39.0' 40.0' 3 40.5'	VIBRACORE From 0.0' Ran 8.6'  Top of vibra sample is lo ginning at 0' When Run is Recovery, th is depicted Not Recover	to 8.6' Rec: 6.3' score soil gged as be- cean Bottom. greater than he difference as Assumed	
42	2	Assumed not Recovered	42.8'		42.0'			
-45.1 45	5.1	BOTTOM OF HOLE AT 4	45.1' 45.1'			LAB CLASS  Jar  Number  1 2 3 4	Classification  SP SP-SC SP-SM SM	
		SOILS ARE FIELD VISUALL CLASSIFIED IN ACCORDANC WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				NOTE: Terr hole at pro depth at 8	edetermine	; ]
ENG FORM						AII INI FT H		

							Hole No. TI-03-V-116		
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	TION WILN	MINGTON	SHEET 1  N DISTRICT OF 1 SHEETS	3	
1. PROJECT	all inle	T T					4" Dia. Vibracore		
2. LOCATION	N (Coordinate	es or Station		MLL W		EVALION S	SHOWNT <i>BM or MSL)</i>		
3. DRILLING	AGENCY		109 N 214363 NAD83	1	FACTURER' CORE	S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	. (As shown	N DISTE	· · · · · · · · · · · · · · · · · · ·		L NO. OF ( EN SAMPLE		DISTURBED UNDISTURBED 0		
and file no 5. NAME_OF	DRILLER	_		14. TOTAL NUMBER CORE BOXES N/A  15. ELEVATION GROUND WATER N/A					
6. DIRECTION			CRANE OPERATOR	16. DATE		STAF	RTED COMPLETED		
7		NCLINED	DEG. FROM VERT.	17. ELEV	ATION TOP		/01/03 :07/01/03 :0.0' MLLW		
7. THICKNES  8. DEPTH D			N/A (35.7' Water) 0.0'		L CORE RE		FOR BORING N/A	У.	
9. TOTAL D	EPTH OF	HOLE	45.6'		LACKE	Y AND	LARRY BENJAMIN		
ELEVATION MLLW	DEPTH fewet	LEGEND c	CLASSIFICATION OF MATERIAL (Description) d	-S	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	0 =		0.0'TO 35.7' WATER				Time begin vibracoring: 0844 hrs.	E	
							Soils described by Larry Benjamin, Civil Engr. Tech.		
							Senjanini, Sivil Engl. 1601.	E	
	35 —	1							
-35.7	35 7	<u> </u>	OCEAN BOTTOM @35			35.7'	NOTE: TOP OF HOLE is de-	F	
	33.7 -	]··  †	SP-SM Dark gray mediu poorly graded silty sand	m d with		1	fined as surface of water and compensation is made		
	=	- · · · · ·	shell fragments			36.2	for the tide such that top of Hole is 0.0 EL MLLW	'. E	
	37 —		37.3'			37.0' 2		_	
			With 3" siltstone	38.0'		37.5' 38.0'	VIBRACORE BORING From 0.0' to 9.9'		
			SP - Tan course poorly graded sand.			3	Ran 9.9' Rec: 7.0'		
	39 —	<u> </u>	gradea sana.			38.5'	Top of vibracore soil		
	39 —	••••					sample is logged as be ginning at Ocean Botton		
						40.0'	When Run is greater the Recovery, the difference	an E	
	=	- · · ·				4	is depicted as Assumed		
	41 -	· · · ·				40.5'	Not Recovered.	-E	
	=	····						7 E	
	_	<u> </u>		42.7'		 		<u> </u>	
	43 —		Assumed not Recovered				LAB CLASSIFICATION  Jar		
	=					 	Number Classification  SP		
		_				<u> </u>	2 SP-SM 3 SP-SM		
	45						4 SP-SM		
	_			45.6'					
-45.6	45.6 -		BOTTOM OF HOLE AT 4						
		-						F	
	47 —		SOILS ARE FIELD VISUALL' CLASSIFIED IN ACCORDANC					E	
		1	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	_			NOTE: T	E	
							NOTE: Terminated hole at predetermin	ed	
							depth at 9.9'.	E	
	- - - - - - -	-						F	
		1						E	
								-	
	=							F	
	-							E	
- NO FOD					DDO IECT	$T \cap D \subset D$	All INI FT HOLE NO.		

TI-03-V-117 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) MLLW NC COORD E 2408685 N 212623 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-117 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR STARTED 07/01/03 6. DIRECTION OF HOLE COMPLETED 07/01/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (40.3' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 46.3 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY  $M \sqcup L W$ fe⊯t 0.0  $\Omega$ 0.0' TO 40.3' WATER Time begin vibracoring: 0905 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 40 -40.3' OCEAN BOTTOM @40.3' -40.3 40.3 -NOTE: TOP OF HOLE is de-SP - Gray course poorly graded sand with shell fragments fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 40.81 VIBRACORE BORING From 0.0' to 6.0' Ran 6.0' Rec: 5.0' 41.9 41.91 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed SM - Gray fine silty sand with shell 2 fragments 42.41 Not Recovered. 43 -43.1 43.1 SP-SM - Tan medium poorly graded silty sand 3 43.6 LAB CLASSIFICATION 44 Jar <u>Number</u> <u>Classification</u> SP-SM SP-SM SP-SM 45 45.3' Assumed not Recovered 46 -46.31 -46.3 46.3 NOTE: Terminated BOTTOM OF HOLE AT 46.3' hole at predetermined depth at 6.0'. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE 47 WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

		חוא	ISION	INSTALLA	TION		Hole No.   -U3-V-  8		
DRILL	ING LO	G DIV	SOUTH ATLANTIC		WILM		N DISTRICT OF 1 SHEETS		
1. PROJECT TOPSAIL INLET					AND TYPE				
2. LOCATION (Coordinates or Station)				11. DATUM FOR ELEVATION SHOWN BM or MSL)  MLLW					
NC COORD E 2410177 N 214057 NAD83  3. DRILLING AGENCY				1		S DESIGNA	ATION OF DRILL		
WILN	MINGTON		•	VIBRA CORE SNELL  13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED					
4. HOLE NO. (As shown on drawing title TI-03-V-118				BURDEN SAMPLES TAKEN O  14. TOTAL NUMBER CORE BOXES N/A					
5. NAME OF LESTER	DRILLER GAUGH	łF	CRANE OPERATOR		ATION GRO		147 7 (		
6. DIRECTIO	N OF HOLE	E		16. DATE	HOLE	STAF			
			DEG. FROM VERT.	17. ELEVATION TOP OF HOLE 0.0' MLLW					
7. THICKNES			N/A (41.2' Water)	18. TOTAL CORE RECOVERY FOR BORING N/A %					
9. TOTAL D			0.0' 46.2'	19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN					
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)		% CORE RECOV-	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
MLW 0.0	feet	С	ď		ERY	f f	g		
0.0	0 =	]	0.0'TO 41.2' WATER				Time begin vibracoring:		
							Soils described by Larry Benjamin, Civil Engr. Tech.		
	=						Benjamin, Civil Engr. Tech.		
	11 -								
-41.2	41 <del>-</del>  41.2 -		OCEAN BOTTOM @41.	2'					
71,2	' ' -		Assumed not Recovered				NOTE: TOP OF HOLE is de-		
		1					fined as surface of water and compensation is made for the tide such that		
							top of Hole is 0.0 EL MLLW.		
	42 -								
	=	-					VIBRACORE BORING		
		1					From 0.0' to 5.0' Ran 5.0' Rec: 0.0'		
							Ran 5.0' Rec: 0.0'		
	43 <del>-</del>						Top of vibracore soil		
		-					sample is logged as be- ginning at Ocean Bottom.		
							When Run is greater than Recovery, the difference		
							is depicted as Assumed		
	=						Not Recovered.		
	44	-							
	=	-							
	45	-					LAB CLASSIFICATION		
							Jar		
	_								
	=								
	_ =								
-46.2	46 <u> </u>			46.2'					
	' ' -	-	BOTTOM OF HOLE AT 4	46.2'					
	=	1	COIL C ADE FIELD VICUALLY	<i>,</i>					
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANC						
	47 -	1	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						
	=	1					NOTE: Terminated		
		1					hole at predetermined depth at 5.0'.		
	= = =						depth at 5.0'.		
	_=	†							
	=	1							
		1							
	=	1							
		]							
		-							
	_	-							
		1							
		1				TADS	ALL INILET HOLEND		

6611		o DIV	TISION	INSTALLA.	TION	-	Hole No. II-U3-V-II&A		
	ING LO	G	SOUTH ATLANTIC		WILM		N DISTRICT OF 1 SHEETS		
1. PROJECT TOPSAIL INLET				11. DATUI	M FOR ELE	OF BIT EVATION S	4" Dia. Vibracore		
2. LOCATION (Coordinates or Station) NC COORD E 2410166 N 214103 NAD83			ML L W  12. MANUFACTURER'S DESIGNATION OF DRILL						
3. DRILLING					CORE	3 0131014	SNELL		
4. HOLE NO	. (As shown		•	13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED O					
5. NAME OF DRILLER			14. TOTAL NUMBER CORE BOXES N/A						
LESTER 6. DIRECTIO			CRANE OPERATOR	15. ELEVATION GROUND WATER N/A					
Ŭ VERT	ICAL   IN	NCLINED	DEG. FROM VERT.	10. DATE HOLE : 07/01/07 : 07/01/07					
7. THICKNES			11771 (10.0 1701017	18. TOTAL CORE RECOVERY FOR BORING N/A %					
8. DEPTH D			0.0' 45.5'	19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN					
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		% CORE RECOV-	BOX OR SAMPLE	REMARKS		
MLW	feet	c	(Description) d		ERY	NO.	(Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	0 =	-	0.0'TO 40.5' WATER				Time begin vibracoring:		
	_						Soils described by Larry		
	=						Benjamin, Civil Engr. Tech.		
	40 -								
		-							
-40.5	 40.5 <del></del>		OCEAN BOTTOM @40.5	5'			NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made		
	=	-	Assumed not Recovered				for the tide such that		
							top of Hole is 0.0 EL MLLW.		
							VIBRACORE BORING		
							From 0.0' to 5.0'		
							Ran 5.0' Rec: 0.0'		
	42 -	-					Top of yibracore soil		
							sample is logged as be- ginning at Ocean Bottom.		
							When Run is greater than Recovery, the difference		
							is depicted as Assumed   Not Recovered.		
	43 -								
		1							
	44 -						LAB CLASSIFICATION		
	=						Jar <u>Number</u> <u>Classification</u>		
	=	_							
	45								
	=			4					
-45.5	45.5	1	BOTTOM OF HOLE AT 4	45.5' 15.5'					
	=	-	BOTTOW OF HOLL AT	10.0					
	46 -			.,					
	=		SOILS ARE FIELD VISUALI CLASSIFIED IN ACCORDAN				NOTE: Terminated		
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				hole at predetermined		
	= = =						depth at 5.0'.		
	_	-							
		1							
		-							
		-							
	=	1							
	=	-							
1			1		PPO IFCT	T 0 D 0	ALL INTET HOLENO		

				Hole No. TI-03-V-119			
DRILLING LOG DIVISION SOUTH ATLANTIC	INSTALLA		IINGTON	SHEET 1 OF 1 SHEETS			
1. PROJECT TOPSAIL INLET		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWN BM OF MSD					
2. LOCATION (Coordinates or Station)  NC COORD E 2411530 N 214616 NAD83	MLLW	<u> </u>					
3. DRILLING AGENCY		12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL					
WILMINGTON DISTRICT  4. HOLE NO. (As shown on drawing title and file number)  TI-03-V-119	13. TOTA BURDE	13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED BURDEN SAMPLES TAKEN 2					
5. NAME OF DRILLER		14. TOTAL NUMBER CORE BOXES N/A					
LESTER GAUGHF CRANE OPERATOR  6. DIRECTION OF HOLE		15. ELEVATION GROUND WATER N/A					
VERTICAL ☐ INCLINED DEG. FROM VERT	т. 🗀	10.0  DATE HOLE $1.07/01/03$ $1.07/01/03$					
7. THICKNESS OF OVERBURDEN N/A (42.1' Water)		18. TOTAL CORE RECOVERY FOR BORING N/A %					
8. DEPTH DRILLED INTO ROCK 0.0' 9. TOTAL DEPTH OF HOLE 51.1'		19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN					
ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERI		% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of			
MLLW feet c		ERY	NO. f	weathering, etc., if significant)			
0.0 0 0 0.0' TO 42.1' WATER				Time begin vibracoring:			
				Soils described by Larry Benjamin, Civil Engr. Tech.			
				[			
42 — OCEAN BOTTOM @42	.1'		42.1'				
SP - Tan course poorly graded sand			1	NOTE: TOP OF HOLE is de-			
			, 	fined as surface of water and compensation is made			
			42.6'	for the tide such that top of Hole is 0.0 EL MLLW.			
43				_			
]::::				VIBRACORE BORING From 0.0' to 9.0'			
				Ran 9.0' Rec: 2.4'			
			44.0'	Top of vibracore soil			
44 - ::-			2	sample is logged as be- ginning at Ocean Bottom.			
	44.5'		2	When Run is greater than Recovery, the difference			
Assumed not Recovered	р		44.5'	is depicted as Assumed			
45 _				Not Recovered.			
				<u> </u>			
				<u> </u>			
46 —				LAB CLASSIFICATION			
				Jar Number Classification			
				1 SP-SM — SP-SM			
47 —							
				l E			
				E			
48 —				E			
				NOTE: Terminated			
				hole at predetermined depth at 9.0'.			
50 —							
				E			
	51.1'			E			
-51.1 51.1 BOTTOM OF HOLE AT				F			
				E			
SOILS ARE FIELD VISUAL CLASSIFIED IN ACCORDA							
WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				E.			
				E			
ENC FORM18.36 PREVIOUS EDITIONS ARE ORGANIZED		PRO IFCT	TADS	AII INLET HOLE NO.			

				Hole No. TI-O	3-V-120
DRILLING LOG DIVISION SOL	JTH ATLANTIC INSTA	ALLATION WILW	MINGTON		HEET 1 T SHEETS
1. PROJECT TOPSAIL INLET				4" Dia. Vibracor	
2. LOCATION (Coordinates or Station)	ML 210960 NAD83	LW			
NC COORD E 2406882  3. DRILLING AGENCY WILLIAM OF TON DISTRICT	'2.  \footnote{\chi_{\text{\chi}}}	ianufacturer' RA CORE	S DESIGNA	TION OF DRILL SNELL	
WILMINGTON DISTRICT  4. HOLE NO. (As shown on drawing title	13. T	OTAL NO.OF ( URDEN SAMPLE	OVER- S TAKEN	DISTURBED UN	NDISTURBED
and file number)  5. NAME OF DRILLER	14. T	OTAL NUMBER		147 73	
LESTER GAUGHF C	STATULE OF ETATION	ATE HOLE	STAF	RTED COMPL	_ETED
VERTICAL   INCLINED	DEG. FROM VERT.			/01/03 07/ 0.0' MLLW	01/03
	A (39.5' Water) 18. τ	OTAL CORE RE			Z.
0.0		IGNATURE OF I		LARRY BENJAM	IN
ELEVATION DEPTH LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV-	BOX OR SAMPLE	REMARKS	oss, depth of
MLW feet c	d d	ERY	NO. f	weathering, etc., if s	
	0.0'TO 39.5' WATER			Time begin vibr 1305 hrs.	
				Soils described b Benjamin, Civil End	y Larry gr. Tech.
					F
39 —				Scale changed @44	1.0'.
	ICEAN DOTTOM AZO EL		39.5'	NOTE: TOP OF HO	
	CEAN BOTTOM @39.5' - Dark gray fine silty nd with shellfragments		 	fined as surface of and compensation for the tide such	ıs made 🗀
	ia with shell-fragments		1	top of Hole is 0.0	EL MLLW.
40 —			40.0'	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
				V <u>IBRACORE B</u> From 0.0' to	
				Ran 9.0' Red	
41 - 1	41.	.0'	41.0'	Top of vibracor	re soil
	-SM - Tan fine poorly ded silty sand with		2	sample is logge ginning at Ocea	ed as be-IH
	lland rock fragments			When Run is gr Recovery, the	eater than
	4.4		41.5'	is depicted as Not Recovered	Assumed
42Ass	umed not Recovered	.9'		Not Recovered	·
			l		
43 —				LAB CLASSIFI Jar	CATION   E
			   	<u>Number</u> <u>Clas</u>	ssification
			[ 	1 2	SP-SM SM
44 —					
46 —					F
					E
				NOTE: Termin	nated E
				hole at prededepth at 9.0	:.
48 —					
-48.5 48.5	48.				
Вот	TOM OF HOLE AT 48.5'				F
50 —	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				F
	WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
					F
ENC FORM1836 previous ent	WONG ARE ORGALETE	PROJECT	TOPS	L AII INLET Hole	NO.

							Hole No. TI-03-V-121		
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLATION SHEET 1 OF 1 SHEETS					
1. PROJECT	Ail inle	T T		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore					
				MLLW	/				
3. DRILLING	AGENCY			1		S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	).(As shown		1911-	13. TOTA	L NO. OF	OVER- S TAKEN	DISTURBED UNDISTURBED O		
and file n	DRILLER		: 11-03-7-121	14. TOTA	L NUMBER	CORE BO	XES N/A		
LESTER 6. DIRECTIO	GAUGH		CRANE OPERATOR				147 71		
1			DEG. FROM VERT.			: 07	/01/03 : 07/01/03		
			N/A (33.3' Water)						
8. DEPTH D			0.0' 42.3'						
ELEVATION	DEPTH	LEGEND			% CORE	BOX OR	REMARKS		
Mlo L W	fevet	с	(Description)		ERY	NO. f	weathering, etc., if significant)		
0.0	0 =	_	0.0'TO 33.3' WATER				Time begin vibracoring:		
	_	1					Soils described by Larry		
	=	SOUTH ATLANTIC   STATE   STA							
	33 —	1					Scale changed @38.0'.		
-33.3	33.3	<del> </del>	OCEAN BOTTOM @33.	3'		33.3'	-		
			Isand with shell			1	fined as surface of water and compensation is made		
	=	-	m agments			770:	for the tide such that		
	34 —					33.8' 			
	_								
	_								
	_					35 0'			
	35 —						I sample is loaged as be- II-		
						2	ginning at Ocean Bottom.       When Run is greater than		
	_					35.5'	Recovery, the difference is depicted as Assumed		
	36						Not Recovered.		
				36.2		36.2'			
	=		MH – Dark gray elastic	silt		7			
	=						<u> </u>		
	37 —					36./	LAB CLASSIFICATION		
							1 SP-SM		
	=	<u>-</u>	SM - Gray fine silty say	37.7'		37.7'			
	38 —		T/wood fibers.	ıu		4			
	=					38.2'			
	=	<u> </u>							
	=								
	40 -	<del>                                      </del>							
	=						NOTE: Tarminated		
	-	<del> </del>	Assumed not Recovered				hole at predetermined		
	=	1	7.55amed not Necovered				depth at 9.0'.		
-42.3	42 —			42.3'					
-42.3	<sup>42.5</sup>		BOTTOM OF HOLE AT 4	12.3'					
			SOILS ARE FIELD VISUALL	Y					
	=		CLASSIFIED IN ACCORDANC						
	44	1	CLASSIFICATION SYSTEM						
	=								
	=	1							
LLL FOR	1 76		C EDITIONS ADE ODSOLETE		PROJECT	TOPS	AII INLET HOLE NO.		

							Hole No. T	I-03-V-122	
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	all inle	T		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWN BM OF MSL)					
2. LOCATION			577 N 209655 NAD83	MLLW	/				
3. DRILLING	AGENCY			1	FACTURER' CORE	'S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	. (As shown	N DISTE on drawing	•	13. TOTA BURDI	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED 4	UNDISTURBED	
and file no 5. NAME_OF	DRILLER	_			L NUMBER				$\Box$
LESTER  6. DIRECTION			CRANE OPERATOR	16. DATE	ATION GRO	STAF	RTED	COMPLETED_	$\dashv$
Ŭ VERT	ICAL   IN	NCLINED	DEG. FROM VERT.				/01/03 0.0' MLLW	:07/01/03	$\dashv$
7. THICKNES			N/A (38.8' Water) 0.0'	18. TOTA	L CORE RE	ECOVERY	FOR BORING N/	A	Z.
9. TOTAL D			48.2'		ATURE OF LACKE		: Larry ben	IJAMIN	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)	_S	% CORE RECOV-	BOX OR SAMPLE	(Drilling time,	EMARKS water loss, depth of etc., if significant)	
MLW 0.0	fevet	c	ď		ERY	NO. f	-	9	
		-	0.0'TO 38.8' WATER				1403 hrs.	vibracoring:	F
	_						Soils describ   Benjamin, Civ	ed by Larry vil Engr. Tech.	F
									E
	38 —	1					Scale changed	042.0'.	-
		-					NOTE: TOP O	F HOLE is de-	F
		1	OCEAN BOTTOM @38	8'		  38.8'	and compense for the tide s	ation is made such that	E
-38.8	38.8 <u>-</u> 39 —	-	SM - Gray fine silty sa			30.0	top of Hole is	0.0 EL MLLW.	F
	39 —		,			1	VIBBACOE	RE BORING	¬E
						39.3'	From 0.0		E
	=	1					Ran 9.4'	Rec: 7.9'	
	40 —			40.1		   40.1'	Top of vibr	acore soil	E
			MH - Dark gray elastic				sample is i ainnina at (	ogged as be- Ocean Bottom	۱. ا
						2	When Run i Recovery,	is greater tha the difference	
						40.6'	is depicted Not Recove	l as Assumed ered.	E
	41	- -							屵
	=								ΙĖ
	_	-							
	=	- - -				  42.0'	LAR CLAS	SSIFICATION	1 E
	42 —					3	Jar		IE
		-				42.5'	<u>Number</u> 1	<u>Classification</u> SP	1
	_						2 3	CH CH	
	44 —						4	SC	
	_			45.0'		45.0'			JE
	_		SM - Dark gray fine silt sand with shell fragments	ty s		4			E
	46 -					45.5'			E
				46.7'			NOTE: T.	-min at a d	E
			Assumed not Recovered				NOTE: Ter hole, at pr	redetermine 9.4′.	<u> </u>
	=	-					depth at '	9.4'.	F
-48.2	48 —			48.2'					
-40.2	<del>+0.</del> 2 _	1	BOTTOM OF HOLE AT	48.2'					E
	-	-	SOILS ARE FIELD VISUALL'	Y					F
			CLASSIFIED IN ACCORDANC WITH THE UNIFIED SOIL						E
	-	1	CLASSIFICATION SYSTEM						F
	=	-							F
									E
	=								<b>_</b> _
			C EDITIONS ARE ORSOLETE		PROJECT	TOPS	AII INLET	HOLE NO	

TI-03-V-123 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station)
NC COORD E 2402703 N 210407 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-123 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED 07/01/03 COMPLETED 07/01/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (33.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 43.4 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY  $M \sqcup L W$ feæt 0.0 0 0.0' TO 33.5' WATER Time begin vibracoring: 1424 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 33 Scale changed @37.0'. NOTE: TOP OF HOLE is de-OCEAN BOTTOM @33.5' fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. SP - Gray course poorly graded sand with shell fragments -33.5 33.5 1 34 34.0' VIBRACORE BORING From 0.0' to 9.9' Ran 9.9' Rec: 4.3' 35.0 <u>35.0'</u> Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed SP-SM - Tan medium poorly graded silty sand T/shell fragments 2 35.5' Not Recovered. 36 LAB CLASSIFICATION 37.0' 3 Jar <u>Number</u> <u>Classification</u> 37.8' 37.5' SP Assumed not Recovered ŠΜ SM 39 NOTE: Terminated hole at predetermined depth at 9.9'. 43 43.4 -43.4 43.4 BOTTOM OF HOLE AT 43.4' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM 45

TI-03-V-124 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG of 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) MII W NC COORD E 2404413 N 208624 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-124 6 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR STARTED 07/01/03 6. DIRECTION OF HOLE COMPLETED 07/01/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (38.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 55.5 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. f REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY  $M \sqcup L W$ fe⊯t 0.0  $\Omega$ 0.0' TO 38.5' WATER Time begin vibracoring: 1445 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 38 -Scale changed @52.0'. OCEAN BOTTOM @38.5' SP - Dark gray fine poorly graded silty sand 38.5' -38.5 38.5 NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 39.0' 40 40.5 40.5 VIBRACORE BORING Tan 2 From 0.0' to 17.0' 41.0' Ran 17.0' Rec: 15.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 42 42.5 42.5 SP-SM - Tan me graded silty sand Tan medium poorly 3 43.0' Not Recovered. 44 45.0 4 45.5 LAB CLASSIFICATION 46 Jar <u>Classification</u> <u>Number</u> SP-SM 2 SP-SM SP-SM 48.0 48 SP-SM 5 48.5 50 NOTE: Terminated 51.01 hole at predetermined depth at 17.0'. 6 51.5' 53.5 Assumed not Recovered 55.5 -55.5 55.5 BOTTOM OF HOLE AT 55.5 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

							Hole No. Tl	-03-V-125	
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	al inle						4" Dia. Vibra		
2. LOCATION			974 N 207216 NAD83	MLLV	/		SHOWNTBM or MSL)		
3. DRILLING	AGENCY			1	FACTURER CORE	'S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	.(As shown	N DISTE on drawing	•	13. TOTA BURD	L NO. OF	OVER- S TAKEN	DISTURBED 6	UNDISTURBED	
and file no 5. NAME OF	DRILLER				L NUMBER		147 71	·	
6. DIRECTION			CRANE OPERATOR	15. ELEV	ATION GRO	STAF	RTED (	COMPLETED	
Ŭ VERT	ICAL   IN	NCLINED	DEG. FROM VERT.				<u>/01/03 :</u> 0.0' MLLW	07/01/03	
7. THICKNES			N/A (38.9' Water)				FOR BORING N/A	4	7.
9. TOTAL D			0.0' 51.0'		ATURE OF LACKE		R Larry benj	JAMIN	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)	_S	% CORE RECOV-	BOX OR SAMPLE	(Drilling time, v	MARKS water loss, depth of	
<u>M</u> <u>L</u> W 0.0	fevet	С	ď		ERY	NO. f	_	tc., if significant)	
0.0			0.0'TO 38.9' WATER				Time begin 1504 hrs.	9	E
							Soils describe Benjamin, Civ	ed by Larry ilEngr. Tech.	
	_								E
	38 —								F
70.0	700		OCEAN BOTTOM @38	.9'		38.9'	NOTE: TOP OF		E
-38.9	JO.Y		SM - Gray fine silty sa with shell fragments			1	fined as surfa and compensa for the tide si	tion is made uch that	E
	40 =		With Shorth agricults			39.4'	top of Hole is	0.0 EL MLLW.	F
	40 -						VIDD ACODI		¬E
			SD SM Tan fine poorl	40.9		40.9'	VIBRACORI From 0.0		
	_ _	-	SP-SM - Tan fine poorl graded silty sand T/she fragments	y ell		2 41.4'	Ran 12.1'		
	42 —		in agments			41.4	Top of yibro	acore soil	
	_	<u> </u>					sample is lo ainnina at 0	ogged as be- Icean Bottom	
						43.0'	When Run is Recovery, t	s greater tha he difference	
	_	• • •				3 43.5'	is depicted Not Recove	as Assumed	E
	44					40.0	1101110000		<u> </u>
	=	-••							ΙE
		<b>-</b> • • • • • • • • • • • • • • • • • • •							
	_	•••				   4 C OL		CIFICATION	
	46 —	] · ·				46.0'	Jar	SIFICATION	
	_ _ _	<b>-</b> • • • •				46.5'	Number 1	<u>Classification</u> SP-SM	
						! 	2 3 4	SP-SM SP-SM	
						48.0'	5	SP-SM SM	IE
	48 —					5	6	SM	
	_ 					48.5'			J⊨
	_	-							E
	50 —								E
	=	- · ·				50.5'			F
-51.0	51.0 <del>-</del>	• • • • •	5077011 05 11015 17	51.0'		6 51.0'	NOTE: Ter	minated edetermine	E
			BOTTOM OF HOLE AT S	51.0'		31.0	depth at 1	edetermine 12.1'.	E
	52 <del>-</del>	-	SOILS ARE FIELD VISUA	LLY					
			CLASSIFIED IN ACCORDA WITH THE UNIFIED SOIL	NCE					F
			CLASSIFICATION SYSTEM	Л					
	=								F
	_								
	=								E
		1							-
		-							E
	· <del></del> .		I .		DBO IECT	TARS	AII INI ETT	101 F NO	

						ļ	Hole No. T	I-03-V-126	
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	
1. PROJECT	all inle	ΞT					4" Dia. Vibro		4
2. LOCATION			D43 N 205429 NAD83	MLLW	<u> </u>		HOWNTBM or MSL)		
3. DRILLING	AGENCY			1	FACTURER' CORE	'S DESIGNA	ATION OF DRILL SNELL		
4. HOLE NO	. (As shown	N DISTE on drawing	· · · · · · · · · · · · · · · · · · ·	13. TOTA BURDE	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED 6	UNDISTURBED	
and file no 5. NAME OF	DRILLER					CORE BOX	147 7 1		
LESTER  6. DIRECTION			CRANE OPERATOR	16. DATE		OUND WATE	RTED	COMPLETED	
Ŭ VERT	ICAL   I	NCLINED	DEG. FROM VERT.				<u>/01/03                                  </u>	07/01/03	
7. THICKNES			N/A (38.7' Water) 0.0'	18. TOTA	L CORE RE	ECOVERY	FOR BORING N/	Ą	%
9. TOTAL D			49.7'			INSPECTOR Y AND	LARRY BEN	JAMIN	
ELEVATION MLLW	DEPTH fewet	LEGEND c	CLASSIFICATION OF MATERIAL (Description) d	.S	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	(Drilling time,	EMARKS water loss, depth of etc., if significant) g	
0.0	0 _		0.0'TO 38.7' WATER					vibracoring:	F
	_						1530 hrs. Soils describ	ed by Larry vil Engr. Tech.	E
	_						Benjamin, Civ	/IIEngr. Tecn.	E
	38 <del>-</del>	_							<u> </u>
							Scale changed	d @40.0'. F HOLE is de-	E
			OCEAN BOTTOM @38	7'		   38.7'	fined as surfo	ace of water ation is made	
-38.7	38.7 -	•   •	SP-SM - Grav fine silty			30.7	for the tide s top of Hole is	such that 3 0.0 EL MLLW.	. E
	39 —		sand with shell fragment	S		1			_=
						39.2'	<u>VIBRACOR</u> From 0.0	E BORING	
							Ran 11.0'		
		-					Top of yibr	acore soil	
	40 -						I sample is la	ogged as be- Ocean Bottom	
		• • •		41.0'		41.0'	When Run i	s greater tha the difference	
	=		SP - Gray course poor graded sand T/shell	У		2	is depicted	as Assumed	
	42 _=		fragments			41.5'	Not Recove	er ea. 	<u> </u>
									] E
		• • • •							
	=	•   •	SP-SM - Greenish aray	43.5' fine		43.5 <u>'</u> 3		SSIFICATION	
	44 -		SP-SM - Greenish gray poorly graded silty sand T/shell fragments			44.0'	LAD CLAS    Jar	SIFICATION	
							<u>Number</u> 1	Classification SP-SM	
		- · ·   ·				45.5'	2 3 4	SP-SM SM	
	16 -					4	5	SP-SM SM	
	46 —					46.0'	6	SP-SM	
									JE
		•				47.5'			E
	48 -					5 48.0'			
		-				40.0	NOTE: Ter	minated	E
						49.2'	hole at pr	redetermine	<u> </u>
-49.7	49.7 <sup>–</sup>	•   •		49.7'		6	depth at	11.0'.	E
	50 —	-	BOTTOM OF HOLE AT 4	-9.7'		49.7'			
		1	SOILS ARE FIELD VISUALLY						E
		1	CLASSIFIED IN ACCORDANC WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	E					
			CLASSIFICATION SYSTEM						F
									F
		1							E
		1							E
		_			חפס ובכד.	 TADC	 Au inift]	HOLE NO	上

DRILLI	NG LOG DIV	VISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS	 s	
1. PROJECT	IL INLET	-		AND TYPE	OF BIT	4'' Dia. Vit	oracore		
2. LOCATION	(Coordinates or Static		11. DATUM FOR ELEVATION SHOWNTBM or MSL)  ML L W						
3. DRILLING	AGENCY	3297 N 202867 NAD83	12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL						
4. HOLE NO	IINGTON DIST .(As shown on drawing	- 4141-	13. TOTA	L NO. OF (	OVER- S TAKEN	DISTURBED	UNDISTURBED		
and file no 5. NAME OF		TI-03-V-127			CORE BO				
LESTER  6. DIRECTION	GAUGHF	CRANE OPERATOR			UND WATE	147.73	COMPLETED		
	CAL   INCLINED _	DEG. FROM VERT.	16. DATE		:07	701/03 0.0' MLLW	:07/01/03		
	S OF OVERBURDEN	N/A (39.8' Water)				0.0	1/A	γ.	
	RILLED INTO ROCK	0.0' 45.7'			INSPECTOR	LARRY BE	- N.IAMIN		
ELEVATION	DEPTH LEGEND	CLASSIFICATION OF MATERIAL (Description)		% CORE RECOV-	BOX OR SAMPLE NO.		REMARKS ime, water loss, depth of ng, etc., if significant)		
<u>M⊌LW</u> 0.0	fevet c	d		ERY	f f		9		
0.0		0.0' TO 39.8' WATER				1553 hrs.	n vibracoring:		
							ribed by Larry Civil Engr. Tech.		
	=					-	-		
	39 🖳								
	3					NOTE: TOP	OF HOLE is de-		
	-					fined as sur and comper	rface of water is ation is made		
-39.8	· · · ·	OCEAN BOTTOM @39. SP-SM - Gray fine poo	rlv		39.8'	for the tide top of Hole	such that is 0.0 EL MLLW	٧.	
	40	graded silty sand with s	shell		1				
	∃•.• .				40.3'		DRE BORING		
	∃'.'					Ran 5.9	).0' to 5.9' ' Rec: 4.9'		
	∃'.'					T			
	41 =				ĺ	sample is	bracore soil - logged as be : Ocean Bottor	-	
	╡•.•					When Run	n is greater th	an	
	∃'.' .					Recovery is depicte	, the differenced as Assumed	:e   d	
	42 =					Not Řeco	vered.		
	*	42.3′			42.3′				
	_∃•.•	Tan, T/shell fragments.			2				
	╡•.•\↓								
	43 - • • • •				42.8′	LAB CL	ASSIFICATION		
	∃•.•					Jar <u>Numbe</u> r	Classification		
	-∃•.+					1 2	SP SP-SM		
	∃•.•\↓					3	SP-SM		
	44				44.0'				
	∃•.• ↓				3				
	-∄∙.+ .		יכ אא		44.5′				
	<u> </u>	Assumed not Recovered	44.7'						
	45 —								
	=					NOTE: T	erminated		
	=		45.7'			hole at	predetermin	iec	
-45.7	45.7	BOTTOM OF HOLE AT 4	+5.7'			depth at	t 5.9'.		
	46 —	SOILS ARE FIELD VISUALLY							
	=	CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL							
	=	CLASSIFICATION SYSTEM							
	=								
	긬								
	∄								
	긬								
	∄								
		S EDITIONS ARE OBSOLETE.		DD0 1501	T O D C	L AIL INLE	T l		

TI-03-V-128 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 1. PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Statton) NC COORD E 2400223 N 200904 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-128 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED : 07/01/03 :COMPLETED::07/01/03 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (43.8' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 51.1 BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS **ELEVATION** DEPTH LEGEND (Description) MLLW fe⊯et d 0.0 0 Time begin vibracoring: 1625 hrs. 0.0'TO 43.8' WATER Soils described by Larry Benjamin, Civil Engr. Tech. 43 Scale changed @49.0'. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @43.8' 43.8' -43.8 43.8 = SM - Dark gray fine silty sand with shell fragments 44 -1 VIBRACORE BORING 44.3' From 0.0' to 7.3'
Ran 7.3' Rec: 7.3'

Top of vibracore soil sample is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. From 0.0' to 7.3' 45 45.6' 45.6' SP-SM - Gray fine poorly graded silty sand Not Recovered. 2 46 46.1 LAB CLASSIFICATION 47.3 47.3' <u>Number</u> Classification MH - Dark gray elastic silt with 2" sand lenses 3 SP-SM CH SP 47.8' 48 49 NOTE: Terminated 50.1 50.1 hole at predetermined depth at 7.3'. SP - White, course poorly graded sand with tiny shell fragments 4 50.6 51.1<u>-</u> -51.1 BOTTOM OF HOLE AT 51.1' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO.

TI-03-V-129 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2401453 N 202085 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-129 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED: 07/01/03 COMPLETED : 07/01/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED . DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (40.9' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 49.2 BEN LACKEY AND LARRY BENJAMIN BOX OR SAMPLE NO. REMARKS
(Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) FI EVATION DEPTH LEGEND ERY MLW fee t 0.0 0 0.0' TO 40.9' WATER Time begin vibracoring: 1643 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 40 Scale changed @44.0'. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @40.9' -40.9 40.9 <del>-</del> SP - Light gray course poorly graded sand with shell fragments VIBRACORE BORING From 0.0' to 8.3' 41.4' Ran 8.3' Rec: 8.3' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 42 42.5' is depicted as Assumed 2 Not Recovered. 43 43.0 43.4 43.4' SM - Gray fine silty sand with MH lenses and T/shell fragments 3 LAB CLASSIFICATION 43.9 44.3 44.3' Jar SP - Light gray course poorly graded sand with MH lenses and wood fibers 4 Number Classification SP 44.8' ŠP SC SC SP СH 46 47.6' 47.6 MH - Dark gray elastic silt with wood fibers and 5 course grain sizes at the 48.1 bottom. NOTE: Terminated hole at predetermined -49.2 49.2 depth at 8.3'. BOTTOM OF HOLE AT 49.2' 50 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

TI-03-V-130 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET II. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2404306 N 204848 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-130 4 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR COMPLETED : 07/01/03 6. DIRECTION OF HOLE STARTED : 07/01/03 16. DATE HOLE VERTICAL | INCLINED . DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (42.6' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 50.9 BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MLLW fe⊯et 0.0 0 0.0' TO 42.6' WATER Time begin vibracoring: 1706 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 42 Scale changed @47.0'. NOTE: TOP OF HOLE is defined as surface of water and compensation is made OCEAN BOTTOM @42.6' SP-SM - Gray medium poorly graded silty sand with shell fragments 42.6' -42.6 42.6 for the tide such that top of Hole is 0.0 EL MLLW. 43 43.1 VIBRACORE BORING From 0.0' to 8.3' Ran 8.3' Rec: 8.3' Top of vibracore soil sample is logged as be-ginning at Ocean Bottom. When Run is greater than Recovery, the difference 44 is depicted as Assumed Not Recovered. 45 -45.1 45.1 SM - Gray fine silty sand with MH lenses and T/shell fragments 45.6 LAB CLASSIFICATION 46 <u>Classification</u> <u>Number</u> SP-SM SP SP SP 47.0 47 3 47.5 49.0' 49 4 NOTE: Terminated hole at predetermined depth at 8.3'. 50.9 -50.9 51 -BOTTOM OF HOLE AT 50.9' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

TI-03-V-131 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2407242 N 207553 NAD83 MLLW12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-131 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 07/01/03 . :COMPLETED : 07/01/03 16. DATE HOLE X VERTICAL | INCLINED . \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (42.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 48.8 BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) **ELEVATION** DEPTH LEGEND MLLW feve t đ 0.0 0 Time begin vibracoring: 0.0' TO 42.2' WATER 1734 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 42 -OCEAN BOTTOM @42.2' 42.21 -42.2 42.2 SP - Gray course poorly graded sand with shell fragments NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 42.7' 43 VIBRACORE BORING From 0.0' to 6.6' Ran 6.6' Rec: 6.6' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 44 When Run is greater than Recovery, the difference 44.7 44.7 is depicted as Assumed MH - Dark gray elastic silt with sand layers Not Recovered. 2 45 45.2' LAB CLASSIFICATION 46 Jar <u>Number</u> <u>Classification</u> GP 47.0' SP - Tan course poorly graded sand 3 47.5 48 NOTE: Terminated hole at predetermined depth at 6.6'. 48.8 -48.8 48.8 BOTTOM OF HOLE AT 48.8' 49 -SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO.

Hole No. TI-03-V-132 DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS PROJECT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station)
NC COORD E 2408912 N 209079 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-132 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED : 07/01/03 COMPLETED: 07/01/03 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (42.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 47.6' REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) **ELEVATION** DEPTH ERY MLLW feæ t 0.0 0 0.0'TO 42.2' WATER Time begin vibracoring: 1759 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 42 -OCEAN BOTTOM @42.2' 42.21 -42.2 42.2 SP - Gray course poorly graded sand with shell fragments NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 42.7' 43 VIBRACORE BORING From 0.0' to 5.4' Ran 5.4' Rec: 5.4' 43.8 43.8 SP-SM - Tan fine poorly Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed graded silty sand 2 Not Recovered. 45 LAB CLASSIFICATION 46.0' 46 Jar 3 <u>Number</u> <u>Classification</u> SP 46.5 SP-SM 47.6 -47.6 47.6 BOTTOM OF HOLE AT 47.6' 48 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE NOTE: Terminated WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM hole at predetermined depth at 5.4'. PROJECT TOPSAIL INLET HOLE NO. TI-03-V-132

Hole No. TI-03-V-133 DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore II. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2410632 N 210637 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE UNDISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-133 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR STARTED : 07/01/03 COMPLETED: 07/01/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL ☐ INCLINED \_ \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (44.1' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 51.6 BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND M⊌LW 0.0 fee t 0 0.0' TO 44.1' WATER Time begin vibracoring: 1817 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @44.1' SP - Tan course poorly graded sand with shell fragments 44.1 NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 44.6 45 VIBRACORE BORING 45.5' 45.5' From 0.0' to 7.5' SM - Gray fine silty sand with shell fragments Ran 7.5' Rec: 7.1' 2 Top of vibracore soil sample is logged as beginning at Ocean Bottom. 46 46.0' When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 47.0 47.0' SP-SM - Tan fine poorly graded silty sand 3 47.5 LAB CLASSIFICATION 48 Jar <u>Number</u> <u>Classification</u> SP SMSP-SM 49.0 49 4 49.5 50 NOTE: Terminated hole at predetermined depth at 7.5'. 51 51.2 Assumed not Recovered -51.6 | 51.6 -BOTTOM OF HOLE AT 51.6' 52 -SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-133

Hole No. TI-03-V-134 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 1. PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) MII W NC COORD E 2412256 N 212152 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-134 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A COMPLETED: 07/01/03 6. DIRECTION OF HOLE STARTED: 07/01/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (41.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 46.4 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MLLW fee t 0.0 0 0.0'TO 41.4' WATER Time begin vibracoring: 1837 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. -41.4 41.4 OCEAN BOTTOM @41.4' 41.41 SP - Gray course poorly graded sand with shell fragments NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that 41.91 top of Hole is 0.0 EL MLLW. VIBRACORE BORING From 0.0' to 5.0' Ran 5.0' Rec: 3.5' 43.0 43.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 43 Tan, T/shell fragments 2 43.5' Not Recovered. 44 44 9 LAB CLASSIFICATION Assumed not Recovered 45 <u>Classification</u> <u>Number</u> SP SP-SM 46 46.4 -46.4 46.4 -BOTTOM OF HOLE AT 46.4' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE 47 WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 5.0'. PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-134

TI-03-V-135 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 1. PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) MII W NC COORD E 2409681 N 216446 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-135 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A 6. DIRECTION OF HOLE STARTED : 07/01/03 :COMPLETED : 07/01/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (36.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 49.7 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN BOX OR SAMPLE NO. REMARKS
(Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY MLLW <u>fe⊯et</u> 0.0 0 0.0' TO 36.7' WATER Time begin vibracoring: 1904 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 36 OCEAN BOTTOM @36.7' SP - Gray course poorly graded sand with shell fragments 36.7' NOTE: TOP OF HOLE is de--36.736.7 1 fined as surface of water and compensation is made 37.2' for the tide such that top of Hole is 0.0 EL MLLW. 38 VIBRACORE BORING 39.0' From 0.0' to 13.0' 2 Ran 13.0' Rec: 12.8' 39.5 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 40 40.2 40.2 SP-SM - Tan fine poorly graded silty sand T/shell fragments 3 40.7 Not Recovered. 42 • 43.0' 4 43.5 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> 45.0' SP 2 3 4 5 5 SP-SM 45.5 SM 46 47.5 48 48.0' NOTE: Terminated hole at predetermined depth at 13.0'. Assumed not Recovered 49.7 49.7 -49.7 BOTTOM OF HOLE AT 49.7' 50 -SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-135

TI-03-V-136 Hole No. DIVISION SOUTH ATLANTIC INSTALLATION SHEET 1 DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2409536 N 216575 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-136 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR COMPLETED 07/01/03 6. DIRECTION OF HOLE STARTED : 07/01/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (36.8' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 41.8 BEN LACKEY AND LARRY BENJAMIN REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY  $M \sqcup L W$ feet 0.0 0 0.0' TO 36.8' WATER Time begin vibracoring: 1914 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 36 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @36.8' 36.8 -36.8|36.8 \_ SP-SM - Tan fine poorly graded silty sand with shell fragments 37 -1 VIBRACORE BORING 37.3 From 0.0' to 5.0' Ran 5.0' Rec: 1.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 38 38.3 Assumed not Recovered Not Recovered. 39 LAB CLASSIFICATION 40 Jar <u>Number</u> <u>Classification</u> SP-SM 41.8 -41.8 41.8 42 -BOTTOM OF HOLE AT 41.8' SOILS ARE FIELD VISUALLY NOTE: Terminated CLASSIFIED IN ACCORDANCE hole at predetermined depth at 5.0'. WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO.

TI-03-V-137 Hole No. DIVISION SOUTH ATLANTIC INSTALLATION SHEET 1 DRILLING LOG WILMINGTON DISTRICT PROJECT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2407185 N 222496 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE UNDISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-137 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED : 07/02/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (3.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 10.5 BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS
(Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M⊌LW 0.0 fee t 0 0.0'TO 3.7' WATER Time begin vibracoring: 0756 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 3 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @3.7' 3.7 SP - Grayish white course poorly graded sand T/shell fragments 1 VIBRACORE BORING 4.21 From 0.0' to 6.8' Ran 6.8' Rec: 6.8' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 5.5' is depicted as Assumed 2 Not Recovered. 6.01 6.5 Tan LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> 7.5' SP SP SP 3 8.0' NOTE: Terminated hole at predetermined depth at 6.8′. 10.0' 10 -4 10.5 -10.510.5 10.5 BOTTOM OF HOLE AT 10.5' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO.

TI-03-V-137A Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS PROJECT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2407377 N 222409 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-137A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE :COMPLETED::07/02/03 16. DATE HOLE 07/02/03 VERTICAL □ INCLINED □ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (7.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 10.7 REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW fe<sub>e</sub>t 0.0 0 0.0' TO 7.5' WATER Time begin vibracoring: 0812 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. NOTE: TOP OF HOLE is de-7.5' OCEAN BOTTOM @7.5' fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. SP - Grayish white course poorly graded sand 1 8 8.0 VIBRACORE BORING From 0.0' to 3.2' Ran 3.2' Rec: 3.2' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 9.5 2 Not Recovered. 10 10.0 10.7 -10.7 10.7 BOTTOM OF HOLE AT 10.7' LAB CLASSIFICATION 11 -SOILS ARE FIELD VISUALLY Jar <u>Number</u> <u>Classification</u> CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.2. HOLE NO. TI-03-V-137A PROJECT TOPSAIL INLET

TI-03-V-138 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2408640 N 223907 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-138 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 07/02/03 16. DATE HOLE VERTICAL | INCLINED . DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (5.8' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND M<u>⊌LW</u> 0.0 fe<sub>e</sub>t 0 0.0'TO 5.8' WATER Time begin vibracoring: 0840 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 5 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @5.8' 5.8 -5.8 | 5.8 | SP - Grayish white course poorly graded sand T/shell fragments 1 VIBRACORE BORING 6.3 From 0.0' to 3.8' Ran 3.8' Rec: 3.8' Top of vibracore soil sample is logged as be-ginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 8.0' 8 2 8.5 LAB CLASSIFICATION Number Classification SP-SM 9.6 -9.6 9.6 BOTTOM OF HOLE AT 9.6' 10 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.8'.

TI-03-V-138A Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2408751 N 223888 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-138A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE :COMPLETED: 07/02/03 16. DATE HOLE 07/02/03 X VERTICAL ☐ INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (8.1' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 11.1 REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY MLLW fe<sub>e</sub>t 0.0 0 0.0' TO 8.1' WATER Time begin vibracoring: 0900 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @8.1' 8.1 -8.1 SP - Gray course poorly graded sand with shell fragments NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. VIBRACORE BORING From 0.0' to 3.0' Ran 3.0' Rec: 3.0' 10.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 10 2 10.5 is depicted as Assumed Not Recovered. 11.1-- 11.1 BOTTOM OF HOLE AT 11.1' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION 12 Jar <u>Number</u> <u>Classification</u> NOTE: Terminated hole at predetermined depth at 3.0'. PROJECT TOPSAIL INLET HOLE NO. TI-03-V-138A

TI-03-V-139 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2406144 N 217430 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-139 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 07/08/03 . :COMPLETED :07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (6.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR
BEN LACKEY AND LARRY BENJAMIN 11.5 9. TOTAL DEPTH OF HOLE % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) **ELEVATION** DEPTH LEGEND M⊌LW 0.0 <u>fe⊯et</u> 0 Time begin vibracoring: 0757 hrs. 0.0' TO 6.5' WATER Soils described by Larry Benjamin, Civil Engr. Tech. 6 NOTE: TOP OF HOLE is de-6.5 OCEAN BOTTOM @6.5' fined as surface of water and compensation is made 6.5 SP - Gray fine medium poorly graded sand T/shell fragments for the tide such that top of Hole is 0.0 EL MLLW. 1 7 7.0' VIBRACORE BORING From 0.0' to 5.0' Ran 5.0' Rec: 5.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 8 When Run is greater than Recovery, the difference 8.5 is depicted as Assumed 2 Not Recovered. 9.0' LAB CLASSIFICATION 10 <u>Number</u> <u>Classification</u> 10.5 SP SP 3 11 -11.0 11.5 -11.5 11.5<del>-</del> BOTTOM OF HOLE AT 11.5' SOILS ARE FIELD VISUALLY 12 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminates hole at predetermined depth at 5.0'.

TI-03-V-140 Hole No. DIVISION SOUTH ATLANTIC INSTALLATION WILMINGTON DISTRICT SHEET 1 DRILLING LOG 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) MLLW 2. LOCATION (Coordinates or Station) NC COORD E 2404649.78 N 217699.23 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-140 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A :STARTED :07/08/03 6. DIRECTION OF HOLE :COMPLETED::07/08/03 16. DATE HOLE X VERTICAL | INCLINED . DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (11.1' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 14.7 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN BOX OR SAMPLE NO. f REMARKS
(Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M⊌LW fe⊯et 0.0 0 0.0' TO 11.1' WATER Time begin vibracoring: 0815 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 11.0 -OCEAN BOTTOM @11.1'
) MATERIAL FELL OUT WHILE - 11.0 11.1 BRINGING ON DECK NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 12.0 VIBRACORE BORING From 0.0' to 3.6' Ran 3.6' Rec: 0.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 13.0 Not Recovered. 14.0 -14.7 14.7 -BOTTOM OF HOLE AT 14.7' LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM E NOTE: Terminated |hole at predetermined<del>\_</del> depth at HOLE NO. PROJECT TOPSAIL INLET TI-03-V-140A

TI-03-V-140A Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 1. PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2404641 N 217702 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNELI 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-140A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A 6. DIRECTION OF HOLE STARTED 07/08/03 COMPLETED : 07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (10.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 14.2 BEN LACKEY AND LARRY BENJAMIN REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-BOX OR SAMPLE NO. CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY M៤LW fe∙et 0.0 0 0.0' TO 10.4' WATER Time begin vibracoring: 0820 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 10.0 OCEAN BOTTOM @10.4' NOTE: TOP OF HOLE is de--10.4 10.4 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. (SP) MATERIAL FELL OUT WHILE BRINGING ON DECK. 11.0-VIBRACORE BORING From 0.0' to 5.0' Ran 5.0' Rec: 5.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is desired. 12.0is depicted as Assumed Not Recovered. 13.0-LAB CLASSIFICATION 14.0 -14.2 14.2 Jar BOTTOM OF HOLE AT 14.2' <u>Number</u> Classification SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.8'. PROJECTTOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-140A

TI-03-V-141 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1. PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2403599 N 217481 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-141 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A : :COMPLETED :07/08/03 6. DIRECTION OF HOLE STARTED : 07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (7.8' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 12.81 REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY MLLW fe<sub>e</sub>t 0.0 0 0.0'TO 7.8' WATER Time begin vibracoring: 0846 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @7.8' -7.8 7.8 SP - Grayish white course poorly graded sand T/shell fragments 1 VIBRACORE BORING 8.3' From 0.0' to 5.0' Ran 5.0' Rec: 5.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 10.0 10 2 10.5 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP SP 2 12.0 12 3 12.5 -12.8 12.8 BOTTOM OF HOLE AT 12.8' 13 – SOILS ARE FIELD VISUALLY NOTE: Terminated CLASSIFIED IN ACCORDANCE hole at predetermined depth at 5.0'. WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-141

Hole No. TI-03-V-142 INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) MLL W NC COORD E 2402640 N 217391 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-142 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A 6. DIRECTION OF HOLE STARTED: 07/08/03 COMPLETED 07/08/03 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (11.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 15.8 BEN LACKEY AND LARRY BENJAMIN BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY M៤LW 0.0 0 0.0' TO 11.4' WATER Time begin vibracoring: 0903 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 11 NOTE: TOP OF HOLE is de-OCEAN BOTTOM @11.4' 11.4 11.4 SP - Grayish course poorly graded sand with tiny shell fragments fined as surface of water and compensation is made for the tide such that 1 top of Hole is 0.0 EL MLLW. 12 11.9 VIBRACORE BORING From 0.0' to 4.4' Ran 4.4' Rec: 4.4' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 13 13.5 2 Not Recovered. 14 14.0 LAB CLASSIFICATION 15 15.3 <u>Number</u> <u>Classification</u> SP SP SP 3 -15.8 | 15.8 -15.8 BOTTOM OF HOLE AT 15.8' 16 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 4.4'. PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-142

TI-03-V-143 Hole No. INSTALLATION WILMINGTON DISTRICT SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 1. PROJECT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2401814 N 218358 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-143 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED : 07/08/03 :COMPLETED::07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (13.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 17.5 BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW fe⊯et d 0 0.0'TO 13.7' WATER Time begin vibracoring: 0920 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 13 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that OCEAN BOTTOM @13.7' SP - Gray course poorly graded sand with shell fragments -13.7 | 13.7 top of Hole is 0.0 EL MLLW. 1 VIBRACORE BORING 14.2' From 0.0' to 3.8' Ran 3.8' Rec: 3.8' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 16.01 16 2 16.5 LAB CLASSIFICATION 17 Jar <u>Number</u> <u>Classification</u> 17.5 -17.5<sub>17.5</sub> BOTTOM OF HOLE AT 17.5' SOILS ARE FIELD VISUALLY 18 -CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.8'. PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-143

Hole No. TI-03-V-144 DIVISION SOUTH ATLANTIC INSTALLATION SHEET 1 DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) ML L W NC COORD E 2401932 N 219357 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-144 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A 6. DIRECTION OF HOLE STARTED : 07/08/03 :COMPLETED : 07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (13.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 19.7 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) DEPTH ELEVATION LEGEND FRY  $M \sqcup L W$ <u>fe∞et</u> 0.0 0 0.0' TO 13.5' WATER Time begin vibracoring: 0940 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 13 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @13.5' SP - Tan course poorly graded sand with shell fragments 13.5 -13.5 13.5-14 14.0 VIBRACORE BORING 14.5 14.5' From 0.0' to 6.2' MH – Dark gray elastic silt with shell fragments Ran 6.2' Rec: 6.2' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 15.0 Not Recovered. 16 16.3 16.3 SM - Dark gray fine silty sand 3 16.8 LAB CLASSIFICATION 17 17.3 <u>Classification</u> <u>Number</u> SP-SM - Gray fine poorly graded silty sand T/tiny shell fragments SP 2 3 4 4 ŠМ SP-SM 17.8 18 19 19.0' NOTE: Terminated 19.5' hole at predetermined depth at 6.2'. -19.7 19.7 BOTTOM OF HOLE AT 19.7' 20 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-144

Hole No. TI-03-V-145 DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 1. PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2417324 N 232237 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 0 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-145 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR COMPLETED: 07/08/03 6. DIRECTION OF HOLE STARTED : 07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (3.1' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY M⊌LW 0.0 feæ t 0 0.0' TO 3.1' WATER Time begin vibracoring: 1040 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @3.1' 3.1 3.1 -3.1SP - Tan course poorly graded sand T/shell fragments NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 3.6 VIBRACORE BORING From 0.0' to 4.4' Ran 4.4' Rec: 4.4' 5.0 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 5.1 With shell fragments 2 5.5 Not Recovered. LAB CLASSIFICATION 7.0' 3 <u>Number</u> <u>Classification</u> 7.5 7.5 BOTTOM OF HOLE AT 7.5' SOILS ARE FIELD VISUALLY 8 -CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 4.4'. PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-145

DRILLI	ING LOG	DIVISI	ION SOUTH ATLANTIC	INSTALLA		IINGTON	DISTRICT	SHEET 1 OF 1 SHEETS	s	
PROJECT TOPSA	AL INLET				AND TYPE		4" Dia. Vit	oracore		
	N (Coordinates or St		38 N 232204 NAD83	MLLV	/			,		
. DRILLING	AGENCY			l .	FACTURER' CORE	S DESIGNA	TION OF DRILL SNELI	L		
. HOLE NO	MINGTON DIS 1. (As shown on draw			13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED O						
and file no . NAME OF	DRILLER		•		L NUMBER		11777			
	GAUGHF N OF HOLE		CRANE OPERATOR	15. ELEV	ATION GRO	STAF	TED	COMPLETED	_	
₩ VERT	ICAL   INCLINED		DEG. FROM VERT.				/08/03 0.0' MLLW	:07/08/03		
	S OF OVERBURE		N/A (6.4' Water)					1/A	7.	
	RILLED INTO ROC EPTH OF HOLE	- N	0.0'		ATURE OF I		LARRY BE	ENJAMIN		
ELEVATION MLLW	DEPTH LEGE	ND	CLASSIFICATION OF MATERIAL ( <i>Description</i> ) d	.S	% CORE RECOV- ERY	BOX OR SAMPLE NO.	(Drilling ti weatheri	REMARKS ime, water loss, depth of ng, etc., if significant)		
0.0	0 -		0.0' TO 6.4' WATER					in vibracoring:		
							1049 hrs. Soils desci	ribed by Larry	ŀ	
							Benjamin,	Civil Engr. Tech.		
	6 =									
			0.05.41. 5.2.77.77				NOTE TOE	05 11015	}	
-6.4	6.4	• 5	<u>  OCEAN BOTTOM @6.4</u> SP – Tan course poorly			6.4'	INUTE: TOP fined as su land comper	OF HOLE is de- rface of water nsation is made		
	].		graded sand with shell ' ragments			1	for the tide	such that is 0.0 EL MLLV	v	
	7 - ]	$\cdot$				6.9'				
	<b>│</b>	•.						ORE BORING		
	│ ╡∴	•						).0' to 4.2' ' Rec: 4.2'		
	│ ∄∴	٠.				8.0'				
	8 →	٠.				0.0	lsample is	bracore soil Logged <u>a</u> s be	-	
	│	٠.				2	When Rur	t Ocean Bottor n is greater th	anll	
	│ ╡∴	٠.				8.5'	Recovery	r, the difference ed as Assume	:e	
	9 📑 🖰	٠.					Not Reco			
	"	٠.							$\neg$	
	│ <u> </u>	٠.								
		٠.								
	10 📑 🔭	٠.				10.0'	LAB CL	ASSIFICATION		
	₫.・	٠.				3	Jar <u>Numbe</u> r	<u>Classification</u>		
10.0	   	٠.		10.6'		10.5'	1 2	SP		
-10.6	0.0	E	BOTTOM OF HOLE AT 1	0.6'		10.5	3	SP SP		
	11 —	- 1	SOILS ARE FIELD VISUALLY							
		١ ١	CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL							
	_	1	CLASSIFICATION SYSTEM						_	
	]								-	
							NOTE: T	erminated .	ļ	
							nole at depth at	predetermir t 4.2'.	ne d	
	1 _=						•			
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					ı		L AIL INLE	T HOLE NO.		

TI-03-V-146A Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2418858 N 233443 NAD83 12 MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-146A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A COMPLETED : 07/08/03 6. DIRECTION OF HOLE 16. DATE HOLE 07/08/03 VERTICAL | INCLINED . DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (7.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M<u>⊌LW</u> 0.0 fe⊯e t 0 0.0'TO 7.7' WATER Time begin vibracoring: 1122 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @7.7' 7.7' -7.7 SP - Tan course poorly graded sand 1 VIBRACORE BORING 8.2' From 0.0' to 6.0' Ran 6.0' Rec: 3.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 10.0' 10.01 10 -T/shell fragments 2 10.5 10.71 Assumed not Recovered LAB CLASSIFICATION 11 <u>Number</u> <u>Classification</u> 12 -13 NOTE: Terminated hole at predetermined -13.713.7 depth at 6.0'. BOTTOM OF HOLE AT 13.7' 14 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM HOLE NO. TI-03-V-146A PROJECT TOPSAIL INLET

	NG LO	G DIVI	SOUTH ATLANTIC	INSTALLATION SHEET 1 WILMINGTON DISTRICT SHEETS						
I. PROJECT TOPSA	IL INLE	Т		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL)						
2. LOCATION NC CO			, 340 N 234509 NAD83	MLLW  12. MANUFACTURER'S DESIGNATION OF DRILL						
3. DRILLING WILW		N DISTR	RICT	VIBRA CORE SNELL						
4. HOLE NO and file no	.(As shown ımber)	on drawing	111le TI-03-V-147	13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED SAMPLES TAKEN 3 0						
5. NAME OF LESTER		F	CRANE OPERATOR	14. TOTAL NUMBER CORE BOXES N/A  15. ELEVATION GROUND WATER N/A						
5. DIRECTION	OF HOLE		DEG. FROM VERT.	16. DATE	HOLE	:STAF : 07	COMPLETED : 07/08/03			
7. THICKNES			N/A (4.8' Water)	h		OF HOLE	0.0' MLLW			
B. DEPTH DI			0.0'	19. SIGNA	TURE OF	NSPECTOR				
9. TOTAL DE			10.7'		_ACKE\ % CORE RECOV-	BOX OR	LARRY BENJAMIN REMARKS			
ELEVATION MLLW	DEРТН fe⊯et	LEGEND c	CLASSIFICATION OF MATERIAL ( <i>Description</i> ) d	.5	RECOV- ERY	SAMPLE NO. f	(Drilling time, water loss, depth of weathering, etc., if significant) 9			
0.0	0 =		0.0'TO 4.8' WATER				Time begin vibracoring:			
							1140 hrs. Soils described by Larry			
	=						Benjamin, Civil Engr. Tech.			
	4 —									
	Ξ						NOTE: TOP OF HOLE is de-			
	_						fined as surface of water and compensation is made			
-4.8	4.8		OCEAN BOTTOM @4.8			4.8'	for the tide such that top of Hole is 0.0 EL MLLW.			
	5 —	• • •	SP - Gray medium poo graded sand	orty		1				
		• • • •				5.3'	VIBRACORE BORING			
	=	• • •					From 0.0' to 5.9' Ran 5.9' Rec: 4.3'			
	<u>.</u>	• • • •					Top of vibracore soil			
	6 —	••••					sample is logged as be- ginning at Ocean Bottom.			
	_=	• • • •				6.5'	When Run is greater than Recovery, the difference			
	=	•••				2	is depicted as Assumed			
	7						Not Recovered.			
						7.0'				
	=						LAB CLASSIFICATION			
	8 —						Jar			
						8.5'	Number <u>Classification</u> 1 SP			
	=						2 SP SP SP			
	9 —			0.41		3				
		• •	Assumed not Recovered	9.1'		9.0'				
	=									
	10 —									
	Ξ						NOTE: Terminated			
	=			10.7'			hole at predetermined depth at 5.9'.			
-10.7	10.7		BOTTOM OF HOLE AT 1				aepth at 5.9".			
	11 —		SOILS ARE FIELD VISUALLY							
	Ξ		CLASSIFIED IN ACCORDANCE							
	=		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM							
	=									
	_									
	=									
							AIL INLET HOLE NO			

DRII I I	NG LO	G DIVI	SION	INSTALLA				-03-V-147	$\stackrel{\wedge}{\neg}$
1. PROJECT	INO LO	<u> </u>	SOUTH ATLANTIC	WILMINGTON DISTRICT OF 1 SHEETS  10. SIZE AND TYPE OF BIT 4" Dia. Vibracore					
	IL INLE				M FOR EL		HOWNTBM or MSL)	icore	
NC C	DORD E		418 N 2344500 NAD83	12. MANU	FACTURER'	S DESIGNA	TION OF DRILL		
3. DRILLING WILN		N DISTE	RICT		CORE L NO. OF (	OVFR-	SNELL	·UNDISTURBED	
4. HOLE NO and file no	.(As shown umber)	on drawing	TI-03-V-147A	BURDE	EN SAMPLE L NUMBER	S TAKEN	: 2	: 0	
5. NAME OF LESTER	DRILLER GAUGH	IF	CRANE OPERATOR		ATION GRO		11771		
6. DIRECTION		E ICLINED	DEG. FROM VERT.	16. DATE	HOLE	:STAF : 07	TED : (	COMPLETED 07/08/03	
7. THICKNES			N/A (8.0' Water)	17. ELEV		OF HOLE	0.0' MLLW		
8. DEPTH DI			0.0'		TURE OF		FOR BORING N/A	4	γ.
9. TOTAL DE	PTH OF	HOLE	12.9'	•	LACKE` % core		LARRY BEN	JAMIN marks	
ELEVATION MLW	DEРТН fe⊫et	LEGEND c	CLASSIFICATION OF MATERIA ( <i>Description</i> ) d	LS	RECOV- ERY	BOX OR SAMPLE NO. f	(Drilling time, weathering, e	water loss, depth of tc., if significant)	
0.0	0 =		0.0'TO 8.0' WATER				Time begin	vibracoring:	-
							hrs. Soils describe Benjamin, Civ	ed by Larry	ļ
							Benjamin, Civ	irengr. rech.	Ė
-8.0	8.0_		OCEAN BOTTOM @8.0' SP - Tan course poorl	./		8.0'			-
			graded sand	y		1	NOTE: TOP OF	HOLF is de-	ļ
						8.5'	fined as surfa and compensa	ce of water tion is made	
	=	• • •					for the tide s	uch that 0.0 EL MLLW	.
	9 —	••••							
	=						VIBRACORI		
							From 0.0 Ran 4.9'		
	10		10.0'			10.0'	Top of wibre	انمور موزا	
	10 —		T/shell fragments				Top of vibro	acore soil ogged as be- Icean Bottom	
	_ =					2	When Run is	s greater tha	ın [
	=	•••	10.8'			10.5'	is depicted	he difference as Assumed	
	11 —	• • • •	with shell fragments				Not Recove	ered.	4
	Ξ	• • • •							7
	_			11.5'					
	Ξ		Assumed not Recovered	נ				0.5.0.1	_
	12 —						LAB CLAS    Jar	SIFICATION	
							Number	<u>Classification</u>	
	_						1 2	SP SP	
-12.9	12 <u>9</u> -			12.9'					
	13 —		BOTTOM OF HOLE AT	12.9'					
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						╛┆
	=		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						ļ
			12. ISSN 15. THOM STOTEM						ļ
	=						NOTE T		
	=						NOTE: Ter hole at pr	minated edetermine	e d
	=						depth at 4	4.9'.	
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TI-03-V-148 Hole No. SHEET 1 DIVISION SOUTH ATLANTIC INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2421726 N 235951 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY VIBRA CORE WILMINGTON DISTRICT 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 'DISTURBED 'UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-148 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 07/08/03 COMPLETED : 07/08/03 16. DATE HOLE ∀ VERTICAL INCLINED INCLINE \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (2.8' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR
BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 9.8' REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-BOX OR SAMPLE CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW 0.0 0 0.0' TO 2.8' WATER Time begin vibracoring: 1214 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @2.8' -2.8 2.8 \_ SP-SM - Gray fine poorly graded silty sand 3 – 1 VIBRACORE BORING 3.3' From 0.0' to 7.0' Ran 7.0' Rec: 4.6' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 4.7' SP - Tan course poorly graded sand T/shell fragments Not Recovered. 2 5 5.2 LAB CLASSIFICATION <u>Number</u> Classification 6.5' ŠP 3 7.0 7.4 Assumed not Recovered NOTE: Terminated hole at predetermined depth at 7.0'. -9.8 9.8 BOTTOM OF HOLE AT 9.8' 10 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-148

TI-03-V-148A Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 1. PROJECT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2421791 N 235910 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-148A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A :COMPLETED::07/08/03 6. DIRECTION OF HOLE STARTED : 07/08/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (5.0' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 10.01 BEN LACKEY AND LARRY BENJAMIN REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M៤LW fe<sub>e</sub>t 0.0 0 0.0'TO 5.0' WATER Time begin vibracoring: 1225 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @5.0' 5.0' -5.0 |5.0 -SP - Gray course poorly graded sánd 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 6.0' Tan T/shell fragments VIBRACORE BORING From 0.0' to 5.0' Ran 5.0' Rec: 3.0' 7.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 2 is depicted as Assumed Not Recovered. 8.01 Assumed not Recovered LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> 10.0 -10.0 10 BOTTOM OF HOLE AT 10.0' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM 11 NOTE: Terminated hole at predetermined depth at 5.0'.

TI-03-V-149 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 1. PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Statton) NC COORD E 2423244 N 237477 NAD83 MLLW12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-149 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A :COMPLETED::07/08/03 6. DIRECTION OF HOLE 16. DATE HOLE 07/08/03 VERTICAL | INCLINED . DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (7.0' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M⊌LW 0.0 feet 0 0.0'TO 7.0' WATER Time begin vibracoring: 1253hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 7.0' OCEAN BOTTOM @7.0' -7.0 7.0 -SP - Gray course poorly graded sand with shell fragments 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. VIBRACORE BORING From 0.0' to 6.2' Ran 6.2' Rec: 4.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 9.5' Not Recovered. 10 10.0 11.0 LAB CLASSIFICATION 11 Assumed not Recovered <u>Number</u> <u>Classification</u> 12 -13 13.2 -13.2 13.2 NOTE: Terminated BOTTOM OF HOLE AT 13.2' hole at predetermined SOILS ARE FIELD VISUALLY depth at 6.2'. CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM 14 PROJECT TOPSAIL INLET HOLE NO.

TI-03-V-149A Hole No. INSTALLATION WILMINGTON DISTRICT SOUTH ATLANTIC SHEET 1 DRILLING LOG 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2423306 N 237489 NAD83 MLLW12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-149A 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR :COMPLETED::07/08/03 6. DIRECTION OF HOLE STARTED: 07/08/03 16. DATE HOLE ▼ VERTICAL INCLINED DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (6.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 11.7 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-BOX OR SAMPLE NO. CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY  $M \sqcup L W$ fe⊯et 0.0 0 0.0' TO 6.7' WATER Time begin vibracoring: 1305 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 6 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 6.7' OCEAN BOTTOM @6.7' -6.7 | 6.7 SP - Gray course poorly graded sand 1 7 -VIBRACORE BORING 7.2' From 0.0' to 5.0' 7.7' Ran 5.0' Rec: 2.8' with shell fragments Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 8 Not Recovered. 9.0' 9 2 9.5' 9.5 Assumed not Recovered LAB CLASSIFICATION 10 <u>Number</u> <u>Classification</u> SP 11 11.7 -11.7 11.7 BOTTOM OF HOLE AT 11.7' 12 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE NOTE: Terminated WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM hole at predetermined depth at 5.0'. PROJECT TOPSAIL INLET HOLE NO. TI-03-V-149A

ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

DRILLI	NG LO	G DIVI	SOUTH ATLANTIC	INSTALLA	TION WILM	MINGTON	SHEET 1 OF 1 SHEETS
. PROJECT	IL INLE	т			AND TYPE		4" Dia. Vibracore
. LOCATION	l (Coordinate	s or Station		11. DATU		EVATION S	HOWNTBM or MSL)
NC CC  B. DRILLING		2424	588 N 238643 NAD83	1	FACTURER' CORE	S DESIGNA	TION OF DRILL SNELL
WILM HOLE NO	(As shown			13. TOTA	L NO. OF (		DISTURBED UNDISTURBED O
and file no	ımber)	g	TI-03-V-150		L NUMBER		
ESTER	GAUGH		CRANE OPERATOR	15. ELEV	ATION GRO		147 71
S. DIRECTION	ICAL   IN		DEG. FROM VERT.	16. DATE			/08/03 :07/08/03
7. THICKNES	S OF OVE	RBURDEN	N/A (3.1' Water)				O.O' MLLW FOR BORING N/A %
B. DEPTH DE			0.0' 10.6'	19. SIGNA	ATURE OF	INSPECTOR	
). TOTAL DE			CLASSIFICATION OF MATERIAL		/ CORE RECOV-	BOX OR	LARRY BENJAMIN  REMARKS
ELEVATION   MLLW	<sub>DEРТН</sub> fe⊫et	LEGEND c	(Description)	-3	ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	0 _		0.0' TO 3.1' WATER				Time begin vibracoring:
	_						1319 hrs.   Soils described by Larry
							Benjamin, Civil Engr. Tech.
	٦		OCEAN DOTTON OF "			3.1'	
-3.1	3.1 <u>=</u>	•••	OCEAN BOTTOM @3.1' SP – Tan course poorly	,		1	
		•••	graded sand				NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made
	_	• • •				] 5.0	for the tide such that
	4 —	• • •					top of Hole is 0.0 EL MLLW.
	· =	••••					VIBRACORE BORING
		•••					From 0.0' to 7.5'
	-	· · · ·					Ran 7.5' Rec: 5.0'
	5 —	•••				5.0'	Top of vibracore soil
		•••				2	sample is logged as beginning at Ocean Bottom.
							When Run is greater than Recovery, the difference
						5.5'	is depicted as Assumed Not Recovered
	6 —		6.0'				Not necovered.
			with shell fragments				
		•••					
	7 —	•				7.0'	LAB CLASSIFICATION
	_					l 1 3	Jar <u>Number</u> <u>Classification</u>
						7.5'	1 SP 2 SP 3 SP
							3 SP
	8 —	• • •		8.1'			
			Assumed not Recovered				
	9 —						
							NOTE: Terminated
							hole at predetermined depth at 7.5'.
	1.0						
	10 —						
	=			10.01			
-10.6	10.6			10.6'			
	1 -		BOTTOM OF HOLE AT	0.6'			
	11		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				
	_		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
			<del> </del>				

DRII I II	NG LO	DIVI	ISION ATLANTIC	INSTALLA			Hole No. TI-03-V-150A
. PROJECT			SOUTH ATLANTIC	10. SIZE			N DISTRICT OF 1 SHEETS 4" Dia. Vibracore
TOPSAI					M FOR ELE		HOWN BM or MSL)
NC CC	ORD E			12. MANU	FACTURER'	S DESIGNA	ATION OF DRILL
	INGTON		•		CORE	OVER-	SNELL OUNDISTURBED
4. HOLE NO. and file nu		on drawing	TI-03-V-150A	BURD	EN SAMPLE L NUMBER	S TAKEN	: 1 : 0
S. NAME OF LESTER	DRILLER GAUGHI	F	CRANE OPERATOR		ATION GRO		147.73
5. DIRECTION				16. DATE	HOLE	;staf · 07	COMPLETED : 07/08/03
7. THICKNES			DEG. FROM VERT.  N/A (3.1' Water)				0.0' MLLW
B. DEPTH DR			0.0'		ATURE OF I		FOR BORING N/A %
O. TOTAL DE	PTH OF H	IOLE	6.2'	1	LACKE	/ AND	LARRY BENJAMIN
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)	.S	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
M <u>⊌</u> LW 0.0	<u>fe∙et</u> O –	С	0.0' TO 3.1' WATER			1	Time begin vibracoring:
	Ī		0.0 TO 3.1 WATER				1330 hrs.
	_						Soils described by Larry Benjamin, Civil Engr. Tech.
-3.1	3.1		OCEAN BOTTOM @3.1 SP - Tan course poorly	<u>1'</u>		3.1'	
	$\exists$	• • •	graded sand	•			NOTE: TOP OF HOLE is de-
	$\exists$	• • •					fined as surface of water and compensation is made for the tide such that
	$\downarrow$	• • •					top of Hole is 0.0 EL MLLW.
	4 -	• • •					
	=	• • •		4.4			VIBRACORE BORING From 0.0' to 3.1'
	$\equiv$		Assumed not Recovered				Ran 3.1' Rec: 1.3'
	5 —						Top of vibracore soil
	3 —						sample is logged as be- ginning at Ocean Bottom.
	=						When Run is greater than Recovery, the difference
	$\exists$						is depicted as Assumed
	6 —						Not Recovered.
-6.2	6.2			6.2'			
	$\exists$		BOTTOM OF HOLE AT (	6.2'			
	$\equiv$		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				
	7 📑		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				LAB CLASSIFICATION
	=						Jar <u>Number</u> <u>Classification</u>
	=						1 SP
	=						
	=						
	=						
	=						
	3						
	_						
	Ξ						NOTE: Terminated
	=						hole at predetermined depth at 3.1'.
	$\exists$						
	=						
	=						
	$\exists$						
	=						
	$\exists$						
	$\exists$						
	_						

TI-03-V-151 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2425207 N 240945 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-151 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 07/08/03 :COMPLETED::07/08/03 16. DATE HOLE ∀ VERTICAL INCLINED INCLINE \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (2.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE BEN LACKEY AND LARRY BENJAMIN / CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND M<u>⊌</u>LW 0.0 fe⊯et 0 0.0'TO 2.4' WATER Time begin vibracoring: 1349 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @2.4' NOTE: TOP OF HOLE is de-2.4 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. SP-SM - Gray fine poorly graded silty sand, T/shell fragments 1 2.9' .3 VIBRACORE BORING From 0.0' to 6.5' Ran 6.5' Rec: 6.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 5 2 5.5 LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> 7.0 3 7.5 NOTE: Terminated hole at predetermined depth at 6.5'. 8.9 8<sub>9</sub>9 -8.9 BOTTOM OF HOLE AT 8.9' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

DRILLI	NG LO	G DIV	ISOUTH ATLANTIC	INSTALLA		IINGTON	SHEET 1 OF 1 SHEETS
. PROJECT	IL INLE	T				OF BIT	4" Dia. Vibracore
LOCATION				MLLW	'		
3. DRILLING	AGENCY		279 N 240934 NAD83	1	FACTURER' CORE	S DESIGNA	TION OF DRILL SNELL
VVILIV 4. HOLE NO. and file no.	INGTON . (As shown		•		L NO.OF ( N SAMPLE		DISTURBED UNDISTURBED
5. NAME OF	DRILLER		, ., ., ., ., ., ., ., ., ., ., ., .,			CORE BOX	147 73
_ESTER 5. DIRECTION			CRANE OPERATOR	15. ELEV		UND WATE	11771
X VERT	ICAL 🔲 IN	ICLINED	DEG. FROM VERT.				/08/03 :07/08/03 0.0' MLLW
7. THICKNES			N/A (4.5' Water)				FOR BORING N/A Z
B. DEPTH DE			0.0' 9.5'	1		INSPECTOR	LARRY BENJAMIN
ELEVATION MLW	DEPTH feœt	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.s	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
0.0	0 -		0.0'TO 4.5' WATER				Time begin vibracoring:
							1357 hrs. Soils described by Larry
	_						Benjamin, Civil Engr. Tech.
	4 -						
							NOTE: TOP OF HOLE is de-
-4.5	4.5-	••••	OCEAN BOTTOM @4.5 SP - Tan course poorly			4.5'	fined as surface of water and compensation is made
			graded sand with shell fragments	·		1	for the tide such that top of Hole is 0.0 EL MLLW.
	5 —		in aginients			5.0'	
		• • •					VIBRACORE BORING
		•.•.•					From 0.0' to 5.0'   Ran 5.0' Rec: 5.0'
	-	•••		6.0'		6.0'	
	6 —		MH - Dark gray elastic silt with shell fragments	0.0			Top of vibracore soil
	=		Islit with shell tragments			2	ginning at Ocean Bottom.   When Run is greater than
						6.5'	Recovery, the difference is depicted as Assumed
	7 _						Not Recovered.
	, <u> </u>						
	=						
	8 -						LAB CLASSIFICATION
			lou o a	8.3'		8.3'	Jar <u>Numbe</u> r <u>Classification</u>
			SM - Gray fine silty sand with shell			3	1 SP 2 SM
	_		fragments			8.8'	
	9 —					0.0	
				9.5'			
-9.5	9.5		BOTTOM OF HOLE AT :				
	10		BOTTOM OF HOLE AT S	J.J			[
	10 -		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL				
	_		CLASSIFICATION SYSTEM				NOTE: Terminated
	_						hole at predetermined depth at 5.0'.
	=						'
							[
							[
	_		S EDITIONS ARE OBSOLETE.		BBO IECT.		AIL INLET HOLE NO.

DRILLI	NG LO	G DIVI	ISION SOUTH ATLANTIC	INSTALLA	TION WIL N		Hole No. TI-03-V-152    DISTRICT
. PROJECT			JOOTH ATLANTIC	10. SIZE	AND TYPE		OI I SIILLIS
TOPSA LOCATION	(Coordinate		)	11. DATU ML L W		EVATION S	HOWNTBM or MSL)
NC CC		2424	165 N 241969 NAD83		FACTURER'	S DESIGNA	TION OF DRILL SNELL
WILM HOLE NO.	(As shown			13. TOTA	L NO. OF (		DISTURBED UNDISTURBED
and file nu	mber)		TI-03-V-152	_	L NUMBER		
ESTER  DIRECTION	GAUGH		CRANE OPERATOR		ATION GRO	UND WATE	11771
\ <i>\</i>	CAL   IN		DEG. FROM VERT	16. DATE		:07	
. THICKNES			N/A (3.9' Water)	-			FOR BORING N/A %
B. DEPTH DE			0.0' 13.9'		TURE OF		LARRY BENJAMIN
ELEVATION MLW	DEPTH feæt	LEGEND c	CLASSIFICATION OF MATERIA (Description) d	ALS	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
0.0	0 =		0.0'TO 3.9' WATER				Time begin vibracoring:
	三						1410 hrs. Soils described by Larry Renjamin Civil Foor Tech
	$\exists$						Benjamin, Civil Enģr. Tech.
	3 —						
	=						Scale changed @8.0'. NOTE: TOP OF HOLE is de-
	=						fined as surface of water and compensation is made
-3.9	30		OCEAN BOTTOM @3	.9'		3.9'	for the tide such that top of Hole is 0.0 EL MLLW.
ا 9.9	3.9	•	SP-SM - Gray medium			1	
	=		poorly graded sand, T/shell fragments				VIBRACORE BORING
	$\exists$					4.4'	From 0.0' to 10.0' Ran 10.0' Rec: 5.2'
	5 —	·.•					Top of vibracore soil
							sample is logged as be- ginning at Ocean Bottom.
		•••		5.5'		5.5'	When Run is greater than Recovery, the difference
	=	• • •	SP – Tan course poorl graded sand, T/shell	у		2	is depicted as Assumed Not Recovered.
	6 —	• • •	fragments			6.0'	
	$\exists$					0.0	
		• • • •					
	$\exists$	••••					LAB CLASSIFICATION
	7	• • • •					Jar
	=	• • • •					Number <u>Classification</u> 1 SP
		••••					1 SP 2 SP 3 SP
	, –	• • •	SP-SM – Gray fine poc	7.9'		7.9'	- 3F
	8 —	•••	graded silty sand with shell fragments	ıı ı y		3 8.4'	
	耳	· · ·		9.1'		0.4	
	$\exists$		Assumed not Recovered	4			
	10 -						
	=						NOTE: Terminated
	=						hole at predetermined depth at 10.0'.
	=						aeptn at 10.01.
	12 -						
	=						
-13.9	13 0			13.9'			
10.9	10.9		BOTTOM OF HOLE AT	13.9'			
			SOILS ARE FIELD VISUALLY				
	$\exists$		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
	-		CLASSIFICATION SISTEM				

DRILLI	NG LO	G DIVI	ISION SOUTH ATLANTIC	INSTALLA		IINGTON	SHEET 1
. PROJECT	IKII	т	JJJ //IL/WYIIO	10. SIZE			4" Dia. Vibracore
TOPSAI	(Coordinate	s or Station		11. DATU		EVATION S	HOWNTBM or MSL)
. DRILLING	AGENCY		231 N 241955 NAD83		FACTURER' CORE	S DESIGNA	TION OF DRILL SNELL
. HOLE NO.	(As shown	DISTR		13. TOTA	L NO. OF (	OVER-	DISTURBED UNDISTURBED O
and file nu	mber)		TI-03-V-152A			CORE BOX	· · · · · · · · · · · · · · · · · · ·
ESTER DIRECTION			CRANE OPERATOR			UND WATE	147.71
X VERTI			DEG. FROM VERT.	16. DATE		:07	08/03 :07/08/03 0.0' MLLW
. THICKNES:			N/A (6.2' Water)				FOR BORING N/A X
. TOTAL DE			0.0' 13.5'	l :		INSPECTOR	LARRY BENJAMIN
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)	.s	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
M <u>⊌</u> LW 0.0	<u>fevet</u> 0 –	с	0.0'TO 6.2' WATER		LIVI	f	Time begin vibracoring:
			0.0 TO 0.2 WATER				1420 hrs.
							Soils described by Larry Benjamin, Civil Engr. Tech.
-6.2	6.2		OCEAN BOTTOM @6.			6.2'	
		· · · ·	SP - Tan course poorly graded sand with tiny	′		1	NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made
	_		šhell fragments			6.7'	for the tide such that
	7 —					0.7	top of Hole is 0.0 EL MLLW.
	=	• • •					VIBRACORE BORING
	_	••••					From 0.0' to 7.3'
	=	•••					Ran 7.3'   Rec: 7.3'
	8 —	•••		8.21		8.2'	Top of vibracore soil sample is logged as be-
	=		SP-SM - Gray medium goorly graded sand,	0.2			ginning at Ocean Bottom. When Run is greater than
			T/shell fragments			2	Recovery, the difference is depicted as Assumed
	0	• • •				8.7'	Not Recovered.
	9 —	• • •   †					
	=						
	_	· · · [					
	10 —						LAB CLASSIFICATION
	_	· . ·					Jar <u>Number</u> <u>Classification</u>
	_	• • •					1 SP   1 2 SP-SM   1 3 SC   1
	=	• •	SM - Dark aray fine	10.81		10.8'	3 SC 4 SM
	11 —	$ \dagger \dagger $	SM - Dark gray fine silty sand with shell fragments			3	
	=	$ \dagger\downarrow\dagger\downarrow $				11.3'	
	12 —	$ \uparrow\uparrow\uparrow\uparrow $					
	'-						NOTE T
	=						NOTE: Terminated hole at pr <u>ede</u> termined
	_						depth at 7.3'.
	13 —					13.0'	
	_			17 [		4	
-13.5	13.5		DOTTON 05 1121 5 1	13.5'		13.5'	
	=		BOTTOM OF HOLE AT 1 SOILS ARE FIELD VISUALLY	J.5'			
			CLASSIFIED IN ACCORDANCE				
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
			i				i

TI-03-V-153 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT 1 SHEETS OF PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Statton) NC COORD E 2423797 N 242578 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) 4 TI-03-V-153 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED : 07/08/03 :COMPLETED :07/08/03 16. DATE HOLE ▼ VERTICAL INCLINED INCLINE DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (2.9' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 12.9 BEN LACKEY AND LARRY BENJAMIN REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY  $M \sqcup L W$ feæ t 0.0 0 0.0' TO 2.9' WATER Time begin vibracoring: 1430 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. Scale changed @6.0'. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @2.9' -2.9 2.9 SP-SM - Gray fine poorly graded silty sand, T/shell fragments 1 VIBRACORE BORING From 0.0' to 10.0' 3.4 Ran 10.0' Rec: 7.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. sample is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. Not Recovered. 5.0' 2 5.5 LAB CLASSIFICATION Jar 6.5 <u>Classification</u> <u>Number</u> 3 7.0' SP SP 2 3 4 8 8.3 SM - Dark gray fine silty sand, T/shell fragments 4 8.8 10 Assumed not Recovered NOTE: Terminated hole at predetermined depth at 10.0'. 12 12.9 -12.9 12.9\_ BOTTOM OF HOLE AT 12.9' SOILS ARE FIELD VISUALLY 14 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

DRII I II	NG LO	G DIVI	SION ATLANTIC	INSTALLA		UNIC TO:	I DICTOIAT	SHEET 1	3 A
1. PROJECT			SOUTH ATLANTIC	10. SIZE	WILN AND TYPE		I DISTRICT 4'' Dia. Vib	or 1 SHEETS	_
TOPSAI 2. LOCATION					IM FOR ELE		HOWNTBM or MSL)		
			803 N 242560 NAD83		•	S DESIGNA	TION OF DRILL		_
3. DRILLING WILM		N DISTR	RICT		CORE	OVER.	SNELL	 'UNDISTURBED	
4. HOLE NO. and file nu	(As shown mber)	on drawing	111e TI-03-V-153A	BURD	EN SAMPLE	S TAKEN	: 4	ONDISTORBED	
5. NAME OF LESTER			CRANE OPERATOR		AL NUMBER				
6. DIRECTION			CRANE OFERATOR	16. DATE		;STAF	RTED	COMPLETED	_
X VERTI	CAL   IN	CLINED	DEG. FROM VERT.				/08/03 0.0' MLLW	:07/08/03	
7. THICKNESS  8. DEPTH DR			N/A (2.1' Water)					/A	%
9. TOTAL DE			0.0' 12.3'		ATURE OF I		LARRY BE	NJAMIN	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	.S	% CORE RECOV-	BOX OR SAMPLE	(Drilling til	REMARKS me, water loss, depth of ig. etc., if significant)	
MLLW	fe∞et	с	(Description) d		ERY	NO.	weatherin	g, etc., if significant)	
0.0	0 =		0.0' TO 2.1' WATER				Time begii 1440 hrs.	n vibracoring:	
	Ξ						Soils descr	ibed by Larry	
	_						Benjamin, (	Civil Engr. Tech.	
	2 —		OCEAN BOTTOM @2.1'			0.4/			
-2.1	2.1 =	• •	SP - Tan medium poor	ly		2.1′		nged @6.0′.	
		• • •	graded sand, T/shell fragments	-		1	NOTE: TOP fined as sur	OF HOLE is de- face of water sation is made	
		• • • •	, <u>,</u>			2.6′	for the tide	such that	
	3 <del>-</del>	••••					top of Hole	is 0.0 EL MLLW	•
		••••					VIRRACC	RE BORING	$\neg$
	_=	· · ·						.0' to 10.2'	
							Ran 10.2		
	, –					4.0'	Top of wik	oracore soil	
	4 =	· · · · ·				0	sample is	logged as be- Ocean Bottom	
	=	· · · · ·				2	When Run	is areater tha	nl
		••••				4.5'		, the difference ed as Assumed	
	_ =	••••					Not Reco	vered.	
	5 —								٦
		•							
	( -					6.0'	LAB CL	ASSIFICATION	٦
	6 —		6.2' course grain sizes			3	Jar		
	Ξ	• •	with shell fragments			6.5'	<u>Number</u> 1	<u>Classification</u> SP	
	_						2 3	SP SP	
	_ =	• • •					4	SM	
	8 —	1111	0.1	8.3		8.3'			
	_	last [   last [ ]	SM - Gray fine silty sand			4			
	=	$  \downarrow   \downarrow  $		0.0		8.8'			
	_ =		Assumed not Recovered	9.6					
	10 —								
							NOTE: Te	erminated .	
							hole at p depth at	oredetermine	ec
							deptii dt	. 10.2.	
-12.3	12 <del></del> 12.3 =			12.3'					
.2.0	,		BOTTOM OF HOLE AT 1	2.3'					
	_		SOILS ARE FIELD VISUALLY						
			CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						
	14 —		CLASSIFICATION SYSTEM						
	=								
	_				1				

TI-03-V-170 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET II. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2401680 N 199432 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED 'DISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-170 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR 'STARTED :COMPLETED::08/02/03 6. DIRECTION OF HOLE 16. DATE HOLE 08/02/03 X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (42.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 62.41 BOX OR SAMPLE NO. f REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY MLLW feæt 0.0 0 0.0' TO 42.4' WATER Time begin vibracoring: 1212 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 42 -42.4' Scale changed @52.0'. OCEAN BOTTOM @42.4' -42.4 42.4 SP - Gray course poorly 1 NOTE: TOP OF HOLE is degraded sánd fined as surface of water and compensation is made 43.4 for the tide such that top of Hole is 0.0 EL MLLW. 43.4 SM - Dark gray fine 2 silty sand 43.9' 44.6' 44.6' VIBRACORE BORING MH – Dark gray elastic silt 3 From 0.0' to 20.0' Ran 20.0' Rec: 19.7' 45.1' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 46 is depicted as Assumed Not Recovered. 48 LAB CLASSIFICATION 50.01 4 <u>Number</u> <u>Classification</u> 50.5 ŠΜ CH CH NOTE: Terminated 60.0' hole at predetermined depth at 20.0'. Assumed not Recovered 62.4 -62.462.4 BOTTOM OF HOLE AT SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-170

DRILLI	NG LO	G DIV	VISION SOUTH ATLANTIC	INSTALLA		MINGTON	DISTRICT	SHEET 1 OF 1 SH	HEETS		
PROJECT	IL INLE	т				OF BIT	. 2.4. 1	ibracore	-		
. LOCATION	(Coordinate	s or Statio		ML L W		EVATION S	HOW <b>N</b> TBM or MS.	D			
. DRILLING	AGENCY		3211 N 197330 NAD83	1	12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL						
. HOLE NO.	(As shown			13. TOTA	L NO. OF (	OVER-	DISTURBED	UNDISTURB	ED		
and file no . NAME OF	mber)		TI-03-V-171	-		CORE BOX		. 0			
ESTER DIRECTION	GAUGH		CRANE OPERATOR	+		UND WATE	147.73	COMPLETED			
\ /	CAL   IN		DEG. FROM VER	16. DATE		:08	/02/03	:08/02/03	3		
. THICKNES	S OF OVE	RBURDEN	N/A (42.8' Water)				O.O' MLLW	/ N / A	y.		
. DEPTH DE			0.0' 58.8'			INSPECTOR		_			
ELEVATION	DEPTH	LEGEND			% CORE RECOV-	BOX OR SAMPLE		REMARKS time, water loss, depth	of.		
MLW	feet	c	(Description)	25	ERY	NO.	weather	rime, warer 1055, depin ling, etc., if significant g	) )		
0.0	0		0.0' TO 42.8' WATER					jin vibracorii	ng:		
	=							ribed by Lari			
	=						Benjamin,	Civil Engr. Ted	ch.		
	42 —										
			0.05	40.0:		400	NO. T	05			
-42.8	42. <u>8</u>	•   •	SP-SM - Gray medium			42.8' 1	INUTE: TOP	OF HOLE is urface of water is mo	de- er		
	_	•••	graded silty sand, T/sh fragments	neli 33y		43.3'	for the tid	nsation is mo e such that e is 0.0 EL M			
	44 —	•••	]				COP OI HOIG	, IS U.U EL IV	VV .		
	=	• • <del> </del>	CM - Double on fin	44.5'		44.5'	<u>VIB</u> RAC	ORE BORING	<u> </u>		
			SM - Dark gray fine silty sand			2	From (	0.0' to 16.0	'		
	=					45.0'	Ran 16.	0' Rec: 11.0	)'		
	46 —						Top of y	ibracore so	il		
	Ξ.						ginning a	s logged as t Ocean Bot	ttom.		
	=					47.0'	Recover	n is greater y, the differ	ence		
	=					3 47.5'	is depict Not Rec	ed as Assur overed.	med		
	48 —		1			77.5					
	=										
	=										
	$\equiv$	] † ] †		49.7'		49.7'		ASSIFICATIO	NI I		
	50 —		ML – Dark gray sandy silt			4	Jar	ASSII ICATIC	/14		
						50.2'	<u>Number</u> 1	<u>Classificati</u> SP	on		
	_						2 3	SM SM			
		$ \  \  \  $					4 5	SM SP-SM			
	52 —	$ \  \  \  $						J. J			
	_			52.8'		52.8'					
	=	• <u>• •                                </u>	SP-SM - Tan fine poorly graded silty			5					
	54 —		sand´ Assumed not Recovere	53.8' d		53.3'					
	J4 —		The state of the s	_							
	=							erminated			
							hole at depth (	predeterr at 16.0'.	nined		
	56 —							•			
	33 —										
	_=										
	50 -										
	58 —			F 0 0 '							
-58.8	58.8_		BOTTOM OF HOLE AT	58.8' 58.8'			SUIS VEL	FIELD VISUALL	, l		
			John St Holl At	50.0			CLASSIFIED	IN ACCORDANC			
	_						WITH THE	UNIFIED SOIL ATION SYSTEM			

Hole No. TI-03-V-172 INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2404511 N 195062 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-172 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/02/03 16. DATE HOLE X VERTICAL | INCLINED DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (44.4' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 62.4 % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW fee t 0.0 0 0.0'TO 44.4' WATER Time begin vibracoring: 1309 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @44.4' 44.4' Scale changed @60.0'. -44.4|44.4\_ SP - Gray course poorly graded sand with shell fragments NOTE: TOP OF HOLE is de-44.9 fined as surface of water and compensation is made 45.4 for the tide such that 2 top of Hole is 0.0 EL MLLW. SM - Gray fine silty sand with shell fragments 46 45.9' VIBRACORE BORING 47.0' From 0.0' to 18.0' ML - Dark gray sandy silt 3 Ran 18.0' Rec: 15.0' 47.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 48 is depicted as Assumed Not Recovered. 50 -51.91 51.9' LAB CLASSIFICATION MH – Dark gray elastic silt 4 Number 52.4 SC SC CH 54.2' pocket of course grain sizes 55.0' 5 55.5' 56 NOTE: Terminated hole at predetermined depth at 18.0'. 58 58.3' SM - Tan fine silty sand 6 58.8 Assumed not Recovered 60 62.4 -62.4 62.4 SOILS ARE FIELD VISUALLY BOTTOM OF HOLE AT 62.4' CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

DRILLING LOG DIVISION SOUTH ATLANTIC	INSTALLA		IINGTON	N DISTRICT	SHEET 1 OF 1 SHEET	ıs
PROJECT TOPSAIL INLET				4" Dia. Vil	oracore	
. LOCATION (Coordinates or Station)	MLLV	٧				
NC COORD E 2407178 N 193823 NADE  DELLING AGENCY  WILLING AGENCY  OF THE PROPERTY OF THE PROPE		FACTURER'	S DESIGNA	ATION OF DRILL SNEL	L	
WILMINGTON DISTRICT  HOLE NO. (As shown on drawing title and file number)  TI-03-V-	000	AL NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED	UNDISTURBED O	
NAME OF DRILLER	14. TOT/	AL NUMBER		147 73		
.ESTER GAUGHF CRANE OPERATOR . DIRECTION OF HOLE	16. DATE	HOLF	;STAF	RTED	COMPLETED	
X VERTICAL ☐ INCLINED DEG. FRO	M VERT			/02/03 0.0' MLLW	:08/02/03	
THICKNESS OF OVERBURDEN N/A (44.2' Water)  DEPTH DRILLED INTO ROCK 0.0'	18. TOTA	L CORE RE	COVERY	FOR BORING	I/A	γ.
TOTAL DEPTH OF HOLE 64.2'		ATURE OF I		R Larry Be	ENJAMIN	
ELEVATION DEPTH LEGEND CLASSIFICATION OF (Description.	MATERIALS )	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	(Drilling to weatheri	REMARKS ime, water loss, depth of ng, etc., if significant)	
0.0 0 - 0.0' TO 44.2' W	ATER				in vibracoring:	
<u> </u>				1339 hrs. Soils desc	ribed by Larry	
				Benjamin,	Civil Engr. Tech.	
-44.2 44.2 OCEAN BOTTOM	044.21		44.2'			
I THIT ISP - Lan course i	poorly	-	1		inged @58.0'. OF HOLE is de	
graded sand with fragments			44.7'	c	rface of water nsation is made	
- ■ ■ MH - Dark gray e	45.4 Iastic silt		45.4' 2	from the tide	such that is 0.0 EL MLL'	
46 📆 🛮 🖠			45.9'	'		
│ ╡ <b>┃ ┃</b>				VIBRAC	DRE BORING	
-				From 0 Ran 20.0	.0' to 20.0' )' Rec: 10.8'	
▎∃▋▋▋			180'			
			48.0 <u>'</u> 3	sample is	bracore soil : logged as be	e -
▎∃▋▋▋			48.5'	When Rur	t Ocean Botto n is greater th	nanl
3				Recovery is depicted	r, the differen ed as Assume	ce d
50 = 1 1	50.0			Not Reco	vered.	
J SM - Dark gray fi	50.2 ine		50.2' 4			$\neg$
-			50.7'	-		
				LAB CL	ASSIFICATION	
] ] ] ]   ]   ]   ]   ]   ]   ]   ]   ]				Jar <u>Numbe</u> r	Classification	
<u>-</u>	53.2		53.2'	1 2	SP CH	
SP-SM - Gray fine	e poorly		5	3 4	CH SC	
54 - 1			53.7'	5	SP-SM	
<u> </u>	55.0					
Assumed not Reco	55.0 vered					_
1 3						
56 —						
					erminated .	
				lhole at depth at	predetermir : 20.0'.	тес
58 —						
]						
-64.2 64.2 BOTTOM OF HOLE	64.2					
BOTTOM OF HOLE SOILS ARE FIELD V	VISUALLY					
CLASSIFIED IN ACC	SOIL					
CLASSIFICATION SY				L AIL INLE	<del>-</del> I	

DRILLI	NG LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	WILN		SHEET 1  I DISTRICT OF 1 SHEET	ETS	
PROJECT TOPSA	IL INLE	Т				OF BIT	4" Dia. Vibracore		
. LOCATION			207 N 191693 NAD83	MLLW  12. MANUFACTURER'S DESIGNATION OF DRILL					
. DRILLING				VIBRA	CORE		. SNELL .		
. HOLE NO.	(As shown			13. TOTA BURDE	L NO.OF ( N SAMPLE	OVER- S TAKEN	DISTURBED UNDISTURBED		
. NAME OF	DRILLER		·	<b>-</b>		CORE BOX	147 7 (		
ESTER . DIRECTION			CRANE OPERATOR	16. DATE		;STAR	TED COMPLETED		
Ŭ VERTI	CAL   IN	CLINED	DEG. FROM VERT.	17. ELEV	ATION TOP		/02/03 :08/02/03 0.0' MLLW		
. THICKNES			N/A (45.5' Water) 0.0'				FOR BORING N/A	χ	
. TOTAL DE			51.5'			INSPECTOR	LARRY BENJAMIN		
ELEVATION MLW	<sub>DEPTH</sub> feæt	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.S	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	0 =		0.0'TO 45.5' WATER			·	Time begin vibracoring	9:	
	=						1408 hrs. Soils described by Larry	.	
							Benjamin, Civil Engr. Tech	'.	
	45 —							ļ	
							NOTE: TOD OF HOLE:		
-45.5	45. <del>5</del>	• •	OCEAN BOTTOM @45			45.5'	NOTE: TOP OF HOLE is d fined as surface of water and compensation is made	e [	
		• . • . •	SP - Gray medium poo graded sand with shell	riy		1	for the tide such that top of Hole is 0.0 EL MLI	F	
	46 —	• • • • •	fragments 			46.0'			
	=	• • • • •					VIBRACORE BORING		
	=	• • • •					From 0.0' to 6.0'   Ran 6.0' Rec: 5.8'		
	=	••••							
	47 —	••••					Top of vibracore soil sample is logged as t	oe-	
	-	•••					ginning at Ocean Bott  When Run is greater	than	
		••••		47.8'		47.8'	Recovery, the differer is depicted as Assum		
	48 —		MH - Dark gray elastic silty sand	17.0			Not Recovered.		
			isinty suriu			2			
						48.3'			
								[	
	49 —						LAB CLASSIFICATION	\   <u> </u>	
						40 51	<u>Number</u> <u>Classification</u>	<u> </u>	
	=					49.5'	1 SP 2 CH 3 CH		
						3	3 CH 4 SM		
	50 —					50.0'			
				50.5'		50.5'			
		<del>                                    </del>	SM - Greenish gray fine silty sand			4		F	
	51 —					Ţ		ļ	
				51.3'		51.0'	NOTE T		
-51.5	51.5		Assumed not Recovered	51.5'			NOTE: Terminated hole at predeterm	ined	
			BOTTOM OF HOLE AT :   SOILS ARE FIELD VISUALLY	) اد.ان ا			hole at predeterm depth at 6.0'.	1	
	=		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL					Ė	
	=		CLASSIFICATION SYSTEM						
	=							F	
								Ė	
								F	
								ļ	
	=							F	

TI-03-V-175 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2410992 N 189848 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY VIBRA CORE WILMINGTON DISTRICT 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED 'DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-175 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR COMPLETED: 08/02/03 6. DIRECTION OF HOLE 16. DATE HOLE 08/02/03 X VERTICAL ☐ INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.4' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 60.4 BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLW feæt 0.0 0 0.0'TO 46.4' WATER Time begin vibracoring: Soils described by Larry Benjamin, Civil Engr. Tech. 46 OCEAN BOTTOM @46.4' 46.41 -46.4 46.4 SM – Greenish gray fine silty sand with shell 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 46.9' fragments 48 VIBRACORE BORING From 0.0' to 14.0' Ran 14.0' Rec: 12.6' 49.6' 49.6 SP-SM - Gray fine poorly graded silty sand, T/shell fragments 2 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is desired. 50 — 50.1 is depicted as Assumed Not Recovered. 52.0 52 3 52.5 LAB CLASSIFICATION 54 Jar <u>Number</u> <u>Classification</u> 55.0 SM 4 SM 55.5 SM56 57.5 5 58 -58.0' NOTE: Terminated 59.0' |hole at predetermined<del>\_</del> Assumed not Recovered depth at 14.0'. 60 60.4 -60.4 60.4 BOTTOM OF HOLE AT 60.4' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

TI-03-V-176 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 1. PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2412837 N 187952 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-176 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A 6. DIRECTION OF HOLE STARTED: 08/02/03 :COMPLETED : 08/02/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (47.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 64.5 BEN LACKEY AND LARRY BENJAMIN BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY MLLW <u>fe∙et</u> 0.0 0 0.0' TO 47.5' WATER Time begin vibracoring: 1455 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 47 -47.5' Scale changed @61.0'. OCEAN BOTTOM @47.5' -47.5 47.5 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made 48.5' for the tide such that SM - Gray medium poorly graded sand with shell fragments 4. SP-SM - Greenish gray fine poorly graded silty sand, T/shell fragments top of Hole is 0.0 EL MLLW. 2 49 49.0' VIBRACORE BORING From 0.0' to 17.0' Ran 17.0' Rec: 14.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 51.5 3 52.0' is depicted as Assumed Not Recovered. 53 -54.0' 54.5 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP-SM SM SM SM SM SM 57.0' 5 57.5 59 -NOTE: Terminated hole at predetermined depth at 17.0'. 62.0' Assumed not Recovered -64.5 64.5 BOTTOM OF HOLE AT 64.5 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE\_NO. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-176

DRILLI	NG LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		INGTON	SHEET 1 OF 1 SHEETS
PROJECT TOPSA	IL INLE	Т			AND TYPE		4" Dia. Vibracore
NC CC			715 N 189749 NAD83	MLLW	1		TION OF DRILL
DRILLING WILM		N DISTE	RICT	VIBRA	CORE		SNELL
HOLE NO.	(As shown imber)	on drawing	**** TI-03-V-177	BURDE	L NO. OF	S TAKEN	: DISTURBED : UNDISTURBED : 5
NAME OF ESTER		IF	CRANE OPERATOR			CORE BOX	117 7 1
DIRECTION	OF HOLI		DEG. FROM VERT.	16. DATE	HOLE	:STAR : 08	COMPLETED : 08/02/03
THICKNES			N/A (46.5' Water)				O.O' MLLW FOR BORING N/A %
DEPTH DE			0.0'	19. SIGNA	TURE OF	INSPECTOR	
TOTAL DE			56.5'		% CORE	BOX OR	LARRY BENJAMIN REMARKS
LEVATION   MLLW	рертн fe√e t	LEGEND c	(Description)	.3	RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant) 9
0.0	0 =		0.0'TO 46.5' WATER				Time begin vibracoring:
	_						1523 hrs.   Soils described by Larry   Benjamin, Civil Engr. Tech.
	Ξ						Bonjaniin, Olvii Engr. 1801.
	46 -						Scale changed @50.0'.
	=		0.05 434 5.0 7.7 7.1	· - ·		16 5	NOTE: TOP OF HOLE is de-
-46.5	46.5 <del>-</del>	]   ]	SM – Dark gray fine sil	ty			fined as surface of water and compensation is made for the tide such that
	47 =		sand with shellfragment	S		1	top of Hole is 0.0 EL MLLW.
	47 —	]				47.0'	VIBRACORE BORING
	_						From 0.0' to 10.0'
	=	]	•				Ran 10.0' Rec: 8.5'
	48 —	]				48.0'	Top of vibracore soil
	=	]				2	sample is logged as be- ginning at Ocean Bottom.
	=	]	•			48.5'	When Run is greater than Recovery, the difference
	=						is depicted as Assumed Not Recovered.
	49 —	<u> </u>					
	Ξ						
	=			49.7'		49.7'	
	50 —	<b>!∙.•</b>	SP-SM - Gray fine poor graded silty sand	·iy		3	LAB CLASSIFICATION
	Ξ	<b> </b> *.*				50.2'	Jar <u>Numbe</u> r <u>Classification</u>
	=	.					1 SM 2 SM
	=	$ \cdot  $				52.01	3 SM 4 SM
	52 —					52.0' 4	5 SM
	Ξ					52.5'	
	=	<b> .·. </b>					
	54 —	.:.				54.0'	
	= =					5/ 5/	NOTE, Talasia III
	_	·*.  †	Assumed not Recovered	55.0'			NOTE: Terminated hole at predetermined
	=						depth at 10.0'.
	56 —			56.5'			
-56.5	56.5		BOTTOM OF HOLE AT S				
	=						
	58 —		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANC				
	Jo <u> </u>		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	_			
	=		SEASSIFICATION STSTEM				
	Ξ						
							AIL INLET HOLENO.

TI-03-V-178 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN OF MSL) 12. MANUFACTURER'S DESIGNATION OF DRILL SNELL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 8 UNDISTURBED 14. TOTAL NUMBER CORE BOXES N/A 15. ELEVATION GROUND WATER N/A COMPLETED

LESTER		CRANE OPERATOR	15. ELEV	ATION GRO	UND WATE	R N/A
6. DIRECTION	N OF HOLE ICAL   INCLINED _	DEG.FROM VERT.	16. DATE	HOLE	STAF 08	COMPLETED : 08/02/03 : 08/02/03
-			17. ELEV	ATION TOP	OF HOLE	0.0' MLLW
	SS OF OVERBURDEN	N/A (46.3' Water)	18. TOT	AL CORE RE	ECOVERY	FOR BORING N/A Z
	EPTH OF HOLE	0.0' 66.3'		ATURE OF		
9. TOTAL D	I I	T	•			LARRY BENJAMIN REMARKS
ELEVATION MLLW	DEPTH LEGEND	CLASSIFICATION OF MATERIAL (Description)	.S	% CORE RECOV- ERY	BOX OR SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	0 = = = = = = = = = = = = = = = = = = =	0.0' TO 46.3' WATER				Time begin vibracoring: 1545 hrs. Soils described by Larry Benjamin, Civil Engr. Tech.
-46.3	46 — 46.3 <del>• • •</del>	OCEAN BOTTOM @46	.3'	-	46.3'	Scale changed @56.0'.
		SP-SM - Gray fine pool graded silty sand, T/she fragments	ell		1 46.8'	NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.
	48				48.5' 2 49.0'	VIBRACORE BORING From 0.0' to 20.0' Ran 20.0' Rec: 17.0'
	50				50.5 <sup>'</sup>	Top of vibracore soil sample is logged as be-ginning at Ocean Bottom. When Run is greater than
	52	  SP - Tan course poorly	<u>52.0</u>	-	51.0' 52.0' 4	Recovery, the difference is depicted as Assumed Not Recovered.
	54	graded sand, T/shell í fragments			52.5'	LAB CLASSIFICATION
					54.5' 5 55.0'	Jor Number Classification 1 SP-SM 2 SP-SM 3 SP-SM 4 SP-SM
	56 -				57.0' 6 57.5'	2 SP-SM SP-SM 4 SP-SM 5-SP-SP 8 SP-SP SP-SP SP-SP
	60				60.0' 60.5'	
-66.3	66		63.3 <sup>1</sup>		62.5' 8 63.0'	NOTE: Terminated hole at predetermined depth at 20.0'.
-66.3	bb.3	BOTTOM OF HOLE AT ( SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL	56.3'			
		CLASSIFICATION SYSTEM				

MLLW

VIBRA CORE

DIVISION SOUTH ATLANTIC

TI-03-V-178

CRANE OPERATOR

2. LOCATION (Coordinates or Station) NC COORD E 2413316 N 191142 NAD83

DRILLING LOG

3. DRILLING AGENCY
WILMINGTON DISTRICT

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

1. PROJECT TOPSAIL INLET

5. NAME OF DRILLER LESTER GAUGHF

TI-03-V-179 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station)
NC COORD E 2411791 N 194146 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNELI 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-179 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED : 08/02/03 6. DIRECTION OF HOLE :COMPLETED : 08/02/03 16. DATE HOLE \_ DEG. FROM VERT. X VERTICAL | INCLINED \_ 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.0' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR
BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 56.0' REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY <u>M⊌LW</u> 0.0 feet 0 0.0' TO 46.0' WATER Time begin vibracoring: 1613 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46.0' OCEAN BOTTOM @46.0' -46.0 46.0 <u>-</u> SP-SM - Gray fine poorly graded silty sand, T/shell fragments Scale changed @51.0'. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 46.5' 47 VIBRACORE BORING From 0.0' to 10.0' Ran 10.0' Rec: 9.1' 48.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 48 -2 48.5 Not Recovered. 49 -49.4 49.4 SP - Tan course poorly graded sand, T/shell fragments 3 LAB CLASSIFICATION 49.9 50 <u>Number</u> <u>Classification</u> SM SM -SM SM SM 51.5 52 52.0' 53.0' 5 53.5 54 NOTE: Terminated 55.1 hole at predetermined Assumed not Recovered depth at 10.0'. -56.056.0 BOTTOM OF HOLE AT 56.0' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM 58 PROJECT TOPSAIL INLET HOLE NO.

		SOUTH ATLANTIC	10. SIZE			N DISTRICT OF 1 SHEETS
l (Coordinate	. 1			AND THE	OF BIT	4" Dia. Vibracore
	es or Station	n)		M FOR EL		SHOWN BM or MSL)
AGENCY		234 N 195736 NAD83	12. MANU	FACTURER	'S DESIGNA	ATION OF DRILL
IINGTO	N DISTE		13. TOTA	CORE L NO. OF	OVER-	SNELL :UNDISTURBED
umber)	on drawing	TI-03-V-180	$\overline{}$	EN SAMPLE L NUMBER		· 4 · · · · · · · · · · · · · · · · · ·
DRILLER GAUGH		CRANE OPERATOR	15. ELEV	ATION GRO		R N/A
		DEG. FROM VERT.			: 08	/02/03 :08/02/03
S OF OVE	ERBURDEN	N/A (44.2' Water)				
		0.0'	19. SIGN/	ATURE OF	INSPECTOR	1
			•	% CORE	BOX OR	REMARKS
	LEGEND	(Description)	LS	ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0 =		0.0' TO 44.2' WATER				Time begin vibracoring:
Ξ						1635 hrs. Soils described by Larry
						Benjamin, Civil Engr. Tech.
44 —		005	0.1			Carda alta   1 0 10 0;
44.2	1   1   1		.2'			Scale changed @49.0'. NOTE: TOP OF HOLE is de-
-	]	sand with shell fragments			1	fined as surface of water and compensation is made
		_			44.7'	for the tide such that top of Hole is 0.0 EL MLLW.
45 —						
						VIBRACORE BORING
_						From 0.0' to 9.0' Ran 9.0' Rec: 7.0'
=	1				46.0'	
46 —  -	]					Top of vibracore soil sample is logged as be-
=	<b>┆┆┼┆┼</b>				2	ginning at Ocean Bottom. When Run is greater than
	] [   [				46.5'	Recovery, the difference is depicted as Assumed
47 —						Not Recovered.
=		SP - Tan fine medium	47.2		47.2'	
	· · · · · ·	poorly graded sand			3	
Ξ	· ·				47.7'	
48 —						LAB CLASSIFICATION
=						Jar Number <u>Classification</u>
						1 SM SM SM 3 SP-SM
Ξ	· · · · ·				10.01	4 SP-SM
49 —					49.0	
					49.5'	
=						
			E1 01			
-		Assumed not Recovered	31.2			
_						NOTE: Terminated
						hole at predetermined depth at 9.0'.
_53 <u>,                                    </u>			53.2'			
)    -		BOTTOM OF HOLE AT :	53.2'			
=						
=						
		WITH THE UNIFIED SOIL	Ε			
		CLASSIFICATION SYSTEM				
=						
	## A 1   1   1   1   1   1   1   1   1   1	S OF HOLE  S OF OVERBURDEN RILLED INTO ROCK PTH OF HOLE  DEPTH LEGEND feet c  44 44.2  45  47  48  53.2  53.2	DEG. FROM VERT.  S OF OVERBURDEN N/A (44.2' Water) RILLED INTO ROCK O.0' PTH OF HOLE C  OCEAN BOTTOM @44.  OCEAN BOTTOM @44.  SM - Gray fine silty sand with shell fragments  A5  SP - Tan fine medium poorly graded sand  A7  ASsumed not Recovered  ASsumed not Recovered  SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANC WITH THE UNIFIED SOIL  SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANC WITH THE UNIFIED SOIL	16. DATE  CAL   NCINED   DEC. FROM VERT.  S OF OVERBURDEN   N/A (44.2' Water)   18. TOTA  19. SIGNU  BEN  19. SIGNU  19. S	SOURCE SELECTION OF HOLE  CAL   INCLINED   DEG. FROM VERT.   17. ELEVATION TOR ELECTATION TOROCK   O.0'   19. SIGNATURE OF PTH OF HOLE   53.2'   BEN LACKE   ERY    DEPTH LEGEND   CLASSFICATION OF MATERIALS   CLASSFICATION SYSTEM   CLASSFICATION SYS	10 F MOLE

DRILLI	NG LO	G DIV	SOUTH ATLANTIC	INSTALLA		MINGTON	SHEET 1 OF 1 SHEETS				
PROJECT TOPSA	IL INLE	Т		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWNTBM or MSL)							
. LOCATION			, 127 N 197488 NAD83	MLLW	<u>'</u>						
. DRILLING	AGENCY	N DISTE		VIBRA	CORE		TION OF DRILL SNELL				
. HOLE NO.	. (As shown			BURDE	L NO. OF N SAMPLE	S TAKEN	: DISTURBED : UNDISTURBED : 0				
. NAME OF		F	CRANE OPERATOR			CORE BO	147 71				
. DIRECTION	OF HOLE		CRANE OF ERATOR		15. ELEVATION GROUND WATER N/A  16. DATE HOLE STARTED COMPLETED CONFIDENCE COMPLETED CONFIDENCE CON						
	ICAL   IN		DEG. FROM VERT.	17. ELEVATION TOP OF HOLE 0.0' MLLW  18. TOTAL CORE RECOVERY FOR BORING N/A Z  19. SIGNATURE OF INSPECTOR							
. THICKNES			N/A (44.0' Water) 0.0'								
. TOTAL DE	PTH OF H	-IOLE	53.0'	1	BEN LACKEY AND LARRY BENJAMIN						
ELEVATION MLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIA ( <i>Description</i> ) d	LS	RECOV- ERY	SAMPLE NO.	REMARKS (Drilling filme, water loss, depth of weathering, etc., if significant)  9				
0.0	0 =		0.0'TO 44.0' WATER				Time begin vibracoring: 1704 hrs.				
	=						Soils described by Larry   Benjamin, Civil Engr. Tech.				
							Bonjaniin, Olvii Engr. 16011.				
-44.0	44.0		OCEAN BOTTOM @44. SM – Gray fine silty	0'		44.0'	Scale changed @49.0′.				
	=		sand with shell fragments			1	NOTE: TOP OF HOLE is de-				
			- <del> </del>			44.5'	fined as surface of water and compensation is made				
							for the tide such that top of Hole is 0.0 EL MLLW.				
	45 —										
							VIBRACORE BORING From 0.0' to 9.0'				
		[   [					Ran 9.0' Rec: 7.7'				
	46 —	╽╏┼╏┼				46.0	Top of vibracore soil				
	1		•			2	sample is logged as be- ginning at Ocean Bottom.				
	$\equiv$	$  \   \   \   \  $					When Run is greater than Recovery, the difference				
	$\equiv$	[ ] + [ ] + [				46.5'	is depicted as Assumed Not Recovered.				
	47 —	[ ]					Not Recovered.				
			•								
	=	†   †									
	=			10.01			LAD OLACCIDICATION				
	48 -	1111	SP - Tan fine medium	48.0'		48.0'	LAB CLASSIFICATION				
			poorly graded sand			3	Number Classification  1 SP-SM				
						48.5'	2 SM				
							3 4 SP-SM				
	49 —										
	=					50.0					
						4					
	51 —	· · · .									
		· · · ·		51 7'		50.5'	NIOTE, T				
	_		Assumed not Recover	ed			NOTE: Terminated hole, at predetermined				
				E 7 6.			depth at 9.0'.				
-53.0	53.0		BOTTOM OF HOLE AT :	<u>53.0'</u> 53.0'							
	-		SOILS ARE FIELD VISUALLY								
			CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM								
			CLASSIFICATION SYSTEM								
						1					

DRILLI	NG LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	WILN		N DISTRICT SHEETS			
1. PROJECT TOPSA	IL INLE	T		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWN BM or MSL)						
2. LOCATION			287 N 199517 NAD83	MLLV	/					
3. DRILLING	AGENCY	N DISTE		VIBRA	CORE		ATION OF DRILL SNELL			
4. HOLE NO.	. (As shown		•	13. TOTA BURD	L NO. OF EN SAMPLE	OVER- S TAKEN	: DISTURBED : UNDISTURBED : 0			
5. NAME OF LESTER	DRILLER	ıF	CRANE OPERATOR		L NUMBER		.,,,,			
6. DIRECTION	OF HOLE	Ε	CRANE OF ERATOR	16. DATE		STAF	RTED COMPLETED			
	CAL IN		DEG. FROM VERT.	17. ELEVATION TOP OF HOLE 0.0' MLLW						
7. THICKNES 8. DEPTH DE			N/A (44.7' Water) 0.0'	18. TOTAL CORE RECOVERY FOR BORING N/A Z  19. SIGNATURE OF INSPECTOR						
9. TOTAL DE	PTH OF I	HOLE	52.7'	BEN LACKEY AND LARRY BENJAMIN						
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIAI (Description) d	.S	% CORE RECOV- ERY	SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., If significant) 9			
0.0	0 =		0.0' TO 44.7' WATER				Time begin vibracoring:			
	Ξ						Soils described by Larry			
	=						Benjamin, Civil Engr. Tech.			
	44									
	=						Scale changed @50.0'.			
	=						NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made			
-44.7	44.7		OCEAN BOTTOM @44 SP – Gray course poor			44.7'	for the tide such that top of Hole is 0.0 EL MLLW.			
	45 —	• • • • • • • • • • • • • • • • • • • •	graded sand with shell fragments	' y		1	top of flore is 0.0 LL MLLW.			
	Ξ	· · · ·				45.2'	VIBRACORE BORING			
	_						From 0.0' to 8.0'			
	Ξ	• • • • • • • • • • • • • • • • • • • •					Ran 8.0' Rec: 7.6'			
	46 -	• • • •				46.0'	Top of vibracore soil			
	Ξ	• • • •				2	sample is logged as beginning at Ocean Bottom.			
	_	• • • •				46.5'	When Run is greater than Recovery, the difference			
	Ξ	• • • •				10.0	is depicted as Assumed Not Recovered.			
	47 —	•	<u> </u>  SP-SM - Tan fine poorl <sup>,</sup>	47.0 <u>'</u> ⁄		47.0'				
	=		graded silty sand	,		3				
	=					47.5'				
	=	.					LAB CLASSIFICATION			
	48 – <del>_</del>						Jar			
	Ξ	•					Number Classification  1 SP			
	_	•					1 SP			
		•				49.0'	3   SP-SM			
	49 —	•								
		-				4				
	Ξ					49.5'				
	50 —									
	_ ∃	•								
	=	•					NOTE: Terminated hole at predetermined			
	Ξ						depth at 8.0'.			
	52 —	•		52.3'						
-607	- - - 	<u>• • •  </u>	Assumed not Recovered	52.7'						
-52.7	ر / 		BOTTOM OF HOLE AT	52.7'						
	Ξ	]	SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE							
	54 —		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM							
	-									
	=									
NO FOR	M18.36	BBEVIOUS	S EDITIONS ARE OBSOLETE.		PROJECT	TOPS	AIL INLET HOLE NO. TI-03-V-18			

TI-03-V-183 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2411241 N 197600 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-183 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/02/03 16. DATE HOLE X VERTICAL ☐ INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR
BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE 50.7 % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND <u>M⊌LW</u> 0.0 <u>fe∞et</u> 0 0.0' TO 45.7' WATER Time begin vibracoring: 1751 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 45 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that OCEAN BOTTOM @45.7' 45.7' -45.7 45.7 SP-SM - Greenish gray fine poorly graded silty sand top of Hole is 0.0 EL MLLW. 46 -46.21 VIBRACORE BORING From 0.0' to 5.0' Ran 5.0' Rec: 4.6' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 48.01 48 2 48.5 LAB CLASSIFICATION 49 <u>Number</u> <u>Classification</u> 49.5' SP-SM SM SM 3 50 50.0 50.3 Assumed not Recovered 50.7 -50.750.7 BOTTOM OF HOLE AT 50.7' 51 -NOTE: Terminated SOILS ARE FIELD VISUALLY hole at predetermined depth at 5.0'. CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE\_NO.

TI-03-V-184 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG lor 1 PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) MLLW 2. LOCATION (Coordinates or Station)
NC COORD E 2414179 N 196288 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-184 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED 08/02/03 COMPLETED 08/02/03 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (47.1' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 67.1 BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M<u>L W</u> fe<sub>e</sub>t 0.0 0 0.0' TO 47.1' WATER Time begin vibracoring: 1827 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 47.1 OCEAN BOTTOM @47.1' -47.1 47.T SM - Dark gray fine silty sand with shell fragments Scale changed @57.0'. 47.6 NOTE: TOP OF HOLE is dewith some course grain sizes fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 49 VIBRACORE BORING From 0.0' to20.0' 50.3 50.31 Ran 20.0' Rec: 18.7' ML - Dark gray sand silt 2 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 50.8 SM - Dark gray fine silty sand 51.3' 3 51.8 Not Recovered. 53 54.0' 54.0 ML - Dark gray sand silt 4 54.5 54.7 54.7 LAB CLASSIFICATION SM – Dark gray fine silty sand with iinterbedded 5 55 55.2' silt lenses Number Classification SM SM SM SM SM 234567 58.0' 6 58.5 62 65.3' hole at predetermined 8 depth at 20.0'. 63.51 NOTE: Terminated 64 Assumed not Recovered -67.167.1 -BOTTOM OF HOLE AT 67.1' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM1846 PREVIOUS EDITIONS ARE OBSOLETE.

TI-03-V-185 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) MLLW 2. LOCATION (Coordinates or Station) NC COORD E 2415302 N 193753 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-185 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR STARTED: 08/02/03 6. DIRECTION OF HOLE : COMPLETED : 08/02/03 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 66.5' BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MLLW feet 0.0 0 0.0' TO 46.5' WATER Time begin vibracoring: 1843 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46 46.5' Scale changed @58.0'. OCEAN BOTTOM @46.5' -46.5 46.5 SP - Tan course poorly graded sand with shell fragments NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 47.0 48 -48.5' 48.5 VIBRACORE BORING SM - Gray fine silty sand with shell fragments 2 From 0.0' to20.0' 49.0' Ran 20.0' Rec: 18.3' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 50 51.0 3 51.5 Not Recovered. 52 53.0' MH - Dark gray elastic silt 4 53.5 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP SP-SM SM SM CH CH SM SM 55.0' 1234567 5 55.5 56 8 58.0' 58.0 SM - Gray fine silty sand 6 58.5' NOTE: Terminated 61.0' hole at predetermined 61 61.5' 63 64.3 8 64.8 Assumed not Recovered -66.5 66.5 BOTTOM OF HOLE AT 66.5 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM1856 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-185

				Hole No.	TI-03-V-186	6		
DRILLING LOG DIVISION SOUTH ATLANTIC	INSTALLA	WILK		N DISTRICT	Or 1 SHEETS	s		
. PROJECT TOPSAIL INLET	10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWNTBM or MSL)							
2. LOCATION (Coordinates or Station) NC COORD E 2417347 N 192119 NAD83	MLLW	/			<b></b>			
B. DRILLING AGENCY WILMINGTON DISTRICT	VIBRA	12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL						
HOLE NO. (As shown on drawing title and file number)  TI-03-V-186		13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED O						
5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR		ATION GRO		117 71		$\dashv$		
S. DIRECTION OF HOLE	16. DATE	16 DATE HOLE STARTED COMPLETED						
VERTICAL ☐ INCLINED	17. ELEV	17. ELEVATION TOP OF HOLE 0.0' MLLW						
7. THICKNESS OF OVERBURDEN N/A $(47.7' \text{ Water})$ B. DEPTH DRILLED INTO ROCK $0.0'$	18. TOTAL CORE RECOVERY FOR BORING N/A X  19. SIGNATURE OF INSPECTOR							
D. TOTAL DEPTH OF HOLE 67.7'	BEN	BEN LACKEY AND LARRY BENJAMIN    z core   box or   remarks						
ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIA  MILW feet c d	ALS	RECOV- ERY	SAMPLE NO.	(Drilling weather	time, water loss, depth of ing, etc., if significant)			
0.0 0 - 0.0' TO 47.7' WATER				Time beg	jin vibracoring:	F		
4				Soils desc	cribed by Larry Civil Engr. Tech.	F		
				Derrjariiii,	Civil Eligi. Tecli.	E		
47 🚽				Scale obse	iged @57.0'.	Ė		
-47.7 47.7 OCEAN BOTTOM @47			47.7'	NOTE: TOP	OF HOLF is de-	.		
-   SP - Gray course pool	rıy		1 48.2'	tined as su and compe for the tide	urface of water insation is made e such that	F		
fragments					e is 0.0 EL MLLW	v. F		
49	49.5'		49.5'	\/IRD \ ∩	ORE BORING	—Ē		
SP-SM - Gray fine poor graded silty sand, T/sh	orly ell		2		0.0' to20.0'	E		
fragments '			50.0'	Ran 20.0	0' Rec: 17.8'	E		
51 - SM - Gray fine silty	51.0'		51.0'	Top of y	ibracore soil	F		
			3 51.5'	ginning a	s logged as be t Ocean Bottor n is greater th	n.   -		
- <del>-</del>				Recovery	y, the differenc	:e   <b> -</b>		
				Not Rec	ed as Assumed overed.	'   <u> </u>		
						¬[		
	53.9'		53.9'			۱Ė		
MH - Dark gray elastic silt, T/shell fragments			4 54.4'			<u></u> ↓⊧		
55 —					ASSIFICATION	IJ₽		
				Jar <u>Numbe</u> r	<u>Classification</u>	۱F		
▎Ӛ▋▋▋			56.0' 5	2 2	SP SP SP-SM	IJ₽		
<sub></sub>	57.0'		56.5' 57.0'	2 3 4 5 7	CH CH			
57 — SM - Gray fine silty — Isand, T/shell fragments	57.0		57.0 57.5'		ŠM SP-SM			
				8	SC	╛		
			60.0' 60.5'	1		F		
62 - 1	67.5					F		
64 - Isilty sand	63.0' I	_	63.0' 8 63.5'	H Note: t	erminated	F		
64 - silty sand	65.5'		00.0	hole at	predetermin	ned		
66 Assumed not Recovere				depth a	ι ∠∪.∪ .			
-67.7 67.7 DOTTOM OF HOLE AT	67.7					Ė		
BOTTOM OF HOLE AT	6/./'					E		
						F		
4						F		
SOILS ARE FIELD VISUALLY						Ė		
CLASSIFIED IN ACCORDANCE						E		
- WILL THE INTELL COLL			i	İ		F		
WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						Ŀ		

DRILLI	ING LO	G DIVI	SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT	SHEET 1 OF 1 SHEETS			
. PROJECT	JL INLE	 ∶T		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWN BM or MSL)							
. LOCATION	l (Coordinate	es or Station	, 902 N 204964 NAD83	MLLV	/						
. DRILLING	AGENCY	N DISTE		VIBRA	CORE		SNEL	<u>-L</u>			
. HOLE NO and file no	. (As shown		•	BURD	L NO. OF (	S TAKEN	:DISTURBED	: UNDISTURBED : O			
. NAME OF		ıF	CRANE OPERATOR		14. TOTAL NUMBER CORE BOXES N/A 15. ELEVATION GROUND WATER N/A						
DIRECTION	N OF HOLE		DEG. FROM VERT.	16. DATE	16. DATE HOLE   STARTED   COMPLETED   08/03/03   08/03/03						
. THICKNES			N/A (42.5' Water)	17. ELEVATION TOP OF HOLE O.O' MLLW  18. TOTAL CORE RECOVERY FOR BORING N/A %							
. DEPTH DI			0.0' 57.5'	19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN							
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA		% CORE RECOV-			REMARKS			
Melw 0.0	feet	с	(Description) d		ERY	NO.		time, water loss, depth of ring, etc., if significant)			
0.0	0 =		0.0' TO 42.5' WATER				0805 hrs				
	=						Soils deso Benjamin,	cribed by Larry , Civil Engr. Tech.			
-42.5	42		OCEAN BOTTOM @42.			42.5'					
+2.5	42.3 <u> </u>	-	SP-SM - Gray fine poo graded silty sand, T/sh	rly ell		1	fined as si	OF HOLE is de- urface of water			
		· . •	fragments 1			43.0'	for the tid	ensation is made le such that e is 0.0 EL MLLW	/.   /.		
	44 —					,,,	<u>'</u>				
	=					44.5 2		ORE BORING 0.0' to15.0'			
	=					45.0'	From Ran 15				
	46 —						Top of v	ribracore soil			
		<u> </u>	CD T	46.5		46.5'	ginning d	ribracore soil s logged as be at Ocean Botton	n.		
	_		SP - Tan medium poor graded sand with traces of tiny shell fragments	Tly S		3 47.0'	When Ru Recover	in is greater the y, the differenc	an e		
		• • •	or thry shell it aginetits			17.0	is depic <sup>.</sup> Not Rec	ted as Assumed overed.	į į		
	48 —	•••									
	=					49.0'					
	=					4					
	50 <del>-</del>					49.5'	LAB CI	LASSIFICATION			
							Jar <u>Numbe</u> r	<u>Classification</u>			
	=						1 2	SP SP-SM SP-SM			
		• • •				52.0'	23456	SP-SM SP-SM			
	52 — =	•••				5	ě	ŜM			
	=					52.5'			$\rfloor  $		
	] =										
	54 —	.·				54.0' 6					
								erminated			
				55.5'			hole at depth a	predetermin it 15.0'.	ес		
	56 —		Assumed not Recovered								
-57.5	_		BOTTOM OF HOLE AT !	<u>57.5'</u> 57.5'							
	58 —		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE								
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM								
	=										
	=	]									

Hole No. TI-03-V-188 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET II. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2409013 N 202653 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 10. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-188 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 10. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED : 08/03/03 COMPLETED : 08/03/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL ☐ INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (44.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 54.2' BEN LACKEY AND LARRY BENJAMIN % CORE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY M⊌LW 0.0 feet 0 0.0'TO 44.2' WATER Time begin vibracoring: 0831 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. -44.2 44.2· OCEAN BOTTOM @44.2' 44.2 SM - Gray fine silty sand with shell 1 NOTE: TOP OF HOLE is de-44.7' fined as surface of water and compensation is made for the tide such that fragments top of Hole is 0.0 EL MLLW. 46 VIBRACORE BORING From 0.0' to10.0' Ran 10.0' Rec: 10' 47.8 47.8 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed SP-SM - Gray fine poorly graded silty sand, T/shell fragments 2 48.3' Not Recovered. 50.0 50 -3 50.5 LAB CLASSIFICATION 52.0' 4 <u>Classification</u> <u>Number</u> 52.5' -54.2 54.2 BOTTOM OF HOLE AT 54.2' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM 56 NOTE: Terminated hole at predetermined depth at 10.0'. PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1886 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-188

TI-03-V-189 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS PROJECT TOPSAIL INLET 15. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2411275 N 201372 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 15. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-189 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED: 08/03/03 6. DIRECTION OF HOLE 16. DATE HOLE \_ DEG. FROM VERT. X VERTICAL | INCLINED \_ 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 60.5 BEN LACKEY AND LARRY BENJAMIN 9. TOTAL DEPTH OF HOLE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND M៤LW fee t 0.0 0 0.0' TO 45.5' WATER Time begin vibracoring: 0853 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 45 OCEAN BOTTOM @45.5' 45.5 -45.5 45.5 NOTE: TOP OF HOLE is de-SP - Gray course poorly graded sand with shell fragments 1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 46.0 47 47.5 47.5' VIBRACORE BORING SM - Gray fine silty sand with shell fragments 2 From 0.0' to15.0' 48.0 Ran 15.0' Rec: 14.0' 49 Top of vibracore soil sample is logged as be-ginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 51.0 3 51.5 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP SP-SM SP-SM SP-SM SP-SM SP-SM 7456 54.8 54.8 SP-SM - Tan fine poorly graded silty sand, T/shell fragments 55 -4 55.3 57.0' 5 NOTE: Terminated hole at predetermined depth at 15.0'. 59.0' 59 6 59.5 59.5 Assumed not Recovered 60.5 -60.5 60.5 BOTTOM OF HOLE AT 60.5' 61 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM1896 PREVIOUS EDITIONS ARE OBSOLETE.

DRILLI	NG LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA			Hole No. TI-03-V-190				
. PROJECT			JJOIN ALLANIIG	WILMINGTON DISTRICT OF 1 SHEETS  15. SIZE AND TYPE OF BIT 4" Dia. Vibracore							
TOPSA	(Coordinate	s or Station		11. DATU MLLW		EVATION S	HOWNTBM or MSL)				
3. DRILLING	AGENCY		215 N 199408 NAD83		FACTURER CORE	S DESIGNA	TION OF DRILL SNELL				
. HOLE NO.	(As shown	N DISTE on drawing	444-	15. TOTA	L NO. OF	OVER-	DISTURBED UNDISTURBED				
and file nu 5. NAME OF			TI-03-V-190	14. TOTA	BURDEN SAMPLES TAKEN : 7 : 0  14. TOTAL NUMBER CORE BOXES N/A						
ESTER  B. DIRECTION			CRANE OPERATOR	<del>                                     </del>	ATION GRO		COMPLETED				
X VERTI	CAL   IN	ICLINED	DEG. FROM VERT.		16. DATE HOLE STARTED COMPLETED 08/03/03  17. ELEVATION TOP OF HOLE 0.0' MLLW						
7. THICKNES			N/A (47.5' Water)	18. TOTAL CORE RECOVERY FOR BORING N/A X 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN							
. TOTAL DE			0.0' 62.5'								
ELEVATION MLLW	DEРТН fe⊫et	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.s	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)				
0.0	0 =		0.0'TO 47.5' WATER				Time begin vibracoring:				
	Ξ						0913 hrs. Soils described by Larry				
	=						Benjamin, Civil Engr. Tech.				
	47 —										
-47.5	47.5	• •	OCEAN BOTTOM @47 SP - Gray course poor			47.5' 1	NOTE: TOP OF HOLE is de-				
	=	•••	graded sand with shell fragments			48.0'	fined as surface of water and compensation is made				
	=			48.9'			for the tide such that top of Hole is 0.0 EL MLLW.				
	49 —		SM - Gray fine silty sand with shell			2	VIDDACODE DOSCUIO				
			fragments			49.4'	VIBRACORE BORING From 0.0' to15.0'				
	_						Ran 15.0' Rec: 14.0'				
	51 —	[+]	•			51.0'	Top of vibracore soil				
		+]+[				3 51.5'	sample is logged as be- ginning_at Ocean Bottom.				
	=					31.3	When Run is greater than Recovery, the difference				
	Ξ						is depicted as Assumed Not Recovered.				
	53 —		ļ Ī								
				54.0'		54.0'					
	=	•••	SP-SM - Tan fine poorl graded silty sand, T/she	V		4					
	55 —	†	fragments	<b>.</b> 11		54.5'	LAB CLASSIFICATION				
	- -						Jar Number Classification				
	=	-  -  -  -  -  -  -  -  -  -  -  -  -					1 SP   <b> </b> -				
							2 SM SM SM SM SM SP-SM S				
	57 —	· . •  [				57.0' 5	5 SP     6 SP-SM   7 SP-SM   6 SP-SM				
	=	•••				57.5'	J 3F - SWI				
	59 —	• •				59.0'					
	<i>J j j j j j j j j j j</i>					6					
	=					59.5'	NOTE: Terminated hole at predetermined				
	-						depth at 15.0'.				
	61 —	†		6		61.0' 7					
	=	•   •	Assumed not Recovered	61.5'		61.5'					
	=			62.5'							
-62.5	_		BOTTOM OF HOLE AT 6								
	63 —										
			SOILS ARE FIELD VISUAL CLASSIFIED IN ACCORDAN								
	=		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM								
	=										
NG FORM	м 1906	PREVIOUS	S EDITIONS ARE OBSOLETE.		PROJECT	TOPS	AIL INLET <b> hole no.</b> TI-03-V-19				

TI-03-V-191 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2415210 N 197315 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL DISTURBED UNDISTURBED 20. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN 4. HOLE NO. (As shown on drawing title and file number) 8 TI-03-V-191 19.5. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 20. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED: 08/03/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (47.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 67.2 BEN LACKEY AND LARRY BENJAMIN % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY MLLW feet 0 0.0'TO 47.2' WATER Time begin vibracoring: 0935 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @47.2' SP - Gray course poorly graded sand with shell fragments 47.2 Scale changed @57.0'. NOTE: TOP OF HOLE is de-47.7 48.0' fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 48.0' SM - Gray fine silty sand, T/shell fragments VIBRACORE BORING From 0.0' to20.0' Ran 20.0' Rec: 19.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 51 51.7 MH – Dark gray elastic silt 3 is depicted as Assumed 52.2' Not Recovered. 54.0' 4 54.5 LAB CLASSIFICATION 55 Jar Number Classification SM CHC 56.2 56.2 SM - Dark gray fine silty sand with shell fragments 5 56.7 SP-SM SM SM 59.0' 6 59.5 62.0 62 -NOTE: Terminated hole at predetermined depth at 20.0'. 66.2' -67.2 67.2 Assumed not Recovered 67.2 BOTTOM OF HOLE AT 67.2' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1916 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-191

TI-03-V-192 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2417022 N 195388 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL DISTURBED 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED O 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-192 3.0. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF 20. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 08/03/03 6. DIRECTION OF HOLE :COMPLETED: 08/03/03 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (47.0' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR BEN LACKEY AND LARRY BENJAMIN 51.0' 9. TOTAL DEPTH OF HOLE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY <u>M⊾LW</u> 0.0 feet 0 0.0'TO 47.0' WATER Time begin vibracoring: 0955 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @47.0' SP - Gray course poorly graded sand with shell fragments 47.0' -47.0 47.<del>0</del> 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 48 VIBRACORE BORING From 0.0' to4.0' Ran 4.0' Rec: 3.0' 49.01 49.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed ·CL - Dark sandy lean clay 2 SM - Gray fine silty sand with shell fragments 49.5 Not Recovered. 50 Assumed not Recovered LAB CLASSIFICATION 51.01 -51.0 51.0 BOTTOM OF HOLE AT 51.0' <u>Number</u> <u>Classification</u> SP SC SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined<del>\_</del> depth at 4.0'. PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1926 PREVIOUS EDITIONS ARE OBSOLETE.

TI-03-V-192

Hole No. TI-03-V-194 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2409639 N 206546 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-194 6.5. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A COMPLETED: 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (42.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 49.21 STACEY SMITH BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY MLLW fee t 0.0 0 0.0'TO 42.7' WATER Time begin vibracoring: 1109 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 42 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that OCEAN BOTTOM @42.7' SP-SM - Tan fine poorly graded silty sand with shell fragments -42.7 42.7 top of Hole is 0.0 EL MLLW. 43 -VIBRACORE BORING 43.2' From 0.0' to 6.5' Ran 6.5' Rec: 6.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 45.0' 45 2 45.5 LAB CLASSIFICATION 46 Jar <u>Number</u> <u>Classification</u> 47 47.5 3 48 -48.0' NOTE: Terminated hole at predetermined depth at 6.5' 49 --49.2 49.2 = 49.2 BOTTOM OF HOLE AT 49.2' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE 50 WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1946 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-194

Hole No. TI-03-V-195 INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2410409 N 204021 NAD83 ML L W 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED :UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-195 5.6. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED : 08/15/03 6. DIRECTION OF HOLE : COMPLETED : 08/15/03 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (43.7' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 49.3 STACEY SMITH BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY feet MLLW 0.0 0 0.0'TO 43.7' WATER Time begin vibracoring: 1130 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 43 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @43.7' -43.7 43.7 SP - Tan medium poorly graded sand, T/shell fragments VIBRACORE BORING 44.2' From 0.0' to 5.6' Ran 5.6' Rec: 3.8' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 45 Not Recovered. 46.0' 46 2 46.5 LAB CLASSIFICATION 47 <u>Number</u> <u>Classification</u> SP-SM SP-SM 47.5 Assumed not Recovered 48 49 49.3 -49.3 49.3 NOTE: Terminated BOTTOM OF HOLE AT 49.3' |hole at predetermined<del>\_</del> depth at 5.6' SOILS ARE FIELD VISUALLY 50 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO.

Hole No. TI-03-V-196 DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT of 1 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2412135 N 202063 NAD83 ML L W 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** DISTURBED 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-196 8.6. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A :STARTED : 08/15/03 6. DIRECTION OF HOLE :COMPLETED: 08/15/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (44.8' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 53.4 9. TOTAL DEPTH OF HOLE STACEY SMITH BOX OR SAMPLE NO. REMARKS
(Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY MLLW feet 0.0 0 0.0'TO 44.8' WATER Time begin vibracoring: 1151 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. Scale changed @50.0'. NOTE: TOP OF HOLE is defined as surface of water fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @44.8' -44.8 44.8 SP - Tan course poorly 45 graded sand VIBRACORE BORING 45.3' From 0.0' to 8.6' Ran 8.6' Rec: 8.0' 46 Top of vibracore soil sample is logged as beginning at Ocean Bottom. 46.4 46.4' When Run is greater than Recovery, the difference is depicted as Assumed SM - Grayish tan fine silty sand 2 Not Recovered. 47 46.91 LAB CLASSIFICATION 48 Number <u>Classification</u> SP SC SC 48.5' 3 SP-ŠM 49 49.0' 50 50.5 4 NOTE: Terminated 51.0 hole at predetermined depth at 8.6' 52 52.8 Assumed not Recovered -53.4 53.4 BOTTOM OF HOLE AT 53.4' 54 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE\_NO. ENG FORM 1966 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-196

TI-03-V-197 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2414068 N 200168 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-197 14.3. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/15/03 :COMPLETED: 08/15/03 16. DATE HOLE X VERTICAL | INCLINED . \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.5' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 59.8' STACEY SMITH % CORE RECOV-REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) ERY <u>M⊌LW</u> 0.0 feet 0 0.0' TO 45.5' WATER Time begin vibracoring: 1212 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 45 45.5 OCEAN BOTTOM @45.5' -45.5|45.5= SP - Tan course poorly graded sand NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 46.0' 47.0 47.0' SM - Gray fine silty sand 2 VIBRACORE BORING 47.5 From 0.0' to 14.3' Ran 14.3' Rec: 12.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 49 49.5 3 50.01 Not Recovered. 51 52.0' MH – Dark gray elastic silt 4 52.5' LAB CLASSIFICATION 52.9 SM - Gray fine silty sand 5 <u>Number</u> <u>Classification</u> 53.4 SP SM SCSC 5<u>5.0</u> 55 6 55.5 56.7 56.7 MH – Dark gray elastic silt 7 57.2 Assumed not Recovered NOTE: Terminated hole at predetermined<del>\_</del> depth at 14.3' 59 59.8 -59.859.8 BOTTOM OF HOLE AT 59.8' SOILS ARE FIELD VISUALLY 61 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE\_NO. ENG FORM 1976 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-197

Hole No. TI-03-V-198 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2418885 N 193430 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN ;DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-198 10.5. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR STARTED : 08/15/03 COMPLETED 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 9. TOTAL DEPTH OF HOLE 57.0' % CORE RECOV-BOX OR SAMPLE REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) NO. ERY MLLW feet 0.0 0 0.0'TO 46.5' WATER Time begin vibracoring: 1311 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46 Scale changed @49.0'. NOTE: TOP OF HOLE is de-OCEAN BOTTOM @46.5' 46.51 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. -46.5|46.5 SP - Tan course poorly graded sand with shell fragments 1 47 47.0' VIBRACORE BORING From 0.0' to 10.5' Ran 10.5' Rec: 8.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 48 48.5' 2 Not Recovered. 49 49.0 49.5 49.5 - Gray fine silty sand 3 50.0 50.5 50.5 SP – Whitish gray course poorly graded sand 4 LAB CLASSIFICATION 51.0 <u>Number</u> <u>Classification</u> 2345 52.5 SP-SM - Light gray fine poorly graded silty sand 5 53.0 54.5 Assumed not Recovered 55 NOTE: Terminated hole at predetermined depth at 10.5' 57.0' -57.057.0 BOTTOM OF HOLE AT 57.0' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM 59 PROJECT TOPSAIL INLET ENG FORM 1986 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-198

TI-03-V-199 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2420955 N 195485 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 20. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-199 7.4. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR STARTED: 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.6' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 54.0' STACEY SMITH REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY <u>M⊌LW</u> 0.0 feet 0 0.0'TO 46.6' WATER Time begin vibracoring: 1451 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @46.6' -46.6 46.6 SP - Light gray course poorly graded sand with shell fragments 47.1 VIBRACORE BORING From 0.0' to 7.4' Ran 7.4' Rec: 5.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed 48 48.8 48.81 Not Recovered. SM - Gray fine silty sand, T/shell fragments 49 -2 49.3 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP SM SM 51.1' 3 51.6 51.6 Assumed not Recovered 52 NOTE: Terminated hole at predetermined depth at 7.4' 53 54.0' -54.054.0 BOTTOM OF HOLE AT 54.0' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1996 PREVIOUS EDITIONS ARE OBSOLETE.

Hole No. TI-03-V-200 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2419104 N 197378 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL DISTURBED 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-200 8.5. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A COMPLETED : 08/15/03 STARTED : 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.3' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 54.8' STACEY SMITH % CORE RECOV-BOX OR SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH (Drilling time, water loss, depth of weathering, etc., if significant) LEGEND FRY MLLW fee t 0.0 0 0.0'TO 46.3' WATER Time begin vibracoring: 1517 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46 Scale changed @53.0'. 46.31 OCEAN BOTTOM @46.3' NOTE: TOP OF HOLE is de-fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. -46.3 | 46.3 -SP - Light gray course poorly graded sand with shell fragments 46.81 VIBRACORE BORING From 0.0' to 8.5' 47.6 47.6' Ran 8.5' Rec: 6.7' MH - Dark gray elastic silt 2 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 48 48.1 Not Recovered. 49 49.5' 3 LAB CLASSIFICATION 50 -50.01 <u>Classification</u> <u>Number</u> SP CH CH SM 50.5 with shell fragments 51 51.3 51.3 SP-SM - Tan fine poorly graded silty sand 4 51.8 52 -NOTE: Terminatea hole at predetermined 53 -Assumed not Recovered 54.8 -54.8 55 -BOTTOM OF HOLE AT 54.8' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 2006 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-200

DRILLI	NG LO	IG DIVI	ISION SOUTH ATLANTIC	INSTALLA			Hole No. TI-03-V-201	
1. PROJECT			JOHN ATLANTIC	WILMINGTON DISTRICT OF 1 SHEETS  20. SIZE AND TYPE OF BIT 4" Dia. Vibracore				
TOPSA 2. LOCATION	(Coordinate	es or Station		11. DATUM FOR ELEVATION SHOWN BM or MSL) ML L W				
	ORD E		106 N 199345 NAD83	12. MANU		S DESIGNA	ATION OF DRILL SNELL	
	INGTO	N DISTE		20. TOT	AL NO. OF	OVER-	DISTURBED UNDISTURBED	
and file nu	ımber)	on arawing	TI-03-V-201	$\overline{}$	EN SAMPLE AL NUMBER		DXES N/A	
ROBBIE I	PAGE		CRANE OPERATOR	20. ELEV	ATION GRO		117 71	
6. DIRECTION		L NCLINED	DEG. FROM VERT.	16. DATE			/15/03 :08/15/03	
7. THICKNES	S OF OVE	ERBURDEN	N/A (46.1' Water)				O.O' MLLW FOR BORING N/A %	
B. DEPTH DE 9. TOTAL DE			0.0' 49.8'	1	ATURE OF		1	
	DEPTH	LEGEND	CLASSIFICATION OF MATERIA		% CORE RECOV-	BOX OR	REMARKS (Drilling time water loss, depth of	
MeLW	feet	c	(Description) d		ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)	
0.0	0 =	1	0.0' TO 46.1' WATER				Time begin vibracoring:	
	_						Soils described by Larry Benjamin, Civil Engr. Tech.	
	Ξ						,,	
-46.1	46 <del>-</del>	1,,,,	OCEAN BOTTOM @4	6.1'		46.1'		
		<b>]   ]   ]</b>	SM - Gray fine silty sand with shell			1	NOTE: TOP OF HOLE is de-	
	_	╡╁┇╁┇	fragments			4.0.01	fined as surface of water and compensation is made for the tide such that	
	=	▋∤┇∤┇				46.6'	top of Hole is 0.0 EL MLLW.	
	47 —	▋▍▍	•					
	=	╡╽╏╽					VIBRACORE BORING From 0.0' to 3.7'	
	Ξ	<b>]                                    </b>					Ran 3.7' Rec: 2.5'	
	48 —	<u> </u>				48.1'	Top of vibracore soil	
		╡╽╏╽	•				sample is logged as be- ginning at Ocean Bottom.	
	_	]		48.6'		2	When Run is greater than Recovery, the difference	
	Ξ		Assumed not Recovered			48.6'	is depicted as Assumed Not Recovered.	
	49 —						THE CHOOS VOT GG.	
	=	1						
	_							
-49.8	_		BOTTOM OF HOLE AT .	<u>49.8'</u> 49.8'			LAB CLASSIFICATION	
	50 —	1					Jar	
	_=						Number <u>Classification</u> 1 SM	
	=		SOILS ARE FIELD VISUA CLASSIFIED IN ACCORDA				1 SM SM	
	51 —		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					
	Ξ	1	02/100/1/10/1/ 070/2/					
	_	1						
	Ξ							
	_	1						
	=	]					NOTE: Terminated	
	=						hole at predetermined	
	Ξ	1					depth at 3.7'	
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		]					AIL INLET HOLE NO.	

TI-03-V-202 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 INSTALLATION DRILLING LOG WILMINGTON DISTRICT OF 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) LOCATION (Coordinates or Station)
NC COORD E 2416026 N 201998 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED :DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-202 9.3. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED: 08/15/03 :COMPLETED : 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.3' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 55.6' STACEY SMITH BOX OR SAMPLE NO. % CORE RECOV-REMARKS CLASSIFICATION OF MATERIALS (Description) (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION DEPTH LEGEND ERY <u>M⊌LW</u> 0.0 fee t 0 0.0'TO 46.3' WATER Time begin vibracoring: 1605 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46 46.3' Scale changed @50.0'. OCEAN BOTTOM @46.3' NOTE: TOP OF HOLE is de-fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. -46.3 46.3 SP - Light gray course silty sand with shell fragments 46.8 47 VIBRACORE BORING From 0.0' to 9.3' Ran 9.3' Rec: 7.6' 48.0 48.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference 48 SM - Gray fine silty sand with shell 2 fragments 48.5' is depicted as Assumed Not Recovered. 49 LAB CLASSIFICATION 50.01 50 .3 Number <u>Classification</u> 50.5 SP -SM SM SM 52.0' 4 52.5' 53.9 54 Assumed not Recovered NOTE: Terminated hole at predetermined depth at 9.3' -55.6 55.6 BOTTOM OF HOLE AT 55.6' 56 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET ENG FORM2026 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-202

TI-03-V-203 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2414052 N 203893 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-203 4.0. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED 08/15/03 6. DIRECTION OF HOLE :COMPLETED : 08/15/03 16. DATE HOLE ▼ VERTICAL □ INCLINED DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (43.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 47.4' STACEY SMITH % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLLW feet 0 0.0'TO 43.4' WATER Time begin vibracoring: 1625 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 43 OCEAN BOTTOM @43.4' 43.4' NOTE: TOP OF HOLE is de--43.4|43.4 SP - Light gray course poorly graded sandy, T/shell fragments fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 43.91 VIBRACORE BORING From 0.0' to 4.0' Ran 4.0' Rec: 3.2' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 45 When Run is greater than Recovery, the difference 45.5' is depicted as Assumed 2 Not Recovered. 46 46.0 46.6 Assumed not Recovered LAB CLASSIFICATION Number Classification 47.4 -47.4 47.4 SP SP BOTTOM OF HOLE AT 47.4' 48 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 4.0' PROJECT TOPSAIL INLET ENG FORM 2036 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-203

Hole No. TI-03-V-204 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2412016 N 205448 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL DISTURBED UNDISTURBED 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-204 15.0. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR :STARTED : 08/15/03 :COMPLETED: 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (43.6' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 9. TOTAL DEPTH OF HOLE 58.61 % CORE RECOV-BOX OR SAMPLE REMARKS CLASSIFICATION OF MATERIALS (Description) (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION DEPTH LEGEND ERY NO. MLLW feet 0.0 0 0.0' TO 43.6' WATER Time begin vibracoring: 1643 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 43 OCEAN BOTTOM @43.6' 43.6' -43.6 43.6 NOTE: TOP OF HOLE is de-SP - Ṭan course poorly 1 fined as surface of water and compensation is made for the tide such that graded sand 44.1' top of Hole is 0.0 EL MLLW. 45.0 45.0 SM - Gray fine silty sand 2 VIBRACORE BORING 45.5' From 0.0' to 15.0' Ran 15.0' Rec: 9.4' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 47.6' 47.6 MH – Dark gray elastic silt 3 48.1 Not Recovered. 49 50.51 4 LAB CLASSIFICATION 51.01 <u>Number</u> <u>Classification</u> 53.0 53 Assumed not Recovered 55 NOTE: Terminated NOTE: Terminated hole at predetermined depth at 15.0' 57 58.6 -58.6 58.6 BOTTOM OF HOLE AT 58.6' 59 -SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET ENG FORM 2046 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-204

TI-03-V-205 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2410957 N 207734 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-205 18.6. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED : 08/15/03 16. DATE HOLE ∨ERTICAL INCLINED DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (43.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 61.81 STACEY SMITH REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH ERY <u>M⊌LW</u> 0.0 feet 0 0.0' TO 43.2' WATER Time begin vibracoring: 1715 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 43.2' OCEAN BOTTOM @43.2' Scale changed @55.0'. SP - Gray course poorly graded sand, T/shell fragments 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 43.7' 45 45.2 MH - Dark gray elastic silt 2 VIBRACORE BORING 45.7 From 0.0' to 18.6' Ran 18.6' Rec: 12.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 47.2 47.21 SM – Dark gray fine silty sand with shell fragments 3 47.7 is depicted as Assumed Not Recovered. 49 50.01 50.5 LAB CLASSIFICATION Jar <u>Number</u> Classification SP CC SC SC 2345 53.0 5 53.5 55 Assumed not Recovered NOTE: Terminated hole at predetermined depth at 18.6 61.81 -61.8 61.8 BOTTOM OF HOLE AT 61.8 SOILS ARE FIELD VISUALLY 65 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. ENG FORM 2056 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-205

TI-03-V-206 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 1. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2412238 N 208881 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing fille and file number) TI-03-V-206 3.0. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A COMPLETED 08/15/03 6. DIRECTION OF HOLE STARTED: 08/15/03 16. DATE HOLE X VERTICAL | INCLINED . \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (44.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 9. TOTAL DEPTH OF HOLE 47.2' % CORE RECOV-BOX OR SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Description) (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION DEPTH LEGEND <u>M⊌LW</u> 0.0 <u>fee</u> 0 0.0'TO 44.2' WATER Time begin vibracoring: 1736 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 44 OCEAN BOTTOM @44.2' SP-SM - Grayish tan fine poorly graded silty sand with shell fragments 44.21 -44.2 44.2 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 45 VIBRACORE BORING From 0.0' to 3.0' 45.7 Ran 3.0' Rec: 1.5' Assumed not Recovered Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 46 is depicted as Assumed Not Recovered. 47 -47.2 47.2 BOTTOM OF HOLE AT 47.2' SOILS ARE FIELD VISUALLY LAB CLASSIFICATION 48 CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM Jar Number Classification SMNOTE: Terminated hole at predetermined depth at 3.0' PROJECT TOPS AIL INLET HOLE NO. ENG FORM 2066 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-206

TI-03-V-207 Hole No. NSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS PROJECT TOPSAIL INLET 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2413829 N 207127 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-207 3.4. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED : 08/15/03 COMPLETED: 08/15/03 16. DATE HOLE VERTICAL | INCLINED \_ \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.2' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 49.6' STACEY SMITH BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MLW feet 0.0 0 0.0'TO 46.2' WATER Time begin vibracoring: 1758 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46 OCEAN BOTTOM @46.2' 46.21 -46.2 46.2 SP-SM - Gray fine poorly graded silty sand with shell fragments NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 VIBRACORE BORING From 0.0' to 3.4' Ran 3.4' Rec: 3.1' 48.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 48 2 When Run is greater than Recovery, the difference 48.5 is depicted as Assumed Not Recovered. 49 49.3 Assumed not Recovered 49.6 -49.6 49.6 BOTTOM OF HOLE AT 49.6' LAB CLASSIFICATION 50 Jar Number <u>Classification</u> SP-SM SP-SM SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.4' PROJECT TOPSAIL INLET HOLE NO. ENG FORM 2076 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-207

Hole No. TI-03-V-208 INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2415564 N 205206 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-208 3.5. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE CRANE OPERATOR 20. ELEVATION GROUND WATER :STARTED : 08/15/03 COMPLETED : 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.0' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 52.5 STACEY SMITH BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY MLLW <u>feet</u> 0.0 0 0.0' TO 49.0' WATER Time begin vibracoring: 1830 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCFAN BOTTOM @49.0' SP - Tan course poorly graded sand, T/shell fragments 49.0' -49.0 49.<del>0 |</del> 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 50 VIBRACORE BORING From 0.0' to 3.5' Ran 3.5' Rec: 3.2' 51.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is desired. 2 51.5' is depicted as Assumed Not Recovered. 52 52.2 Assumed not Recovered -52.5 52.5-BOTTOM OF HOLE AT 52.5' LAB CLASSIFICATION 53 — <u>Number</u> <u>Classification</u> SOILS ARE FIELD VISUALLY SP SP-SM CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.5' PROJECT OPSAIL INLET HOLE NO.

Hole No. TI-03-V-209 DIVISION SOUTH ATLANTIC INSTALLATION SHEET 1 DRILLING LOG WILMINGTON DISTRICT OF 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 1. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2417402 N 203240 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN :DISTURBED ·UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-209 2.0. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 20. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 08/15/03 :COMPLETED: 08/15/03 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (44.4' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 9. TOTAL DEPTH OF HOLE 46.4 % CORE RECOV-BOX OR SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Description) (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION DEPTH LEGEND ERY <u>M⊌LW</u> 0.0 <u>fe⊫et</u> 0 0.0' TO 44.4' WATER Time begin vibracoring: 1847 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @44.4' NOTE: TOP OF HOLE is de--44.4 44.4 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. Assumed not Recovered 45 -VIBRACORE BORING From 0.0' to 2.0' Ran 2.0' Rec: 0.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed 46.4 -46.4 46.4 -BOTTOM OF HOLE AT 46.4' Not Recovered. 47 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION Jar Number Classification NOTE: Terminated hole at predetermined depth at 2.0' PROJECT TOPSAIL INLET ENG FORM 2096 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-209

DRILLI	NG LO	G DIVI	SION SOUTH ATLANTIC	INSTALLATION SHEET 1 WILMINGTON DISTRICT OF 1 SHEETS					
I. PROJECT		<u> </u> _	JOOTH ATEANTIC	20. SIZE AND TYPE OF BIT 4" Dia. Vibracore					
2. LOCATION		s or Station		11. DATUM FOR ELEVATION SHOWNTBM or MSL) ML L W					
NC CC 3. DRILLING		24174	12 N 203231 NAD83	l .	FACTURER'	S DESIGNA	ITION OF DRILL SNELL		
	INGTON		4947-	20. TOT/	NL NO. OF		DISTURBED UNDISTURBED O		
and file nu	ımber)	o. o	TI-03-V-209A		AL NUMBER				
ROBBIE 1	PAGE		CRANE OPERATOR		ATION GRO	OUND WATE	14771		
	CAL   IN		DEG. FROM VERT.	16. DATE		<u>: 08</u>	/15/03 :08/15/03		
7. THICKNES			N/A (47.8' Water)				O.O' MLLW FOR BORING N/A %		
B. DEPTH DE			0.0' 49.8'		TURE OF				
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of		
MeLW	feet	c	(Description) d		ERY	NO.	(Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	°		0.0'TO 47.8' WATER				Time begin vibracoring: 1856 hrs.		
	=						Soils described by Larry Benjamin, Civil Engr. Tech.		
	=						Jon Januari, Gran Zingri, 1991.		
	47 —								
	=						NOTE: TOP OF HOLE is de-		
	=						fined as surface of water and compensation is made		
-47.8			OCEAN BOTTOM @47 Assumed not Recovered	.8'			for the tide such that top of Hole is 0.0 EL MLLW.		
	48 —								
							VIBRACORE BORING From 0.0' to 2.0'		
							Ran 2.0' Rec: 0.0'		
	49 —						Top of vibracore soil		
	49 =						sample is logged as be- ginning at Ocean Bottom.		
	=						When Run is greater than Recovery, the difference		
-49.8	, , , , <del>,</del> ,			49.8'			is depicted as Assumed		
-49.0	49.6 <u> </u>		BOTTOM OF HOLE AT 4	19.8'			Not Recovered.		
	$\exists$								
	=								
	=		SOILS ARE FIELD VISUALL	<b>,</b>			LAB OLAGOISIOATION		
	크		CLASSIFIED IN ACCORDANC				LAB CLASSIFICATION    -		
	∃		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				Number <u>Classification</u>		
	=								
	=								
	]						NOTE: Terminated		
							hole at predetermined depth at 2.0'		
	=								
	=								
			EDITIONS ARE OBSOLETE.		PROJECT	TOPS	AIL INLET HOLE NO. TI-03-V-209		

Hole No. TI-03-V-210 INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 20. SIZE AND TYPE OF BIT 4" Dia. Vibracore 1. PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2419363 N 201064 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 20. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-210 2.0. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE CRANE OPERATOR 20. ELEVATION GROUND WATER N/A STARTED: 08/15/03 :COMPLETED : 08/15/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (47.3' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 49.0' STACEY SMITH Z CORE BOX OR RECOV- SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MLLW <u>feet</u> 0.0 0 0.0'TO 47.8' WATER Time begin vibracoring: 0756 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 47 -47.3' OCEAN BOTTOM @47.3' -47.3 47.3 -SP - Gray course poorly graded sand with shell fragments NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 47.8 48 48.3 VIBRACORE BORING Assumed not Recovered From 0.0' to 1.7' Ran 1.7' Rec: 1.0 49.0 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference -49.049.0-BOTTOM OF HOLE AT 49.0' is depicted as Assumed Not Recovered. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE 50 WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> SP NOTE: Terminated hole at predetermined<del>\_</del> depth at 1.7' PROJECT OPSAIL INLET HOLE NO.

DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		IINGTON	N DISTRICT SHEET 1		
PROJECT	JL INLE	<del></del>		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWNTBM or MSL)  MLLW					
LOCATION	N (Coordinate	s or Station							
DRILLING		Ł 24	21161 N 199148 NAD83	1	FACTURER'	S DESIGNA	ATION OF DRILL SNELL		
WILMI	NGTON			13. TOTA	L NO. OF (	OVER-	DISTURBED UNDISTURBED		
HOLE NO. (As shown on drawing title and file number)  TI-03-V-211  NAME OF DRILLER					L NUMBER		XES N/A		
OBY P	DBY PAGE CRANE OPERATOR DIRECTION OF HOLE				ATION GRO	UND WATE	147 71		
			DEG. FROM VERT.	16. DATE		90 :	1/16/03 : 08/16/03		
THICKNES	S OF OVE	RBURDEN	N/A (49.1' of Water)		ATION TOP		FOR BORING N/A 2		
	RILLED INT EPTH OF H		0.0' 50.3'	1	TURE OF				
LEVATION		LEGEND	CLASSIFICATION OF MATERIA		% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of		
Melw	feet	с	(Description) d		ERY	NO.	weathering, etc., if significant)		
0.0			0.0'TO 49.1' WATER				Time begin vibracoring: 0814 hrs.		
							Soils described by Larry Benjamin, Civil Engr. Tech.		
							Bernjammi, Gramengr. 1961.		
-49.1	49.0		OCEAN BOTTOM @49.			49.1'			
13.1	'		SP Gray, coarse, poorly graded sand, T/shell frag	ments	•	1	NOTE: TOP OF HOLE is de-		
							fined as surface of water and compensation is made		
			_	49. 9'		49.6'	for the tide such that top of Hole is 0.0 EL MLLW.		
	50.0		Assumed not Recovere	ed					
-50.3	50.3		BOTTOM OF HOLE AT	50.3'			VIBRACORE BORING		
	_						From 0.0' to 1.2' Ran 1.2' Rec: 0.8'		
							T 6 11		
			SOILS ARE FIELD VISUALLY				Top of vibracore soil sample is logged as be-		
			CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	•			ginning at Ocean Bottom. When Run is greater than		
			CLASSIFICATION STSTEM				Recovery, the difference is depicted as Assumed		
							Not Recovered.		
							LAB CLASSIFICATION		
							Jar <u>Numbe</u> r <u>Classification</u>		
							1 SP		
				,					
							NOTE: Terminated		
							hole at predetermined depth at 1.2'		
							popul ut 1.2		
	_=								
	1 -					l	1		

Hole No. TI-03-V-212 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) MLLW NC COORD E 2422944 N 197201 NAD 83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY WILMINGTON DISTRICT VIBRA CORE SNELI 13. TOTAL NO.OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-212 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE CRANE OPERATOR 15. ELEVATION GROUND WATER N/A 6. DIRECTION OF HOLE COMPLETED: 08/16/03 STARTED: 08/16/03 16. DATE HOLE X VERTICAL | INCLINED \_ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.9' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK O.O' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE STACEY SMITH % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) DEPTH (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION LEGEND MeLW feet ERY 0.0' TO 49.9' WATER Time begin vibracoring: 0834 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 49.0-NOTE: TOP OF HOLE is de-OCEAN BOTTOM @49.9' -49.9 49.9 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. Assumed not Recovered 51.0-VIBRACORE BORING From 0.0' to 9.5' Ran 9.5' Rec: 0.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 53.0-When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. 55.0-LAB CLASSIFICATION 57.0 Number Classification 59.0--59.4 59.4 BOTTOM OF HOLE AT 59.4' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated nole at predetermined depth at 9.5'. PROJECT TOPSAIL INLET HOLE NO. TI-03-V-212 ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

Hole No. TI-03-V-212A INSTALLATION SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) MLLW NC COORD E 2422952 N 197200 NAD 83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-212A 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER
ROBY PAGE CRANE OPERATOR 15. ELEVATION GROUND WATER : :COMPLETED : 08/16/03 6. DIRECTION OF HOLE STARTED: 08/16/03 16. DATE HOLE VERTICAL | INCLINED . \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.7' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE STACEY SMITH % CORE RECOV-REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) NO. MFLM 0.0' TO 49.7' WATER Time begin vibracoring: 0840 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 49.0 Scale changed @52.0' NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 49.7' OCEAN BOTTOM @49.7' -49.7 49.7 -SP Tan, coarse, poorly graded sand, T/shell fragments. 50.0— VIBRACORE BORING 50.2' From 0.0' to 9.7' Ran 9.7' Rec: 8.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 51.0-51.21 SM Gray, fine, silty sand. 2 is depicted as Assumed 51.7' Not Recovered. 52.0-53.0' 3 53.5 LAB CLASSIFICATION 54.0 Number <u>Classification</u> SP SM SM SM 56.01 56.0-4 56.5 57.7' Assumed not Recovered 58.0--59.4 59.4 -BOTTOM OF HOLE AT 59.4' NOTE: Terminated nole at predetermined depth at 9.7'. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

Hole No. TI-03-V-213 DIVISION SOUTH ATLANTIC INSTALLATION SHEET 1 DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2424730 N 198909 NAD 83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-213 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED: 08/16/03 : :08/16/03 6. DIRECTION OF HOLE 16. DATE HOLE \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.9' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 9. TOTAL DEPTH OF HOLE 52.5 % CORE RECOV-REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) ERY MLLW 0.0 0.0'TO 49,9' WATER Time begin vibracoring: 0901 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 49.0 NOTE: TOP OF HOLE is de-fined as surface of water and compensation is made for the tide such that OCEAN BOTTOM @49.9' top of Hole is 0.0 EL MLLW. -49.9 49.9 50.0 SP Tan, coarse, poorly graded sand, w/shell frag-1 VIBRACORE BORING ments. From 0.0' to 2.6' Ran 2.6' Rec: 1.4' 50.4 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 51.0-51.31 Not Recovered. Assumed not Recovered 52.0 -52.5 52.5 BOTTOM OF HOLE AT 52.5' LAB CLASSIFICATION SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE <u>Number</u> <u>Classification</u> WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM SP NOTE: Terminated hole at predetermined depth a't 2.6'. PROJECT TOPSAIL INLET HOLE NO. TI-03-V-213

Hole No. TI-03-V-214 DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 1. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station)
NC COORD 2423188 N 201056 NAD83 MII W 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNFI 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-214 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE CRANE OPERATOR 15. ELEVATION GROUND WATER STARTED: 08/16/03 COMPLETED : 08/16/03 6. DIRECTION OF HOLE 16. DATE HOLE \_ DEG. FROM VERT. VERTICAL □ INCLINED □ 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (50.5) of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0" 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 59.2 BEN LACKEY AND LARRY BENJAMIN % CORE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MFTM fe€t O 0.0 0.0' TO 50.5' WATER Time begin vibracoring: 0933 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 50.0-Scal e changed @55.0' NOTE: TOP OF HOLE is de-fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @50.5' 50.51 -50.5 50.5 MH Dark gray, elastic silt. 51.0-51.0 VIBRACORE BORING From 0.0' to 8.7' Ran 8.7' Rec: 6.3' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 52.5' 2 Not Recovered. 53.0 53.0 LAB CLASSIFICATION 54.0 <u>Number</u> <u>Classification</u> 54.5' 23 3 55.0 55.0 SM Dark gray, fine, silty sand, T/shell fragments. 56.2' -56.8 56.8 57.0 Assumed not Recovered -59.2 59.0 -59.2 59.2 BOTTOM OF HOLE AT 59.2' NOTE: Terminated hole at predetermined SOILS ARE FIELD VISUALLY depth at 8.7'. CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET

TI-03-V-215 Hole No. DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG WILMINGTON DISTRICT SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore **PROJECT** TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) MLLWNC COORD E 2421469 N 203113 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY WILMINGTON DISTRICT VIBRA CORE SNELI 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-215 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED: 08/16/03 6. DIRECTION OF HOLE COMPLETED : 08/16/03 16. DATE HOLE DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.4' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 52.8 STACEY SMITH REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-BOX OR SAMPLE NO. CLASSIFICATION OF MATERIALS (Description) **ELEVATION** DEPTH LEGEND ERY MFLM <u>fe€t</u> 0 0.0' to 49.4' WATER 0.0 Time begin vibracoring: 0949 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 49.0 OCFAN BOTTOM @49.4'

SP Tan, coarse, poorly
graded sand, T/shell fragments. NOTE: TOP OF HOLE is de-49.4fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 49.9' 50.0<del>\_</del> VIBRACORE BORING From 0.0' to 3.4' Ran 3.4' Rec: 3.4' 50.6 50.6' · · · · GP Gray, coarse, poorly · · · graded gravel. 2 Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 51.0-51.1 51.7 51.7 SM Tan, fine, silty sand. Not Recovered. 3 52.0 52.2 -52.8 52.8 = BOTTOM OF HOLE AT 52.8' LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> SP-SM SP-SM 2 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.4'.

DRILLING LOG DIVISION SOUTH ATLANTIC	INSTALLA		MINGTON	SHEET 1 OF 1 SHEETS		
. PROJECT TOPSAIL INLET		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BW OF MSU				
2. LOCATION (Coordinates or Station) C COORD E 2419338 N 205038 NAD83	MLLW	MLLW  112. MANUFACTURER'S DESIGNATION OF DRILL				
B. DRILLING AGENCY WILMINGTON DISTRICT	VIBRA	CORE		SNELL		
H. HOLE NO. (As shown on drawing title and file number)		L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED UNDISTURBED 0		
S. NAME OF DRILLER ROBY PAGE CRANE OPERATOR	14. TOTA	ATION GRO		147 71		
S. DIRECTION OF HOLE	16. DATE		;STAF	RTED COMPLETED		
VERTICAL ☐ INCLINED DEG. FROM \	17. ELEV	ATION TOP		/16/03 : 08/16/03 0.0' MLL W		
7. THICKNESS OF OVERBURDEN N/A (48.2' of Water B. DEPTH DRILLED INTO ROCK $0.0$ '	10: 10:	L CORE RE		FOR BORING N/A %		
D. TOTAL DEPTH OF HOLE 51.1		Y SMIT	Н			
ELEVATION DEPTH LEGEND CLASSIFICATION OF MA M&L W feet c d	TERIALS	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
0.0 0 _ 0.0' TO 48.2' WAT	ER		,	Time begin vibracoring:		
<u> </u>				1007 hrs. Soils described by Larry		
				Benjamin, Civil Engr. Tech.		
48.0						
-48.2 48.2 OCEAN BOTTOM © SP Tan, coarse, poor			48.2'	NOTE, TOD OF HOLE :		
graded sand, w/shell fragments.	• )		1	NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made		
] - · ·   ragments.			   48.7'	for the tide such that top of Hole is 0.0 EL MLLW.		
49.0 -	49.0'		49.0'	,		
w/shell fragments.	arra,		2	VIBRACORE BORING		
│ <u>─</u> ]† <u> </u> †			49.5'	From 0.0' to 2.9' Ran 2.9' Rec: 2.1'		
50.0	50.71			Top of vibracore soil sample is logged as be-		
Assumed not Reco	50.3' vered			ginning at Ocean Bottom. When Run is areater than		
				Recovery, the difference is depicted as Assumed		
]				Not Recovered.		
-51.1 51.0 BOTTOM OF HOLE	AT 511'					
	,,,					
SOILS ARE FIELD VISU CLASSIFIED IN ACCORE	DANCE					
WITH THE UNIFIED SO CLASSIFICATION SYSTI				LAB CLASSIFICATION		
]				Jar <u>Number</u> <u>Classification</u>		
				1 SP 2 SP-SM		
] ]				2 31 3101		
]				NOTE: Terminated		
				hole at predetermined depth at 2.9'		
				   SAIL INLET		

Hole No. TI-03-V-217 SHEET 1 DIVISION SOUTH ATLANTIC INSTALLATION DRILLING LOG WILMINGTON DISTRICT of 1 SHEETS PROJECT TOPSAIL INLET 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2417713 N 207313 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** DISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-217 . 0 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED : 08/16/03 :COMPLETED::08/16/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.4' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 45.81 STACEY SMITH BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND FRY Melw 0.0' TO 45.4' WATER Time begin vibracoring: 1026 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 45.0 OCEAN BOTTOM @45.4' NOTE: TOP OF HOLE is de--45.4 45.4 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. Assumed not Recovered -45.8 45.8 -BOTTOM OF HOLE AT 45.8' VIBRACORE BORING SOILS ARE FIELD VISUALLY From 0.0' to 0.4' CLASSIFIED IN ACCORDANCE Ran 0.4' Rec: 0.0' WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM Top of vibracore soil ginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> NOTE: Terminated . hole at predetermined depth at 0.4'. sample is logged as be-

						H	lole No. TI-03-V-217A		
DRILLI	NG LO	G DIVI	SOUTH ATLANTIC	INSTALLATION WILMINGTON DISTRICT SHEET 1 OF 1 SHEETS					
1. PROJECT TOPSA	IL INLE	Т		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWN BM or MSL)					
2. LOCATION			, 691 N 207324 NAD83				ATION OF DRILL		
3. DRILLING					CORE	5 DESIGNA	SNELL		
4. HOLE NO.	. (As shown			13. TOTA BURDI	L NO. OF ( EN SAMPLE	OVER- S TAKEN	DISTURBED UNDISTURBED		
5. NAME OF	DRILLER				L NUMBER		147 71		
ROBY PAGE CRANE OPERATOR  B. DIRECTION OF HOLE  CONTROL INCLINED				16. DATE	HOLF	;STAF	RTED COMPLETED		
					ATION TOP		<u>/16/03                                    </u>		
7. THICKNES 8. DEPTH DE			N/A (45.3' of Water)				FOR BORING N/A %		
9. TOTAL DE			15.8'		EY SM		?		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)	_S	% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of		
M <b>೬</b> LW 0.0	feet 0 _	с	đ		ERY	NO. f	weathering, etc., if significant)		
0.0	-		0.0'TO 45.3' WATER				Time begin vibracoring: 1034 hrs.		
	_						Soils described by Larry Benjamin, Civil Engr. Tech.		
	_								
	45.0			_					
-45.3	45.3		OCEAN BOTTOM @45. Assumed not Recovere				NOTE: TOP OF HOLE is de-		
							fined as surface of water and compensation is made for the tide such that		
-45.8	45.8		BOTTOM OF HOLE AT	45.8'			top of Hole is 0.0 EL MLLW.		
							\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				<u>VIBRACORE BORING</u> From 0.0' to 0.5'		
			WITH THE UNIFIED SOIL				Ran 0.5' Rec: 0.0'		
	=		CLASSIFICATION SYSTEM				Top of vibracore soil		
	_						sample is logged as be- ginning at Ocean Bottom.		
	_						When Run is greater than Recovery, the difference		
	_						is depicted as Assumed Not Recovered.		
							THOU THE COVET CO.		
	=								
	=								
	_						LAB CLASSIFICATION		
							Jar		
							<u>Number</u> <u>Classification</u>		
	_								
	_								
	=								
							NOTE: Terminated hole at predetermined		
	=						depth at 0.5'.		

Hole No. TI-03-V-218 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) . LOCATION (Coordinates or Station)
NC COORD E 2415460 N 210149 NAD83 ML L W 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-218 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE CRANE OPERATOR 15. ELEVATION GROUND WATER N/A COMPLETED : 08/16/03 6. DIRECTION OF HOLE STARTED: 08/16/03 16. DATE HOLE VERTICAL | INCLINED | \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.3' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 47.1 STACEY SMITH % CORE RECOV-REMARKS CLASSIFICATION OF MATERIALS (Description) DEPTH ELEVATION LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) FRY MFTM 0.0 0.0' TO 45.3' WATER Time begin vibracoring: 1052 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 45.0 OCEAN BOTTOM @45.3' 45.3' -45.3 | 45.3 -NOTE: TOP OF HOLE is de-SP-SM Tan, fine, poorly graded, silty sand, T/shell fined as surface of water fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. fragments. 45.8 46.0 VIBRACORE BORING From 0.0' to 1.8' Ran 1.8' Rec: 1.8' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 47.1 | 47.0 <del>-</del> BOTTOM OF HOLE AT 47.1' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE Not Recovered. WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP-SM NOTE: Terminated hole at predetermined depth at 1.8′. PROJECT TOPSAIL INLET HOLE NO. TI-03-V-218

DRILLING LOG DIVISION SOUTH ATLANTIC	Hole No. TI-03-V-219 INSTALLATION SHEET 1 WILMINGTON DISTRICT OF 1 SHEETS					
PROJECT	10. SIZE AND TYPE OF BIT 4" Dia. Vibracore					
TOPSAIL INLET 2. LOCATION (Coordinates or Station)	11. DATUM FOR ELEVATION SHOWN BM or MSL)  MLLW					
NC COORD E 2413590 N 210149 NAD83  3. DRILLING AGENCY	12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL					
WILMINGTON DISTRICT	13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN 1 UNDISTURBED					
in HOLE NO. (AS Shown on arowing fine TI-03-V-219 is NAME OF DRILLER	14. TOTAL NUMBER CORE BOXES N/A					
ROBY PAGE CRANE OPERATOR  5. DIRECTION OF HOLE	15. ELEVATION GROUND WATER N/A  16. DATE HOLE STARTED COMPLETED					
	:08/16/03 :08/16/03					
7. THICKNESS OF OVERBURDEN N/A (42.7' of Water)	17. ELEVATION TOP OF HOLE O.O' MLLW  18. TOTAL CORE RECOVERY FOR BORING N/A X					
B. DEPTH DRILLED INTO ROCK 0.0'  D. TOTAL DEPTH OF HOLE 45.0'	19. SIGNATURE OF INSPECTOR STACEY SMITH					
ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIAL (Description)	S RECOV- SAMPLE (Drilling time, water loss, depth of					
M&LW feet c d d d d d d d d d d d d d d d d d d	f g					
0.0 (0 12.7 W///EN	Time begin vibracoring: 1111 hrs.					
	Soils described by Larry Benjamin, Civil Engr. Tech.					
42.0-						
	NOTE: TOP OF HOLE is de- fined as surface of water					
-42.7 42.7 OCEAN BOTTOM @42.7	7' 42.7' and compensation is made for the tide such that					
43.0 SP Gray, coarse, poorly	top of Hole is 0.0 EL MLLW.					
=	43.2' VIBRACORE BORING					
	From 0.0' to 2.3' Ran 2.3' Rec: 1.6'					
₹::::	Ruil 2.3 Rec. 1.0					
44.0	Top of vibracore soil sample is logged as be-					
-44.3 44.3 ASSUMED NOT RECOVER	sample is logged as beginning at Ocean Bottom.  When Run is greater than					
	Recovery, the difference is depicted as Assumed					
-45.0 45.0	Not Recovered.					
BOTTOM OF HOLE AT	45.0'					
500 5 405 515 0 4161414						
SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE						
WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	LAB CLASSIFICATION					
	Jar <u>Numbe</u> r <u>Classification</u>					
	1 SP					
4						
-						
	NOTE: Terminated hole at predetermined					
	depth at 2.3'.					
<u>                                   </u>						
4						
	PROJECT TOPSAIL HOLE NO. 11-03-V-219					

	Hole No. TI-03-V-220						
DRILLING LOG DIVISION SOUTH ATLANTIC	INSTALLATION SHEET 1 WILMINGTON DISTRICT OF 1 SHEETS						
1. PROJECT TOPSAIL INLET	10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL)						
2. LOCATION (Coordinates or Station) NC COORD E 2414662 N 211075 NAD83	MLLW						
3. DRILLING AGENCY	12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL						
WILMINGTON DISTRICT  4. HOLE NO. (As shown on drowling filtle and filte number)  TI-03-V-220	13. TOTAL NO. OF OVER- DISTURBED UNDISTURBED BURDEN SAMPLES TAKEN 2						
5. NAME OF DRILLER	14. TOTAL NUMBER CORE BOXES N/A						
ROBY PAGE CRANE OPERATOR  6. DIRECTION OF HOLE	15. ELEVATION GROUND WATER N/A  16. DATE HOLE STARTED COMPLETED 7						
X VERTICAL ☐ INCLINED DEG. FROM VERT.	17. ELEVATION TOP OF HOLE 0.0' MLL W						
7. THICKNESS OF OVERBURDEN N/A (44.2' of Water)  8. DEPTH DRILLED INTO ROCK 0.0'	18. TOTAL CORE RECOVERY FOR BORING N/A %						
9. TOTAL DEPTH OF HOLE 47.9'	19. SIGNATURE OF INSPECTOR STACEY SMITH						
ELEVATION DEPTH LEGEND CLASSIFICATION OF MATERIA (Description)	TREGOT SHAME EE TENTING THICK WORLD TOOK COPING						
MLLW         feet         c         d           0.0         0         0         0.0' TO 44.2' WATER	_ r g						
0.0 10 44.2 WATER	Time begin vibracoring:						
	Soils described by Larry Benjamin, Civil Engr. Tech.						
-44.2 44.2 OCEAN BOTTOM @44	.2' .44.2'						
SP Grayish tan, medium, poorly graded sand, T/s	i ii l linoiti ioi oi liotti is de I						
fragments.	and compensation is made						
<sub>45.0</sub> =	top of Hole is 0.0 EL MLLW.						
	VIBRACORE BORING						
= :::	From 0.0' to 3.7'						
]:::	Ran 3.7' Rec: 3.7'						
46.0 - 1 SP-SM Tan, fine, poorly	46.0' Top of vibracore soil sample is logged as be-						
graded silty sand.	2 ginning at Ocean Bottom. When Run is greater than						
	46.5 Recovery, the difference is depicted as Assumed						
	Not Recovered.						
47.0							
¬;.;;							
-47.9 47.9 BOTTOM OF HOLE AT	47.9' LAB CLASSIFICATION						
]	Jar <u>Numbe</u> r <u>Classification</u>						
SOILS ARE FIELD VISUALL CLASSIFIED IN ACCORDANC							
WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM							
4	NOTE: Terminated						
	hole at predetermined depth at 3.7'						

Hole No. TI-03-V-221 NSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG lor 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) MIIW NC COORD E 2416925 N 210105 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY WILMINGTON DISTRICT VIBRA CORE SNELL DISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-221 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE CRANE OPERATOR 15. ELEVATION GROUND WATER 6. DIRECTION OF HOLE STARTED : 08/16/03 COMPLETED: 08/16/03 16. DATE HOLE \_\_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.7' OF WATER) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 52.1 STACEY SMITH BOX OR SAMPLE NO. REMARKS % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) ERY MFTM <u>fe€t</u> 0.0 0.0' TO 46.7' WATER Time begin vibracoring: 1218 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46.0-NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that 46.7 SP Gray, medium, poorly graded sand, T/shell fragments. <u>46.7'</u> OCEAN BOTTOM @46.7 -46.7 top of Hole is 0.0 EL MLLW. 1 VIBRACORE BORING 47.2' From 0.0' to 5.4' Ran 5.4' Rec: 3.6' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 48.0-48.5' 48.5 SM Tan, fine, silty sand, with shell fragments. 2 Not Recovered. 49.0-49.0 LAB CLASSIFICATION 50.0-50.3 <u>Number</u> <u>Classification</u> ASSUMED NOT RECOVERED SP SM 51.0-52.0--52.1 52.1 BOTTOM OF HOLE AT 52.1' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE NOTE: Terminated WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM hole at predetermined depth at 5.4'.

TI-03-V-222 Hole No. SHEET 1 DIVISION SOUTH ATLANTIC INSTALLATION DRILLING LOG WILMINGTON DISTRICT of 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2419581 N 208964 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 'UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-222 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER ROBY PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR 6. DIRECTION OF HOLE STARTED: 08/16/03 COMPLETED : 08/16/03 16. DATE HOLE \_\_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.4' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 51.6' STACEY SMITH % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY NO. MLLW <u>fe€t</u> 0 0.0 0.0'TO 45.4' WATER Time begin vibracoring: 1239 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 45.0 45.4' NOTE: TOP OF HOLE is de-OCEAN BOTTOM @45.4' -45.4 45.4 -SP Gray, coarse, poorly
• graded sand, w/shell fined as surface of water and compensation is made for the tide such that fragments. top of Hole is 0.0 EL MLLW. 45.9 VIBRACORE BORING From 0.0' to 6.2' Ran 6.2 Rec: 4.3' 47.0 47.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 47.<del>0</del> ·:·GP Gray, coarse, poorly :·graded gravel. 2 47.5 Not Recovered. 48.0-48.4' SM Grayish tan, fine, silty sand, T/shell fragments. 3 LAB CLASSIFICATION 48.9 49.0<del>-</del> <u>Number</u> Classification SP SP 49.7' ŠΜ Assumed not Recovered 50.0 51.0--51.6 | 51.6 -BOTTOM OF HOLE AT 51.6' NOTE: Terminated hole at predetermined depth at 6.2'. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-222 ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

DRILL	ING LOG	DIV	VISION	INSTALLA			Hole No. TI-03-V-223		
1. PROJECT			SOUTH ATLANTIC	10. SIZE	WILMINGTON DISTRICT OF 1 SHEETS  10. SIZE AND TYPE OF BIT 4" Dia. Vibracore				
	IL INLET	or Station	n)		M FOR EL		SHOWNTBM or MSL)		
NC COC		4214	-22 N 206932 NAD83	1		'S DESIGNA	ATION OF DRILL		
WILMI	NGTON [		•	13. TOTA	CORE	OVER-	SNELL :DISTURBED :UNDISTURBED		
and file n	umber)	arawing	TI-03-V-223	_	EN SAMPLE AL NUMBER		· 3 · 0 xes N/A		
5. NAME OF ROBY P	AGE	CR	ANE OPERATOR	15. ELEV	ATION GRO		147 73		
6. DIRECTION		.INED	DEG.FROM VERT	16. DATE			/16/03 :08/16/03		
7. THICKNES	S OF OVER	BURDEN	N/A (43.5' of Water)		AL CORE RE		O.O' MLLW FOR BORING N/A %		
	RILLED INTO EPTH OF HO		0.0' 52.1'	19. SIGN	ATURE OF	INSPECTOR	147.71		
			I	•	EY SMI	BOX OR	REMARKS		
ELEVATION MLLW	DEPTH l feet	.EGEND	(Description)		RECOV- ERY	SAMPLE NO. f	(Drilling time, water loss, depth of weathering, etc., if significant) 9		
0.0	0 _		0.0'TO 43.5' WATER				Time begin vibracoring: 1259 hrs.		
							Soils described by Larry		
							Benjamin, Civil Engr. Tech.		
	43.0								
							Scal e changed @48.0'. NOTE: TOP OF HOLE is de-		
-43.5	43.5-	• •	OCEAN BOTTOM @43.	5'		43.5'	fined as surface of water land compensation is made		
	∃.	• • •	graded sand, w/shell ^			1	for the tide such that top of Hole is 0.0 EL MLLW.		
	44.0 <del>-</del>	• • •	fragments.			44.0'	'		
		• • • •					VIBRACORE BORING		
	-∃∙	•.•.					From 0.0' to 8.6' Ran 8.6' Rec: 3.7'		
	l ∃.	•••				45.01			
	45.0	•••				<u>45.0'</u> 	Top of vibracore soil sample is logged as be-		
	∄.	•••				2	ginning at Ocean Bottom. When Run is areater than		
	<del>-</del>	• • •				45.5'	Recovery, the difference is depicted as Assumed		
	]. ].	•••					Not Recovered.		
	46.0	•••							
		• • • • •		46.5'		46.5'			
			SM Gray, fine, silty sand			3			
	47.0		T/shell fragments.				LAB CLASSIFICATION		
	+		ACCUMED NOT DECOVE	47.2		47.0'	Jar Number Classification		
			ASSUMED NOT RECOVE	KLU			1 SP		
							2 SP 3 SM		
	48.0								
	-								
	50.0								
	=								
-52.1	52.Y		BOTTOM OF HOLE AT	52.1'					
			SOILS ARE FIELD VISUALL	ſ			NOTE: Terminated hole at predetermined		
			CLASSIFIED IN ACCORDANC WITH THE UNIFIED SOIL	E			depth at 8.6'.		
	F		CLASSIFICATION SYSTEM						
	=								
			1		i .	I	i .		

TI-03-V-224 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG of 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Statton) NC COORD E 2423382 N 204873 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNELI 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-224 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBY PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED: 08/16/03 COMPLETED: 08/16/03 6. DIRECTION OF HOLE 16. DATE HOLE VERTICAL □ INCLINED □ \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (46.4' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 52.6' STACEY SMITH % CORE BOX OR RECOV- SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) ERY MFFM feet 0 -0.0' to 46.4' WATER 0.0 Time begin vibracoring: 1322 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 46.0 46.4' NOTE: TOP OF HOLE is de-OCEAN BOTTOM @46.4' -46.4 46.4fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. SP Tan, coarse, poorly graded sand, with shell fragments. 1 46.9' 47.0-VIBRACORE BORING From 0.0' to 6.2' Ran 6.2' Rec: 6.2' 48.0\_ Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference 48.4 48.4 SM Greenish gray, fine, silty sand. 2 is depicted as Assumed Not Recovered. 48.9 49.0<del>-</del> LAB CLASSIFICATION 50.0 <u>Number</u> <u>Classification</u> SP SM 50.51 3 51.0-51.0' 52.0--52.6 | 52.6 -BOTTOM OF HOLE AT 52.6' NOTE: Terminated hole at predetermined depth at 6.2'. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM

DRILLI	NG LO	G DIVI	ISION	INSTALLA	TION	AINIC T O A	Hole No. TI-03-V-22			
PROJECT			SOUTH ATLANTIC	10. SIZE	WILMINGTON DISTRICT OF 1 SHEETS  10. SIZE AND TYPE OF BIT 4" Dia. Vibracore					
TOPSA LOCATION	L INLE		N.		M FOR EL		SHOWNTBM or MSL)	$\exists$		
COOF	RD E 2		7 N 202896 NAD83	12. MANU	FACTURER'	S DESIGNA	ATION OF DRILL	$\dashv$		
	<u> IGTON</u>			13. TOTA	CORE	OVER-	SNELL :UNDISTURBED	$\dashv$		
4. HOLE NO. (As shown on drawing title and file number)				BURD	EN SAMPLE	S TAKEN	. 0	$\dashv$		
NAME OF		CR	ANE OPERATOR		ATION GRO		117 71			
DIRECTION			DEC EDON VEDT	16. DATE	HOLE	:STA	COMPLETED /16/03 08/16/03			
, ,			DEG. FROM VERT.  N/A (46.9' of Water)	17. ELEV	ATION TOP	OF HOLE	0.0' MLLW			
DEPTH DE			0.0'	-	L CORE RE		FOR BORING N/A	·/.		
. TOTAL DE	PTH OF H	IOLE	50.2'		Y SMI	ГН	I			
LEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA (Description)	LS	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)			
M€LW 0.0	feet 0 _	С	0.0' TO 46.9' WATER			1	Time begin vibracoring:	$\dashv$		
	$\exists$						1343 hrs. Soils described by Larry			
	$\exists$						Benjamin, Civil Engr. Tech.			
	ΞΞ									
	46.0									
	$\exists$						NOTE: TOP OF HOLE is de-			
							fined as surface of water and compensation is made for the tide such that			
-46.9	46.9		OCEAN BOTTOM @46 ASSUMED NOT RECOVE				top of Hole is 0.0 EL MLLW.			
	4 /.0		ASSUMED NOT RECOVE	LINEU			VIBRACORE BORING	$\neg$		
	$\exists$						From 0.0' to 3.3'			
	=						Ran 3.3' Rec: 0.0'			
	48.0						Top of vibracore soil			
	=						Top of vibracore soil sample is logged as be- ginning at Ocean Bottom	ì.		
	$\exists$						When Run is greater the Recovery, the difference	ınll		
	=						is depicted as Assumed Not Recovered.			
	49.0						Not Recovered.	Ц		
	$\exists$					 		]		
	=							_		
	50.0						LAB CLASSIFICATION			
-50.2	50.2		BOTTOM OF HOLE AT	50.2'			Jar Number Classification			
	$\exists$									
	$\equiv$		SOILS ARE FIELD VISUAL	ΙΥ						
			CLASSIFIED IN ACCORDAN WITH THE UNIFIED SOIL							
	$\exists$		CLASSIFICATION SYSTEM							
	ㅋ						NOTE: Terminated	-		
	$\exists$						hole at predetermine  depth at 3.3'	ed		
	$\exists$						aepth at 3.3'			
	$\exists$									
	$\exists$									
	_ =									
	$\exists$									
	日									
	$\exists$									
	$\exists$									
	$\exists$									
	$\exists$									
							 SAIL INLET   HOLE NO. TI-03-V-2:			

						H	lole No. TI-03-V-225A		
	ING LOG	DIVI	SOUTH ATLANTIC	INSTALLA:	WILN		N DISTRICT SHEETS SHEETS		
1. PROJECT	AIL INLET			10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL)					
	N (Coordinates or RD F 24:		, 6 N 202799 NAD83	MLLW					
3. DRILLING				12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL					
	). (As shown on d			BURDE	L NO. OF ( IN SAMPLE	S TAKEN	DISTURBED UNDISTURBED		
5. NAME OF ROBY P		CP	ANE OPERATOR			CORE BO	11771		
	DIRECTION OF HOLE  VERTICAL INCLINED DEG. FROM VERT					;STAF	RTED COMPLETED		
						OF HOLE	<u>/16/03 :08/16/03</u> 0.0' MLLW		
	SS OF OVERBU		N/A (47.0' of Water)				FOR BORING N/A %		
	EPTH OF HOLE	50.9'		Y SMI					
ELEVATION MLLW	feet	GEND c	CLASSIFICATION OF MATERIAL ( <i>Description)</i> d	_S	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) 9		
-50.9	47.0	ς	OCEAN BOTTOM @47.0  ASSUMED NOT RECOVE  BOTTOM OF HOLE AT  SOILS ARE FIELD VISUALI CLASSIFIED IN ACCORDAN WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	50.9'		f			

DRILLII	NG LO	G	ISION SOUTH ATLANTIC	INSTALLATION SHEET 1 WILMINGTON DISTRICT SHEETS						
. PROJECT	L INLE	Т			10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNEM or MSL)					
. LOCATION	(Coordinate:	s or Station								
. DRILLING	AGENCY		320 N 202789 NAD83	1	FACTURER' CORE	S DESIGNA	SNELL			
. HOLE NO.	(As shown		title	13. TOTA BURDI	L NO. OF	OVER- S TAKEN	DISTURBED UNDISTURBED 0			
5. NAME OF DRILLER ROBY PAGE CRANE OPERATOR 6. DIRECTION OF HOLE						CORE BO	xes N/A			
						UND WATE	RTED COMPLETED			
X VERTI	CAL   IN	CLINED	DEG. FROM VERT			08 OF HOLE	/16/03 : 08/16/03 0.0' MLL W			
. THICKNESS			N/A (46.8' of Water)	-			FOR BORING N/A %			
. TOTAL DE			0.0' 51.4'		TURE OF	INSPECTOR [H				
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA (Description)	LS	% CORE RECOV-	BOX OR SAMPLE	REMARKS (Drilling time, water loss, depth of			
M€LW 0.0	feet 0 _	c	d d		ERY	NO.	weathering, etc., if significant)			
0.0	Ĭ		0.0'TO 46.8' WATER				Time begin vibracoring:   1423 hrs.			
	$\exists$						Soils described by Larry Benjamin, Civil Engr. Tech.			
	$\exists$						, , , , , , , , , , , , , , , , , , , ,			
	46.0									
	$\exists$						NOTE: TOP OF HOLE is de-			
	$\exists$					l	fined as surface of water			
-46.8	46.8		OCEAN BOTTOM @46 SP Gray, coarse, poorly	.8'		46.8'	for the tide such that top of Hole is 0.0 EL MLLW.			
4	47.0	••••	graded sand, T/shell			1				
	∄	••••	fragments.			47.3'	VIBRACORE BORING			
	$\exists$	••••					From 0.0' to 4.6' Ran 4.6' Rec: 4.6'			
	$\exists$	•••••								
	48.0	••••					Top of vibracore soil sample is logged as be-			
	=	••••					ginning at Ocean Bottom. When Run is greater than			
		1111	SM Grayish tan, fine, sil	48.6'		48.6'	Recovery, the difference is depicted as Assumed			
		+ ] $+$ ]	sand, T/shell fragments.	. у		2	Not Recovered.			
	49.0	+ $+$ $+$ $+$ $+$				49.1'				
	=									
	$\exists$									
	50.0						LAB CLASSIFICATION			
	30.0						Jar Number <u>Classification</u>			
	$\exists$					50.5'	1 SP			
	=					3	2 SM 3 SM			
],	51.0	1111								
	$\exists$	1111				51.0'				
-51.4	51.4_	Y   F	BOTTOM OF HOLE A	T 51.4'			H			
	$\exists$						NOTE: Terminated			
	4						hole at predetermined depth at 4.6'			
	$\exists$									
	$\exists$		SOILS ARE FIELD VISUAL CLASSIFIED IN ACCORDAN							
	$\exists$		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM							
	$\exists$									
	$\exists$									
	$\exists$									
	$\exists$									
	$\exists$									
	=									
	$\exists$									
	-									

DRILLI	NG LO	G DIV	SOUTH ATLANTIC	INSTALLA		IINGTON	SHEET 1 OF 1 SHEETS		
. PROJECT TOPSA	IL INLE	Т				OF BIT			
LOCATION			, 196 N 200873 NAD83	11. DATUM FOR ELEVATION SHOWN BM or MSL)  12. MANUFACTURER'S DESIGNATION OF DRILL					
. DRILLING				VIBRA	CORE		SNELL		
. HOLE NO.				BURDE	L NO. OF ( N SAMPLE	S TAKEN	DISTURBED UNDISTURBED O		
NAME OF DRILLER ROBY PAGE CRANE OPERATOR				-		CORE BO	117 71		
S. DIRECTION OF HOLE					HOLE	STAF	,		
<del></del>	ICAL   IN			17. ELEV	ATION TOP	OF HOLE			
B. DEPTH DE			N/A (47.8' of Water) 0.0'			COVERY INSPECTOR	FOR BORING N/A %		
. TOTAL DE	PTH OF H	HOLE	49.9'		Y SMI	ГН			
ELEVATION MLLW	<sub>DEPTH</sub> feæt	LEGEND c	CLASSIFICATION OF MATERIAL ( <i>Description</i> ) d	_S	% CORE RECOV- ERY	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	0 _		0.0'TO 47.8' WATER				Time begin vibracoring:		
	_						1511 hrs. Soils described by Larry		
	=						Benjamin, Civil Engr. Tech.		
	47.0								
							NOTE: TOP OF HOLE is de- fined as surface of water		
-47 8	47.8 –		OCEAN BOTTOM @47.	.8'		47.8'	and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.		
	48.0	••••	SP Gray, coarse, poorly graded sand, T/shell			1	TOP OF HOIS IS U.U EL MILLW.		
		•••	fragments.			'  48.3'	VIBRACORE BORING		
	_	• • • •				40.3 	From 0.0' to 2.1' Ran 2.1' Rec: 1.5'		
		••••					Run Z.i Rec. i.3		
	49.0	••••					Top of vibracore soil sample is logged as be-		
	_	• • •	ASSUMED NOT RECOVER	49.3'			ginning at Ocean Bottom. When Run is greater than		
			ASSUMED NOT RECOVER	KED			Recovery, the difference		
-49.9	400						is depicted as Assumed Not Recovered.		
			BOTTOM OF HOLE AT	49.9'					
	_						LAB CLASSIFICATION		
							Jar Number <u>Classification</u>		
							1 SP		
	=								
						] 			
							NOTE: Terminated		
							hole at predetermined depth at 2.1'		
			COIL C ADE EIEL D MICH	_					
			SOILS ARE FIELD VISUALL CLASSIFIED IN ACCORDAN						
	=		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM						

							Hole No. TI-03-V-227			
DRILLI	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	WILN		N DISTRICT OF 1 SHEETS			
1. PROJECT TOPSA	IL INLE	Т			AND TYPE		4" Dia. Vibracore			
2. LOCATION			ກ 584 N 208874 NAD83	MLLW	<b>/</b>		ATION OF DRILL			
3. DRILLING	AGENCY	I DISTR		VIBRA	CORE		SNELL			
4. HOLE NO and file no	. (As shown		•	BURDI	L NO. OF EN SAMPLE	S TAKEN	: DISTURBED : UNDISTURBED : 3 : 0			
5. NAME OF ROBBIE	DRILLER PAGE		CRANE OPERATOR		ATION GRO		11777			
6. DIRECTION	N OF HOLE	:		16. DATE	HOLE	STAF				
7. THICKNES	ICAL   IN		N/A (47.7' Water)			OF HOLE	0.0' MLLW			
	B. DEPTH DRILLED INTO ROCK 0.0'  19. SIGNATURE OF INSPECTOR									
9. TOTAL DE	EPTH OF I	HOLE	57.7'		ACEY S		REMARKS			
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.s 	% CORE RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)			
0.0	=		0.0'TO 47.7' WATER				Time begin vibracoring:			
	=						Soils described by Larry Benjamin, Civil Engr. Tech.			
	=						Berrjamin, ervir Erigr. reen.			
	47 —						<u> </u>			
	=						Scale changed @50.0'. NOTE: TOP OF HOLE is de-			
-47.7	<del>-</del>		OCEAN BOTTOM @47.	7'		47.7'	fined as surface of water and compensation is made for the tide such that			
-47.7	_		SP-SM - Gray fine poor graded silty sand, T/she	rly ell		1	top of Hole is 0.0 EL MLLW.			
	48 <del></del>	.*.	fragments			1				
		•••				48.2'	VIBRACORE BORING From 0.0' to 10.0'			
	_						Ran 10.0' Rec: 6.3'			
	49 —						Top of vibracore soil			
	=						Top of vibracore soil sample is logged as be-ginning at Ocean Bottom.			
	_					49.5'	When Run is greater than			
	=	· . ·				2	is depicted as Assumed Not Recovered.			
	50 —	• • •				50.0'				
		• • •								
		• •								
	52 —						LAB CLASSIFICATION			
	52 —			52.6'		52.6'	Jar Number <u>Classification</u>			
	=					3	1 SP-SM			
	=					53.1'	2 SP-SM Z 3 SM Z			
	54 —		Assumed Not Recover	54.0'						
	=									
	=									
							_			
	56 —									
	=									
	=			57.7'			[			
-57.7	57.7 <u>-</u> 58 —		BOTTOM OF HOLE AT				ļ E			
	=						l E			
							NOTE: Terminated			
			SOILS ARE FIELD VISUALL CLASSIFIED IN ACCORDANG				hole at predetermined depth at 10.0'			
	=		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM	_						
							l E			
	_						<u> </u>			
							[			
NG FOR	M1836	PREVIOUS	S EDITIONS ARE OBSOLETE.		PROJECT	TOPS.	AIL INLET HOLE NO. TI-03-V-227			

DRILLI	NG LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	TION WILM	IING TON	Hole No. TI-03-V-228    SHEET 1			
PROJECT TOPSA	IL INLE	Т		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL)						
. LOCATION			, 464 N 206734 NAD83	MLLW  12. MANUFACTURER'S DESIGNATION OF DRILL  VIBRA CORE  SNELL						
. DRILLING WILM	AGENCY INGTON	I DISTR	RICT							
. HOLE NO.		on drawing	1111e : TI-03-V-228	BURDEN SAMPLES TAKEN : 4 : 0						
NAME OF		(	CRANE OPERATOR	14. TOTAL NUMBER CORE BOXES N/A  15. ELEVATION GROUND WATER N/A  16. DATE HOLE :STARTED :COMPLETED :08/17/03 :08/17/03						
S. DIRECTION	N OF HOLE		DEG. FROM VERT.							
. THICKNES			N/A (46.9' Water)		17. ELEVATION TOP OF HOLE O.O' MLLW  18. TOTAL CORE RECOVERY FOR BORING N/A %  19. SIGNATURE OF INSPECTOR					
3. DEPTH DI			0.0'	19. SIGNA						
. TOTAL DE			56.9'	•	CEY S	BOX OR	REMARKS			
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND	CLASSIFICATION OF MATERIA (Description)	LS	RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)			
0.0	1.1		0.0'TO 46.9' WATER				Time begin vibracoring: 0906 hrs.			
							Soils described by Larry			
							Benjamin, Civil Engr. Tech.			
	46 -									
							Scal e changed @49.0'. NOTE: TOP OF HOLE is de-			
							fined as surface of water and compensation is made			
-46 0	460		OCEAN BOTTOM @46.9				for the tide such that top of Hole is 0.0 EL MLLW.			
-46.9	477-	•••	SP – Gray course poor graded sand, T/shell	ly		1				
		• • • •	fragments 			47.4'	VIBRACORE BORING From 0.0' to 10.0'			
		• • • • •					Ran 10.0' Rec: 6.7'			
	48 —		SP-SM - Gray medium	47.9'		47.9'	Top of vibracore soil			
	<sup>+0</sup> –	·.·	graded silty sand with s fragments	shell		2	sample is logged as be- ginning at Ocean Bottom.			
	$\equiv$	· . ·				48.4'	When Run is greater than Recovery, the difference			
		•••					is depicted as Assumed Not Recovered.			
	49 —	•••  <b> </b>					TWO TRECOVERED.			
		• • •								
		••								
			50.6' T/shell fragments			50.6 <sup>1</sup>	LAB CLASSIFICATION			
	51 —	<b>`.</b>	Tan, fine grain sizes			51.1'	Jar			
		. · <u>.                                 </u>					Number <u>Classification</u> 1 SP			
	=	<b>. • .</b>				52.5'	2 SP-SM 3 SP-SM			
	53 <del>-</del>	<b>. · .</b>				4	4 SP-SM			
		<u> </u>		53.6'		53.0'				
	_		Assumed Not Recove	red						
	55 —									
-56.9	56.9			56.9'						
50.9	-		BOTTOM OF HOLE AT	56.9'						
	=						NIOTE, Tamanaina at a d			
			SOILS ARE EIELD VISUALLE	,			NOTE: Terminated hole at predetermined			
			SOILS ARE FIELD VISUALL' CLASSIFIED IN ACCORDANC				hole at predetermined depth at 10.0'			
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM							
	-									
	_		S EDITIONS ARE OBSOLETE.		DDO IECT	L TOPS,	L AII INLET HOLE NO.			

						1	Hole No. TI-03-V-229	
DRILL	ING LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT SHEET 1 OF 1 SHEETS	
1. PROJECT	IL INLE	Т					4" Dia. Vibracore	
2. LOCATION			n 160 N 204809 NAD83	MLLW 12. MANU		'S DESIGNA	ATION OF DRILL	
	IINGTON				CORE	OVER-	SNELL	
4. HOLE NO and file no		on drawing	**** TI-03-V-229	BURDI	EN SAMPLE	S TAKEN	: 4 : 0	
5. NAME OF ROBBIE	PAGE		CRANE OPERATOR	15. ELEV	ATION GRO		R N/A	
6. DIRECTION	ICAL   IN		DEG. FROM VERT.	16. DATE			COMPLETED	
7. THICKNES			N/A (48.5' Water) 0.0'	18. TOTA	L CORE R	ECOVERY	FOR BORING N/A Z	
9. TOTAL DI			55.7'		ATURE OF	MITH		
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIA (Description)	LS	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
0.0	_		0.0'TO 48.5' WATER				Time begin vibracoring: 0926 hrs.	E
	_						Soils described by Larry Benjamin, Civil Engr. Tech.	
	=							E
	48 <del>-</del>							
-48.5	48.5 <del>-</del>		OCEAN BOTTOM @48.			48.5'	NOTE: TOP OF HOLE is de-	L
	=======================================	·[· ]	SP-SM - Gray fine poo graded silty sand with shell fragments	rly		1	and compensation is made for the tide such that top of Hole is 0.0 EL MLLW.	Ė
	49 —	•.•	Janeir ir agrificites			49.0'		
	=						VIBRACORE BORING From 0.0' to 7.2'	
	=		CM Cray fine ailtu	49.7'		49.7'	Ran 7.2' Rec: 6.3'	
	50 <del>-</del>	]   ]	SM - Gray fine silty sand with shell fragments			2	Top of vibracore soil sample is logged as be-	Ξ.
	=		- C grown			50.2'	ginning at Ocean Bottom.  When Run is greater than	
	=						Recovery, the difference is depicted as Assumed	=
	51 —	┆┊╅┇┪	•				Not Recovered.	Ē
	31 =							E
		[   [						E
		]	•			E 2 0 1	LAB CLASSIFICATION	E
	52 —	<u> </u>				52.0'	Jar	
	<u> </u>					3	Number <u>Classification</u> 1 SP-SM	
						52.5'	2 SC SC SM	Ė
	53 —						4 SM	
	=							Ė
	54 <del>-</del>					54.0'		Ē.
	=	]				4		E
	=			E 4 C:		54.5'		Ē
	55 —		Assumed Not Recovered	54.8'				Ė
								E
	=			55.7'			NOTE: Terminated	
-55.7	=		BOTTOM OF HOLE AT	55.7'			hole at predetermined depth at 7.2'	Ė
	56 <u> </u>							
	] =		SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE					
	=		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM					Ė
FNC FOR	<u> </u>	DDE VIOLE	S EDITIONS ARE OBSOLETE.		PROJECT	L Tops	AIL INLET HOLE NO.	<u> </u>
MAR 71	טכטו וייו	FRE VIOUS	S CUTTONS ARE UBSULETE.				/"E "'\=" TI-03-V-22	9

							Hole No. TI-03-V-230
DRILL	ING LO	G DIVI	ISION SOUTH ATLANTIC	INSTALLA		MINGTON	N DISTRICT SHEET 1
1. PROJECT	JL INLE	<u>'</u>					4" Dia. Vibracore
2. LOCATION			, 243 N 202087 NAD83	MLLW	/		HOWNTBM or MSL)
3. DRILLING	AGENCY	N DISTR		VIBRA	CORE		ATION OF DRILL SNELL
4. HOLE NO	. (As shown		•	BURDI	L NO. OF ( EN SAMPLE	S TAKEN	: DISTURBED : UNDISTURBED : 5
5. NAME OF ROBBIE			CRANE OPERATOR		ATION GRO		117/73
6. DIRECTION	N OF HOLE	E		16. DATE	HOLE	:STAF	·
7. THICKNES		ICLINED	DEG. FROM VERT.  N/A (48.3' Water)	17. ELEV		OF HOLE	0.0' MLLW
8. DEPTH D	RILLED INT	O ROCK	0.0'	19. SIGNA	ATURE OF	INSPECTOR	FOR BORING N/A X
9. TOTAL DI			60.3'	•	ACEY S	BOX OR	REMARKS
ELEVATION MLLW	DEPTH feet	LEGEND c	(Description)		RECOV- ERY	SAMPLE NO. f	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0			0.0'TO 48.3' WATER				Time begin vibracoring:
	_						Soils described by Larry Benjamin, Civil Engr. Tech.
-48.3	48 <del>-</del>		OCEAN BOTTOM @48			48.3'	<u> </u>
+0.5	5.5		SM - Dark gray fine si sand with shell fragment	ty :s		1	NOTE: TOP OF HOLE is de-
		$  \downarrow   \downarrow  $					fined as surface of water and compensation is made for the tide such that
	50 <del>-</del>						top of Hole is 0.0 EL MLLW.
			•	F 0 01		50.8'	VIBRACORE BORING
	_		MH - Dark gray elastic	50.8'		2	From 0.0' to 12.0'
			silt with shell fragments			51.3'	Ran 12.0' Rec: 11.8'
	52 —						Top of vibracore soil sample is logged as beginning at Ocean Bottom.
							∥When Run is areater than⊩
		- T					Recovery, the difference is depicted as Assumed
	54 <del>-</del>					54.0'	Not Recovered.
	· -					3	
	_					54.5'	
	=						L AD CLASSIFICATION
	56 —						LAB CLASSIFICATION   -
						57.0'	Number <u>Classification</u> 1
		* * *				4	2 CH CH CH
	58 <del>-</del>					57.5'	4 CH E
						59.0'	<u> </u>
	_					5 59.5'	E
-60.3	60 -		Assumed Not Recovere				F
-60.3	50.5		BOTTOM OF HOLE AT				[
			SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE				l F
	61 —		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				<u> </u>
							l E
							NOTE: Terminated
							hole at predetermined depth at 12.0'
	=						
							[
	=						l F
	_ =						  -
NG FOR	м 1836	PREVIOUS	S EDITIONS ARE OBSOLETE.		PROJECT	TOPS.	AIL INLET HOLE NO. TI-03-V-230

DRILLI	ING LO	G DIV	ISION ATLANTIC	INSTALLA			Hole No. TI-03-V-231	٦
. PROJECT			SOUTH ATLANTIC	10. SIZE		OF BIT	N DISTRICT OF 1 SHEETS  4" Dia. Vibracore	$\dashv$
TOPSA	IL INLE		NI	$\overline{}$	M FOR EL		HOWNTBM or MSL)	٦
NC CC	DORD E		211 N 201136 NAD83	12. MANU	FACTURER'	S DESIGNA	ATION OF DRILL	┪
DRILLING WILM	AGENCY IINGTON	DISTR	RICT _		CORE L NO. OF	OVER-	SNELL	4
I. HOLE NO. and file no	. (As shown umber)	on drawing	TI-03-V-231	BURDE	N SAMPLE	CORE BOX	: 3 : 0	$\dashv$
. NAME OF COBBIE 1	DRILLER PAGE		CRANE OPERATOR			UND WATE	147 71	_
. DIRECTION	N OF HOLE		DEG. FROM VERT.	16. DATE	HOLE	:STAF : 08	COMPLETED : 08/17/03	
. THICKNES			N/A (48.0' Water)				0.0' MLLW	
. DEPTH DE			0.0'			INSPECTOR	11/7	z.
. TOTAL DE	EPTH OF H	HOLE	53.6'	·	CEY S		REMARKS	$\dashv$
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIA (Description)	LS	RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)	
0.0	=		0.0' TO 48.0' WATER				Time begin vibracoring:	Ī
							1010 hrs. Soils described by Larry	Ė
	=						Benjamin, Civil Engr. Tech.	F
-48.0	48.0	1111	OCEAN BOTTOM @48.C			48.0'		F
		+ $]$ $+$ $]$	SM - gray fine silty sa with shell fragments	nu		1	NOTE: TOP OF HOLE is de-	Ė
		<u> </u>				48.5'	fined as surface of water and compensation is made	Ė
							for the tide such that top of Hole is 0.0 EL MLLW.	F
	49 -							_
							VIBRACORE BORING	7
	_						From 0.0' to 5.6' Ran 5.6' Rec: 5.0'	l
								ŀ
	50 —						Top of vibracore soil sample is logged as be- ginning at Ocean Bottom.	ŀ
							When Run is areater than	հI⊑
		<u> </u>		50.7'		50.7'	Recovery, the difference is depicted as Assumed	E
	51 —		MH - Dark gray elastic silty, T/shell fragments			2	Not Recovered.	JĖ
						51.2'		ŀ
	=					31.2		E
				51.8'		51.8'		, E
	52 -		SM - Gray fine silty sa with shell fragments	nd		3	LAB CLASSIFICATION	lE
	=	$ \downarrow\uparrow\uparrow\downarrow\uparrow$	-				Jar <u>Numbe</u> r <u>Classification</u>	E
		$ \uparrow\uparrow\uparrow\downarrow $				52.3'	1 SP-SM CH SM	
		$\left[ + \right] + \left[ -\right]$		F 7 O.			3 SM	E
	53 —		Assumed Not Recovered	53.0'				F
								]
-53.6	53.6		BOTTOM OF HOLE AT	53.6' 53.6'				E
	54 —		DOTTOW OF HOLL AT	55.0				þ
	-		SOILS ARE FIELD VISUALLY	,				F
	=		CLASSIFIED IN ACCORDANCI WITH THE UNIFIED SOIL	E				E
			CLASSIFICATION SYSTEM					þ
								F
								F
							NOTE: Terminated	F
							hole at predetermine depth at 5.6'	F
							l nebru at 2.0,	E
	=							þ
								F
								E
			 		PROJECT	L TNPS	I AIL INLET <mark>hole no.</mark> TI-03-V-2	

		_ Inivi	ISION	INSTALLA	TION	ļ	Hole No. TI-03-V-232		
DRILLI I. PROJECT	NG LO	G S.V.	SOUTH ATLANTIC		WILN		N DISTRICT OF 1 SHEETS		
TOPSA	IL INLE			10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL)					
	ORD E		886 N 203642 NAD83	ML L W  12. MANUFACTURER'S DESIGNATION OF DRILL					
3. DRILLING WILM		N DISTR	RICT		CORE	OVER-	SNELL OUNDISTURBED		
I. HOLE NO and file no	. (As shown umber)	on drawing	TI-03-V-232	BURDI	EN SAMPLE	S TAKEN	: 3 : 0		
S. NAME OF ROBBIE I	DRILLER PAGE	(	CRANE OPERATOR	<u> </u>	ATION GRO		11771		
5. DIRECTION	OF HOLI		DEG. FROM VERT.	16. DATE	HOLE	:STAF :08	COMPLETED : 08/17/03		
7. THICKNES			N/A (48.3' Water)				O.O' MLLW FOR BORING N/A %		
3. DEPTH DI			0.0'	19. SIGNA	TURE OF	INSPECTOR	11771		
9. TOTAL DE			53.3'  CLASSIFICATION OF MATERIAL		CEY S	BOX OR	REMARKS		
MLLW MLLW	DEPTH feet	LEGEND	(Description)		RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	=		0.0' TO 48.3' WATER				Time begin vibracoring:		
							Soils described by Larry Benjamin, Civil Engr. Tech.		
	Ξ						Berryamin, ervinging reem.		
	48 -								
-48.3	48.3 <del>-</del>	•	OCEAN BOTTOM @48.3 SP-SM - Gray fine_poor			48.3'	NOTE: TOP OF HOLE is de-		
		•••	graded silty sand, T/she fragments			1	fined as surface of water and compensation is made for the tide such that		
	_ =		· · · · · · · · · · · · · · · ·			48.8'	for the tide such that top of Hole is 0.0 EL MLLW.		
	49 —								
	=						VIBRACORE BORING From 0.0' to 5.0'		
	=	] -					Ran 5.0' Rec: 4.0'		
	50 <del>-</del>			50.1		50.1	Top of vibracore soil		
	=		SM – Gray fine slilty so with shell fragments				sample is logged as be- ginning at Ocean Bottom.		
	_=	<u> </u>	with shell iraginents			2	When Run is greater than Recovery, the difference		
	=	<del> </del>				50.6'	is depicted as Assumed Not Recovered.		
	51 —			51.1'		51.1'			
	Ξ	•	GP - Light gray course poorly, graded sandy			3			
	_	•	gravel(limestone) 			51.6'			
		•				31.0	LAB CLASSIFICATION		
	52 —	•		52.3'			Jar Classification		
			Assumed Not Recovered	52.5			Number Classification SP		
	=						2 SM SM SM		
	53 —								
-53.3	53.3 <del>-</del>			53.3'					
	=		BOTTOM OF HOLE AT	53.3'					
	=								
	54 —		SOILS ARE FIELD VISUALLY						
	=		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				[		
	=		OLASSII ICATION SISIEM				Į į		
	=								
		}					NOTE: Terminated		
							hole at predetermined		
							depth at 5.0'		
	=								
	=								
NG FOP	M 18 36	PBEAIOLIC	EDITIONS ARE OBSOLETE.		PROJECT	TOPS	AIL INLET <mark>hole no.</mark> TI-03-V-232		

Hole No. TI-03-V-233 INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL)
MLLW 2. LOCATION (Coordinates or Station) NC COORD E 2430968 N 204647 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT **SNEL** VIBRA CORE 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-233 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE COMPLETED: 08/17/03 16. DATE HOLE X VERTICAL | INCLINED . \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (48.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 51.6' STACEY SMITH BOX OR SAMPLE NO. REMARKS % CORE RECOV-CLASSIFICATION OF MATERIALS (Description) (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION DEPTH LEGEND ERY 0.0 0.0' TO 48.5' WATER Time begin vibracoring: 1039 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 48 NOTE: TOP OF HOLE is de-OCEAN BOTTOM @48.5' 48.5' fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. -48.548.5 SM – Tan fine silty sand, T/shell fragments 49 49.0' VIBRACORE BORING From 0.0' to 3.1' Ran 3.1' Rec: 2.6' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 50 50.5' 2 Not Recovered. <u>51.1'</u> 51.0 Assumed Not Recovered 51.6 -51.6 51.6 -BOTTOM OF HOLE AT 51.6' LAB CLASSIFICATION 52 Jar <u>Number</u> <u>Classification</u> SM SM SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.1' PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

							Hole No. TI-03-V-234
DRILLII	NG LO	G DIVI	ISION SOUTH ATLANTIC	INSTALLA	TION WII M	MINGTON	SHEET 1
I. PROJECT	. INI C	<del></del>	300111 7112711110	10. SIZE	AND TYPE		OF 1 SHEETS
TOPSAI 2. LOCATION	(Coordinate	s or Station		11. DATU MLLW		EVATION S	SHOWNTBM or MSL)
3. DRILLING	AGENCY		980 N 206495 NAD83		FACTURER'	'S DESIGNA	ATION OF DRILL SNELL
	INGTON	on drawina		13. TOTA	L NO. OF (	OVER-	DISTURBED UNDISTURBED O
and file nu	mber)		TI-03-V-234		L NUMBER		
ROBBIE F	PAGE		CRANE OPERATOR		ATION GRO	OUND WATE	1177
VERTI		-	DEG. FROM VERT.	16. DATE		90	<u>/17/03 :08/17/03</u>
7. THICKNESS			N/A (48.3' Water)				O.O' MLLW FOR BORING N/A %
3. DEPTH DR 9. TOTAL DE			0.0' 49.0'		ATURE OF		1
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		% CORE RECOV-		REMARKS (Orlillog time water loss death of
MŁLW	feet	c	(Description)		ERY	NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	=		0.0'TO 48.3' WATER				Time begin vibracoring:
	Ξ						Soils described by Larry
	=						Benjamin, Civil Engr. Tech.
	48 —						
-48.34			OCEAN BOTTOM @48.3			48.3'	MOTE, TOD OF HOLE:
+0.5	-0.5		SP - Tan course poorly graded sand with shell			1	NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made
	Ξ		fragments	48.8'			for the tide such that top of Hole is 0.0 EL MLLW.
-49.0	49.0		Assumed Not Recovered			48.8'	
	Ξ		BOTTOM OF HOLE AT	49.U			VIBRACORE BORING
	_						From 0.0' to 0.7' Ran 0.7' Rec: 0.5'
			SOILS ARE FIELD VISUALLY				Run U.7 Rec. U.3
	=		CLASSIFIED IN ACCORDANCI WITH THE UNIFIED SOIL	Ξ			Top of vibracore soil
	=		CLASSIFICATION SYSTEM				sample is logged as beginning at Ocean Bottom.
	=						When Run is greater than Recovery, the difference
	=						is depicted as Assumed Not Recovered.
	=						
	Ξ						
	_						
	Ξ						LAB CLASSIFICATION
							Jar
							Number Classification  1 SP-SM
	$\equiv$						
	=						
	=						
	Ξ						
	=						
	_=						
	_=						
	=	•					NIOTE: Tarasia - ta d
	=						NOTE: Terminated hole at predetermined
	Ξ						hole at predetermined depth at 0.7'
	=						
	=						
	_						
	-						

TI-03-V-235 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station)  $\mathsf{MLLW}$ NC COORD E 2425348 N 214315 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-235 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/20/03 :COMPLETED: 08/20/03 16. DATE HOLE VERTICAL | INCLINED . \_ DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (45.8' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 49.7' 9. TOTAL DEPTH OF HOLE % CORE BOX OR SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) ERY Melw 0.0 0.0' TO 45.8' WATER Time begin vibracoring: 0805 hrš. Soils described by Larry Benjamin, Civil Engr. Tech. 45 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @45.8' 45.81 -45.845.8 SP - Gray course poorly graded sand with shell fragments 46 -1 VIBRACORE BORING 46.3' From 0.0' to 3.9' Ran 3.9' Rec: 2.5' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 47 47.3' 47.3 When Run is greater than Recovery, the difference - Olive gray fine silty sand 2 is depicted as Assumed Not Recovered. 47.8' 48 48.3 Assumed Not Recovered LAB CLASSIFICATION 49 <u>Number</u> <u>Classification</u> SP ŠМ 2 49.7 -49.7 49.7 BOTTOM OF HOLE AT 49.7' 50 -SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated NOTE: Terminated
hole at predetermined depth at 3.9' PROJECT TOPSAIL INLET ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-235

						!	Hole No. TI-03-V-236
DRILLI	NG LO	G DIV	ISION SOUTH ATLANTIC	INSTALLA	WILN		SHEET 1 OF 1 SHEETS
I. PROJECT TOPSA	IL INLE	Т					4" Dia. Vibracore
2. LOCATION			, 253 N 212294 NAD83	MLLW	'		ATION OF DRILL
. DRILLING	AGENCY	DISTR		VIBRA	CORE		SNELL
HOLE NO.				BURDE	NO. OF (	S TAKEN	DISTURBED : UNDISTURBED : 0
S. NAME OF			CRANE OPERATOR		L NUMBER ATION GRO		147 73
DIRECTION	OF HOLE		DEG. FROM VERT.	16. DATE	HOLE	STAF 08	COMPLETED : 08/20/03
7. THICKNES			N/A (46.8' Water)				O.O' MLLW FOR BORING N/A %
B. DEPTH DE			0.0' 49.7'	19. SIGNA	TURE OF	NSPECTOR	117 73
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	· I	CEY S z core recov-	BOX OR SAMPLE	REMARKS (Orliging time water loss depth of
MŁLW	feet	c	(Description)		ERY	NO.	(Drilling time, water loss, depth of weathering, etc., if significant) g
0.0	∃		0.0'TO 46.8' WATER				Time begin vibracoring: 0827 hrs.
							Soils described by Larry Benjamin, Civil Engr. Tech.
	$\exists$						
	46 -						
	=						NOTE: TOP OF HOLE is de-
	=		OCEAN BOTTOM @46.8	<sub>3'</sub>		46.8'	fined as surface of water and compensation is made for the tide such that
-46.8	46.8 <del>-</del> 47		SP-SM - Gray fine poo graded silty sand				top of Hole is 0.0 EL MLLW.
	∃					1	VIBRACORE BORING
	크					47.3'	From 0.0' to 2.9' Ran 2.9' Rec: 1.2'
	╡			40.01			Null 2.5 Nec. 1.2
	48 📑		Assumed Not Recovered	48.0'			Top of vibracore soil sample is logged as be- ginning at Ocean Bottom.
	=						When Run is areater than
	目						Recovery, the difference is depicted as Assumed
	49						Not Recovered.
				49.7'			
-49.7	コ		BOTTOM OF HOLE AT				LAB CLASSIFICATION
	50 -						Jar
	=						Number <u>Classification</u> 1 SM
	=						
	耳						
	=		SOILS ARE FIELD VISUALL CLASSIFIED IN ACCORDANG				
	크		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
	∄						
	긬						
	_=						
	目						
	4						
	=						
							NOTE: Terminated
	∄						hole at predetermined depth at 2.9'
	$\exists$						2.0
	=						
							1

Hole No. TI-03-V-237 DIVISION SOUTH ATLANTIC INSTALLATION WILMINGTON DISTRICT SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2429152 N 210165 NAD83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNEL** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-237 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED 08/20/03 :COMPLETED : 08/20/03 16. DATE HOLE X VERTICAL | INCLINED DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.1' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 51.4 9. TOTAL DEPTH OF HOLE STACEY SMITH % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND <u>M⊾LW</u> 0.0 ERY feet 0.0' TO 49.1' WATER Time begin vibracoring: 0849 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. -49.149.1-OCEAN BOTTOM @49.1' 49.1 SP-SM - Gray medium poorly graded silty sand, T/shell fragments NOTE: TOP OF HOLE is de-1 fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 49.6' 50 VIBRACORE BORING From 0.0' to 2.3' Ran 2.3' Rec: 1.5' 50.6 Assumed Not Recovered Top of vibracore soil sample is logged as beginning at Ocean Bottom. 51 51.4 When Run is greater than Recovery, the difference -51.4 51.4 BOTTOM OF HOLE AT 51.4' is depicted as Assumed Not Recovered. 52 SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION <u>Number</u> Classification SP-SM NOTE: Terminated hole at predetermined depth at 2.3 PROJECT OPSAIL INLET HOLE NO. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

DO: 1	INIC 1 C	DIVI	SION	INSTALLA			Hole No. TI-03-V-238			
DRILLI I. PROJECT	ING LO	G P	SOUTH ATLANTIC	WILMINGTON DISTRICT OF 1 SHEETS						
TOPSA	IL INLE			10. SIZE AND TYPE OF BIT 4" Dia. Vibracore 11. DATUM FOR ELEVATION SHOWNTBM or MSL)						
2. LOCATION NC CO			958 N 208179 NAD83	MLLW  12. MANUFACTURER'S DESIGNATION OF DRILL						
3. DRILLING WILM	AGENCY IINGTON	I DISTR	RICT	VIBRA	CORE		SNELL			
4. HOLE NO and file no	. (As shown umber)	on drawing	111e TI-03-V-238	BURDI	L NO. OF (	S TAKEN	:DISTURBED :UNDISTURBED O			
5. NAME OF ROBBIE			CRANE OPERATOR			CORE BOX	IV/ A			
6. DIRECTION	N OF HOLE			16. DATE		;STAR				
	ICAL   IN		DEG. FROM VERT.	17. ELEV	ATION TOP		0.0' MLLW			
7. THICKNES  B. DEPTH D			N/A (48.3' Water) 0.0'			COVERY I	FOR BORING N/A %			
9. TOTAL DI	EPTH OF H	HOLE	50.5'		CEY S	HTIM				
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description) a	.s	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc if significant)			
0.0	_		0.0'TO 48.3' WATER				Time begin vibracoring:			
							0909 hrs. Soils described by Larry			
							Benjamin, Civil Engr. Tech.			
	48 —									
-48.3			OCEAN BOTTOM @48.	3'		48.3'	NOTE: TOD OF HOLE !			
+0.3	, o., o		SP - Gray course poor graded sand, T/shell			1	NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made			
		· · · ·	fragments ,				for the tide such that top of Hole is 0.0 EL MLLW.			
	49 🛁	$ \cdots $				48.8'				
		$ \cdot\cdot\cdot $		49.4'		49.4'	VIBRACORE BORING			
	=	1111	SM - Gray fine silty sa				From 0.0' to 2.2' Ran 2.2' Rec: 1.8'			
	=					2	1.0.1 2.2 1.00 1.0			
	50 —	1111	Assessed Nist Description	50.1'		49.9'	Top of vibracore soil sample is logged as be-			
			Assumed Not Recovered	50.5'			ginning at Ocean Bottom. When Run is greater than			
-50.5	50.5		BOTTOM OF HOLE AT				Recovery, the difference is depicted as Assumed			
	<u>- ,</u>						Not Recovered.			
	51 —									
	=									
	=									
	=		SOILS ARE FIELD VISU CLASSIFIED IN ACCORD				LAB CLASSIFICATION			
	$\exists$		WITH THE UNIFIED SOI CLASSIFICATION SYSTE				Jar <u>Number Classification</u>			
	=						1 SP SP-SM			
							2 3F-3M			
	=									
	크									
	=									
	=									
							NOTE: Terminated hole at predetermined			
							depth at 2.2'			
	=									
	_ =					TOPS,	AII INLET HOLE NO.			

DRILLI	NG LO	G DIVI	ISION SOUTH ATLANTIC	INSTALLA	WILN		N DISTRICT SHEET 1 OF 1 SHEETS
I. PROJECT TOPSA	IL INLE	т			AND TYPE		4" Dia. Vibracore
2. LOCATION			, 775 N 206175 NAD83	MLLW	<u> </u>		ATION OF DRILL
3. DRILLING WILM		N DISTR	RICT	VIBRA	CORE		SNELL
4. HOLE NO	. (As shown		•	BURDI	L NO. OF ( EN SAMPLE	S TAKEN	DISTURBED UNDISTURBED 0
5. NAME OF ROBBIE I	DRILLER		CRANE OPERATOR		L NUMBER		147.71
6. DIRECTION	OF HOLE	Ī		16. DATE	HOLE	STAF	
7. THICKNES	S OF OVE		DEG. FROM VERT.			OF HOLE	0.0' MLLW
8. DEPTH DI			N/A (48.1' Water) 0.0'		TURE OF		FOR BORING N/A X
9. TOTAL DE	PTH OF I	-IOLE	50.5'		CEY S	MITH I BOX OR	REMARKS
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description) d	.S	% CORE RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	=		0.0' TO 48.1' WATER				Time begin vibracoring:
	$\equiv$						0940 hrs. Soils described by Larry
	=						Benjamin, Civil Engr. Tech.
-48.1	48 .		OCEAN BOTTOM @48.	1'		48.1'	
-48.1	40.1		SP - Tan course poorly graded sand, T/shell			1	NOTE: TOP OF HOLE is de-
			fragments			·	fined as surface of water and compensation is made
	=					48.6'	for the tide such that top of Hole is 0.0 EL MLLW.
	49 —						
							VIBRACORE BORING
	=		GP – Light gray course	49.6'		49.6'	From 0.0' to 2.4' Ran 2.4' Rec: 2.4'
			poorly graded gravel (limestone)			2	Top of vibracore soil
	50 -					50.1	sample is logged as be- ginning at Ocean Bottom.
-50.5	50 5			50.5'			When Run is greater than Recovery, the difference
50.5			BOTTOM OF HOLE AT	50.5'			is depicted as Assumed Not Recovered.
	51 —						Not Recovered.
	=		SOILS ARE FIELD VISUALL' CLASSIFIED IN ACCORDANC				
			WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				LAB CLASSIFICATION
	=						Jar
	$\exists$						Number <u>Classification</u> 1 SP
							2 SP-SM
	=						
	=						
	=						
	=						
	=						
							NOTE T
							NOTE: Terminated hole at predetermined
	$\equiv$						hole at predetermined depth at 2.4'
	$\exists$						
			S EDITIONS ARE OBSOLETE.			L TOPS,	AII INI FT HOLE NO.

TI-03-V-240 Hole No. INSTALLATION SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG WILMINGTON DISTRICT OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2435058 N 208427 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNEL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED :DISTURBED 4. HOLE NO. (As shown on drawing title and file number) TI-03-V-240 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED: 08/20/03 COMPLETED : 08/20/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (50.0' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 59.6 STACEY SMITH % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MFTM feet 0.0 0.0' TO 50.0' WATER Time begin vibracoring: 1008 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @50.0' 50.0' -50.050.0-SP - Gray course poorly graded sand, T/shell fragments Scale changed @54.0'. 1 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 50.5' 51 VIBRACORE BORING From 0.0' to 9.6' Ran 9.6' Rec: 2.8' 52.0 52.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. 52 SM - Gray fine silty sand, T/shell fragments 2 When Run is greater than Recovery, the difference 52.5' is depicted as Assumed 52.8 Not Recovered. Assumed Not Recovered 53 LAB CLASSIFICATION <u>Number</u> <u>Classification</u> SP-SM 56 58 59.61 -59.6 | 59.6 -BOTTOM OF HOLE AT 59.6' 60 -SOILS ARE FIELD VISUALLY NOTE: Terminated CLASSIFIED IN ACCORDANCE hole at predetermined WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM depth at 9.61 PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

	ING LO	G DIV	SOUTH ATLANTIC	INSTALLA	WILN		SHEET 1 OF 1 SHEETS		
PROJECT TOPSA	JL INLE	T		10. SIZE AND TYPE OF BIT 4" Dia. Vibracore  11. DATUM FOR ELEVATION SHOWNTBM or MSL)					
. LOCATION			, 931 N 210063 NAD83	MLLW					
DRILLING				12. MANUFACTURER'S DESIGNATION OF DRILL VIBRA CORE SNELL					
. HOLE NO				13. TOTA BURDE	L NO. OF ( N SAMPLE	OVER- S TAKEN	: DISTURBED : UNDISTURBED : 0		
. NAME OF	DRILLER					CORE BO	117 73		
OBBIE DIRECTION			CRANE OPERATOR	16. DATE		;STAF	RTED COMPLETED		
7-1	ICAL   IN		DEG. FROM VERT.	17. ELEV	ATION TOP		/20/03 :08/20/03 0.0' MLL W		
. THICKNES			N/A (49.0' Water) 0.0'				FOR BORING N/A X		
. TOTAL DE			58.4'		CEY S	INSPECTOR			
LEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL (Description)	.s	% CORE RECOV- ERY	SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
0.0	feet -	с	0.0'TO 49.0' WATER			1	Time begin vibracoring:		
							1029 hrs. Soils described by Larry		
							Benjamin, Civil Engr. Tech.		
			OCEAN BOTTOM @49.0	,,		49.0'			
-49.0	49.0 <u> </u>	• • •	SP - Gray course poor araded sand. T/shell				  Scale changed @53.0'.		
			fragments			1	NOTE: TOP OF HOLE is de-		
	=					49.5'	fined as surface of water and compensation is made for the tide such that		
	50 —						top of Hole is 0.0 EL MLLW.		
		• • •					VIBRACORE BORING		
							From 0.0' to 9.4'		
	=		50.8'				Ran 9.4' Rec: 7.1'		
	51 <del>-</del>	• • •	with shell fragments				Top of vibracore soil		
		1111	SM - Gray fine silty sa	51.2'		51.2'	sample is logged as be- ginning at Ocean Bottom.		
	=		T/shell fragments	iiu,		2	When Run is greater than Recovery, the difference		
		<b>†</b>				51.7'	is depicted as Assumed Not Recovered.		
	52 —					01.7	Not recovered.		
		+							
	=					E 7 01	LAB CLASSIFICATION		
	53 —		MH - Dark gray elastic	<u>53.0'</u> silt		53.0' 3	LAB CLASSIFICATION		
			j ,			53.5	Number <u>Classification</u>		
	-		SM – <u>Dark gray</u> fine sil	_ <u>54.0'</u> ty		54.0' 4	2 SP-SM		
		$ \uparrow \downarrow \uparrow \downarrow $	sand, T/shell fragments			54.5'	3 SC SC		
	55 —								
		$ \uparrow\downarrow\uparrow\downarrow $							
	=	1 1 1	Assumed Not Recovered	56.1'					
	57 <del></del> 								
	=								
-58.4	58.4 –			58.4'					
··	59 <del>-</del>		BOTTOM OF HOLE AT	58.4'					
			SOILS ARE FIELD VISUALLY				NOTE: Tarminated		
	=		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL				NOTE: Terminated hole at predetermined		
	=		CLASSIFICATION SYSTEM				depth at 9.4'		
	=								
	=								
	=								
	=								

TI-03-V-242 Hole No. INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 1. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) MLLWNC COORD E 2435123 N 211995 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE DISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-242 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/20/03 COMPLETED : 08/20/03 16. DATE HOLE VERTICAL | INCLINED . DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (49.0' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 SIGNATURE OF INSPECTOR STACEY SMITH 9. TOTAL DEPTH OF HOLE 51.0 BOX OR SAMPLE NO. % CORE RECOV-REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) ERY MLLW 0.0 0.0' TO 49.0' WATER Time begin vibracoring: 1059 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. OCEAN BOTTOM @49.0' -49.049.0-Assumed Not Recovered NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 50 VIBRACORE BORING From 0.0' to 2.0' Ran 2.0' Rec: 0.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 51.0 -51.0 51.0 <u></u> BOTTOM OF HOLE AT 51.0' SOILS ARE FIELD VISUALLY Not Recovered. CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION Jar <u>Number</u> <u>Classification</u> NOTE: Terminated NOTE: Terminated hole at predetermined depth at 2.0' PROJECT TOPSAIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

	NG LO	G DIV	SOUTH ATLANTIC	INSTALLA	WILN		N DISTRICT OF 1 SHEETS
TOPSA  LOCATION	IL INLE				M FOR ELI		4" Dia. Vibracore HOWNTBM or MSL)
NC CC	ORD E		128 N 211996 NAD83	12. MANU	FACTURER'	S DESIGNA	TION OF DRILL
	INGTON	DISTR	•	13. TOTA	CORE	OVER-	SNELL · UNDISTURBED
4. HOLE NO. and file no	ımber)	on drawing	**** : TI-03-V-242A	-	N SAMPLE		: 0 : 0
5. NAME OF ROBBIE I	DRILLER PAGE	1	CRANE OPERATOR	-	ATION GRO		11771
S. DIRECTION	OF HOLE		DEG.FROM VERT.	16. DATE			/20/03 :08/20/03
7. THICKNES			N/A (49.5' Water)				O.O' MLLW FOR BORING N/A %
3. DEPTH DI			0.0'	19. SIGNA	TURE OF	NSPECTOR	
9. TOTAL DE			51.5'		Z CORE RECOV-	BOX OR	REMARKS
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description) d	.5	RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant) 9
0.0	=		0.0'TO 49.5' WATER				Time begin vibracoring:
	=						Soils described by Larry Benjamin, Civil Engr. Tech.
	=						Denjanin, Civirengr. recii.
	49 —						
			OOEAN DOTTO: - / -	<b>-</b> 1			NOTE: TOP OF HOLE is de-
-49.5	49.5		OCEAN BOTTOM @49. Assumed Not Recovered				fined as surface of water and compensation is made
							for the tide such that top of Hole is 0.0 EL MLLW.
	50 —						
	Ξ						<u>VIBRACORE BORING</u> From 0.0' to 2.0'
	=						Ran 2.0' Rec: 0.0'
	51 —						Top of vibracore soil
							Top of vibracore soil sample is logged as be- ginning at Ocean Bottom.
-51.5	51.5			51.5'			When Run is greater than Recovery, the difference
31.3	J1.5 _		BOTTOM OF HOLE AT SOILS ARE FIELD VISUALLY	51.5'			is depicted as Assumed Not Recovered.
	51 <del>-</del>		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL				Not Necovered.
	Ξ		CLASSIFICATION SYSTEM				
	=						LAB CLASSIFICATION
							Jar
	=						Number Classification
	_						
	=						
	=						
	_=						
	=						
	=						
	Ξ						
	Ξ						
	_						
							NOTE: Terminated
							hole at predetermined depth at 2.0'
	_						20pm ut 2.0
	=						
		ı					

TI-03-V-243 Hole No. INSTALLATION WILMINGTON DISTRICT DIVISION SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) MLLW NC COORD E 2437071 N 210130 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 13. TOTAL NO. OF OVER- DISTURBURDEN SAMPLES TAKEN O DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) : TI-03-V-243 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/20/03 X VERTICAL | INCLINED DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (50.6' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR 53.8' STACEY SMITH 9. TOTAL DEPTH OF HOLE % CORE RECOV-REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND <u>M⊾LW</u> 0.0 ERY 0.0' TO 50.6' WATER Time begin vibracoring: 1126 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 50 NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @50.6' -50.650.6 Assumed Not Recovered 51 VIBRACORE BORING J.0'

Jinple is logged as beginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed Not Recovered. From 0.0' to 3.2' Ran 3.2' Rec: 0.0' 52 53 53.8 -53.8 53.8 BOTTOM OF HOLE AT 53.8' LAB CLASSIFICATION 54 -SOILS ARE FIELD VISUALLY Jar CLASSIFIED IN ACCORDANCE Number Classification WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM NOTE: Terminated hole at predetermined depth at 3.2' PROJECT TOPSAIL INLET HOLE NO. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-243

Hole No. TI-03-V-244 INSTALLATION WILMINGTON DISTRICT SHEET 1 DIVISION SOUTH ATLANTIC DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD E 2438605 N 211705 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE **SNELI** 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing title and file number) : TI-03-V-244 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A STARTED : 08/20/03 COMPLETED : 08/20/03 6. DIRECTION OF HOLE 16. DATE HOLE X VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (50.5' Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 52.5' STACEY SMITH X CORE RECOV- SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Description) ELEVATION LEGEND (Drilling time, water loss, depth of weathering, etc., if significant) DEPTH 0.0 0.0'TO 50.5' WATER Time begin vibracoring: 1148 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 50 -NOTE: TOP OF HOLE is de-OCEAN BOTTOM @50.5' fined as surface of water and compensation is made for the tide such that -50.550.5 Assumed Not Recovered top of Hole is 0.0 EL MLLW. 51 VIBRACORE BORING From 0.0' to 2.0' Ran 2.0' Rec: 0.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 52 -52.5 52.<del>5</del> BOTTOM OF HOLE AT 52.5' Not Recovered. SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM LAB CLASSIFICATION <u>Number</u> <u>Classification</u> NOTE: Terminated hole at predetermined depth at 2.0' PROJECT TOPS AIL INLET HOLE NO. ENG FORM 1836 previous editions are obsolete. TI-03-V-244

TI-03-V-245 Hole No. INSTALLATION WILMINGTON DISTRICT SOUTH ATLANTIC SHEET 1 DRILLING LOG OF 1 SHEETS 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) MLLW NC COORD E 2441687 N 214522 NAD83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNFL 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED DISTURBED 4. HOLE NO. (As shown on drawing title and file number) : TI-03-V-245 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER ROBBIE PAGE 15. ELEVATION GROUND WATER CRANE OPERATOR N/A 6. DIRECTION OF HOLE STARTED: 08/20/03 X VERTICAL | INCLINED DEG. FROM VERT 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A (47.2' Water) 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0.0' 19. SIGNATURE OF INSPECTOR STACEY SMITH 50.2' 9. TOTAL DEPTH OF HOLE % CORE RECOV-BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND ERY MELW 0.0'TO 47.2' WATER Time begin vibracoring: 1217 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 47 -OCEAN BOTTOM @47.2' 47.2' -47.247.2 -SP - Tan course poorly graded sand with shell fragments NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 47.7 48 48.3' VIBRACORE BORING T/shell fragments From 0.0' to 3.0' Ran 3.0' Rec: 2.5' 48.5' 2 Top of vibracore soil sample is logged as beginning at Ocean Bottom. 49 ginning at Ocean Bottom.
When Run is greater than Recovery, the difference is depicted as Assumed Not Reco 49.0' 49.7 Assumed Not Recovered Not Recovered. 50 -50.21 -50.2 50.2 BOTTOM OF HOLE AT 50.2' SOILS ARE FIELD VISUALLY LAB CLASSIFICATION CLASSIFIED IN ACCORDANCE 51 WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM Number Classification SP SP hole at predetermined depth at 3.0' NOTE: Terminated PROJECT TOPS AIL INLET HOLE NO. ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE. TI-03-V-245

DRILLI	NG LO	G DIV	SION SOUTH ATLANTIC	INSTALLA			HOIE NO. TI-03-V-246 SHEET 1 OF 1 SHEETS
. PROJECT	IL INLE	т					4" Dia. Vibracore
2. LOCATION	(Coordinate	s or Station		MLLW	1		HOWNTBM or MSL)
3. DRILLING	AGENCY		717 N 216282 NAD83	1	FACTURER' CORE	S DESIGNA	NTION OF DRILL SNELL
4. HOLE NO	. (As shown	N DISTR	404	13. TOTA	L NO. OF (	OVER-	DISTURBED UNDISTURBED
and file no 5. NAME OF			TI-03-V-246	14. TOTA	L NUMBER	CORE BO	
ROBBIE I	PAGE		CRANE OPERATOR	1	ATION GRO	UND WATE	
			DEG. FROM VERT.	16. DATE		:08	/20/03 :08/20/03
7. THICKNES	S OF OVE	RBURDEN	N/A (48.0' Water)				O.O' MLLW FOR BORING N/A %
B. DEPTH DI 9. TOTAL DE			0.0' 50.1'	1	TURE OF		
			CLASSIFICATION OF MATERIAL	•	Z CORE	BOX OR	REMARKS
ELEVATION MLLW	DEPTH feet	LEGEND	(Description)		RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	=		0.0'TO 48.0' WATER				Time begin vibracoring:
	_						1236 hrs. Soils described by Larry
	=						Benjamin, Civil Engr. Tech.
-48.0	48.0 <del>-</del>		OCEAN BOTTOM @48.			48.0'	
	=	••••	SP - Light gray course poorly graded sand with fragments and T/shell	rock		1	NOTE, TOD OF HOLE :
			fragments and T/shell fragments				NOTE: TOP OF HOLE is de- fined as surface of water and compensation is made
		••••				48.5'	for the tide such that top of Hole is 0.0 EL MLLW.
	49 —	•••					TOP OF HOLD IS 0.0 LE MILLW.
				49.3'			VIBRACORE BORING
	<u>-</u>		Assumed Not Recovered				From 0.0' to 2.1'
							Ran 2.1' Rec: 1.3'
-50.1	50 <del>-</del>			50.1			Top of vibracore soil sample is logged as be-
50.1	30.1		BOTTOM OF HOLE AT	50.1'			∥ginning at Ocean Bottom.
							When Run is greater than Recovery, the difference
	=						is depicted as Assumed Not Recovered.
	51 —		SOILS ARE FIELD VISUALLY				
	=		CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL				
	=		CLASSIFICATION SYSTEM				
							LAB CLASSIFICATION
							Jar
	Ξ						Number Classification  1 SD - SM
							1 SP-SM
	Ξ						
	=						
	=						
	=						
	=						
	=						
	=						
	_						
	=						
	=						NOTE, Tale 1
	Ξ						NOTE: Terminated hole at predetermined
							depth at 2.1'
	=						
	=						
	_						

		I_		l			Hole No. TI-03-V-263
DRILLI	NG LO	G DIV	SOUTH ATLANTIC	INSTALLAT	WIL	MINGTON	N DISTRICT SHEET 1 OF 1 SHEETS
I. PROJECT TOPSA	IL INLE	Т		10. SIZE			4" Dia. Vibracore
2. LOCATION	(Coordinate	s or Station		MLL W		EVAIION S	HOWNTBM or MSL)
3. DRILLING	AGENCY		107 N 221247 NAD83	12. MANUF VIBRA		'S DESIGNA	SNELL
WILM . HOLE NO.		ODISTR		13. TOTAL		OVER-	DISTURBED UNDISTURBED
and file nu	mber)	on orowing	TI-03-V-263			CORE BO	xes N/A
S. NAME OF ESTER	GAUGH		CRANE OPERATOR	15. ELEV <i>A</i>	TION GRO	UND WATE	147.73
5. DIRECTION	OF HOLE CAL ☐ IN		DEG. FROM VERT.	16. DATE	HOLE	:STAF :08	COMPLETED : COMPLETED : 08/21/03
7. THICKNES			N/A (9.8' Water)				0.0' MLLW
3. DEPTH DE	RILLED INT	O ROCK	0.0'			INSPECTOR	FOR BORING N/A %
D. TOTAL DE	PTH OF I	HOLE	19.8' 	•	CEY S		REMARKS
ELEVATION MLLW	<sub>DEPTH</sub> feet	LEGEND c	CLASSIFICATION OF MATERIAL (Description)	.S	% CORE RECOV- ERY	SAMPLE NO.	(Drilling time, water loss, depth of weathering, etc., if significant)
0.0	=		0.0' TO 9.8' WATER				Time begin vibracoring: 0711 hrs.
	Ξ						Soils described by Larry
	=						Benjamin, Civil Engr. Tech.
	9 _						
	,		005411 0077011 72 3				
-9.8	9.8		OCEAN BOTTOM @9.8				NOTE: TOP OF HOLE is de- fined as surface of water
	=	• • •	SP - Course poorly gro sand with tiny shell frag	ments		10 31	and compensation is made for the tide such that
	11 —	• • •					top of Hole is 0.0 EL MLLW.
	'' =	• • •				11.3'	VIDDACODE DODINO
	=	• • •	Assumed Not Recovered	11.8'		2 11.8'	VIBRACORE BORING From 0.0' to 10.0'
			ASSUMED NOT RECOVERED			11.0	Ran 10.0' Rec: 2.0'
							T ( )
	13 —						Top of vibracore soil sample is logged as be- ginning_at Ocean Bottom.
	=						Nhen Run is areater thank
	_						Recovery, the difference is depicted as Assumed
	=						Not Recovered.
	15 —						
	=						
							LAB CLASSIFICATION
	17 —						Jar
	Ξ						Number <u>Classification</u> 1 SP
	_						2 SP
	=						
	19 —						
-19.8	19.8			19.8'			
.5.5	.5.5		BOTTOM OF HOLE AT SOILS ARE FIELD VISUALLY	19.8'			
	_ =		CLASSIFIED IN ACCORDANCE				
	21 —		WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM				
	Ξ						
	=						
	=						
	=	•					NOTE: Terminated
	=						hole at predetermined
	=						depth at 10.0'
	_						
	Ξ						
	_					1	

Hole No. TI-03-V-363 SHEET 1 DIVISION SOUTH ATLANTIC INSTALLATION DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN BM or MSL) 2. LOCATION (Coordinates or Station) NC COORD. E 2408123 N 217889 NAD 83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNELL) 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-363 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED: 11/22/03 6. DIRECTION OF HOLE COMPLETED 11/22/03 16. DATE HOLE VERTICAL | INCLINED \_ DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A ( 18.9' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE LARRY BENJAMIN % CORE BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MLLW <u>feet</u> 0.0 0.0' TO 18.9' WATER Time begin vibracoring: 0759 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 18.0 Scale changed @23.0'. NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. OCEAN BOTTOM @ 18.9' 18.9' -18.9 | 18.9 \*• \*• SP Tan, coarse, poorly graded, 19.0 • • sand. 1 VIBRACORE BORING From 0.0' to 8.0' 19. 4' Ran 8.0 Rec: 4.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is desired. 20.0 is depicted as Assumed Not Recovered. 21.0 21.0' 2 21.5 LAB CLASSIFICATION 22.0<del>-</del> <u>Number</u> <u>Classification</u> ŠP 23.0 ASSUMED NOT RECOVERED 25.0 NOTE: Terminated hole at vibraore refusal depth at 8.0' -26.9 26.9 <u>-</u> BOTTOM OF HOLE AT 26.9' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-363

Hole No. TI-03-V-364 SHEET 1 DIVISION SOUTH ATLANTIC INSTALLATION. DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWN OF MSL) 2. LOCATION (Coordinates or Station) NC COORD. E 2410443 MLLW N 220053 NAD 83 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNELL) DISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-364 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED: 11/22/03 6. DIRECTION OF HOLE COMPLETED 11/22/03 16. DATE HOLE DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A ( 23.8' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE ARRY BENJAMIN % CORE RECOV-ERY NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MŁLW 0.0 0.0'TO 23.8' WATER Time begin vibracoring: 0858 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 23.0 Scale changed @35.0'. OCEAN BOTTOM @ 23.8' NOTE: TOP OF HOLE is de--23.8 23.8 SP Gray, fine, poorly graded, sand. fined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. 1 25.0 25.5' VIBRACORE BORING 2 From 0.0' to 14.0' Ran 14.0' Rec: 11.0' 26.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 27.Q<del>\_</del> 27.5 3 Not Recovered. 29.0<del>-</del> 29.5' 4 30. 0' LAB CLASSIFICATION 31.0 <u>Number</u> <u>Classification</u> 31.8' SP-SM Gray, fine, poorly graded, silty sand. 5 SP SP 32. 3 SP 33.0<del>\_</del> SP-SM 34.0' with shell fragments. 6 34. 5 ASSUMED NOT RECOVERED 35.0<del>\_</del> NOTE: Terminated hole at vibraore refusal depth at 14.0' 37.0 -37.8 37.8 BOTTOM OF HOLE AT 37.8' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT HOLE NO. TI-03-V-364 ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.

Hole No. TI-03-V-365 SHEET 1 DIVISION SOUTH ATLANTIC INSTALLATION DRILLING LOG WILMINGTON DISTRICT 10. SIZE AND TYPE OF BIT 4" Dia. Vibracore PROJECT TOPSAIL INLET 11. DATUM FOR ELEVATION SHOWNTBM or MSL) 2. LOCATION (Coordinates or Station) NC COORD. E 2411909 N 218452 NAD 83 MLLW 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY
WILMINGTON DISTRICT VIBRA CORE SNELL) 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED UNDISTURBED HOLE NO. (As shown on drawing title and file number) TI-03-V-365 14. TOTAL NUMBER CORE BOXES N/A 5. NAME OF DRILLER LESTER GAUGHF CRANE OPERATOR 15. ELEVATION GROUND WATER N/A STARTED 11/22/03 6. DIRECTION OF HOLE COMPLETED 11/22/03 16. DATE HOLE ∀ VERTICAL INCLINED INCLINE DEG. FROM VERT. 17. ELEVATION TOP OF HOLE O.O' MLLW 7. THICKNESS OF OVERBURDEN N/A ( 35.5' of Water) 18. TOTAL CORE RECOVERY FOR BORING N/A 8. DEPTH DRILLED INTO ROCK 0.0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE LARRY BENJAMIN % CORE RECOV-ERY BOX OR SAMPLE NO. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) CLASSIFICATION OF MATERIALS (Description) ELEVATION DEPTH LEGEND MELW fe€t O 0.0 0.0'TO 35.5' WATER Time begin vibracoring: 0946 hrs. Soils described by Larry Benjamin, Civil Engr. Tech. 35.0 Scale changed @49.0'. OCEAN BOTTOM @ 35.5' 35. 5' NOTE: TOP OF HOLE is defined as surface of water and compensation is made for the tide such that top of Hole is 0.0 EL MLLW. -35.5 35.5 SM Gray, fine, silty sand, w/shell fragments. 1 36.0' 34.0' 37.0 trace of shell fragments. 37.5' VIBRACORE BORING 2 From 0.0' to 13.0' Ran 13.0' Rec: 10.6' 38.0' Top of vibracore soil sample is logged as beginning at Ocean Bottom. When Run is greater than Recovery, the difference is depicted as Assumed 39.O<sup>\_\_</sup> 39. 5' 3 40.0' Not Recovered. 41.0-41.5' 4 42.0 LAB CLASSIFICATION 43.0-43.5 <u>Classification</u> <u>Number</u> SP-SM 44.0 2 SM 3 SMSM45.0 SM 45.5 SM 6 46.0 ASSUMED NOT RECOVERED 47.0 NOTE: Terminated hole at vibraore efusal depth at 13.0' -48.5 48.5 BOTTOM OF HOLE AT 48.5' SOILS ARE FIELD VISUALLY CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM PROJECT TOPSAIL INLET HOLE NO. TI-03-V-365 ENG FORM1836 PREVIOUS EDITIONS ARE OBSOLETE.