FARNELLA 87-1
GEOPHYSICS LOG
ORIGINAL
February 2-26, 1987

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MASSCOMP ERROR LOG

U.S. GEOLOGICAL SURVEY
OFFICE OF MARINE GEOLOGY

Woods Hole, Massachusetts
02543

1044460A
Ser# 87004

Serial # 87004

U.S.G.S.
GEOPHYSICS
LOG

SHIP FARNELLA

CRUISE NO. F1-87-EC

DATE 2-2-87 to 2-26-87

CHIEF SCIENTIST POPENOE/TWICHELL

2

FARNELLA FI-87-FC
FRNL 87-1 Serial #87004
Feb 2-26, 1987
Popenoe/Twichell
South Atlantic

ROLL NUMBER

LINE #	BEGIN	END	3.5	10	AIRGUN
1.	035/0430	036/1930	TEST, 1, 2	1	1
2.	036/2002	038/2203	2, 3, 4, 5	2	1
3.	038/2322	040/0049	5, 6, 7	3	1
4.	040/0200	041/1722	7, 8	3, 4	1
5.	041/1900	042/1324	8, 9	4	2
6.	042/1435	043/2129	9, 10, 11	4, 5	2
7.	043/2304	044/1444	11, 12	5	2
8.	044/1553	045/0916	12, 13	5, 6	2
9.	045/1104	045/1445	13	6	2
10	045/1454	045/2306	13	6	2
11	046/0330	046/0803	14	6	2
12	046/0811	046/1139	14	6	2
13	046/1149	046/2329	14	6	2
14	047/0137	047/1220	15	7	2
15	047/1436	047/1816	15	7	2
16	047/1845	048/0420	16	7	2
16	049/0051	049/0452	18	7	3
17	049/0617	050/0119	18, 19	7, 8	3
18	050/0328	050/2023	19	8	3
19	050/2228	051/1758	19, 20	8, 9	3
20	051/1954	052/1726	20, 21, 22	9	3
21	052/1923	053/1530	22, 23	9	3
22	053/1936	054/1254	23, 24	9, 10	3, 4
23	056/1321	057/1455	25, 26	10, 11	4
24	057/1653	057/2300	26	12	4

AIRGUN (LSR)

Advance 6" @ Start/end of Lines

SHIP/CRUISE NO./LEG F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE (START / END)	TIME	YYMMDD	CRS/HDG	SPD (kt)	NAVIGATION	SEISMIC SYSTEM
1	1700Z	87 035	040°	8.8	LORAN C	2 channel airgun - Raytheon LSR
1	1916Z	87 035	041	5.0		
1	1930Z	87 035	041	7.5		
1	0410	87 036	—	—		
1	0740	87 036	099	—		
1	0818	87 036	036	8.0		
1	0900	87 036	—	—		
1	1130	87 036	—	—		
1	~1230	87 036	—	—		
EOL1	1930	87 036	040	8.0		
SOL2	2002	87 036	219	8.0		
2	2017	87 036	219	8.0		
2	0000	87 037	219	—		
2	0103	87 037	219	—		
2	0228	87 037	210	—		
2	0437	87 037	206	—		
2	0634	87 037	205	8.7		
2	0827	87 037	—	—		
2	0936	87 037	—	—		
2	1030	87 037	—	—		
2	1112	87 037	—	—		
2	—	—	—	—		
EOL2	0510	87 038	236	6.3		
TRAN	2203	87 038				
TRAN	2219	87 038				
SOL3	2322	87 038				
3	2336	87 039				
3	0043	87 040				
EOL3	0049	87 040				
SOL4	0200	87 040				
4	0638	87 040	249			
4	1000	87 040				
4	0554	87 041	236			

Annotate log: 1. Start/end of Roll
2. Start/end of Line
3. Machine off/on 4. course change

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
4	0 – 3000 m	75/15	—	1		Start of Roll 1 System on
4	0 – 3000 m	"	—	1		Slowed to deploy magnetometer
4	0 – 3000 m	"	—	1		Back up to speed
4	0 – 3000 m	"	—	1		System off - engine trouble
4	0 – 3000 m	"	—	1		System on
4	0 – 3000 m	"	—	1		course change 036°
		"	—	1		ROUTINE: GAIN TWEEKED TO ~ 7 THRESHOLD TO ~ 3
4	750 – 3750	"	—	1		DWD = 1 sec
4		"	—	1		ROUTINE: GAIN TO ~4 (PETE)
4	0 – 3000	"	—	1		EOL 1
4	0 – 3000	"	—	1		SOL 2
4	1500 – 4500	"	—	1		DWD = 2 sec
4	—	"	—	1		LOSS OF SIGNAL / SYSTEM REMAINS ON
4	0 – 3000	"	—	1		NEW AIRGUN IN PLACE (80 min)
4	750 – 3750	"	—	1		DWD = 1 sec
4	1500 – 4500	"	—	1		DWD = 2 sec
4	750 – 3750	"	—	1		DWD = 1 sec
4	1500 4500	"	—	1		DWD = 2 sec
4	750 – 3750	"	—	1		DWD = 1 sec
4	0 – 3000	"	—	1		DWD = 0 sec
4	—	"	—	1	—	"POTENTIAL OVERLOADS" PREC-AMP GAIN = 0.7
4	—	"	—	1	—	RESET, BACK TO 0.8 AFTER ~8-min, ALL QUIET
4	0 – 3000	"	—	1	—	c/c 236°
			—		—	EOL 2
4	0 – 3000	"	—	1	—	SOL 3 INCORRECT (JUST INITIATING TURN)
4	0 – 3000	"	—	1	—	SOL 3
4	750 – 3750	"	—	1	—	DWD = 1 sec
4	1500 – 4500	"	—	1	—	DWD = 2 sec
4	1500 – 4500	"	—	1	—	EOL 3
4	1500 – 4500	"	—	1	—	SOL 4
4	750 – 3750	"	—	1	—	DWD = 1 sec
4	0 – 3000	"	—	1	—	DWD = 0 sec
4	0 – 3000	"	—	1	—	c/c 236°

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
EOL 4	1722	87 041	236	6.0	LORAN C	
TRANS	1855	87 041	—	-		
SOL 5	1900	87 041	053	8.9		
5	1909	87 041	050	9.3		
5	1144	87 042				
EOL 5	1324	87 042				
SOL 6	1435	87 042				
6	1855	87 042				
6	2027	87 042				
6	2242	87 042				
6	2334	87 042				
6	0014	87 043				
6	1147	87 043	236			
6/	2129	87 043				
/7	2304	87 043				
7	1230	87 044				
EOL 7	1444	87 044				
SOL 8	1553	87 044				
8	0140	87 045	225	9.1		
8	0515	87 045	236	9.1		
8/	0916	87 045				
/9	1104	87 045				
EOL 9	1445	87 045		8.2		
SOL 10	1454	87 045				
10	1543	87 045				
10	1625	87 045				
10	1735	87 045				
10	1846	87 045				
10	1852	87 045				
10	1920	87 045				
10	2202	87 045				
10	2230	87 045				DWD = 4 sec
10/	2306	87 045				

Curry....

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP Sec	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL# START / END	MAGNETICS	COMMENTS
4	0 - 3000 m	75/15	—	1	—	EOL 4
4	0 - 3000	"	—	EOR 1		END OF ROLL 1 - SYST OFF
4	0 - 3000	"	—	—		SOL 5 SYST. STILL OFF
4	0 - 3000	"	—	SOR 2		SOR 2 SYST. ON
4	750 - 3750	"		2		DWD = 1 sec *
4		"		2		EOL 5 ? 2 sec
4		"		2		SOL 6
4	1500 - 4500	"		2		DWD = 2 sec
4	1500 - 4500	20/100		2		Change filter 20/100
4	0 - 3000			2		DWD = 0 sec
4	0 - 3000			2		AIRGUN STOPS FIRING, REPLACING
4	0 - 3000			2		REPLACEMENT AIRGUN IN PLACE
4	0 - 3000			2		c/c 236
4	0 - 3000			2		EOL 6
4	0 - 3000			2		SOL 7
4	750 - 3750			2		DWD = 1 sec
4	750 - 3750			2		EOL 7
4	750 - 3750			2		SOL 8
4	0 - 3000			2		DWD = 0 sec
4	0 - 3000			2		c/c to 236°
4	0 - 3000			2		EOL 8
4	0 - 3000			2		SOL 9
4	0 - 3000			2		EOL 9
4	0 - 3000			2		SOL 10
4	750 - 3750			2		DWD = 1 SEC
4	1500 - 4500			2		DWD = 2 SEC
4	1500 - 4500			2		Syst. OFF trouble w/ compressors
4	2250 - 5250			2		Syst on DWD = 3 SEC
4	2250 - 5250			2		airguns off more trouble w/ compr.
4	2250 - 5250			2		Syst off serious trouble w/ compr.
						SYSTEM ON.
4	3000 - 6000			2		DWD = 4 sec
4	3000 - 6000			2		EOL 10

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRANS	2334	87 045				
TRANS	0212	87 046				
SOL 11	0330	87 046	301			
11	0530	87 046	301	9.5		
11	0638	87 046	302	10.0		
EOL 11	0803	87 046				
SOL 12	0811	87 046				
EOL 12	1139	87 046				
SOL 13	1149	87 046				
13	1303	87 046				
13	1422	87 046				
13	2142	87 046				
EOL 13	2329	87 046				
SOL 14	0137	87 047				
14	0231	87 047				
14	1100	87 047				
14	1148	87 047				
EOL 14	1220	87 047				
TRANS	1320	87 047				
SOL 15	1437	87 047				
EOL 15	1816	87 047				
SOL 16	1845	87 047				
TRANS	0912	87 048				
"	2142	87 048				
"	2146	87 048				
16	0100	87 049				
16	0130	87 049				
16	0303	87 049				
EOL 16	0452	87 049				
TRAN	0511	87 049				
SOL 17	0617	87 049	211	4.4		
17	1736	87 049	198			
17	2330	87 049				
17	0119	87 050				
SOL 18	0328	87 050				

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
4	3000-6000	80/15	—	2		TRANSIT
4	2250-5250	"	—	2		DWD = 3 sec
4	2250-5250	"	—	2		SOL "
4	1500-4500			2		DWD = 2 sec
4	750 - 3750	"		2		DWD = 1 sec
4	750 - 3750	"		2		EOL 11
4	750 - 3750			2		SOL 12
						EOL 12
						SOL 13
4	1500-4500			2		DWD = 2 sec
4	2250-5250			2		DWD = 3 sec
4	3000-6000			2		DWD = 4 sec
4	3000-6000			2		EOL 13
						SOL #14
4	2250-5250			2		DWD = 3 sec
4	1500-4500			2		DWD = 2 sec
4	750-3750			2		DWD = 1 sec
4	750-3750			2		EOL 14
4	750					Change airgun DWD = 2 sec *
4	1500-4500					SOL 15
4	1500-4500					SOL 15
4	1500-4500					SOL 16
					?	DWD = 3 sec
						A/C TO AVOID ROUGH WTHR
4	3000-6000					DWD = 4 sec (PREVIOUSLY = 3 sec)
4	750-3750					DWD = 1 sec (PREVIOUSLY = 2 sec)
4						DWD = 1 sec [2142-2146 DWD = 3 secs OOPS]
4	1500-4500					DWD = 2 sec
4	2250-5250					DWD = 3 sec
4	1500-4500					DWD = 2 sec
4	1500-4500			2/3 ?		EOL 16
4	2250-5250			3		DWD = 3
4	2250-5250			3		SOL 17
4	1500-4500			3		DWD = 2
4	2250-5250			3		DWD = 3 sec
4				3		EOL 17

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST DOPENOE/TWICHELL

LINE (START / END)	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION LORAN	SEISMIC SYSTEM
18	0544	87 050	018	7.9		
18	0816	87 050	016	7.6		
18	1136	87 050				
EOL 18	2023	87 050	027	8.2		
SOL 19	2228	87 050	–	–	–	
19	1103	87 051				
EOL 19	1758	87 051				
SOL 20	1954	87 051				
20	0800	87 052	–	–	–	
EOL 20	1726	87 052				
TRANS	1804	87 052				
SOL 21	1923	87 052				
21	1200	87 053				
21		87 053				
EOL 21	1530	87 053				
TRAN	1736	87 053				
SOL 22	1936	87 053				
22	2124	87 053				
22	1040	87 054				
22	1048	87 054				
EOL 22	1254	87 054			Begin Rough	weather transit
TRAN	1310	87 054				
23	1321	87 056				Airgun down. was tested last night and could not seat to fire. is being repaired this AM
23	1605	87 056	190	8.8	36° 13, 74.44	Airgun
23	1700	87 056	190	8.7	36° 08.98 74 45.34	
23	2251	87 056	–	–	–	
23	2348	87 056	–	–	–	
23	0352	87 057				
23	1455	87 057	–	–	–	
24	1704	87 057	–	–	–	
EOL 24	2300	87 057				

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
4	1500-4500	80/15	—	3	—	DWD = 2 SEC
4	2250-5250	"	—	3		DWD = 3 SEC (1 SEC FOR ~9 MINS)
4	3000-6000	"		3		DWD = 4 sec
4	3000-6000	"		3		EOL 18
4	3000-6000	"		3		SOL 19
4	3000-6000	"		3		INADVERTENT INTERRUPT OOPS (GUN OFF BRIEFLY)
4	3000-6000	"		3		EOL 19
4	3000-6000	"		3		SOL 20
4	3750-6750	"		3		DWD = 5 sec
4	3750-6750	"		3		EOL 20 SYST. OFF
4	3750-6750	"		3		SYSTEM ON.
4				3		SOL 21
4	2250-5250			3		DWD = 3 sec
4	3000-6000			3		DWD = 4 sec
4	3000-6000			3		EOL 21
4	2250-5250			3		DWD = 3 SEC
4	3000-6000	"		3		DWD = 4 SOL 22
4	3750-6750			3		DWD = 5 sec
4	3750-6750			3/		EOR 3
4	3750-6750			/4		SOR 4
4	" "			4		EOL 22, rough weather tran
						Airgun broken, syst. off
						Airgun down - at SOL
4	0-3000	80/15		4		Airgun on line
4	0 -	80/15		4		
4	750-3750	80/15		4		DWD = 1 sec
4	1500-4500	"		4		DWD = 2 sec
4	2250-5250	"		4		DWD = 3 sec
4	"			4		EOL 23
4	2250-5250	75/15		4		SOL 24
4	2250-5250	75/15		EOR 4		EOL 24 END CRUISE EOR 4 F4-87-EC. EOC

SHIP/CRUISE NO./LEG

CHIEF SCIENTIST

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM

AREA

TIME ZONE

3.5 kHz

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS

Advance 6" @ start/end of lines

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
—	0400	87 034	testing	system		3.5 kHz
—	0801	87 034				
—	2140	87 034	250			
SOL 1	0430	87 035	056		31° 57.0 78 39.6	
1	0700	87 035	056		32° 13.25 78° 12.00	
1	0800	87 035	056	7.4	32° 18.00 78° 03.90	
1	0900	87 035	058	7.5	32° 21.3 77° 57.0	
1	1000	87 035	056	8.4	32° 25.8 77° 49.2	
1	1033	87 035	(056)		32° 28.5 77° 44.5	
1	1036	87 035	042		32° 28.8 77° 44.2	
1	1100	87 035	043	8.4	32° 30.9 77° 41.8	
1	1200	87 035	043	8.4	32° 37.0 77° 35.7	
1	1300	87 035	042	7.6	32° 43' 77° 30'	
1	1400	87 035	044	7.5	32° 50' 77° 23'	
1	1530	87 035	318	7.9	32° 45' 77° 29'	
1	1554	87 035	029	6.2	32° 47.5' 77° 29'	recording GLORIA
1	1600	87 035	074	7.9	32° 48' 77° 27'	
1	1700	87 035	037	8.0	32° 52' 77° 20.3	
1	1800	87 035	048	8.0	32° 58.7 77° 13.7	
1	1900	87 035	040	8.0	33° 04.0 77° 08.0	
1	1916	87 035	041	5.0	—	
1	1930	87 035	041	7.5	—	
1	2000	87 035			32° 09.3' 77° 02.75'	
1	2100	87 035	036		33° 15.1 76 56.9	
1	2200	87 035	047	9.0	33° 20.9 76° 50.5	
1	2300	87 035	045	8.8	33° 27.1 76 43.0	
1	0000	87 036	051	10.4	33° 33.4 76° 35.6	
1	0100	87 036	047	9.9	33° 39.1 76° 29.5	
1	0200	87 036	040	8.4	33° 45' 76° 23'	
1	0300	87 036	038	7.8	33° 51' 76° 16'	
1	0400	87 036	026	4.8	33° 57' 76° 10'	
1	0409	87 036	—	—		
1	0640	87 036	—	—	33° 59 76° 9'	

3.5 kHz

Annotate log: 1. Start/end Roll
2. Start/end Line
3. Change program, turn machine on/off, course change

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	~~MAGNETICS~~ DEPTH(m)	COMMENTS
1 sec	0-750			1		Start of roll 1
	0-750			1		SYSTEM OFF
"	0-750			1		SYSTEM ON "TRANSIT BACK TO" LINE 1
	0-750			1		SOL 1
"	0-750			1	445	routine
	0-750			1	435	"
"	0-750			(1)	405	"
	0-750			"	400	"
				1		CHG CRS TO 041°
				1		ON LINE 041°
"	0-750			1		ROUTINE
	0-750			1		"
				1		"
				1		"
				1		"
				1		"
				1		"
				1	360	"
1	0-750			1	335	"
1	0-750			1	330	"
1	0-750			1	330	slowed to deploy magnetometer
1	0-750			1	325	up to speed
1	0-750			1		routine
1	"			"		routine
1	0-750			1	295	"
1	0-750			EOR 1 SOR 2	315	EOD
1	0-750			2		
1	0-750			2		
1	0-750			2		
1	0-750			2		
1	0-750			2		SYSTEM OFF
1	0-750			2		SYSTEM ON

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
	0730	87 036	045			
1	0800	87 036	049		34°05.7 76°00.1	3.5 KHz LSR
1	0818	87 036	036	7.7		
1	0900	87 036	?	?	34°11.3 75°54.5	
1	1000	87 036			34°17.8 75°48.6	
1	1100	87 036			34°24.0 75°43.4	
1	1111	87 036				
1	1130	87 036				
1	1133	87 036				
1	1140	87 036				
1	1200	87 036	018?	5.7	34°30.4 75°38.2	
1	1300	87 036	042	?	34°36.9 75°32.4	
1	1400	87 036	043	8.8	34°45' 75°25'	
1	1500	87 036	043	7.8		
1	1600	87 036	?	7.1	34°54.8 75°15.4	
1	1617	87 036				
1	1619	87 036				
1	1700	87 036			35 0.7' 75°10.2'	
1	1800	87 036	040		35°07.7 75°03.2	
1	1840	87 036	038	—	—	
1	1900	87 036	038		35°15.2' 74°55.7'	
1	1918	87 036	040		35 17.4 74°53.5	
EOL 1	1930	87 036	040		35°19.6 74°51.0	
TRANS	1954					
SOL 2	2002	87 036	219		35°20 74°48	
2	2136	87 036				
2	2146	87 036				
2	2200	87 036			35°12.4 74°54.2	
	2250	87 036				
	2302	87 036			35°8.6 74°57.7	
2	0000	87 037	?	?	35°5.3 75 0.1	
2	0100	87 037				
2	0200	87 037	219	8.8		
2	0300	87 037				

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
	0-750				Depth	on line 1
1	0-750	—	—	2	415	routine
1	0-750	—	—	2	430	course change
1	0-750			2	425	ROUTINE
1	0-750			2	435	"
				2		"
1	375-1125			2		"
				2		CHANGE TO 100 LINES/IN
1	750-1500			2		CHANGE BACK TO 200 LINES/IN
				2		CHANGE TO 100 LINES/IN. // POWER OUTPUT = 0 db
1	750-1500			2	1035	ROUTINE
				2		
				2		
				2		
				2	595 m	
	750-1500			2	~800	c/s 750-1500 m
	375-1125			2	~900	c/s 375-1125 m
	375-1125			2		
	375-1125			2	820	ROUTINE
	750-1500			2		c/s 750-1500 m
	750-1500			2	1200	ROUTINE
	1125-1875			2		c/s 1125-1875
	1125-1875	—	—	2	1440	EOL 1
	1500-2250					c/s 1500-2250
	1500-2250					SOL 2
	1875-2625					
	1500-2250					
						ROUTINE
	1875-2625					
						"
				2/3		EOR2 / SOR3
				3		ROUTINE
				3		
				3		

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
2	0400	87037	216	8.5	34°50' 75°14'	3.5 kHz LSR
2	0500	87037	209	8.7	34°47' 75°15'	
2	0533	87037	204	8.6	—	
2	0600	87037	205	8.7	34 40.8 75°19.7	
2	0618	87037	204	8.7	—	
2	0700	87037	205	8.4	34°33.2 75 23.9	
2	0800	87 037	203	8.3	34°31' 75°28.7	
2	0807	87 037	204	8.4	34 30.8 75 28.8	
2	0825	87 037	206	8.4		
2	0900	87 037				
	0926	87 037				
	0938	87 037				
2	1000	87 037	219	8.4	34°18.9 75°40.7	
	1024	87 037				
2	1100	87 037	217	8.2	34°12.6 75°47.6	
2	1200	87 037			34°5.5 75°53.1	
2	1300	87 037	223	7.8	34°0' 75°59	
2	1400	87 037	223	8.5	33°54' 76°6'	
2	1500	87 037	223	7.4	33°48' 76°13'	
2	1600	87 037	225	7.6	33°40' 76°21'	
2	1700	87 037	223	8.8	33°37' 76°24'	
2	1730	87 037	220	8.6	—	
2	1800	87 037	219	8.5	33° 30.5' 76°31'	
2	1900	87 037	216	8.4	33°23.8' 76°37.5'	
2	2002	87 037	219	7.6	33°17.3' 76°44'	
2	2100	87 037	218	8.4	33°11.7 76°50.2	
2	2200	87 037	221	8.1	33°5.5 76°57.1	
2	2304	87 037	222	8.6	32°58.5 77°4.0	
2	0000	87 038	223	7.5	32°52.8 77°9.9	
2	0100	87 038				
2	0200	87 038	222	7.7	32°41' 77°23'	
2	0300	87 038	217	7.6	32°35' 77°29'	
2	0400	87 038	215	7.0	32°30' 77°34'	

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS Depth (m)	COMMENTS
1				3	—	routine
1	1500-2250			3	2080	routine
1	1875-2625			3	—	c/s 1875-2625 m
1	1875-2625			3	2220	routine
1	1500-2250			3	1860	c/s 1500-2250 m
1	1125-1875			3	1540	c/s 1125-1875 m
1	1125-1875			3	1730	routine
1	1500-2250			3		c/s 1500-2250
	1875-2625			3		c/s
				3	2315	ROUTINE
	1500-2250			3		c/s
	1125-1875			3		c/s
1	750-1500			3	1165	c/s
	375-1125			3		c/s
1	"			3	560	ROUTINE
1	"			3	530	"
1				3	515	"
1				3	505	"
1				3	495	"
1				3	480m	"
1				3	465 m	"
1	0-750 m			3	460	c/s 0-750 m
1	0-750 m			3	450	ROUTINE
1	0-750 m			3	450	"
1	0-750 m			3		
1	0-750			3	425	"
1	0-750			3		ROUTINE: CHANGE TO 200 lines/in [BORING RECORDS]
1	0-750			3	425	"
1	0-750			3/4	430	EOR 3 / SOR 4
1	0-750			4	440	ROUTINE
				4	485	"
				4	450	"
				4	460	"

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
2	0500	87 038	223	6.5	32°24.5' 77°39.3'	3.5 kHz LSR
2	0510	87 038	236	6.3	32 23.9 77° 40.0	
2	0600	87 038	238	8.4	32 21.3 77° 44.7	
2	0700	87 038	240	—	32°18.2 77°50'	
2	0808	87 038	240	—	32 15.6 77°55'	
2	0900	87 038	223	4.4	32° 13.6 77°58.6	
2	1000	87 038	232	4.7	32°10.6 78°2.5	
2	1100	87 038	236	5.2	32° 7.7 78° 6.7	
2	1200	87 038	238	5.4	32° 5.2 78° 11.3	
2	1300	87 038	241	5.2	32° 2' 78° 17'	
2	1400	87 038	241	5.2	31° 59' 78° 23'	
2	1500	87 038	235	5.6	31° 58' 78° 26'	
2	1600	87 038	235	6.3	31° 54' 78° 32'	
2	1700	87 038	240	6.6	31° 50.9 78° 38'	
2	1800	87 038	243	6.3	31° 47.2 78° 44'	
2	1900	87 038	240	6.4	31° 49' 78° 50.2'	
2	2000	87 038	239	6.3	31° 40.8' 78° 56'	
2	2100	87 038	241	5.3	31° 38.1 79° 1.6	
2	2200	87 038	238	5.4	31° 35.1 79° 7.1	
2/	2203	87 038	235	5.6	31° 34.9 79° 7.4	
/3	2322	87 038				
3	0000	87 039			31° 37' 78° 50'	
3	0100	87 039	62	8.2	31° 38' 78° 48'	
3	0200	87 039	52	8.2	31° 45' 78° 35'	
3	0300	87 039	55	8.1	31° 50' 78° 28'	
3	0400	87 039	63	7.8	31° 54' 78° 19'	
3	0500	87 039	56	8.5	32° 0' 78° 11'	
3	0600	87 039	56	8.5		
3	0700	87 039	53	8.5		
3	0742	" 039	50	9.3		
3	0800	87 039	50	9.0		
3	0900	87 039	48	9.1	32° 19.7 77° 34.4	
3	1000	87 039	44	8.4	32° 25.6 77° 26.1	

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH(M)	COMMENTS
1	0 - 750 m	—	—	4	475	ROUTINE
1	0 - 750 m	—	—	4	—	c/c to 236°
1	0 - 750 m	—	—	4	480	ROUTINE
1	0 - 750 m	—	—	4/5	510	EOR #4 0655 SOR #5
1	0 - 750 m	—	—	5	490	ROUTINE
1	0 - 750			5	480	"
1	0 - 750			5	470	"
1	0 - 750			5	485	"
1	0 - 750			5	510	"
1	0 - 750			5	525	"
1	0 - 750			5	440	"
1	0 - 750			5	525	"
1	0 - 750			5	485	"
1	0 - 750			5	525	"
1	0 - 750	—	—	5	495	"
1	0 - 750	—	—	5	490	"
1	0 - 750	—	—	5	535	"
1	0 - 750			5	520	"
1	0 - 750			5	570	"
1	0 - 750			5		EOL 2
1	0 - 750			5		SOL 3
1	0 - 750			5/6	435	EOR 5, SOR 6
1	0 - 750			6		
1	0 - 750			6		
1	0 - 750			6		
1				6		
1				6		
1				6		
1				6		
1	0 - 750			6		c/s 0 - 750
				6		
1	0 - 750			6	565	ROUTINE
1	0 - 750			6	590	"

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST DODENOE/TWICHELL

LINE START/END	TIME Z	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
3	1100	87 039	036	8.8	32°32.5 77°18.6	3.5 kHz LSR
3	1200	87 039	043	8.8	32°40.0 77°13.1	
3	1300	87 039	037	9.0	32° 47' 77° 6'	
3	1400	87 039	035	9.6	32° 54' 77° 0'	
3	1500	87 039	036	8.9		
3	1600	87 039	042	9.6	33° 8' 76° 45'	
3	1700	87 039	043	10.7	33° 16' 76° 37'	
3	1800	87 039	042	10.0	33° 23.4' 76° 28.7'	
3	1900	87 039	038	10.9	33 30.8 76° 20	
3	2000	87 039	038	9.1	33 39.2 76 11.7	
3	2100	87 039	035	5.7?	33°43.4 76°5.2	
3	2200	87 039	036	7.6	33°51.8 75°58.6	
3	2300	87 039				
3	2336	87 039				
3	0000	87 040				
3	0019	87 040				
3	0039	87 040				
EOL 3	0049	87 040			33°10.1 75°39.5	
—	0059	87 040				
—	0107	87 040				
—	0127	87 040	138	7.5	34°8' 75°34'	
SOL 4	0200	87 040	226	6.1	34°6' 75°35'	
4	0300	87 040	221	4.6	34°3' 75°37'	
4	0400	87 040	220	1.4	34°0' 75°40'	
4	0500	87 040	246		33°58 75°42.5'	
4	0514	87 040	243		—	
4	0620	87 040	252	2.0	33°54' 75°46.8'	
4	0700	87 040	243	4.8	33°51.7 75°49.7	
4	0800	87 040	244	3.0	33°48' 75°53.2'	
4	0900	87 040	232	6.5	33°45.4 75°56.5	
4	0952	87 040				
4	1000	87 040				
4	1100	87 040	224	6.0	33°38.9 76°3.7	

AREA CAROLINAS / BLAKE

TIME ZONE (ALL TIMES GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH (cm)	COMMENTS
1	0-750	–	–	6	585	ROUTINE
1	0-750	–	–	6	540	"
1	0-750	–	–	6		"
1	0-750	–	–	6		"
1	0-750	–	–	6		"
1	0-750	–	–	6		"
1	0-750	–	–	6	540	"
1	0-750	–			560	
1	0-750	–			585	
1	0-750			6	620	"
1	375-1125			6	645	c/s 375-1125 (100 times/in)
1	375-1125			6	745	
1	750-1500			6	990	c/s 750-1500
1	750-1500			6/7	1215	EOR 6, SOR 7
1	1125-1875				1410	c/s 1125-1875
1	1500-2250			7	1700	c/s 1500-2250
1	1500-2250			7	1830	EOL 3
1	1875-2625			7	2390	BETWEEN LINES 3 & 4
1	2250-3000			7	2545	"
1	2250-3000				2790	
1	2250-3000				2825	SOL 4
1	2250-3000				2835	routine
1	2250-3000				2385	"
1	2250-3000				2020	"
1	1500-2250			7	–	c/s 1500-2250 m
1	1125-1875			7	1550	c/s 1125-1875
1	1125-1875			7	1380	routine
1	750-1500			7		c/s 750-1500 m
1	750-1500			7	980	ROUTINE
1	375-1125			7		c/s 375-1125 m
1	375-1125			7	855	ROUTINE
1	375-1125			7	760	"

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST ~~DOPENOE~~/TWICHELL

LINE START/END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
4	1200	87-040	226	6.2	33° 35.2 76° 7.4	3.5 kHz
4	1300	87 040	227	5.3	33° 31' 76° 12'	
4	1400	87 040	218	5.4	33° 27' 76° 16'	
4	1500	87 040	220	7.0	33° 23' 76° 20'	
4	1600	87 040	218	6.7	33° 18' 76° 25'	
4	1700	87 040	225	6.0	33° 12' 76° 31'	
4	1800	87 040	225	—	33° 07' 76 35.5	
4	1900	87 040	229	7.9		
4	2000	87 040	229	6.3	32 57.4 76 46.4	
4	2100	87 040	217	5.0	32° 52.5 76° 51.2	
4	2200	87 040	214	4.3	32° 48' 76° 55'	
4	2308	87 040	217	5.0	32° 44.7 76° 59.1	
4	0000	87 041	225	6.0	32° 41.5 77° 2.5	
4	0100	87 041	208	5.3	32° 38' 77° 6'	
4	0200	87 041				
4	0300	87 041	218	6.4	32° 29' 77° 16'	
4	0400	87 041	220	6.1	32° 25' 77° 21'	
4	0500	87 041	24	6.5	32° 19.4 77° 25.7'	
4	0554	87 041	236	6.5	32 14.9' 77° 30.3'	
4	0600	87 041	237	6.9	32 14.6 77° 30.8	
4	0700	87 041	238	8.0	32 10.5 77° 38'	
4	0800	87 041	236	8.1	32 6.4' 77° 45.2	
4	0900	87 041	238	7.5	32° 2.4 77° 52.4	
4	1000	87 041	226	7.2	32° 58.3 77° 59.5	
4	1100	87 041	239	7.1	32° 54.0 78° 6.3	
4	1200	87 041	239	7.1	32° 50.2 78° 13.1	
4	0300	87 041	240	7.3	31° 46' 78° 20'	
4	1400	87 041	229	6.1	31° 43' 78° 26'	
4	1500	87 041	240	7.1	31° 40' 78° 32'	
4	1600	87 041	236	6.3	31° 36' 78° 39'	
4	1700	87 041	234	6.1	31° 33' 78° 44'	
EOL 4	1722	87 041	236			
SOL 5	1900	87 041	053	9.0	31° 31.5 78° 33.6	

AREA CAROLINAS / BLAKE

TIME ZONE (ALL TIMES GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH (m)	COMMENTS 10-12' swell ROUGH SEAS 25-30 kt wind
1	375-1125	—	—	7	715	ROUTINE
1		—	—	7	690	"
1		—	—	7	675	"
1		—	—	7	670	"
1		—	—	7	660	"
1		—	—	7	650	"
1	375-1125	—	—	7	645	"
1	375-1125	—	—	7	640	"
1	375-1125	—	—	7		
1	375-1125	—	—	7	630	"
1	375-1125	—	—	7	630	"
1	375-1125	—	—	7	625	"
1	375-1125	—	—	7/8	615	EOR 7, SOR 8
1	375-1125	—	—	8	610	Routine
1	375-1125	—	—	8	620	"
1	375-1125	—	—	8	645	"
1	375-1125	—	—	8	670	"
1	375-1125	—	—	8	615	"
1	375-1125	—	—	8		c/c to 236 dog leg
1	375-1125	—	—	8	635	Routine
1	375-1125	—	—	8	605	"
1	375-1125	—	—	8		"
1	375-1125	—	—	8	685	"
1	375-1125	—	—	8	630	"
1	375-1125	—	—	8	680	"
1	375-1125	—	—	8	640	"
1	375-1125	—	—	8		"
1	375-1125	—	—	8		"
1	375-1125	—	—	8		"
1	375-1125	—	—	8		"
1				8		EOL 4
1	375-1125	—	—	8		SOL 5

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START/END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION LORAN C	SEISMIC SYSTEM
5	2000	87 041	053	9.3	31° ? 78° ?	3.5 kHz PDR
5	2100	87 041	056	9.6	31°42.0 78°15.3	
5	2200	87 041	062	9.8	31° 48' 78° 6'	
5	2300	87 041	056	9.6	31°52.6 77°56.2	
5	0000	87 042	055	10.1	31°58.3 77°46.2	
5	0100	87 042	061	9.8	32° 4' 77° 38'	
5	0200	87 042	058	10.1	32° 9' 77° 28'	
5	0300	87 042	042	9.2	32° 16' 77° 20'	
5	0400	87 042	039	8.3	32° 23' 77° 12'	
5	0500	87 042	047	9.5	32° 30' 77° 6'	
5	0600	87 042	045		32° 38' 76° 57'	
5	0700	87 042	039	9.4	32° 45.3 76° 49.5'	
5	0800	87 042	037	10.0	32° 53' 76° 41.5'	
5	0900	87 042	034	11.0	33° 1.0' 76° 33'	
5	1000	87 042	040	9.9	33° 9.1 76° 24.5	
5	1100	87 042	040	11.8	33° 17.2 76° 15.3	
5	1142	87 042				
5	1202	87 042	041	10.5	33° 25.6 76° 6.8	
5	1254	87 042				
5	1300	87 042	043	11.9	33° 32' 76° 0'	
EOL 5	1324	87 042	043	5.8		
SOL 6	1435	87 042	194	3.7	33° 33' 75° 51'	SOL #6
6	1500	87 042	220	4.0	—	
6	1600	87 042	233	5.3	33° 29' 75° 55'	
6	1639	87 042	—	—	—	
6	1705	87 042	225	4.2	33° 25 75 59	
6	1732	87 042	225	4.6	—	
6	1800	87 042	226	4.7	33° 22.1' 76° 2.2'	
6	1824	87 042	227	4.7	—	
6	1900	87 042	229	5.5	33° 18.6' 76° 5.6'	
6	1945	87 042	226	4.8	—	
6	2000	87 042	227	4.3	33° 14.9' 76° 9.6'	
6	2100				33° 11.5 76° 13'	

FI 87 EC . 07 06-042

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS ~~DEPTH~~ (m)	COMMENTS
1	375-1125	—	—	8		Routine
1	375-1125			8	565	"
1	375-1125			8	650	"
1	375-1125			8/9	655	" EOR 8; SOR 9
1	375-1125			9	655	Routine
1	375-1125			9	640	"
1	375-1125			9	750	"
1	375-1125			9	750	"
1	375-1125			9	735	"
1	375-1125			9	695	"
1	375-1125			9	695	"
1	375-1125			9	710	"
1	375-1125			9	720	"
1	375-1125			9	735	"
1	375-1125			9	760	"
1	375-1125			9	830	"
1	750-1500			9		c/s 750-1500 m
1	750-1500			9		ROUTINE
1	1125-1875			9		c/s 1125-1875 m
1	1500-2250			9	1430	c/s ?
1	1875-2625 2250-3000			9	2610	EOL #5 c/s
				9	2750	SOL #6
				9	2525	
	1875-2625			9	2330	
	1875-2625			9	2240	c/s 1875-2625
	1875-2625			9	2200	
	1500-2250			9		c/s 1500-2250
	1500-2250			9	1870	
	1125-1875			9	1750	c/s 1125-1875
	1125-1875			9	1605	
	750-1500			9	1375	c/s 750-1500
	750-1500			9		
	750-1500			9		

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION LORAN C	SEISMIC SYSTEM
6	2200	87 042			33°7.5 76°17.5	3.5 kHz
6	2300	87 042				
6	0000	87 043				
6	0100	87 043	222	6.8	32°55' 76°31'	
6	0200	87 043	208	5.3	32°50' 76°36'	
6	0300	87 043			—	
6	0400	87 043	222	8.2	—	
6	0505	87 043	224		32°34.4' 76°51.5'	
6	0615	87 043	228		32°28' 76°58'	
6	0700	87 043	227	7.7	32°24 77°2.3'	
6	0800	87 043	225	6.8	32°18.6 77°7.8	
6	0900	87 043	220	7.1	32°13.3 77°13.1	
6	1000	87 043	226	7.2	32°8.1 77°18.2	
6	1055	87 043				
6	1103	87 043	225	6.6	32°3.0 77°25.4	
6	1142	87 043	235			
6	1200	87 043	238	5.4	31°58.8 77°28.4	
6	1300	87 043	234	6.1	31°56' 77°34'	
6	1400	87 043	232	5.8	31°52' 77°40'	
6	1500	87 043	240	5.7	31°49' 77°46'	
6	1600	87 043	232	7.0	31°45' 77°53'	
6	1700	87 043	229	6.5	31°42' 77°58'	
6	1800	87 043	241	5.1	31°38' 78°5'	
6	1900	87 043	241	5.4	31°35' 78°11'	
6	2000	87 043	245	6.7	31°31.8 78°16'	
6	2100	87 043	245	5.1	31°29.3 78°20.9	
6/	2129	87 043				
(6A)	2142	87 043				
6A	2200	87 043	100	8.1	31°27' 78°19'	
6A	2300	87 043	092	9.8	31°26.0 78°9.3	
~~7~~	2304	87 043				
7	2346	87 043				
7	0000	87 043				

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH (m)	COMMENTS
1	750-1500	–	–	9		Routine
1	750-1500			9	920	"
1	375-1125			9/10	870	EOR 9, SOR 10, c/s
1	375-1125			10	840	Routine
1	375-1125			10	820	"
1	375-1125			10	805	"
1	375-1125			10	790	"
1	375-1125			10	780	"
1	375-1125			10	780	"
1	375-1125			10	790	"
1	375-1125			10	810	"
1	375-1125			10	805	"
1	375-1125			10	810	"
1	375-1125			10	815	EOR 10
1	375-1125			11	815	SOR 11
					805	c/c 236°
1	375-1125			11	820	ROUTINE
1	375-1125			11	918	" 200 m escarpment
1	375-1125			11	695	"
1	375-1125			11	645	"
1	375-1125			11	605	"
1	375-1125			11	580	"
1	375-1125			11	600	"
1	375-1125			11	625	100 m scarp
1	375-1125			11	555	ROUTINE 2010 100m Canyon Floor
1	375-1125			11	560	"
1	375-1125			11		EOL 6
1	375-1125			11		SOTIELINE 6A
1	375-1125			11		ROUTINE
1	375-1125			11	600	"
1	375-1125			11		SOL 7
						CLOCK RESET ~50 sec OFF.
1	375-1125			11/12	650	EOR 11, SOR 12

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START/END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
7	0100	87 044	057	8.5	31°35.5 77°52.4	
7	0200	87 044	051	8.6	31° 41' 77° 45'	
7	0300	87 044	054	10.3	31° 46' 77° 35'	
7	0346	87 044	061	9.5	31° 50' 77° 28'	
7	0400	87 044	036	8.9	31° 51' 77° 27'	
7	0500	87 044	045	9.6		
7	0600	87 044	030			
7	0700	87 044	028	9.0	32° 11.7 77° 05'	
7	0800	87 044	030	8.6	32° 19.5' 76° 57'	
7	0900	87 044	046	9.3	32° 25.7 76° 50.7	
7	1000	87 044	049	8.8	32° 32.0 76° 44.2	
7	1100	87 044	031	7.1	32° 38.2 76° 38.7	
7	1200	87 044	042	7.3	32° 43.7 76° 33.3	
7	1230	87 044	—	—	—	
7	1300	87 044	044	8.3	32° 49' 76° 27'	
7	1400	87 044	041	8.8	32° 54' 76° 21	
EOL 7	1444	87 044	—	—	—	
SOL 8	1553	87 044	—	—	—	
8	1600	87 044	061	10.8	31° 57' 78° 39'	
8	1700	87 044	220	7.1	32° 49' 76° 15'	
8	1800	87 044	218	7.2	32° 42.8' 76° 21.4'	
8	1900	87 044	227	6.7	32° 37' 76 27'	
8	1907	87 044	226	6.7	—	
8	2000	87 044	224	6.9	32° 32' 76° 31.7'	
8	2100	87 044				
8	2111	87 044				
8	2200	87 044	223	5.9	32° 22.1 76° 41.9	
8	2300	87 044	220	5.7	32° 17.3 76° 47.1	
8	0000	87 045			32° 12.3 76° 52.3	
8	0100	87 045	220	7.1	32° 7.3 76° 57.4	
8	0200	87 045	225	6.6	32° 00' 77° 04'	
8	0300	87 045	231	7.5	31° 57' 77° 9'	
8	0400	87 045	224	7.5	31° 51' 77° 15'	

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH(m)	COMMENTS
1	375-1125	—	—	12	695	ROUTINE
1	375-1125	—	—	12	720	
1	375-1125	—	—	12	745	
1	375-1125	—	—	12	~730	
1	375-1125	—	—	12	775	
1	375-1125	—	—	12	800	
1	375-1125	—	—	12	845	
1	375-1125	—	—	12	900	
1	375-1125	—	—	12		
1	375-1125			12	890	"
1	375-1125			12	905	"
1	375-1125			12	920	"
1	375-1125			12	955	"
1	750-1500			12	1000	c/s 750-1500-m
	750-1500			12	1090	
	750-1500			12	1275	
	750-1500			12	~1430	EOL #7 c/s ?
	1500-2250			12	1940	SOL #8
	1500-2250			12	1910	routine
	1500-2250			12	1805	"
	1500-2250			12	1755	"
	1500-2250			12	1600	"
	1125-1875			12	1575	c/s 1125-1875
	1125-1875			12	1405	
	1125-1875			12	1285	ROUTINE
	750-1500			12	1260	c/s 750-1500-m
	750-1500			12	1215	ROUTINE
	750-1500			12	1155	"
	750-1500			13	1110	SOR #13 EOR #12
	750-1500			13	1030	ROUTINE
	750-1500			13	990	"
	750-1500			13	1025	"
	750-1500			12	935	"

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
8	0500	87 045	225		31° 45.4' 77° 20'	
8	0515	87 045	236	9.2	—	
8	0609	87 045	236	9.1	31° 39' 77° 29.5'	
8	0629	87 045	236	8.9	—	
8	0700	87 045	236	8.7	—	
8	0800	87 045	240	7.7	31° 29.6 77° 46'	
8	0900	87 045			—	
EOL 8	0916	87 045				
TRANS	1002	87 045	095	7.7	31° 22.3 77° 50.9	
TRANS	1100	87 045	093	8.0	31° 21.9 77° 42.7	
SOL 9	1104	87 045				
9	1200	87 045	052	7.0	31° 25.3 77° 36.4	
9	1300	87 045	051	8.0	31° 30' 77° 29'	
9	1400	87 045	056	8.9	31° 35' 77° 20'	
EOL 9	1445	87 045		8.2	31° 39' 77° 15'	
SOL 10	1454	87 045			—	
10	1600	87 045	126	7.3	31° 34' 77° 07'	
10	1610	87 045	—	—	—	
10	1646	87 045	—	—	—	
10	1729	87 045	121	7.3	31° 28.5' 76° 58'	
10	1800	87 045	120	9.2	31° 25' 76 52'	
10	1812	87 045	125	8.3	—	
10	1900	87 045	133	9.6	31° 19.6' 76° 43'	
10	2008	87 045	132	9.4	31° 13.8' 76° 33.7'	
10	2042	87 045	132	9.4	—	
10	2100	87 045	126	9.2	31° 9.1 76° 26.3	
10	2142	87 045				
10	2200	87 045	125	9.4	31° 4.0 76° 18.1	
10	2300	87 045	129	9.6	30° 58.2 76° 10.3	
EOL 10	2306	87 045				
TRAN	2334	87 045				
TRAN	0000	87 046				
TRAN	0100	87 046	270	8.7	31° 00' 76° 25'	

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL# START / END	MAGNETICS Depth	COMMENTS
1	750 - 1500			13	890	Routine
1	750 - 1500			13	880	c/c to 236°
1	750 - 1500			13	840	Routine
1	375 - 1125			13	805	c/s to 375 - 1125
1	375 - 1125			13	775	Routine
1	375 - 1125			13	750	"
1	375 - 1125			13	750	"
1	375 - 1125			13	745	EOL 8
1	375 - 1125			13	790	ROUTINE
1	375 - 1125			13	800	"
1	375 - 1125			13	805	SOL 9 (TURNING TO 054)
1	375 - 1125			13	820	ROUTINE
1	750 - 1500			13	890	1306 c/s 750 - 1500
1	750 - 1500			13	955	
1	750 - 1500			13	~1020	EOL #9 1542 c/s 1125 - 1875
1	1125 - 1875			13	1040	SOL #10
1	1125 - 1875			13	1510	
1	1500 - 2250			13	~1665	c/s 1500 - 2250
1	1875 - 2675			13	—	c/s 1875 - 2675
1	1875 - 2675			13	2435	Routine
1	1875 - 2675			13	2520	"
1	2250 - 3000			13	2560	c/s 2250 - 3000
1	2250 - 3000			13	2680	routine
1	2250 - 3000			13	2805	routine
1	2625 - 3375			13	2930	c/s 2625 - 3375 m
1	2625 - 3375			13	3040	ROUTINE
1	3000 - 3750			13	3250	c/s 3000 - 3750 m
1	3000 - 3750			13	3250	ROUTINE
1	3000 - 3750			13	3340	"
1	"			13	3355	EOL 10
1	"			13	3330	ROUTINE
1	3000 - 3750			13/14	3320	EOL 13 SOL 14
				14	3265	

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRAN	0200	87 046	270	8.4	31° 00' 76° 31	
TRAN	0206	87 046				
SOL 11	0330	87 046	268	6.5	31° 76° 42'	
11	0400	87 046	315	6.6	31° 3' 76° 49'	
11	0417	87 046			—	
11	0500	87 046	307	8.3	31° 8' 76° 57'	
11	0556	87 046	300	9.6	—	
11	0600	87 046	301	9.6	—	
11	0640	87 046	301	9.8	—	
11	0641	87 046	302	9.1	31° 17' 77° 11.6'	
11	0716	87 046	310	8.5	—	
EOL 11	0803	87 046	305	8.5	31 23.6 77° 23'	
SOL 12	0811	87 046				
12	1100	87 046	027	8.8	31° 47.4 77° 11.1	
EOL 12	1139	87 046				
SOL 13	1149	87 046				
13	1200	87 046	123	7.9	31° 52.7 77° 5.5	
13	1236	87 046				
13	1300	87 046	129	8.6	31° 48' 76° 58'	
13	1325	87 046	129	7.5	31° 46' 76° 56'	
13	1400	87 046	123	7.3	31° 43' 76° 50'	
13	1500	87 046	126	6.9	31° 39' 76° 45'	
13	1600	87 046	123	8.0	31° 34' 76° 37'	
13	1700	87 046	128	7.4	31° 30' 76° 29.4'	
13	1800	87 046	124	7.0	31° 25 76° 22	
13	1900	87 046	127	6.8	31° 21.6' 76° 16.5'	
13	2010	87 046	124	7.8	31° 16.5' 76° 8.3'	
13	2100	87 046	121	7.6	31° 12.9 76° 2.6	
13	2154	87 046				
13	2200	87 046	125	9.4	31° 7.7 75° 54.6	
13	2301	87 046	128	8.7	31° 2.3 75° 46.1	
13	2329	87 046				
13	2348	87 046				

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DETECTION	COMMENTS
1	3000-3750	—		14	3115	
1	2625-3325	—		14	3090	c/s to 2625-3375
1	2625-3375	—		14	2850	
1	2625-3375	—		14	2740	
1	2250-3000	—		14	2700	c/s to 2250-3000
1	1875-2675	—		14	2585	
1	1875-2675	—		14	—	c/s 1875-2675
1	1875-2675	—		14	2270	Routine
1	1500-2250	—		14	—	c/s 1500-2250
1	1125-1875	—		14	1630	c/s 1125-1875
1	750-1500	—		14	—	c/s 750-1500
1	750-1500	—		14	985	EOL 11
1	750-1500			14	980	SOL 12
1	750-1500			14	1040	
1	750-1500			14	1065	EOL 12
1	750-1500			14	1075	SOL 13
1	750-1500			14	1090	Routine
1	1125-1875			14	1360	c/s 1125-1875 m
1				14	1770	c/s 1500-2250
1				14	2140	c/s 1875-2625
1				14	2390	
1	2250-3000			14	2530	c/s 2250-3000
1	2250-3000			14	2630	
1	2250-3000			14	2720	
1	2250-3000			14	2765	
1	2625-3325			14	2950	c/s 2625-3325
					~3210	
1	2625-3375			14	3205	Routine (erroneous paper adv.)
1	3000-3750			14	3270	c/s 3000-3750 m
	"			14	3275	Routine
1	3000-3750			14	3490	"
1	3000-3750			14	3550	EOL 13
	3375-4125			14	3535	c/s 3375-4125

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START/END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRANS	0000	87 047	050	7.3	31° 11.5 75°37.8	
TRANS	0100	87 047				
TRANS	0115	87 047				
SOL #14	0137	87 047	305	8.3	31° 10' 75° 28'	
#14	0200	87 047	307	8.5	31° 12' 75° 31'	
14	0300	87 047	304	8.2	31° 17' 75° 40'	
14	0400	87 047	299	9.5	31° 24 75° 51'	
14	0500	87 047	311	8.9	31° 27' 75° 55.7'	
14	0534	87 047	—	—	—	
14	0606	87 047	314	10.1	31°.3' 76° 4'.0	
14	0700	87 047	308	7.7	31° 37' 76° 11.8'	
14	0800	87 047	306		31° 42' 76° 20'	
14	0809	87 047				
14	0900	87 047	311	8.2	31° 47.2 76° 28.4	
14	1000	87 047	307	8.8	31° 52.6 76° 37.0	
14	1101	87 047	302	8.7	31° 58.0 76° 45.7	
14	1130	87 047				
14	1145	87 047				
14	1200	87 047	314	7.7	32° 3.0 76° 54.3	
14	1206	87 047				
SOL 14	1220	87 047				
TRANS	1227	87 047				
TRANS	1300	87 047	039	6.9	32° 9' 76° 54'	
"	1400	87 047	047	8.4	32° 14' 76° 48'	
"	1433	87 047				
SOL 15	1436	87 047	122	5.4	32° 16' 76° 44'	
15	1500	87 047	149	4.2	32° 15' 76° 42'	
15	1504	87 047				
15	1546	87 047				
15	1600	87 047	120	2.1	32° 11' 76° 38'	
15	1700	87 047	125	3.5	32° 9.6 76° 35'	
15	1800	87 047	124	4.4	32° 7.4 76° 31.4	
EOL 15	1816	87 047	126	2.6	32 6.8 76 30.4	
SOL 16	1845	87 047	020	3.0		

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH (m)	COMMENTS
1	3375-4125	–	–	14/15	3535	EOL 14, SOL 15
1	3375-4125			15	3485	ROUTINE
1	3000-3750			15	3525	c/s 3000-3750
1	3000-3750			15	~2410	SOL #14
1	3000-3750			15	3335	
1	3000-3750			15	3195	
1	3000-3750			15	3160	
1	3000-3750			15	3155	
1	2625-3375			15	~3025	c/s 2625-3375
1	2625-3375			15	2860	
1	2625-3375			15	2725	
1	2625-3375			15	2685	
1	2250-3000			15	2600	c/s 2250-3000 m ROUTINE
1	2250-3000			15	2480	"
1	1875-2625			15	2305	c/s 1875-2625 m
1	1500-2250			15	1965	c/s 1500-2250 m
1	1125-1875			15	—	c/s 1125-1875
1	1125-1875			15	1340	ROUTINE
1	750-1500			15	1340	c/s 750-1500 m
1	750-1500			15	—	EOL 14
1	750-1500			15	~1075	ON COURSE 045 (TIE LINE)
1	750-1500			15	1135	routine
1	750-1500			15	1305	routine
1	1125-1875			15	—	c/s 1125-1875 ROUGH
1	1125-1875			15	1435	SOL #15 WEATHER!
1	1125-1875			15	1730	Routine
1	1500-2250			15	—	c/s
1	1875-2625			15	—	c/s
1	1875-2625			15	2205	Routine
1	1875-2625			15	2300	"
1	1875-2625			15	2355	"
1	1875-2625			15	2375	EOL 15
1	1875-2625			15	2370	SOL 16

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
16	2000	87 047	020	6.8	32° 17.5' 76° 25'	3.5 KHz
16	2100	87 047	020	7.3	32° 24.5 76° 21.9	
16	2200	87 047	007	7.2	32° 31.0 76° 19.3	
16	2300	87 047	027	8.8	32° 38.7 76° 16.5	
16	2310	87 047	—	—	—	
16	0000	87 048	019	9.1	32° 46.3 76° 13.0	
16	0100	87 048	029	9.4	32° 54.4 76° 9.0	
16	0147	87 048	014	10	33° 1' 76° 6'	
16	0200	87 048	016	09	33° 6' 76° 4'	
16	0300	87 048	016	9.7	33° 13' 76° 1'	
16	0400	87 048	029	11.9	33° 23' 75° 57'	
16	0405	87 048				
EOL 16	0420	87 048	100°		33° 25' 75° 56'	
TRAN	0524	87 048	117°	6.4	33° 26' 75° 45'	
TRAN	0700	87 048	120		33 24.5 75 35.7	
TRANS	0715	87 048	135		—	
—	0740	87 048	135		—	
—	0745	87 048	150		32.22 75° 35'	
—	0815	87 048	180		33° 20' 75° 29'	
—	0845	87 048	210		32 16 75 28	
—	0901	87 048	224	7.4	33° 15.8 75° 28.	
—	1000	87 048	199	6.5	33° 11.2 75° 29.0	
	1100	87 048	201	5.8	33 6.3 75° 30.5	
	1200	87 048				
—	1300	87 048	224	6.1	32° 56.3 75° 36.6	
"	1400	87 048	259	5.6	32° 54' 75° 42'	
"	1450	87 048	250	6.3		
"	1500	87 048	253	4.8	32° 52' 75° 48'	
"	1600	87 048	270	6.1	32° 51' 75° 55'	
"	1604	87 048	270	—	—	
"	1700	87 048	270	6.7	32° 50' 76° 2.0	
"	1809	87 048	270	6.0	32° 50.6' 76° 10.3'	
"	1833	87 048	000	5.4		

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH	COMMENTS
1	1875-2625	—	—	15	2285	ROUTINE Rough weather
1	1875-2625			15	2225	" "
1	1875-2625			15	2135	" "
1	1875-2625			15	2025	" "
1	1500-2250			15	—	c/s 1500-2250
1	1500-2250			15/16	1910	EOR 15, SOR 16
1	1500-2250			16	1950	ROUTINE
1	1875-2625			16	—	c/s
				16	2165	
				16	2320	
				16	2565	
1	2250-3000			16	~2585	c/s
1	"			16	—	Gloria down -- change course
1	2625-3375			16	2960	c/s running from rough wthr
	2625-3375			16	3205	c/c 135° "
	3000-3750			16	—	ROUTINE "
	3000-3750			16	~3300	c/s 3000-3750 "
	3000-3750			16	—	c/c 150° running from weather
	3000-3750			16	3395	c/c 180° "
	3000-3750			16	3430	c/c 210° "
	3000-3750			16	3415	(ROUTINE) "
	3000-3750			16	3455	" "
	3000-3750			16	3580	" "
	3000-3750			16	3480	"
	3000-3750			16		"
	3000-3750				3220	
	2625-3375			16	—	c/s
	2625-3375			16	3055	
	2625-3375			16	2750	c/c
	2250-3000			16	—	c/s
	1875-2625			16	2445	c/s @ 1720
	1500-2250			16	—	c/s and c/c to 10°
	1500-2250			16	~1865	on new course

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRANS	1906	87 048	002	7.2	32°55.8' 76° 10.8'	
"	1910	87 048	002	7.0	—	
"	1921	87 048	004	7.1	—	
"	2000	87 048	003	6.9	33° 2.0 76° 9.6'	
"	2136	87 048	011	7.7	33°12.5 76° 7.8	
"	2142	87 048	-	—	—	
"	2201	87 048	013	7.7	33° 15.4 76° 7.4	
"	2300	87 048	014	6.3	33°22.4 76°5.5	
"	0000	87 049	—	—	—	
"	0007	87 049	—	—	—	
SOL 16	0051	87 049	090			
16	0056	87 049				
16	0100	87 049	073	12.6	33°35 75°56'	
16	0112	87- 049				
16	0130	87 049				
16	0200	87 049	021	8.2		
16	0300	87 049	294	6.2	33°46' 75°46'	
16	0327	87 049	014	6.3	33°50' 75°45'	
16	0400	87 049	015	5.9	33°54' 75°43'	
EOL 16	0452	87 049	002		—	
TRAN	0500	87 049	090		-	
"	0508	87 049	100	7.8	34°1 75°36'	
"	0539	87 049	108			
"	0600	87 049	098		34°1' 75°28'	
SOL 17	0617	87 049	211	4.4	33°59' 75°27'	
17	0800	87 049	210	6.9	33 51.3 75°31.7'	
17	0900	87 049	-	—	—	
17	1000	87 049	187	4.7	33° 46.4 75° 36.6	
17	1100	87 049	206	6.8	33° 34.6 75° 39.6	
17	1206	87 049	203	6.2	33° 27.6 75°42.6	
17	1300	87 049	196	6.7	33° 22' 75° 45'	
17	1400	87 049	204	8.2	33° 14' 75° 49'	
17	1500	87 049	200	8.3	33° 8' 75° 52'	

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH	COMMENTS
1	1500-2250	—	—	16	1825	Transit to cont of line 16
1	1500-2250	—	—	EOR 16	1820	EOR 16
1	1500-2250	—	—	SOR 17	1815	SOR 17
1	1500-2250	—	—	17	1800	Routine
1	1500-2250			17	1615	"
1	1125-1875			17	1595	"
1	1125-1875			17	1530	"
1	1125-1875			17	1375	"
1	1125-1875			17/	1440	EOR 17
1	1125-1875			/18	1450	SOR 18
1	1125-1875			18	—	TX ON (GLORIA PORT-SIDE ONLY ON) MOVING BACK ONTO LINE 16.
1	1500-2250			18	—	c/s
1	1500-2250			18	1840	
1	1875-2625			18	2130	c/s
1	2250-3000			18	2550	c/s
1	2250-3000			18	2655	Routine
1	2250-3000			18	2520	Routine
1	1875-2625			18	2375	c/s
1	" "			18	2000	EOL 16
1	" "			18	~2355	Routine
1	" "			18	2540	Routine
1	2250-3000			18	—	c/s
1	2625-3375			18	2930	c/s
1	2625-3375			18	2945	turning onto line 17
1	2625-3375			18	2970	SOL #17
1	2625-3375			18	3005	Routine
1	2625-3375			18	3060	"
1	2625-3375			18	3105	"
1	2625-3375			18	3110	"
1	2625-3375			18	3080	"
1	2625-3375			18	3080.	"
1	2625-3375			18	3015	"
1	2625-3375			18	2925	"

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE/TWITCHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
17	1600	87 049	199	7.6	33° – 75° 56'	3.5 KHZ
17	1700	87 049	203		32° 51 75 59	
17	1757	87 049	197		—	
17	1900	87 049	200		32° 35 76 6.7	
17	2000	87 049	205	8.4	32° 27.6' 76° 10'	
17	2100	87 049	197	7.4	32° 20.2 76° 13.4	
17	2200	87 049	208	6.5	32° 13' 76° 17'	
17	2300	87 049	198	6.7	32° 7.1 76° 19.3	
17	0000	87 050				
17	0007	87 050				
17	0012	87 050	200	7.2	32° 59.8 76° 22.5	
17	0100	87 050	203	7.9	32° 54.3 76° 24.9	
17	0119	87 050	190	8.0	31° 52' 76° 26'	
TRANS	0200	87 050	125	7.5	31° 49' 76° 22'	
18	0328	87 050	028	7.8	31° 43' 76° 11'	
18	0400	87 050	018	7.9	31° 49' 76° 8'	
18	0500	87 050	019	8.4	31° 55' 76° 5'	
18	0600	87 050	018	8.7	32° 3.2' 76° 2'	
18	0800	87 050	016	9.9	32° 18' 75° 54'	
18	0900	87 050	000	8.5	32° 25.7 75° 51.8	
18	0936	87 050	–	–	–	
18	1000	87 050	039	9.7	32° 33.3 75° 48.6	
18	1100	87 050	039	10.7	32° 40.8 75° 44.9	
18	1136	87 050	–	–	–	
18	1200	87 050	020	8.8	32° 49.1 75° 41.3	
18	1300	87 050	017	8.8	32° 58' 75° 37'	
18	1400	87 050	029	9.4	33° 8' 75° 32'	
18	1500	87 050	029	9.4	33° 15' 75° 28'	
18	1600	87 050	010	8.4	33° 24' 75° 25'	
18	1700	87 050	016	8.6	33° 32' 75° 21'	
18	1800	87 050	029	9.2	33 41' 75° 17'	
18	1900	87 050	029		33° 49' 75° 13'	
18	2000	87 050	027	7.1	33° 57' 75° 9'	

AREA CAROLINAS RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	~~MAGNETICS~~ DEPTH	COMMENTS
1	2250-3000	—	—	18	2680	Routine c/s
1	2250-3000	—	—	18	2605	
1	1875-2625	—	—	18	2375	c/s
1	1875-2625	—	—	18	2230	Routine
1	1875-2625	—	—	18	2220	"
1	1875-2625	—	-	18	2310	"
1	1875-2625	—	—	18	2405	"
1	2250-3000	-	-	18	2475	c/s 2250-3000 m
1	2250-3000			18/		EOL 18
1	2250-3000			/19		SOL 19
1	2250-3000			19	2535 m	ROUTINE
1	2250-3000			19	2575	"
1	2250-3000			19	2585	EOL 17
1	" "			19	2635	tieline to line 18
1	" "			19	2705	SOL #18
1	" "			19	2690	routine
1	" "			19	2650	routine
1	" "			19	2585	routine (0730 meredible
1	" "			19		routine sedimentary structure
1	2250-3000			19	2790	" (yes!
1	2625-3375			19		c/s 2625-3375
1	2625-3375			19	2995	ROUTINE
1	2625-3375			19	3155	"
1	3000-3750			19	-	c/s 3000-3750 m
1	3000-3750			19	3250	ROUTINE
1	3000-3750			19	3310	"
1	3000-3750			19	3515	"
1	3000-3750			19	3420	"
1	3000-3750			19	3420	"
1	3000-3750			19	3360	"
1	3000-3750			19	3310	"
1	3000-3750			19	3275	"
1	3000-3750			19	3245	"

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
EOL 18	2023	87 050	028	7.3	34° 0.1' 75° 7.8'	3.5 KHZ
TRAN	2100	87 050	096	5.7	34° 1.3' 75° 2.6'	
TRANS	2200	87 050	092	8.9	34 0.6 74° 53.4	
TRANS	2221	87 050	—	—	—	
TRANS	2227	87 050	—	—	—	
SOL 19	2228	87 050	180	6.1	33° 59.5 74° 49.8	
19	2306	87 050	208	8.9	33° 54.9 74° 52.6	
19	0000	87 051	—	—	—	
19	0100	87 051	185	7.2	33 41.8 74° 59.0	
19	0200	87 051	219	10	33° 35' 75° 2'	
19	0300	87 051	229	11	33° 27' 75° 5'	
19	0400	87 051	214	09	33° 20' 75° 8'	
19	0500	87 051	217	09	33° 14' 75° 11'	
19	0600	87 051	195		33° 7' 75 14	
19	0700	87 051	194		33° 0' 75° 17'	
19	0800	87 051	195	6.5	32° 53.5' 75° 20'	
19	0900	87 051	202	7.8	32° 45.7' 75° 24'	
19	1000	87 051	195	8.2	32° 39.2 75° 27.2	
19	1100	87 051	201	8.5	32° 31.8 75° 30.3	
19	1124	87 051	—	—	—	
19	1201	87 051	194	7.8	32° 24.1 75° 33.8	
19	1301	87 051	201	7.7	32° 16.6 75° 37.3	
19	1330	87 051				
19	1400	87 051	210	9.1	32° 10' 75° 40'	
19	1424	87 051				
19	1500	87 051	207	9.3	32° 1' 75° 44'	
19	1600	87 051	197	8.6	31° 53' 75° 48'	
19	1700	87 051	200	8.8	31° 43' 75° 52'	
19	1742	87 051	207	10	—	
EOL 19	1758	87 051	205	10	31° 34' 75° 56'	
TRAN	1900	87 051	113	9	31° 28' 75° 48'	
SOL 20	1954	87 051	018	9		
	2000					

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE GMT

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH	COMMENTS
1	3000-3750	—	—	19	3265	EOL 18
1	3000-3750	-	—	19	3365	ROUTINE
1	3000-3750			19	3585	"
1	3000-3750			19		A/C TO 201
1	3375-4125			19		c/s 3375-4125-m
1	3375-4125			19		SOL 19.
1	3375-4125			19	3660	ROUTINE
1	3375-4125			19/20		EOR 19, SOR 20
1	3375-4125			20	3580	ROUTINE
1	3375-4125			20	3615	"
1	3375-4125			20	3655	"
1	3375-4125			20	3660	"
1	3375-4125			20	3695	"
1	3375-4125			20	3825	" lousy record
1	3375-4125			20	3825	" "
1	3375-4125			20	3765	" "
1	3375-4125			20	3690	" "
1	3375-4125			20	3595	" "
1	3375-4125			20	3520	" "
1	3000-3750			20		c/s 3000-3750 m
1	3000-3750			20	3365	ROUTINE
1	3000-3750			20	3280	"
1	2625-3375			20	3100	c/s
1	2625-3375			20	2885	
1	2250-3000			20	2700	c/s
1	2250-3000			20	2630	Routine
1	2250-3000			20	2625	Routine
1	2250-3000			20	2700	
1	2625-3375			20		c/s 2625-3375
1	2625-3375			20		EOL 19
1	3000-3750			20		c/s muck w/ controls
				20		
				20		

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
20	2100	87 051	024	8.3	31° 33.0 75°36.8	3.5 kHz
20	2112	87 051	–	–	–	
20	2200	87 051	022	7.4	31° 39.9 75° 34.0	
20	2300	87 051	014	7.4	31° 46.6 75° 30.9	
20	2330	87 051	–	–	–	
20	0000	87 052	021	6.9	31° 53.5 75° 27.8	
20	0024	87 052	–	–	–	
20	0100	87 052	025	7.2	32° 0.0 75°25.0	
20	0124	87 052	027	6.8	32° 2' 75° 24'	
20	0200	87 052	018	6.8	32° 6' 75° 22'	
20	0214	87 052	017	7.2	32°8' 75° 21'	
20	0300	87 052	012	7.4	32°14' 75° 19'	
20	0400	87 052	034	6.5	32° 20' 75° 17'	
20	0500	87 052	008	6.9	32° 26' 75° 13'	
20	0600	87 052	021	8.4	32° 35' 75° 9'	
20	0726	87 052	–	–	–	
20	0800	87 052	038	11.4	32°48.9 75° 2.8	
20	0900	87 052	035	9.6	32° 56.4 74°59.2	
20	1000	87 052	029	7.2	33° 3.9 74° 55.6	
20	1100	87 052	014	7.4	33° 11.5 74° 52.2	
20	1200	87 052	–	–	–	
20	1205	87 052	021	7.7	33°19.2 74°48.4	
20	1300	87 052	020	6.9	33° 26' 74° 45'	
20	1400	87 052	012	7.3	33° 33' 74° 43'	
20	1500	87 052	020	6.9	33° 40' 74° 39'	
20	1600	87 052	019	9.1	33° 49' 74° 35'	
20	1700	87 052	026	8.8	33° 56' 74° 32'	
EOL 20	1726	87 052	—	—	—	
TTRANS	1806	87 052	090	8.7	34°0.6 74°23.5	
"	1900	87 052	075	8.4	34° 0.8' 74° 12'	
SOL 21	1923	87 052	204	11.0	34° 1' 74° 10'	
21	2000	87 052	209	10.5	33° 56' 74° 11'	
21	2100	87 052	186	8.3	33°48.2 74° 15.2	

AREA BLAKE PLAT / CAROLINA RISE

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH(m)	COMMENTS
1	3000-3750	—	—	20	3090	ROUTINE
1	2625-3375			20		c/s 2625-3375-m
1	2625-3375			20	3030	ROUTINE
1	2625-3375			20	2820	"
1	2250-3000			20		c/s 2250-3000-m
1	2250-3000			20/21	2790	EOR 20, SOR 21
1	2625-3375			21		c/s 2625-3375-m
1	2625-3375			21	3105	ROUTINE
1	3000-3750			21	3230	c/s
1	3000-3750			21	3470	
1	3375-4125			21	3570	c/s
1	3375-4125			21	3745	
1	3375-4125			21	3850	
1	3375-4125			21	3950	
1	3750-4500			21		c/s 3750-4500-m
1	3750-4500			21	4030	ROUTINE
1	3750-4500			21	4150	"
1	3750-4500			21	4060	"
1	3750-4500			21	4000	"
1	3750-4500			21/	4000	EOR 21
1	3750-4500			/22	4000	SOR 22
1	3750-4500			22	3980	
1	3750-4500			22	3940	
1	3750-4500			22	4000	
1	3750-4500			22	4070	
1	3750-4500			22	3920	
1	3750-4500			22	3730	EOL 20
1	3750-4500			22	3915	ROUTINE
1	3750-4500			22	4000	"
1	3750-4500			22	4110	SOL #21
1	3750-4500			22		ROUTINE
1	3750-4500			22	4195	"

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
21	2200	87 052	212	11.9	33°39' 74°20'	3.5 kHz
21	2306	87 052	206	10.4	33°29.6 74°24.0	
21	0000	87 053	201	8.8	33°20.1 74°28.4	
21	0100	87 053	212	9.7	33°10' 74°33'	
21	0200	87 053	212	7.8	33° 4' 74° 36'	
21	0300	87 053	194	8.5	32° 55' 74° 40'	
21	0400	87 053	190	8.3	32°47' 74°44'	
21	0500	87 053	191	—	32°29.5' 74°51'	
21	0700	87 053	190	7.9	32°21' 74°55'	
21	0800	87 053	191	8.6	32°13' 74°58.4'	
21	0827	87 053	192	8.8	—	
21	0900	87 053	198	7.5	32°5' 75°2'	
21	0948	87 053	199	9.5	31°58' 75°5.4'	
21	1000	87 053	198	8.5	31 57 75 5.6	
21	1043	87 053	199	8.3	—	
21	1100	87 053	202	8.2	31°49.4 75°9.2	
21	1200	87 053	201	7.7	31°41.8 75°12.5	
21	1300	87 053	197	7.5	31° 35' 75° 16'	
21	1400	87 053	199	7.6	31° 27' 75° 19'	
21	1500	87 053	199	8.4	31° 21' 75° 22'	
EOL 21	1530	87 053				
TRAN	1545	87 053	055	7.5	31°17' 75° 22'	
TRAN	1600	87 053	041	7.1	31° 18' 75° 21'	
TRAN	1700	87 053	058	8.0	31° 22' 75° 15'	
TRAN	1800	87 053	058	7.8	31°26.5' 75°6.4'	
TRAN	1900	87 053	054	7.5	31°30' 74°59'	
TRAN	1912	87 053	053	7.2	—	
TRAN	1932	87 053	050	8.8	—	
SOL 22	1936	87 053	019	8.0	—	
22	2006	87 053	019	8.8	31°37' 74°54'	
22	2100	87 053	017	8.3	31°43.9 74°51.4	
22	2121	87 053	-	-	-	
22	2200	87 053	007	7.6	31° 51.7 74°48.2	

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH (m)	COMMENTS
1	3750-4500	–	–	22	4385	TROUTINE
1	3750-4500			22	4325	"
1	3750-4500			22/23	4280	EOR 22 SOR 23.
1	3750-4500			23	4315	Routine
1	3750-4500			23	4350	"
1	3750-4500			23	4420	"
1	4125-4875			23	4455	"
1	4125-4875			23	4405	"
1	4125-4875			23	4285	"
1	4125-4875			23	4220	"
1	3750-4500			23	—	c/s
1	3750-4500			23	4055	Routine
1	3375 4125			23	3790	c/s 3375-4125
1	3375-4125			23	3720	TROUTINE
1	3000-3750			23		c/s 3000-3750m
1	3000-3750			23	3345	TROUTINE
1	2625-3375			23	3050	c/s 2625-3375m
1	2625-3375			23	3005	
1	2625-3375			23	3100	
1	2625-3375			23	3120	EOL H 21
1	2625-3375			23	3185	
1	" "			23	3185	tie line to line 2
1	" "			23	3165	rooteen
1	" "			23	3080	"
1	" "			23	2985	"
1	" "			23	3200	"
1	3000-3750			23	3270	c/s
1	3000-3750			23	3410	c/c to OIC
1	3000-3750			23	3430	SOL 22
1	3375-4125			23	3620	c/s
1	3375-4125			23	3960	TROUTINE
1	3750-4500			23		c/s 3750-4500m
1	3750-4500			23	4165	TROUTINE

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION		SEISMIC SYSTEM
22	2300	87 053	025	8.7	31°59.2	74°44.6	3.5 kHz
22	2312	87 053	-	-	-		
22	0000	87 054	017	8.3	31°56.6	74°41.4	
22	0100	87 054	027	8.1	32° 14'	74° 38'	
22	0200	87 054	019	8.4	32° 23'	74° 34'	
22	0300	87 054	≈ 25	7.5	32° 30'	74° 31'	
22	0400	87 054	14	7.4	32° 37'	74° 28'	
22	0506	87 054	023	7.5	32° 45'	74° 24'	
22	0600	87 054	023	8.3	32° 52'	74° 21'	
22	0800	87 054	023	8.2	33° 7.8'	74° 13.5'	
22	0900	87 054	010	8.4	33°15.2	74° 9.8	
22	1000	87 054	034	12.5	33°23.0	74° 6.7	
22	1100	87 054	014	5.2	33°28.8	74° 3.3	
22	1200	87 054	014	3.7	33°33.9	73°59.5	
EOL 22	1300	87 054	021	5.0	33° 40'	73° 57'	Begin rough weather transit
TRAN	1400	87 054	023	3.1	33° 42'	73° 58'	
"	1500	87 054	040	5.2	33°44'	73°58'	
"	1800	87 054	347	4.5	33° 54'	73° 58'	
"	1900	87 054	356	3.7	33°57.4'	73° 59'	
"	2000	87 054	004	4.3	34°	73° 59'	
22A	2030	87 054	090	—	34° 2'	74°	
22A	2100	87 054	098	5.4	34°1.5	73°53.9	
22A	2201	87 054	097	6.1	34° 1.3	73°45.2	
EOL 22A	2224	87 054	045	8.3	34° 1'	73° 41'	Transit West to drop off Simon
	2239	87 054					MAGGIE OFF
NORFOLK TRANS	0000	87 055	357	6.1	34°0.3	73°50.1	
"	0100	87 055	006	8.0	34°5.7	73°53.4	
"	0145	87 055	270	8.0	—		
TRANS EAST	0700	87 056	086	8.8	36° 44'	75° 12'	
"	0713	87 056	086	10			
"	1100	87 056	090	7.2	36° 46.6	74°29.5	
"	1118	87 056					

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	~~MAGNETICS~~ DEPTH(m)	COMMENTS
1	3750-4500	–	–	23	4350	ROUTINE
1	4125-4875			23		c/s 4125-4875 m
1	4125-4875			23/24	4510	EOR 23, SOR 24
1	4125-4875			24	4520	
1	4125-4875			24	4510	
1	4125-4875			24	4590	
1	4125-4875			24	4605	
1	4125-4875			24	4640	
1	4125-4875			24	4635	
1	4125-4875			24	4530	ROUTINE
1	4125-4875			24	4520	"
1	4125-4875			24	4550	"
1	4125-4875			24	4550	"
1	4125-4875			24	4505	" STRAYING EASTWARD DUE TO ROUGH WTHR
1	4125-4875			24	4430	Heavy seas Airgun off 1310
1	" "			24	4410	" "
1	" "			24	4370	" "
1	" "			24	4275	" "
1	" "			24	4235	" "
1	" "			24	4205	" "
1	3750-4500			24	4205	c/s @ 2033 Begin transit to SOL 22, 90°
1	37750-4500			24	4220	ROUTINE
1	3750-4500			24	4310	ROUTINE - HEAVY SEAS CONTINUE
1	" "			24		
1	3750-4500			24/25		HEADING FOR NORFOLK EOR 24 SOR 25
1	3750-4500			25		"
	" "			25		SYSTEM OFF
1	0 - 750			25		SYSTEM ON
1	0 - 750			25		SYSTEM OFF waiting for deeper H_2O
+	–					DEPLOYING EQUIPMENT (GLOTCIA & AIRGUN) SYSTEM REMAINS OFF
1	1500-2250			25		WHAT THE HELL LETS FIRE UP THE 3.5 ...

SHIP/CRUISE NO./LEG FATCNELLA FL-87-8C

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRANS	1140	87-056	243	7.3	36°45.5 74°25.4	3.5 kHz
"	1202	87-056				
"	1215	87-056				
"	1218	87 056	243	8.1	36°43.3 74°31.1	
"	1300	87 056	250	8.3	36°40.8 74°37.2	
"	1307	87 056	—	—	—	
SOL 23	1321	87 056	180	8.8	35°52.00 74°48.40	3.5 KHz
23	1400	87 056	193	8.8	36°34.07 74°40.68	
23	1500	87 056	190	8.4	36° 25.63, 74°42.32	
23	1609	87 056	184	8.3	36°15.74, 74°44.06	
23	1700	87 056	189	9.0	36° 8.5', 74°45.4'	
23	1800	87 056	189	7.6	36° 1.0', 74 46	
23	1847	87 056	189	8.4	35° 52', 74° 48.4'	
23	1903	87 056	176	8.5	—	
23	1908	87 056	176	9.0	—	
23	1948	87 056	—	—	—	
23	2000	87 056	176	8.3	35°43.75', 74°46.7'	
23	2025	87 056	175	9.4	—	
23	2047	87 056	179	7.5	—	
23	2100	87 056	175	7.2	35°36.2 74°46.9	
23	2136	87 056	194	7.4	35°31.7 74°46.8	
23	2200	87 056	184	9.0	35°28.5 74°47.3	
23	2213	87 056	—	—	—	
23	2247	87 056	—	—	—	
23	2300	87 056	187	6.9	35°20.8 74°48.2	
23	2319	87 056	—	—	—	
23	0000	87 057	180	4.7	35°15.1 74°48.5	
23	0002	87 057	—	—	—	
23	0000	87 057	198	5.7	35°9.3 74°48.5	
23	0122	87 057	190	5.1	35°7.43 74°48.95	
23	0200	87 057	190	5.1	35°4.25 74°50.11	
23	0308	87 057	216	4.6	34°58.99 74°52.28	
23	0400	87-057	212	5.5	34 54.89 74°55.94	

AREA BLAKE PLATEAU / CAROLINA RISE / MID-ATLANTIC

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DEPTH (m)	COMMENTS
1	1500-2250	—	—	25		ON COURSE 243
1	1125-1875			25		c/s 1125-1875 m
1	750-1500			25		c/s 750-1500 m
1	750-1500			25	1320	ROUTINE
1	750-1500			25	840	"
1	375-1125			25		c/s 375-1125
1	375-1125			25		A/C to 180, Start line 23
1	375-1125			25		
1	375-1125			25		
1	375-1125			25		
1	0 - 750			25		c/s 0-750 (1704)
1	0 - 750			25		Routine
1	375-1125			25		c/s to 375-1125 m
1	375-1125			25		c/c to 176°
1	750-1500			25		c/s to 750 1500 m
1	375-1125			25		c/s to 375-1125 m
1	375-1125			25		routine
1	0 - 750			25		c/s to 0 - 750 m
1	385 - 1125			25		c/s to 375-1125
1	375-1125			25	600	ROUTINE
1	375-1125			25		A/C → 188
1	375-1125			25	675	ROUTINE
1	750-1500			25		c/s 750-1500 m
1	1125-1875			25		c/s 1125-1875 m
1	1125-1875			25		ROUTINE
1	1500-2250			25		c/s 1500-2250
1	1500-2250			25/26	2165	EOR 25, SOR 26.
1	1875-2625			26		c/s 1875-2625 m
1	1875-2625			26		ROUTINE.
1	2250-3000			26		c/s 2250-3000
1	2250-3000			26		
1	2250-3000			26		C/C to
1	2250-3000			26		

SHIP/CRUISE NO./LEG POPENOE / TWICHELL

CHIEF SCIENTIST FARNELLA FI-87-EC

LINE (START / END)	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
23	0500	87 057	220	5.6	34°50.7', 74°59.6'	3.5 KHz
23	0600	87 057	221	6.2	34°46.3', 75° 3.46'	
23	0700	87 057	220	6.0	34°41' 75° 7.34'	
23	0900	87 057	210	5.4	34°32.7 75°15.6	
23	1000	87 057	206	6.0	34°28.2 75°19.6	
23	1100	87 057	220	5.1	34°23.6 75°23.6	
23	1200	87 057	227	5.9	34°19.3 75°27.6	
23	1300	87 057	207	6.0	34° 14.5 75°31.6	
23	1400	87 057	229	5.5	34° 10.18 75°35.48	
23	1440	87 057	227	5.3	34°7.38 75° 38.15	
23	1455	87 057		6.1	34°6.10 75°39.16	
Transit	1503	87 057	127		34°5.35 75°38.31	
Transit	1600	87 057	128	8.9	34°1.64 75°21.28	
Tr.	1607	87 057	128			
24	1653	87 057	0		33°57.3 75°24.6	
24	1704	87 057	040	—	—	
24	1810	87 057	038		34°6.03' 75°16.5'	
24	1900	87 057	037	8.2	34°12.66' 75°10.52'	
24	2100	87 057	038	8.9	34°26.7' 74°58.2'	
24	2200	87 057	033	9.4	34°34.0 74°51.7	
24	2300	87 057	—	—	~34°41 ~74°40	

AREA CAROLINA RISE / BLAKE PLATEAU

TIME ZONE GMT

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	~~MAGNETICS~~ Depth	COMMENTS
1	2250-3000	—	—	26	2820	Routine
1	2250-3000	—	—	26	2755	Routine
1	2250-3000			26	2770	"
1	2250-3000			26	2780	"
1	2250-3000			26	2815	"
1	2250-3000			26	2795	"
1	2250-3000			26	2735	"
1	2250-3000			26	2745	
1	1875-2625			26		Change sweep
1	1875-2625			26	2245	End of line 23
1	2250-3000			26		Start of transit, change scale
1	2250-3000			26		
1	2625-3375			26		
1	2625-3375			26		End of Transit,
1	2625-3375			26		SOL 24
1	2625-3375			26		Routine
1	2625-3375			26	3085	Routine
1	2625-3375			26	3045	Routine
1	2625-3375			26	3085	"
1	2625-3375			26	3130	EOL 24
						EOR 26
						EOC END CRUISE F1-87-GC

SHIP/CRUISE NO. /LEG

CHIEF SCIENTIST

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE GMT

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS

Advance 6" @ start/end of Lines

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
—	0348	87 034	TESTING SYSTEM			10 KHz
—	0801	87 034				
—	0922	87 034	TRETESTING GLORIA			
—	1700	87 034	"		"	
—	2140	87 034	250		LORAN C	
SOL 1	0430	87 035	056			
1	1036	87 035	042			
1	0408	87 036	—			
—	0614	87 036	—			
1	0730	87 036	049			
1	1715	87 036	040			
1	1718	87 036	040			
1	1852	87 036	039			
EOL 1	1930	87 036	040			
SOL 2	2002	87 036	219			
2	2131	87 036				
2	0626	87 037	204			
2	0744	87 037	204	8.3		
2	0826	87 037	206	8.4		
2	0930	87 037	—	—		
2	1024	87 037	—	—		
2	0510	87 038	236	7.1		
2	2203	87 038				
2	2219	87 038				
3	2322	87 038				
3	0000	87 040				
EOL 3	0049	87 040				
—	0059	87 040				
SOL 4	0200	87 040	249			
4	0618	87 040	248			
4	0645	87 040	245			
4	0545	87 041	220			
4	0547	87 041	220	6.5		

10 KHz

Annotate log: 1. Start/end Roll
2. Start/end Line
3. Machine off/on 4. course change

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
2				1		Start of Roll 1
				1		System off
				1		SYSTEM ON
				1		SYSTEM OFF
	0 — 1500 m			1		SYSTEM ON "TRANSIT BACK TO LINE 1"
	0 - 1500 m			1		SOL 1
	"			1		"CHG COURSE TO 244"
	0 - 1500 m			1		System off engine trouble
	0 - 1500 m			1		Sytem on
	0 - 1500 m			1		on line 1
	0 - 1500 m			1		EOR #1
	0 - 1500 m			2		SOR #2
	750 - 2250			2		c/s 750 - 2250
	750 - 2250			2		EOL 1
	750 - 2250			2		SOL 2
	1500 - 3000			2		c/s 1500 - 3000
	750 - 2250			2		"centered" 750-2250
	750 - 2250			2		gate off
	1500 - 3000			2		c/s 1500 - 3000 m
	750 - 2250			2		c/s
	0 - 1500			2		c/s
	0 - 1500			2		c/c to 236°
				2		EOL 2
	0 - 1500			2		~~SOL 3 ?~~
				2/3		SOL 3, EOR 2, SOR 3
	750 - 2250					c/s 750-2250
	750 - 2250			3		EOL 3
	1500 - 3000			3		~~BETWEEN~~ LINES 3 & 4
	1500 - 3000			3		SOL 4
	750 - 2250			3		c/s 750 - 2250 W/GATE
	0 - 1500			3		c/s 0 - 1500
	0 - 1500			3		EOR #3
	0 - 1500			1		SOR #4

SHIP/CRUISE NO./LEG FARNELLA ~~87~~ F1-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
4	0554	87 041	236	6.1	LORAN C	10 kHz
EOL 4	1722	87 041	236			
SOL 5	1900	87 041	053	9.1		
5	1236	87 042				
EOL 5	1324	87 042				
SOL 6	1435	87 042				
6	1851	87 042	228	5.5		
6	2006	87 042	226	4.7		
6	2101	87 042				
6	1112	87 043	236			
6	2037	87 043	241	5.4		
EOL 6	2129	87 043				
TRAN	2301	87 043				
SOL 7	2304	87 043				
		87 043				
EOL 7	1444	87 044	041	8.8		
SOL 8	1553	87 044	—	—		
8	1939	87 044	225	7.0		
8	1942	87 044	225	7.0		
8	0130	87 045				
8	0515	87 045	236	9.1		
EOL 8	0916	87 045	—	—		
SOL 9	1104	87 045	—	—		
9	1525	87 045	—	—		
9	1623	87 045	—	—		
EOL 9	?					
SOL 10	?					
EOL 10	2306	87 045				
SOL 11	2334	87 045				
11	0548	87 046	—	—		
11	0641	87 046	—	—		
11	0707	87 046	—	—		
EOL 11	0803	87 046	—	—		
SOL 12	0811	87 046	—	—		
EOL 12	1139	87 046	—	—		

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL# START / END	MAGNETICS	COMMENTS
2	0-1500 m	—	—	4	—	c/c to 236° (dogleg)
	0-1500	—	—	4	—	EOL 4
	0-1500	—	—	4	—	SOL 5
	750-2250	—	—	4		c/s
				4		EOL 5 c/s
				4		SOL 6
	750-2250	—	—	4	—	c/s 750-2250
	0-1500	—	—	4	—	c/s 0-1500
	0-1500	—	—	4/5		EOR 4, SOR 5
	0-1500	—	—	5		A/C 236°
	0-1500	—	—	5		clock reset / 50 sec off
	0-1500	—	—	5		EOL 6
	0-1500	—	—			CLOCK RESET / 47 sec OFF (BACK TO PREVIOUS SETTING)
	0-1500	—	—	5		SOL 7
	750-2250	—	—	5		c/s
	750-2250	—	—	5		EOL 7
	750-2250	—	—	5		SOL 8
	750-2250	—	—	EOR 5		EOR 5
	750-2250	—	—	SOR 6		SOR 6
	0-1500	—	—	6		c/s 0-1500 m.
	0-1500	—	—	6		c/c to 236°
	0-1500	—	—	6		EOL 8
	0-1500	—	—	6		SOL 9
	750-2250	—	—	6		c/s 750-2250
	1500-3000	—	—	6		c/s 1500-3000
	2250-3750	—	—	6		c/s 2250-3750
				6		
	2250-3750	—	—	6		SOL 10
	2250-3750	—	—	6		SOL 11
	1500-3000	—	—	6		c/s 1500-3000
	750-2250	—	—	6	—	c/s 750-2250
	0-1500	—	—	6	—	c/s 0-1500
	0-1500	—	—	6	—	EOL 11
	0-1500	—	—	6	—	SOL 12

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST PODENGE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
SOL 13	1149	87 046				
13	1232	87 046				
13	1311	87 046				
13	1840	87 046				
13	2300	87 046				
EOL 13	2329	87 046				
TRANS	0027	87 047				
TRANS	0030	87 047				
SOL 14	0137	87 047	305			
14	0201	87 047				
14	0954	87 047				
14	1136	87 047				
EOL 14	1220	87 047				
SOL 15	1436	87 047				
15	1524	87 047				
EOL 15	1816	87 047				
SOL 16	1845	87 047	020			
16	0420	87 048	100			
16	0439	87 048	120			
	1024	87 048				
16	1330	87 048				
16	2100	87 048				
16	0056	87 049				
EOL 16	0452	87 049	002			
TRAN	0511	87 049				
SOL 17	0617	87 049	218	4.0		
17	0621	87 049	219	4.4		
17	1606	87 049	202	8.9		
17	0119	87 050				
18	0328	87 050	028	7.8		
18	0906	87 050				
18	1405	87 050				
EOL 18	2023	87 050	028	7.3		

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
2	0-1500	-	-	6		SOL 13
2	750-2250			6		c/s 750-2250
2	1500-3000			6		c/s 1500-3000
2	2250-3750			6		c/s 2250-3750
2	3000-4500			6		c/s 3000-4500
2	3000-4500			6		EOL 13
2	3000-4500			6/		EOR 6 *
2	3000-4500			/7		SOR 7 *
2	3000-4500					SOL #14
2	2250-3750					c/s 2250-3750
2	1500-3000			7		c/s 1500-3000-m
2	750-2250			7		c/s 750-2250-m
2	750-2250			7		EOL 14
2	750-2250			7		SOL #15
2	1500-3000			7		c/s
2	1500-3000			7		EOL 15
2	1500-3000			7		SOL 16
				7		GLORIA down -- change course
2	2250-3750			7		
2	3000-4500			7		c/s 3000-4500-m
2	2250-3750			7		c/s
2	750-2250			7		c/s 750-2250-m
2	1500-3000			7		c/s
2	1500-3000			7		EOL 16
2	2250-3750			7		c/s 2250-3750
2	2250-3750			EOR 7		SOL 17 EOR 7
	2250-3750			SOR 8		
2	1500-3000			8		c/s 1500-3000
2	1500-3000			8		EOL 17
2	1500-3000			8		SOL 18
2	2250-3750			8		c/s 2250-3750-m
2	3000-4500			8		c/s
2	3000-4500			8		EOL 18

SHIP/CRUISE NO./LEG FATNOLLA F1-87-GC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
SOL 19	2228	87 050	–	–	–	
19	1103	87 051				
19	1107	87 051				
19	1154	87 051	–	–	–	
EOL 19	1758	87 051				
SOL 20	1954	87 051				
20	0200	87 052				
EOL 20	1726	87 052				
SOL 21	1923	87 052				
21	2136	87 052				
21	1933	87 053	–			
21	1118	87 053				
EOL 21	1530	87 053				
TRAN	1645	87 053				
SOL 22	1936	87 053				
22	1948	87 053				
22	2229	87 053				
EOL 22	1254	87 054			Begin rough weather transit	
22A	2030	87 054			Begin 90° transit to SOL 23	
EO TRAN	2224	87 055			Begin transit West to drop off Simon	
SO TRAN					Transit East to continue survey	
TRANS	1140	87 056	243	7.3		
"	1300	87 056	–	–	–	
23	1321	87 056	180	8.8		
	1400	87 056	192	8.8		
	1500	87 056	190	8.4	36°25.6 74°42.2	
	1606	87 056	184	8.7		
23	2247	87 056	–	–	–	
23	2315	87 056	–	–	–	
23	2318	87 056	–	–	–	
23	0000	87 057	–	–	–	
23	0100	87 057				

AREA BLAKE PLATEAU / CAROLINA TUSE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
2	3000-4500	–	–	8		SOL 19
2	3000-4500			8/		SOR 8
2	3000-4500			/9		SOR 9
2	2250-3750			9		c/s 2250-3750 m
2	2250-3750			9		EOL 19
2	2250-3750			9		SOL 20
2	3000-4500			9		c/s
2	3000-4500			9		EOL 20
2	3000-4500			9		SOL #21
2	3750-5250			9		c/s 3750-5250 m
2	3000-4500			9		c/s 3000-4500
2	2250-3750			9		c/s 2250-3750 m
2	2250-3750			9		EOL #21; tie to line #22
2	2250-3750			10 / 9		End of roll 9, start roll 10
2	2250-3750			10		SOL 22
2	3000-4500			10		c/s
2	3750-5250			10		c/s
2	" "			10		EOL 22
2	" "			10		start transit to SOL 23
2	" "			EOR 10		system off end Roll 10
2	" "			11		system on SOR 10
2	750-2250			11		A/C TO 243°
2	0-1500			11		c/s 0-1500 m
2	0-1500			11		SOL-23
2	0-1500			11		
2	0-1500			11		
2	0-1500			11		
2	0-1500			11		
2	750-2250			11		c/s 750-2250 m
2	750-2250			EOR 11		EOR 11
2	750-2250			SOR 12		SOR 12
2	1500-3000			12		c/s 1500-3000 m
2	1500-3000			12		

This has been a 2 sec. sweep all along

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START/END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
23	0308	87 057	216	4.6		10 KHz
23	0436	87 057	216	5.1		
23	1400	87 057	216	5.5		10 KHz
23	1436	87 057	222	5.8		10 KHz
23	1453	87 057	222	5.5	34°05.35 75°38.31	10 KHz
Transit	1514	87 057	127	7.0		
Trans	1653	87 057				10 KHz
24	1704	87 057	–	–	–	
EOL 24	2300	87 057	–	–	–	

AREA CAROLINA RISE / BLAKE PLATEAU

TIME ZONE GMT

MASSCOMP

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
2	1500 -3000m	—		12		Change Course
2	2250-3750					Change Scale
2	2250-3750					
2	1500-3000			12		Change scale
2	1500-3750m			12		End of line 23
2	2250-3750m			12		Change scale 3-5 secs.
2	2250-3750m					END TRANSIT.
2	2250-3750m			12		SOL 25
2	2250-3750m			EOR 12		EOL 24 END ETWISB EOR 12 F1-87-8C EOC

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE (START / END)	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
1	1741	035 87	042°	7.8	LORAN C	MASSCOMP/AIRGUN
1	1916	035 87	041°	5.0		
1	1930	035 87	041°	7.5		
1	2124	035 87	—	—		
1	0152	036 87	—	—		
1	0407	036 87	—	—		
1	0755	036 87	049	9.7		
1	1129	036 87				
1	1528	036 87				
1	1605	036 87	038			
EOL 1	1930	036 87	040			
SOL 2	2002	036 87	219			
2	2055	036 87				
2	2058	036 87				
2	0000	037 87				
2	0016	037 87				
2	0109	037 87				
2	0103	037 87				
2						
2						
2		037 87				
2	0437	037-87				
2	0827	037-87	209			
2	0836	037 87				
2	1030	037 87				
2	1112	037 87				
2	1638	037 87	219	8.0		
2	0050	038 87				
2	0510	038 87	236	6.3		
2	0900	038 87				
2	0906	038 87				
2	1622	038 87				
2	1720	038 87	240	7.0		

Annotate: 1. start/end tape
2. start/end line
3. change scale 4. course change 5. system on/off

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START/END	DATA ROLL # START/END	MAGNETICS DRIVE #	COMMENTS
6sec	0 - 4500	110/5	1		0	Start of Tape #1
"	0 - 4500	"	1		0	slowed to deploy magnetometer
"	0 - 4500	"	1		0	up to speed / on line
"	0 - 4500	"	1		0	POST FILTER GAIN = 6db (CH 1 & 2)
"	0 - 4500	"	2/1		1/1	EOT 1 SOT 2
"	0 - 4500	"	2		1	EOT 2 All syst. off engine trouble
"	0 - 4500	"	3		0	SOT 3 System on
6	750 - 5250		3		0	DWD = 1 sec.
6	0 - 4500	"	3		0	DWD = 0 sec.
6	0 - 4500	"	3/4		0/1	EOT 3 SOT 4
6	0 - 4500	"	4		1	EOL 1
6	0 - 4500	"	4		1	SOL 2
		"	4		1	CH1 POST-FILTER GN=12.
		"	4		1	CH1 " " " = 6 (AGAIN)
		"	4		1	LOSS OF SIGNAL / SYSTEM REMAINS ON
		"	4/5		1/0	EOT 4 / SOT 5
	1500 - 6000	"	5		0	DWD = 2 sec
		"	5		0	NEW AIRGUN (80 cu in)
		"	5		0	
		"	5		0	
6	1500 - 6000	"	5		0	New dwd = 2 sec.
6	750 - 5250	"	5		0	DWD = 1 sec
6	1500 - 6000	"	5/6		0/1	DWD = 2 sec
6	750 - 5250	"	6		1	DWD = 1 sec
6	0 - 4500	"	6		1	DWD = 0 sec
6		"	6		1	"POTENTIAL OVERLOADS" => PREAMP GAINS = 0.7
6	0 - 4500	"	6/7		1/0	THEN BACK TO 0.8 AFTER ~6 min. ALL QUIET
6	0 - 4500	"	7/8		0/1	EOT 6 SOT 7 EOT 7, SOT 8
6	0 - 4500	"	8		1	c/c to 236°
6	0 - 4500	"	8/9		1/0	EOT 8, SOT 9
6	0 - 4500	"	9		0	"POTENTIAL OVERLOADS" PRE-AMP GAINS = 0.3
6	0 - 4500	"	9		0	Myst. interrupt in program discovered 1700 EOT 9
6	0 - 4500	"	10		0	reboot - syst on SOT 10

CHECK ANALOG RECORDS: INCONSISTENT DWD FROM 0356-1528 TO 0357-0109

NOT COORDINATED WITH ANALOG

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
EOL 2	2202	87 038	240		—	MASSCOMP
TRAN	2219	87 038	105		—	
SOL3	2322	87 038			—	
3	0629	87 039	052		—	
3	1439	87 039	—		—	
3	2250	87 039				
3	2336	87 039				
3	0043	87 040				
EOL3	0049	87 040				
TRAN	0108	87 040				
SOL4	0200	87 040	249		—	
4	0638	87 040	245			
4	0918	87 040				
4	1000	87 040				
4	1729	87 040	226			
4	0143	87-041				
4	0954	87 041				
EOL4	1722	87 041	236			
TRANS	1809	87 041	084			
—	—	—	—			
SOL5	1900					
5	2120	87 041				
5	2129	87 041				
5	0540	87 042	043			
5	1144	87 042				
EOL5	1324	87 042				
SOL 6	1436	87 042				
6	1631	87 042				Buffer overload; had to reboot
6	1855	87 042				
6	2242	87 042				
6	2334	87 042				
6	0014	87 043				
6	0050	87 043				

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP sec	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	~~MAGNETICS~~ DRIVE	COMMENTS
6	0-4500	110/5	10		0	EOL 2 EOT 10
6	0-4500		11		Ø	~~SOL 3?~~ SOT 11
6	0-4500		11		Ø	SOL 3
6	0-4500		11/12		0/1	SOT 12 EOT 11
6	0-4500		13/12		1/0	EOT 12 SOT 13
6	0-4500		EOT 13/SOT 14		1	EOT 13 SOT 14
6	750-5250				1	DWD = 1 sec
6	1500-4500				1	DWD = 2 sec
6	1500-4500		14		1	EOL 3, EOT 14
6	1500-4500		15		0	SOT 15
6	1500-4500		15		0	SOL 4
6	750-5250		15		0	DWD = 1 sec
6	750-5250		15/16		0/1	EOT 15, SOT 16
6	0-4500		16		1	DWD = 0 sec
6	0-4500		16/17		1/0	EOT 16 SOT 17
6	0-4500		17/18		0/1	EOT 17 SOT 18
6	0-4500		18/19		1/0	EOT 18 SOT 19
6	0-4500		19		0	EOL 4 EOT 19
6	0-4500		20		0	SOT 20 (note: thought we
—	—		—			were starting new line @ 1809)
6	0-4500		EOT 20		Ø	(@ FILE #1685) PROGRAM HANG, RESTART.
6	0-4500		SOT 21		Ø	SOT 21 [LOOSE DRIVE CONNECT'N CAUSED INTERRUPT (?)]
6	0-4500		21/22		1	EOT 21 SOT 22
6	750-5250		22		1	DWD = 1 sec
			22/23		1	SOT 23 (1351) EOT 22 EOL 5 *
	1340 1500-3000		23		1	SOL 6 DWD ?
	1500-4500		23/24		0	SOT 24
	750-5250		24		0	DWD = 1 sec
	0-4500					DWD = 0 sec
			24 (@ FILE #2486)			AIRGUN NOT FIRING, REPLACING
			24 (@ FILE #2726)			NOW AIRGUN IN PLACE
	0-4500		24/25			EOT 24, SOT 25

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE (START / END)	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
6	0901	87-043			LORAN C	
6	1142	87 043	236			
6	1713	87 043	236	6.5		
EOL 6	2129	87 043				
TRAN	2132	87 043				
TRAN	2136	87 043				
SOL 7	2304	87 043				
7	0056	87 044				
7	0058	87 044				
7	0909	87 044				
7	1230	87 044				
EOL 7	1444	87 044				
SOL 8	1553	87 044				
8	1720	87 044				
8	0131	87 045				
8	0140	87 045	225	9.1		
8	0515	87 045	236	9.1		
8	0916	87 045				
TRAN	0921	87 045				
TRAN	0928	87 045				
9	1104	87 045				
EOL 9	1445	87 045				
SOL 10	1454	87 045	120			
10	1543	87 045				
10	1625	87 045				
10	1735	87 045	121			
10	1846	87 045	133			
10	1852	87 045	134			
10	1920	87 045	133	9.6		
—	—	—	—	—		
10	2202	87 045	124	9.7		
10	2230	87 045				
10/	2306	87 045				

AREA CAROLINA RISE / BLAKE PLAT

TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DRIVE	COMMENTS
6	0-4500	110/5	25/26	—	1/0	EOT 25, SOT 26
6					0	A/C 236°
6			26/27			EOT 26, SOT 27
6	0-4500		27		0	EOL 6
6	0-4500		27/		0/	EOT 27
6	0-4500		/28		/0	SOT 28
6	0-4500		28		0	SOL 7
6	0-4500		28/		0	EOT 28
6	0-4500		/29		0	SOT 29
6	0-4500		29/30		0/1	EOT 29, SOT 30 (PROGRAM HANG, RESTART)
6	750-5250		30		1	DWD = 1 sec.
6	750-5250		30		1	EOL 7 Tape left on drive ? *
6	750-5250		30		1	SOL 8
6	750-5250		30/31		1/0	EOT 30 SOT 31
6	750-5250		31/32		0/1	EOT 31 SOT 32
6	0-4500		32		1	DWD = 0 sec
6	0-4500		32		1	C/C to 236
6	0-4500		32		1	EOL 8
6	0-4500		32/		1/	EOT 32
6	0-4500		33/		0/	SOT 33
6	0-4500		33		0	SOL 9
6	0-4500		33		0	EOL 9
6	0-4500		33		0	SOL 10
6	750-5250		33		0	DWD = 1 SEC
6	1500-6000		33		0	DWD = 2 SEC
6	1500-6000		EOT 33		0	Syst. OFF trouble w/ compressors EOT 33
6	2250-6750		SOT 34		0	syst ON SOT 34 4 SEC DWD
6	2250-6750		34		0	airguns off no data receiving last 24 mins. serious trouble w/ air compressors. abort program rewind tape
6	2250-6750		EOT 34			
—			SOT 34			
6	2250-6750		SOT 34		0	Compressor fixed
6	3000-7500		34		0	DWD = 4 sec.
6	3000-7500		34		0	EOL 10

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST DOPENDE / MITCHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRAN	2320	87 045			LORAN C	
TRAN	0212	87 045				
SOL 11	0330	87 046				
11	0530	87 046	301	7.0	—	—
11	0638	87 046	301	7.0	—	—
11	0731	87 046	301	8.2	—	—
EOL 11 SOL 12	0803 0811	87 046				
12	1040	87 046				
12	1044	87 046				
EOL 12 SOL 13	1139 1199	87 046				
13	1303	87 046	127	7.7		
13	1422	87 046				
13	1856	87 046				
13	1900	87 046	124	6.4	31°21' 76°16'	
13	2142	87 046				
EOL 13	2329	87 046				
TRANS	0058	87 047				
TRANS	0102	87 047				
SOL 14	0137	87 047	305			
14	0231	87 047				
14	0913	87 047				
14	1100	87 047				
14	1148	87 047				
EOL 14	1220	87 047				
TRANS	1222	87 047				
TRANS	1227	87 047				
TRANS	1320	87 047				
15	1509	87 047				
EOL 15	1816	87 047				
SOL 16	1845	87 047	020			
16	2040	87 047	023	7.8		
16	2043	87 047	026			
16	2055	87 047	025			

AREA BLAKE PLATEAU / CAROLINA RISE

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DRIVE #	COMMENTS NOTE: This is wrong on TAPE
6	3000-7500	110/5	35		0	SOT 35
6	2250-6750		35		0	DWD = 3 Sec
6	2250-6750		35		0	SOL 11
6	1500-6000		35		0	DWD = 2 sec
6	750-5250		35		0	DWD = 1 sec "WRONG"
6	750-5250		35/36		0/1	EOT 35 SOT 36
6	750-5250		36		1	EOL 11 (0811 SOL 12)
6	750-5250		36		1	EOT 36
6	750-5250		37		0	SOT 37
6	750-5250		37		0	EOL 12 SOL 13
6	1500-6000		37			DWD = 2 seconds
6	2250-6750		37			DWD = 3 seconds
6	2250-6750		37			EOT 37
6	2250-6750		38			SOT 38
6	3000-7500		38		1	DWD = 4 sec.
6	3000-7500		38		1	EOL 13
6	3000-7500		38/		1	EOT 38
6	3000-7500		/39		0	SOT 39
6	3000-7500					SOL #14 DWD = 4 secs.
6	2250-6750					DWD = 3 seconds
6	2250-6750		39/40		0/1	EOT 39, SOT 40
6	1500-6000		40		1	DWD = 2 sec.
6	750-5250		40		1	DWD = 1 sec
6	750-5250		40		1	EOL 14
6	750-5250		EOT 40		1	EOT 40 ROUGH WEATHER
6	750-5250		SOT 41		0	SOT 41
6	750-5250		41		0	Change assign 1437 SOL 15
6	1500-6000		41 File #743		0	Gun back on DWD = 2 secs.
6	1500-6000		41		0	EOL 15
6	1500-6000		41		0	SOL 16
6	1500-6000		41		0	EOT 41 file # 2264 receiving error message end Tape 42 early
6	1500-6000		42*		0	SOT 42
6	1500-6000		42*		0	Data acquisition problems restart tape 42 @ 2059

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
EOL16	0420	87 048	100		—	
T	0445	87 048	120		—	
T	0518	87 048	117	9.1	—	
T						
TRANS	0912	87 048	—	—	—	
T	1330	87 048				
T	1353	87 048				
T	1419	87 048				
T	1723	87 048	271	7.6	—	
"	2142	87 048	—		—	
"	2146	87 048		—	—	
"	2230	87 048	019	7.6		
16	0100	87 049				
16	0130	87 049				
16	0303	87 049	021	5.4		
EOL16	0452	87 049	001	4.0		
TRAN	0503	87 049	090	4.8		
"	0511	87 049	092			
SOL17	0617	87 049	211	4.4		
17	1314	87 049				
17	1736	87 049				
17	2130	87 049				
17	2330	87 049				
17	0119	87 050				
SOL18	0328	87 050				
18	0544	87 050				
18	0815	87 050	015	9.6		
18	0936	87 050				
18	1136	87 050	—	—	—	
18	1619	87 050				
18	2002	87 050				
18	2004	87 050				
EOL18	2023	87 050				

AREA BLAKE PLATEAU / CAROLINA TRSB

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DRIVE #	COMMENTS
6	1500-6000	110/5	42		0	GLORIA down -- change course
6	1500-6000		42		0	New roll of paper
6	1500-6000		42/43		0/1	EOT 42 SOT 43
6	3000-7500		43		1	DWD = 4sec (PREVIOUSLY = 3 sec)
6	3000-7500		44/43		1/0	EOT 43 SOT 44
6			44		0	EOT 44 at rec. #141
6			45		0	SOT 45 on drive 0
6	?750-5250?		45		0	DWD = 2 SEC
6	(750-5250)		45		0	DWD = 1 sec
6	750-5250		45		0	DWD = 1 sec [2142-2146 DWD = 3 sec OOPS]
6	750-5250		46/45		0/1	EOT 45 SOT 46
6	1500-6000		46		1	DWD = 2sec 0051 SOL 16
6	2250-6750		46		1	DWD = 3 secs
6	1500-6000		46		1	DWD = 2 secs
6	1500-6000		46		1	EOL 16
6	1500-6000		46/47		0	EOT 46 SOT 47
6	2250-6750		47		0	DWD = 3
6	2250-6750		47		0	SOL # 17
6	2250-6750		48/47		0/1	EOT #47
6	1500-6000		48		1	DWD = 2
6	1500-6000		48/49		1/0	EOT 48, SOT 49
6	2250-6750		49		0	DWD = 3 sec
6	2250-6750		50/49		0	EOL 17
6	2250-6750		50		0	SOL 18
6	1500-6000		50		0	DWD = 2SEC
6	2250-6750		50		0	DWD = 3 SEC (1 SEC FOR ~9 MINS OOPS)
6	2250-6750		50/51		0/1	EOT 50, SOT 51
6	3000-7500		51		1	DWD = 4 sec
6	" "		52/51		0/1	Read error record # 2362 | SOT 52
6	3000-7500		52		1/0 (1)	" " " # 1204 | EOT 52
6	3000-7500		53		0	SOT 53 → (?- SEE NEXT PAGE) *
6	3000-7500		53		0	EOL 18

SHIP/CRUISE NO./LEG FARNELLA FI-87-EC

CHIEF SCIENTIST POPENOE / TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
TRANS	2027	87-050				
SOL 19	2228	87 050	—	—	—	
19	0420	87 051				
19	1103	87 051				
19	1231	87 051				
19	1321	87 051				
EOL 19	1758	87 051	—	—	—	—
TRAN	1805	87 051	—	—		
SOL 20	1954	87 051	—	—	—	
20	0148	87 052				
20	0217	87 052				
20	0800	87 052				
20	1027	87 052	—	—	—	
20	1501	87 052				
20	1627	87 052				
EOL 20	1727	87 052				
TRANS	1806	87 052				
21	1923	87 052				
21	0220	87 053				
21	0942	87 053				
21	1031	87 053				
21	1200	87 053				
21	1500	87 053				
EOL 21	1530	87 053				
TRAN	1736	87 053				
SOL 22	1936	87 053				
22	2124	87 053				
22	2350	87 053				
22	0801	87 053				
EOL 22	1254	87 054				
TRAN	1318	87 054				
23	1606	87 056				10 kHz
23	2251	87 056	—	—	—	

AREA CAROLINA RISE

TIME ZONE GMT

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DRIVE #	COMMENTS
6	3000-7500	110/5	/53	—	0	SOT 53 (ACCORDING TO PRINT OUT)
6	3000-7500		53	-	0	SOL 19
6			54/53		1	EOT 53 SOT 54
6	3000-7500	"	54		1	INADVERTENT INTERRUPT (GUN OFF BRIEFLY)
6	3000-7500	"	54/55		1/0	EOT 54, SOT 55.
6	2250-6750	"	55		0	C/S DWD = 3 secs
6	2250-6750	"	55		0	EOL 19 EOT 55
6	2250-6750	"	56		0	SOT 56 8
6	2250-6750		56		0	SOL 20
6	3000-7500		56			DWD = 4 secs
6	3000-7500		57/56			EOT 56; SOT 57 11
6	3750-8250		57		1	DWD = 5 sec
6	3750-8250		57/58		1/0	EOT 57, SOT 58 13
6	3750-8250		59/58			EOT 58, SOT 59 14
6	3750-8250		60/59			EOT 59/SOT 60 // record # 460 + a few ?? 15
6	3750-8250		EOT 60			EOL 20 File # 341
6	3750-8250		SOT 61			SOT 61
6	3750-8250		61		0	SOL #21
6	3750-8250		62/61			EOT 61 / SOT 62
6	3000-7500		62		1	DWD = 4 SEC
6	3000-7500		63/62		0	EOT 63 SOT 62
6	2250-6750		63		0	DWD = 3
6	3000-7500		63		0	DWD = 4 secs
6	3000-7500		64/63		0 record # 1808	EOL #21; tie line to line # 22
6	2250-6750		64		0	DWD = 3 SECS
6	3000-7500		64		0	SOL # 22 file 1423 DWD = 4
6	3750-8250		64		0	DWD = 5 sec
6	3750-8250		64/65		0/1	EOT 64, SOT 65
6	3750-8250		65/66		0	EOT 65, SOT 66
6	3750-8250		66			Airgun down at 1302 EOL 22
6	3750-8250		EOT 66			
6	0-3500	Start	TAPE #67			1605 z Start tape 67 on line 23
6	750-5250		67			DWD = 1 sec

SHIP/CRUISE NO./LEG FATCNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START/END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
23	2348	87 056	-	-	-	
23	0016	87 057	-	-	-	
23	0202	87 057	-	-	-	
23	0306	87 057	216			
23	0333	87 057	216			
23	0352	87 057	216			
23	0827	87 057	220			
23	1219	87 057				
23	1307	87 057				
23	1308	87 057				
23	1400	87 057	222			
23	1445	87 057	220			
23	1455	87 057	220			
TRANS	1456	87 057				
TRANS	1505	87 057				
Trans	1518	87 057	127			
Transit	1600	87 057	127			
TRANS	1653	87 057				
24	1704	87 057				
EOL 24	2300	87 057	-	-	-	

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Note: 2 tapes have headers with # 69. Have annotated in logbook as 69A and 69B.

AREA CAROLINA RISE / MID-ATLANTIC

TIME ZONE (GMT)

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS DRIVE #	COMMENTS
6	1500-6000		67		0	DWD = 2 sec.
6	1500-6000		67/68		0/1	EOT 67 SOT 68
6	1500-6000		68		1	
6	1500-6000		68		1	Change course to
6	2250-6750		68		1	DWD 3 seconds - recorded on
6	2250-6750		68		1	Masscomp at 0352 seconds
			68/69A			EOT 68 SOT 69A *
6	2250-6750		69A		1	B/A FILE ERROR; FILE=1376
6	2250-6750		69A		1	EOT 69A
6	2250-6750		69B		0	SOT 69B (TRYING TO CLEAR UP NOISE)
6	2250-6750		69B		0	
6	1500-6000					Change water delay to 2 secs
6	1500-6000		69B			End of line
6	"		69B			End of tape 69
6	"		70			START OF TAPE 70
6	2250-6750		70		0	Change water delay to 3 secs
6	2250-6750		70		0	
6	2250-6750		70		0	END TRANSIT
6	2250-6750		70		0	SOL 24
6	2250-6750		EOT 70		0	EOL 24 END CRUISE EOT 70 F1-87-EC EOC

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST PODENDE / TWICHELL

LINE (START / END)	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	SEISMIC SYSTEM
1	1943	87 035	41	7.5	LORAN C	Magnetometer
1	0410	87 036	—	—	"	"
EOL1	1930	87 036	040	8.0		
SOL 2	2002	87 036	219	8.0		
2	2038	87 036	220	8.0		
2	0510	87 038	236	6.3		
EOL2	2203	87 038				
—	—	—				
SOL 3	2322	87 038				
EOL 3	0049	87 040				
SOL4	0200	87 040	249			
EOL4	1722	87 041	236			
SOL5	1900	87 041	053	9.1		
EOL5	1324	87 042	—			
SOL6	1435	87 042	—			
6	1142	87 042	236			
EOL6	2129	87 043	—			
SOL7	2304	87 043	—			
EOL7	1444	87 044	—			
SOL 8	1553	87 044	—			
EOL8	0916	87 045				
SOL9	1104	87 045				
EOL9	1445	87 045				
SOL10	1454	87 045				
EOL10	2306	87 045				
SOL 11	2334	87 045				
EOL11 SOL12	0803 0811	87 046				
EOL12 SOL13	1139 1149	87 046				
EOL13	2329	87 046				
SOL14	0137	87 046				
EOL14	1220	87 047				
SOL15	1436	87 047				
EOL15	1816	87 047				

AREA BLAKE PLATEAU / CAROLINA RISE
TIME ZONE

SWP	PROGRAM / SCALE	FILTER HI/LO	TAPE NO. START / END	DATA ROLL # START / END	MAGNETICS	COMMENTS
—	—	—	—	—		System on / recording on ABC
—	—	—	—	—		System off engine trouble
—	—	—	—	—		EOL 1 syst. off
—	—	—	—	—		SOL 2 syst. off
—	—	—	—	—		System on
—	—	—	—	—		c/c to 236°
—	—	—	—	—		EOL 2
—	—	—	—	—		—
—	—	—	—	—		SOL 3
—	—	—	—	—		EOL 3
—	—	—	—	—		SOL 4
—	—	—	—	—		EOL 4
—	—	—	—	—		SOL 5
						EOL 5
						SOL 6
						A/e 236°
						EOL 6
						SOL 7
						EOL 7
						SOL 8
						EOL 8
						SOL 9
						EOL 9
						SOL 10
						EOL 10
						SOL 11
						EOL 11
						SOL 12
						EOL 12
						SOL 13
						EOL 13
						SOL 14
						EOL 14
						SOL 15
						EOL 15

SHIP/CRUISE NO./LEG FARNELLA F1-87-EC

CHIEF SCIENTIST POPENOE/TWICHELL

LINE START / END	TIME	YYMMDD	CRS/HDG	SPD	NAVIGATION	~~SEISMIC SYSTEM~~ COMMENTS
SOL 16	1845	87 047	020	3.0		SOL 16
EOL 16	0452	87				
SOL 17	0617	87 047	211	4.4		SOL 17
17	1610	87 049	197	8.3		Shut down for service work
17	0012	87 050				SYSTEM BACK ON LINE
EOL 17	0119	87 050				EOL 17
SOL 18	0328	87 050				SOL 18
EOL 18	2023	87 050				EOL 18
SOL 19	2228	87 050				SOL 19
EOL 19	1758	87 051				EOL 19
SOL 20	1954	87 051				SOL 20
EOL 20	1726	87 052				EOL 20
SOL 21	1923	87 052				SOL 21
EOL 21	1530	87 053				SOL 21
SOL 22	1936	87 053				SOL 22
EOL 22	1254	87 054				EOL 22
TRAN	2239	87 054	Medivac		to coast guard →	NORFOLK
SOL 23	1500	87 056	190	8.8		Mag. on at SOL
23	0308	87 057	216	4.2		Change course
23	1455	87 057		5.2		EOL-23
24	1704	87 057				START-24
EOL 24	2300	87 057				EOL 24 END CRUISE EOC F1-87-EC