Sheet1

Recharge Test Data Record										
Core Boring Number	CB-S-4									
Date Of Test	10/19/99									
Test Performed by	R. Poncivasso									
Ground Water Level	1.8'									
Casing Size	2"									
Casing Depth	130'									
Hole Diameter at point of test	6"									
				A	B		C	D	E	F
From Depth Elevation	To Depth Elevation	Time Start	Time Stop	Total Time	Depth to Ground Water before test	Depth to Ground Water after test	Stickup above Ground	Total Head	Total Water Injected	Gallons Per Minute
Feet	Feet	Min	Min	Min	Feet	Feet	Feet	Feet B+C	Gal	GPM E/A
125	130	12:20	12:30	10	1.8	2.30	4.0	5.8	0.1	0.01

NOTES:
1. Record water take with the water maintained at the top of casing.
2. Water depth must be measured immediately before the recharge test.
3. Water depth shall be recorded after test, and noted if changed.
4. Typical test time is 5 minutes.

= Periods of Heavy rain.

Enr - 11

DRILLING LOG (Coal Sheet) Hole No. CB-S-4

PROJECT CSF | Jacksonville District | SHEET 2 OF 5 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV.	SOIL OR Sample NO.	REMARKS (Drilling rate, water loss, depth weathering, etc. If variable)	BLOW COUNTS
	22		LIMESTONE, Weak Rec - 26"/43%. RQD = 8%			COMMS Lost 1ft	21.0
	22.5						22.5
	23						23
	23.5		LIMESTONE, Medium hard, little shell frags numerous sand filled solution holes.		11	23-24' - 1:06 min 24-25 - 1:14 "	24.0
	24.5					Lost Drilling Mud @ 25.0', core barrel got Clogged	25.5
	25.5					25.0-26.0 - 1:20 26.0-27.0 - 1:30 27.0-28.0 - 0:30	27.0
	26.0		Rec = 36"/60%			Using 6" Bucket Casing/Clutter recovered	28.0
	27.5		RQD = 47%			28-29 - 0:35 min	28.5
	28.0				12	29-30 - 1:21 " 30-31 - 3:21 "	30.0
	28.5		Rec = 12"/20%			31-32 - 2:20 " 32-33 - 3:00 "	31.5
	30.0		RQD = 5"/60" = 8%			Using creeper Jack drill bit	33.0
	31.5				13	33-34 - 1:45 min 34-35 - 0:15 " 35-36 - 2:00 "	34.5
	32.0		Rec = 38"/63%			36-37 - 0:47 " 37-38 - 0:30 "	36.0
	33.5		RQD = (4")+(5")+(5")/60"				37.5
	34.0		RQD = 23%				38.0
	34.5		LIMESTONE, Hard, littleshell (up to 1") and shell frags. Numerous sand filled solution holes white to light tan brown		14	38-39 - 1:15 min 39-40 - 1:25 " 40-41 - 3:30 "	39.0
	35.5					41-42 - 2:03 " 42-43 - 1:00 "	40.5
	36.0		Rec = 48"/80%			Broke Jack @ 39' bgl	42.0
	37.5		RQD = 83%				43.0
	38.0						43.5
	38.5		Rec. = 42"/70%		15	43-44 - 1:02 min 44-45 - 0:18 "	45.0
	40.0		RQD = 57%			45-46 - 5.04 " 46-47 - 0:50 " 47-48 - 1:19 "	46.5
	41.5						48.0
	43.0						
	43.5		LIMESTONE, Weak little shell frags. Numerous sand filled solution holes.		16	0:50 min 48-49 - 20 49-50 - 1:06 "	49.5
	44.5					50-51 - 9:38 " 51-52 - 4:10 " 52-53 - 3:10	
			Rec = 14"/23%; RQD = 0				

DRILLING LOG (Coal Sheet) Hole No. CB-S-4

PROJECT CSF | Jacksonville District | SHEET 2 OF 5 SHEETS

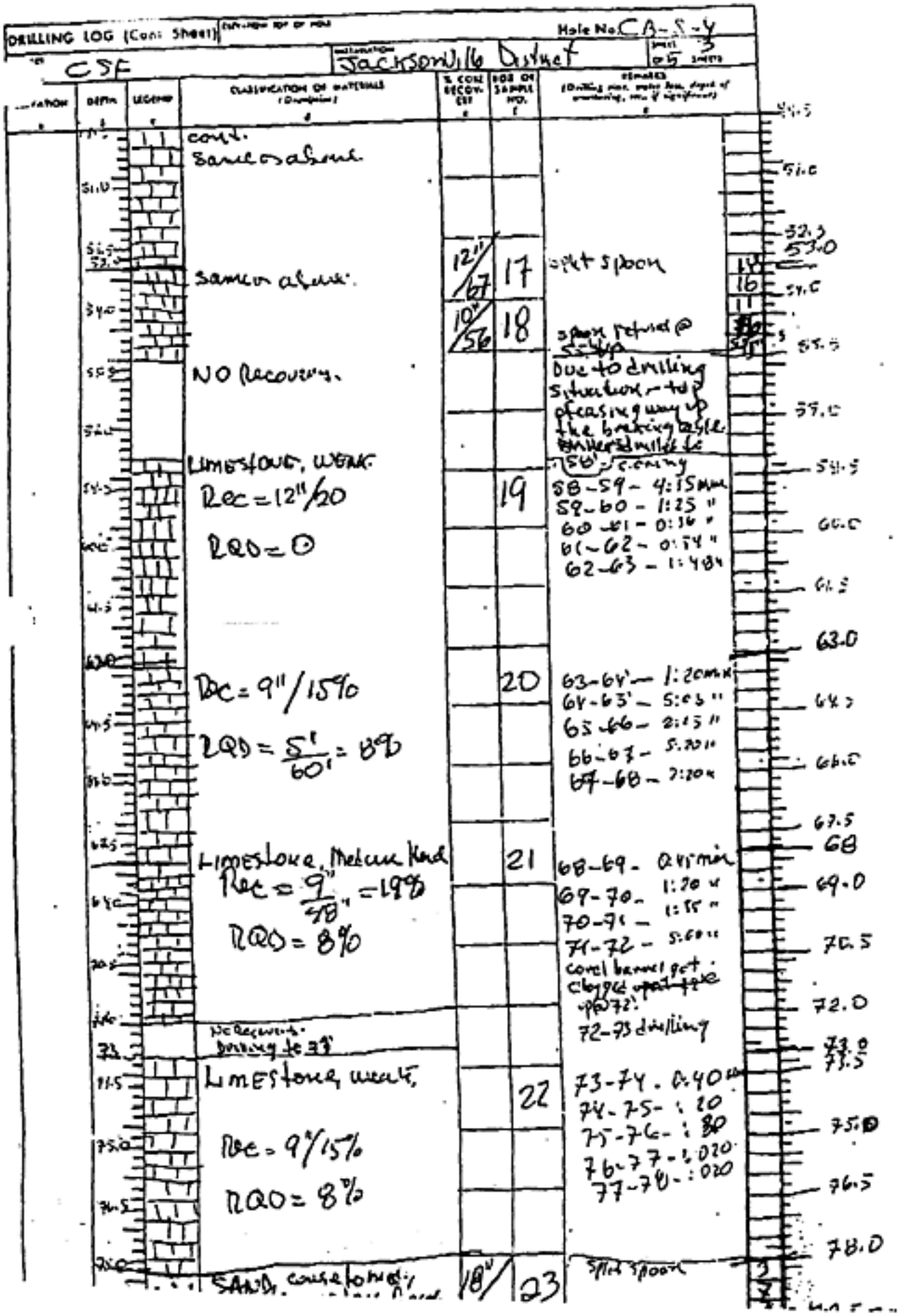
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV.	SOIL OR Sample NO.	REMARKS (Drilling rate, water loss, depth weathering, etc. If variable)	BLOW COUNTS
	22		LIMESTONE, Weak Rec - 26"/43%. RQD = 8%			COMMS Lost 1ft	21.0
	22.5						22.5
	23						23
	23.5		LIMESTONE, Medium hard, little shell frags numerous sand filled solution holes.		11	23-24' - 1:06 min 24-25 - 1:14 "	24.0
	24.5					Lost Drilling Mud @ 25.0', core barrel got Clogged	25.5
	25.5					25.0-26.0 - 1:20 26.0-27.0 - 1:30 27.0-28.0 - 0:30	27.0
	26.0		Rec = 36"/60%			Using 6" Bucket Casing/Clutter recovered	28.0
	27.5		RQD = 47%			28-29 - 0:35 min	28.5
	28.0				12	29-30 - 1:21 " 30-31 - 3:21 "	30.0
	28.5		Rec = 12"/20%			31-32 - 2:20 " 32-33 - 3:00 "	31.5
	30.0		RQD = 5"/60" = 8%			Using creeper Jack drill bit	33.0
	31.5				13	33-34 - 1:45 min 34-35 - 0:15 " 35-36 - 2:00 "	34.5
	32.0		Rec = 38"/63%			36-37 - 0:47 " 37-38 - 0:30 "	36.0
	33.5		RQD = (4")+(5")+(5")/60"				37.5
	34.0		RQD = 23%				38.0
	34.5		LIMESTONE, Hard, littleshell (up to 1") and shell frags. Numerous sand filled solution holes white to light tan brown		14	38-39 - 1:15 min 39-40 - 1:25 " 40-41 - 3:30 "	39.0
	35.5					41-42 - 2:03 " 42-43 - 1:00 "	40.5
	36.0		Rec = 48"/80%			Broke Jack @ 39' bgl	42.0
	37.5		RQD = 83%				43.0
	38.0						43.5
	38.5		Rec. = 42"/70%		15	43-44 - 1:02 min 44-45 - 0:18 "	45.0
	40.0		RQD = 57%			45-46 - 5.04 " 46-47 - 0:50 " 47-48 - 1:19 "	46.5
	41.5						48.0
	43.0						
	43.5		LIMESTONE, Weak little shell frags. Numerous sand filled solution holes.		16	0:50 min 48-49 - 20 49-50 - 1:06 "	49.5
	44.5					50-51 - 9:38 " 51-52 - 4:10 " 52-53 - 3:10	
			Rec = 14"/23%; RQD = 0				

DRILLING LOG (Cont. Sheet) | Elevation top of hole | Hole No. CB-S-4

CSF | Installation: Jacksonville District | Sheet 3 of 5 sheets

Elevation	Depth	Legend	Classification of Materials (Description)	% Core Recovery	Box or Sample No.	Remarks (Drilling time, water loss, depth of weathering, etc., if significant)
			cont. Same as above			
	51.0					
	52.5					
	53.0		Same as above.	12"/67	17	split spoon
	54.0			10"/56	18	spoon refused @ 55' bgs
	55.5		NO Recovery.			Due to drilling situation - top of casing way up the braking cable. Drillers drilled to 58' coring
	56.0					
	58.5		LIMESTONE, WEAK. Rec = 12"/20 RQD = 0		19	58-59 - 4:15 min 59-60 - 1:25 " 60-61 - 0:36 " 61-62 - 0:54 " 62-63 - 1:48 "
	61.5					
	63.0		Rec = 9"/15% RQD = 5'/60' = 8%		20	63-64' - 1:20 min 64-65' - 5:05 " 65-66 - 2:15 " 66-67 - 5:20 " 67-68 - 7:20 "
	64.5					
	66.0					
	67.5		Limestone, Medium Hard Rec = 9"/48" = 19% RQD = 8%		21	68-69 - 0:45 min 69-70 - 1:20 " 70-71 - 1:55 " 71-72 - 5:60 " Core barrel got clogged up @ 72'. 72-73 drilling
	70.5					
	72.0		No Recovery. Drilling to 73'			
	73.0		Limestone, weak. Rec = 9"/15% RQD = 8%		22	73-74 - 0:40 min 74-75 - 1:20 75-76 - 1:80 76-77 - 1:020 77-78 - 1:020
	75.0					
	76.5					
	78.0		SAND, coarse to medium	18"/	23	Split spoon

Depth scale: 44.5, 51.0, 52.5, 53.0, 54.0, 55.5, 57.0, 58.5, 60.0, 61.5, 63.0, 64.5, 66.0, 67.5, 68, 69.0, 70.5, 72.0, 73.0, 73.5, 75.0, 76.5, 78.0



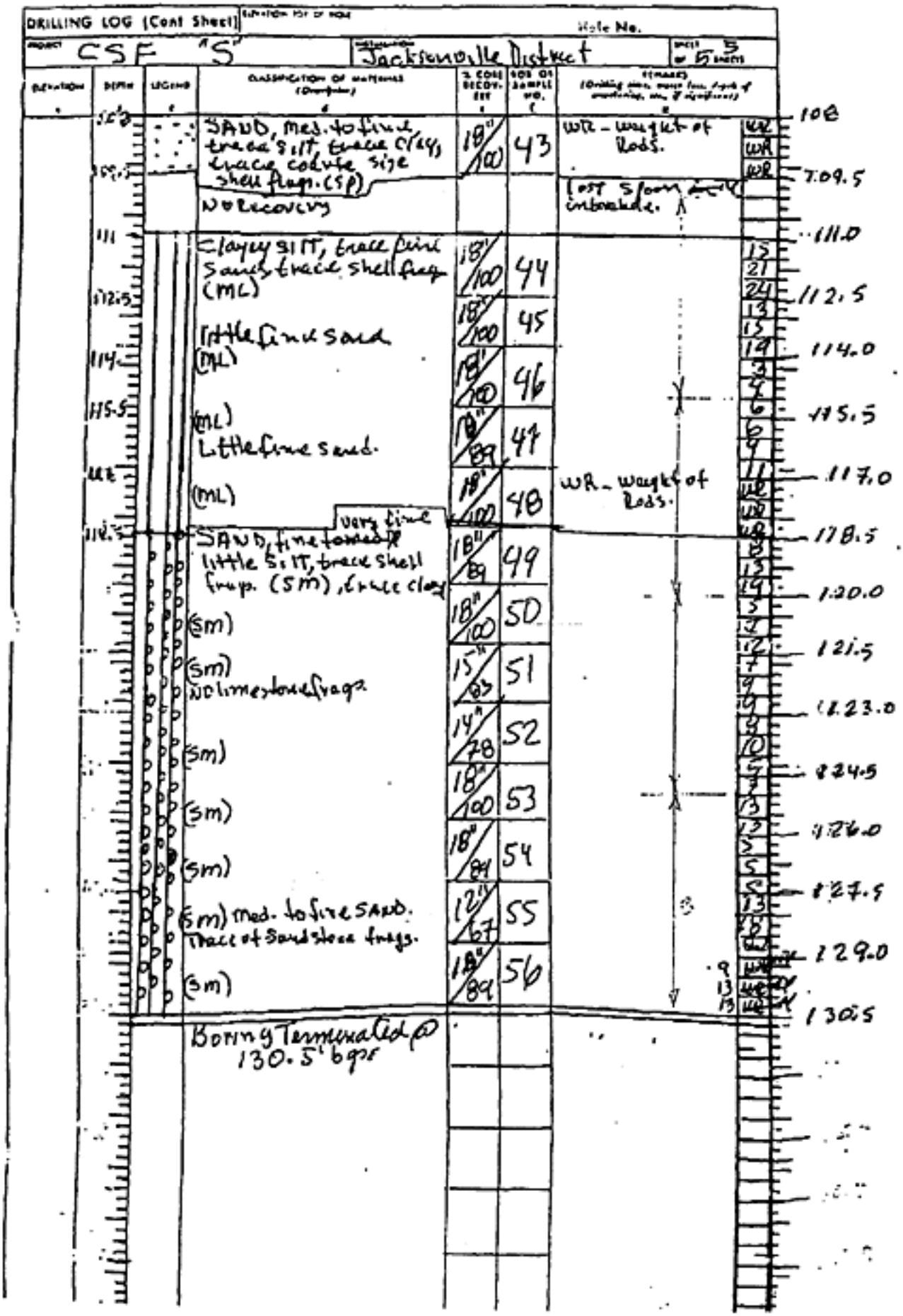
DRILLING LOG (Cont Sheet) | Hole No. CB-S-4

PROJECT CSF "S" | LOCATION Jackson Ville Destin | SHEET 2 of 2 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	SOIL SAMPLE NO.	REMARKS	BLOW COUNTS
	79.5						time: 79.5
	81.0		SAND, Med to fine, trace limestone frags., trace s.lt. (SP)	14"/76	24	Drilling Portdve 6" ϕ steel casing Vibrated W/ 5 3/6" Rollen b.t.	6 8 11
	82.5		little shell frags. trace clay (SP)	18"/100	25		5 6 5
	84			14"/78	26		10 11 3
	85.5		some coarse to gravel size shell frags. (SP)	18/100	27		4 6 8
	87.0		(SP)	16"/89	28		8 8 10
	88.5		SAND, coarse to Med. little clay, little shell frags. trace limestone frags. (SC)	18"/100	24		6 9 12
	90.0			8"/44	30		6 8 11
	91.5		(SC)	15"/83	31		8 14 16
	93.0		(SC) same	6"/33	32		12 14 16
	94.5		SILT, little med. to fine, Little Clay, Little coarse to gravel size shell frags	18"/100	33		10 11 16
	96.0			12"/67	34	WH - weight of Hammer	WH WH WH
	97.5			18"/100	35		8 9 9
	99.0		SAND, med to fine, little coarse to gravel size shell frags. (SP)	18"/100	36	WH - weight of Hammer	WH WH WH
	100.5		(SP)	9"/50	37		4 4 5
	102.0		(SP)	4"/33	38		6 7 6
	103.5		(SP)	7"/39	39		3 1 5
	105		(SP)	18"/100	40		5 6 7
	106.5		(SP)	15"/83	41		7 8 13
	108		(SP)	15"/83	42		5 9 13
							108.0

** TOTAL PAGE.07 **

DRILLING LOG (Cont Sheet) | ELEVATION TOP OF HOLE | Hole No.

PROJECT: CSF "S" | INSTALLATION: Jacksonville District | SHEET 5 OF 5 SHEETS

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
	108		SAND, med. to fine, trace silt, trace clay, trace coarse size shell frags. (SP)	18"/100	43	WR - weight of Rods.	WR WR WR	108
	109.5		No Recovery			Lost spoon in borehole.		109.5
	111		Clayey SILT, trace fine sand, trace shell frag (ML)	18"/100	44		15 21 24	111.0
	112.5		little fine sand (ML)	18"/100	45		13 15 19	112.5
	114		(ML)	18"/100	46		3 4 6	114.0
	115.5		Little fine sand. (ML)	18"/89	47		6 9 11	115.5
	117		(ML)	18"/100	48	WR - weight of Rods.	WR WR WR	117.0
	118.5		SAND, fine ~~to med.~~ very fine little SILT, trace shell frags. (SM), trace clay	18"/89	49		8 13 19	118.5
			(SM)	18"/100	50		5 7 12	120.0
			(SM) No limestone frags.	15"/83	51		7 9 19	121.5
			(SM)	14"/78	52		8 10 5	123.0
			(SM)	18"/100	53		7 13 13	124.5
			(SM)	18"/89	54		5 5 5	126.0
			(SM) med. to fine SAND. Trace of Sandstone frags.	12"/67	55		13 18	127.5
			(SM)	18"/89	56	9 13 13	WR WR WR	129.0
			Boring Terminated @ 130.5' bgs					130.5