U.S. GEOLOGICAL SURVEY

LORANC NAVIGATION LOG

R.V. ASTERIAS - BUZZARDS BAY
& WEST TO SAKONNET PT.

UNIBOOM SURVEY

1 - 12 OCTOBER 1973
2 - 3 DECEMBER 1974

EQUIPMENT

EG&G UNIBOOM SYSTEM
CATAMARAN w/ TRANSDUCER
TRIGGER ASSY.; HYDROPHONE
EPC MOD 4100 RECORDER
Onan gasoline generator (5 kw)
EPSCO Loran C navigation unit
w/ repeater.

PERSONNEL

J. ROBB
C. OHARA
R. HALL
L. SETLOW
(MASS DIV MINERAL RESOURCES)
CAPT. A.D. COLBURN
ASTERIAS

ALSO 19 JUN 1975 (Robb, O'Hara)

ASTR 73OCT #78005
74 DEC #74017
75 JUN #75011
100477

JUNE 19th 1975 R/V ASTERIAS

BUZZARDS BAY UNIBOOM SURVEY

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	FIX TIME	LORAN-C NAVIGATION LATITUDE ± DEGREES ± MINUTES	LONGITUDE ± DEGREES ± MINUTES	TYPE	QUAL.
19	06	75						CAPE RACE	DANA		
			1307					37995.4	69852.4		
			1315					38002.7	69852.3		
			1330		SW			38013.1	69852.4		
			1345		260°			023.1	852.7		
			1405					035.5	852.3		
			1415					041.2	851.8		
			1430:30					049.5	852.7		
			1445					057.2	852.7		
			1500					064.7	864.8		
			1515					073.8	852.4		
	c/c		1525		c/c			080.2	852.9		
			1530					083.5	853.5		
			1535					087.0	854.6		
			1538		c/c			089.2	854.8		
			1545					093.1	857.3		
			1549:15		c/c			094.8	853.9		
			1555:45		c/c			096.1	852.6		
			1602					099.2	852.2		
			1616					107.1	852.5		
			1630					114.6	852.1		
			1645					122.5	852.6		
			1655					127.3	852.2		

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA	
							ROBB, O'HARA DEPART WH ~ 1220
							ON ROUTE TO START BB LINE 39 - EASTERN SIDE
							WILL RUN TO SW
39							Increase speed to 900 RPM COMMENCE LINE # 39
							0.25 SEC SWEEP 0.5 SEC FIRE FILTER 100-6000 Hz
							(nominal track 69852.5 line)
							c/c to ~~[illegible]~~ 220° MAG - to avoid gull island shoal
							c/c to 270° MAG @ C "5"
							c/c to 215° MAG - on route pick up LOP 69,852.5 to resume line
							c/c resume line on LOP 69,852.5 @ 260° MAG
39							End line # 39 Uniboom record ~ so will change feet and remove weights from Uniboom hydrophone

38 132

O'Hara

CRUISE LOG

R/V ASTERIAS

UNIBOOM SEISMIC

SW BUZZARDS BAY
NE RHODE ISLAND SOUND
VINEYARD SOUND

JUNE 19th - JULY 1, 1975

ASTR 75-JUN

ASTR 15JUN 95011 103509

PROPERTY OF:
U. S. GEOLOGICAL SURVEY
OFFICE OF MARINE GEOLOGY
WOODS HOLE, MASS. 02543
PHONE (617) 548-8700

U. S. GEOLOGICAL SURVE
OFFICE - MARINE GEOLOGY
WOODS HOLE, MASS. 0254

LORAN-C NAVIGATION

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD		CAPE RACE	DANA
								37----.-	69----.-
							9000 RPM.		
20	06	75	1405					37962.0	69860.8
			1415					37962.6	69863.5
			1430					37962.0	69866.7
			1445					37961.6	69871.2
			1452	C/C	270°	mag.		37962.4	69873.7
			1455					37964.1	69873.6
			1500					37969.1	69873.6
			1505					37972.9	69873.1
			1507	C/C	340°	mag. 10000 RPM.		37	69
			1515					37973.6	69870.4
			1530					37973.9	69865.2
			1544	C/C				37974.1	69860.1
			1550					37978.8	69860.8
			1555					37983.5	69862.1
			1558:30	C/C				37984.3	69862.4
			1615					37985.8	69866.6
			1630					37986.4	69873.8
			1635	C/C				37986.2	69875.5
			1643					37993.6	69875.4
			1650					37996.6	69875.1
			1655						
			1658	C/C				37998.1	69875.2
			1710						
			1715					L-C STILL DOWN - NO MASTER	

OPS: 12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	COMMENTS AND OBSERVATIONS
							FRIDAY JUNE 20 1340 LEAVE WHOOCE
							R/V ASTERIAS - UNITBOOM SURVEY
							VINEYARD SOUND - WILL START LINE # 1
							JUST OFF WOODS HOLE - O'HARA - FORRESTEL
							37,962 LOP - LINE # 1
							START LINE # 1
							STILL line # 1
37974							
							END LINE # 1 START line #2 LOP - 37974 Inc. speed to 1000 R.P.M.
							End line # 2, start line # 3 LOP - 37986
							Slow down to change Paper & Belt Recorder ON, speed Back up.
							4c End line # 3 start line # 4 LOP - 37,998 Heading ~ 340° MAG LORAN-C Down - Master weak or off lock STICK MAINTAINING COURSE 340° MAG

GMT				TIME ZONE	SHIPS		NAVIGATION					
DAY	MO	YR	TIME	±	COURSE	SPD	CAPE RACE			DANA		
			1730									
			1738									
			1739 o/c									
			1749				37	99	2.3	69	86	1.8
			1750					99	3.5		86	1.9
			1755					99	6.0		86	1.8
			1800					99	8.9		86	1.7
			1805				36	01	1.7	69	86	1.7
			1810					00	5.0		86	1.8
			1815					00	8.2		86	1.8
			1817					01	0.7		86	2.5
			1830					01	0.1		86	6.4
			1848					01	0.1		87	1.9
			1900				36	01	0.1	69	87	5.4
			1909					01	0.0		87	7.8

67,862
37,998

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	

L-C still on + - tried other receiver (no go) will clean plugs (receiver + antenna) @ end of this line and see what happens - most likely the Master transmitter is down.

numbers appeared on C - looks like master is back in commission.

~~Ended~~

LORAN-C back on + locked - will run LOP 69,862 Dana - continuing line #4

on line 4 - continue

on route to start of line #5

End line 4 - commence line #5 LOP 38,010

End Line #5 Return to Woods Hole

ARRIVE WH @ 2015

START NEW DAY
21 JUNE 1975

O'HARA - JENNINGS

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	LORAN C NAVIGATION
21	06	75	0600				
			0837				38 172.1 69 836.7
			0845		330 MAG		172.1 832.5
			0900				172.0 827.4
			0912		C/C		172.0 823.1
			0915				171.1 823.0
			0926		C/C		154.6 823.2
			0930				154.9 825.3
			0945				154.6 831.0
			1000				153.9 837.1
			1015				154.2 842.6
			1019				38 154.5 69 844.5
			1030				153.9 848.8
							154.6 853.1
			1045				154.9 855.0
			1047				
			1100				153.5 860.8
			1130				153.7 872.9
			1145				153.8 878.9
			1200				154.1 884.8
			1215				154.0 890.7
			1230				154.0 896.4
			1245				154.1 902.3
			1300				154.4 908.1
			1315				154.0 913.5

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	
							ON BOARD ASTERIAS
							L-CON WH DOCK 37,952.9 -69,855.7
							Commence line #6 COP 38,192.0
							c/c start on line #6 COP 69,823
							End line 6 - start line #7 COP 38 154
							continue line 7 190° MAG
							ABEAM TO PORT - BUOY "1" WHISTLE
							TEXAS TOWER - ABEAM TO STARBOARD
							BELT CHANGE
							EPC BACK ON
							continuing line #7

GMT				TIME ZONE	SHIPS		NAVIGATION		
DAY	MO	YR	TIME	±	COURSE	SPD			
21	06	78	1317		o/c		38 15 7.2	69 9 14.1	
			1330		c/c		166.5	914.0	
			1345				166.0	908.5	
			1400				165.9	902.9	
			1416				165.7	876.4	
			1430				165.9	891.1	
			1445				165.8	885.4	
			1500				166.0	879.9	
			1515				166.4	874.0	
			1530				166.0	867.1	
			1545				165.7	859.7	
			1600				165.8	853.2	
			1615				165.9	846.6	
			1630				165.7	840.2	
			1645				165.9	834.0	
			1700				166.2	828.0	
			1715				166.2	822.7	
			1716:30		d/c		165.9	821.7	
			1732				177.1	822.3	
			1733		d/c 165 MAG		178.6	822.0	
			1745				178.3	826.8	
			1800				178.4	832.1	
			1815				178.1	837.3	
			1830	+			178.1	842.2	
			1845				178.0	847.5	
			1900				178.0	852.7	
			~~2000~~						
			2000						

L "C" CUTTYHUNK DOCK
38,104.8
69,857.5

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	
							o/c LOP 69919 con't line 7 ~270° MAG
							End line 7 Commence line # 8 LOP 38,166
							1434 Boat along side (Bearded Lady)
							TIME MARKS NG TURN off. - SEA STATE building - this time - SLO chart ADVANCE SLOWED chart Rate - TO GET 15 min To show full Page
							DELT CHANGE ?
							LOP 69,822 con't line 8
							End line 8 commence line 9 LOP 38,178
							SHUT DOWN SYSTEMS - CALL IT A DAY WILL RESUME LINE 9 TOMORROW ON ROUTE TO CUTTYHUNK IS FOR THE NIGHT ARRIVE CUTTYHUNK - SECURE FOR THE NIGHT

START NEW DAY
22 JUNE 1975

O'HARA - JENNINGS

LOGAN - C

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION CAPE NALE	NAVIGATION DANA
22	06	75	0500				38 10 4.8	69 85 7.5
					L-C		DOCKSIDE CUTTYHUNK	↑
			0619				38 17 8.1	69 85 0.1
			0621				178.0	852.7
			0635				178.1	855.7
			0645				178.2	859.4
			0700				178.0	864.2
			0715				178.3	869.5
			0730				178.4	875.2
			0746				178.5	881.0
			0800				177.9	886.5
			0810				178.2	890.3
			0817				177.8	891.4
			0830				177.8	896.5
			0845				177.7	901.9
			0900				177.8	907.4
			0909:15		C/C		177.5	909.2
			0922:30		C/C		190.2	908.7
			0930				189.7	906.1
			0945				190.3	900.9
			1001				189.9	894.8
			1020				189.8	888.3
			1030				190.2	885.1
			1045:30		C/C		190.2	880.1
			1100				200.3	879.6
			1115				211.9	880.0
			1130				223.2	880.2
			1145				235.1	879.7
			1200				247.2	879.9

§52.7

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	
							DEPART CUTTYHUNK - ON ROUTE TO RESUME SEISMIC PROFILING ON LINE # 9
		←					Resume line # 9 - 0621 cd LOP. (§52.7)
							shut down EPC - belt + paper change - End roll #2 start roll #3
							LOP 69,909 End line 9 commence line 10 LOP 38,190.
							Temporarily discontinue line # 10 due to weather + wind - start line 11 69,880 LOP

NEW DAY
WEDNESDAY JUNE 25th, 1975

LORAN-C NAVIGATION

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	CAPE RACE	DANA
25	06	75	0600					
			0653				38011.8	69877.7
			0655				38013.2	69877.9
			0701				38017.9	69879.4
			0705				38020.5	69879.6
			0707 45		C/C		38022.5	69880.3
			0715				38022.2	69877.5
			0730				38022.0	69872.1
			0745				022.0	867.0
			0751:40		C/C		022.0	867.8
			0755				38023.9	864.8
			0800				028.0	865.1
			0805				032.0	865.6
			0807 25		C/C		38034.0	69865.9
			0815				34.2	276.7
			0830				38033.8	69874.2
			0845				33.8	880.2
			0852 45		C/C		034.3	882.7
			0855				35.5	883.0
			0900				39.4	883.2
			0906				043.7	883.8
			0909 30		C/C		046.4	884.0
			0915				45.4	882.0
			0930				46.4	876.7
			0945				46.1	872.0
			1000				046.1	867.7
			1009		C/C		046.3	864.7

(9)

OPS: 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO	STA	COMMENTS AND OBSERVATIONS
							DEPART WOODS HOLE TO CONTINUE SURVEY WILL FINISH LINES IN VINEYARD SOUND ABOARD OHARA, PURDY, TAUSEY
							START LINE 13 VINEYARD SOUND = ROLL #4
							C/C CON'T LINE 13 LOP 38,022.0
							con't line 13
							C/C END LINE 13 COMMENCE LINE 14 LOP 38,034
							C/C CONT LINE 14
							END LINE 14 START LINE 15 LOP 38046
							C/C Cont. line 15 LOP 69,8690

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	LORAN-C NAVIGATION CAPE RACE	DANA
25	06	75	1015				38 050.6	69 864.8
		✓	1024	45	C/C		057.8	864.0
			1030				058.0	866.2
			1045				058.1	872.5
		✓	1100				058.3	878.9
			1116				058.3	884.8
		✓	1122	30	C/C		058.0	887.1
			1125				060.0	887.6
			1131				65.1	888.8
			1135				68.8	889.4
		✓	1136	15	C/C		70.0	889.8
			1145				70.1	886.5
		✓	1200				70.2	880.8
			1215				69.1	875.6
		✓	1230				70.1	871.2
			1245				70.2	866.4
		✓	1253	17	C/C		70.2	863.9
			1256				73.0	864.3
			1301				78.2	65.1
		✓	1304	52	C/C		82.1	65.4
			1306				82.6	66.0
			1315				86.9	69.0
			1322					
			1326					
			1326				081.8	872.8

058

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA	
							C/C END LINE 15 START 16 LOP 38058.0
							C/L LENE 16 CON'T
							C/C END LINE 16 START LINE 17 LOP 38070.0
							C/C LINE 17 CONT LOP 69864.0
							C/C END LINE 17 START LINE 18
							EPC off - belt change
							EPC on

c/c 885

LORAN-C NAVIGATION

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	CAPE RACE	DANA
25	06	75						
			1330				38082.0	69874.3
			1345				82.3	79.3
			1400	40	c/c		81.8	884.3
			1406				86.6	883.5
			1410				090.7	883.0
			1413	30			094.3	882.7
			1416				94.1	881.6
			1420				094.0	875.7
			1452				094.2	867.7
			1500				093.9	867.2
			1504		c/c		094.9	862.7
			1510				101.0	862.0
			1515		c/c		106.2	861.5
			1530				106.1	866.5
			1545				106.1	871.8
			1600				106.0	875.7
			1615				106.0	879.2
			1630				105.9	883.1
			1632		c/c		106.4	884.0
			1636				108.4	885.1
			1640				100.1	886.4
			1646				112.9	888.6
			1650				114.5	889.9
			1655				117.1	891.7
			1659				118.1	892.2
			1704				118.0	893.2
			1705				117.9	892.5
			1715				117.8	888.9

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA	
							c/c LINE 18 CONT
							c/c END LINE 18 START LINE 19 COP 38094.0
							c/c cont Line 19 off Nanhauserna
							c/c end line 19 commence line 20 COP 38,106
							c/c cont line 20
							paper change END LINE 20 END ROLE #4
							~~START LINE 21 START ROLL #5~~
							" " " " " "

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	LORANC NAVIGATION CAPE RACE	DANA
25	06	~~78~~	1730				38117.7	69883.0
		~~X~~	1737:30		C/C		38118.0	69879.9
			1745				112.7	879.8
		~~X~~	1800				103.4	880.1
			1815				092.5	880.1
		~~X~~	1830				081.9	880.1
			1845				071.7	880.4
		~~X~~	1900				059.5	879.9
			1916				047.1	880.2
		~~X~~	1930				035.5	879.8
		~~X~~	1945				322.4	879.9

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	
							End line 21 temporarily - Resume line # 11 LOP 69,880 UP Vineyard Sound - southeastern most line
							END LINE 11 (TODAY) ↓
							CALL IN A DAY - ALL SYSTEMS SHUT DOWN ON ROUTE TO WOODS HOLE - FULL STEAM
							NEW DAY TOMORROW - ?

THURSDAY 26 JUNE 75

NEW DAY

280

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	LORAN-C NAVIGATION CAPE RACE DANA
26	06	75	0600				
							38 . . 69 . .
			0628				37 963.9 69 872.6
			0645				972.0 872.3
			0700				989.5 872.4
			0715				38 005.5 69 872.3
			0730				020.8 872.6
			0745				036.8 872.2
			0800				052.5 872.5
			0815				067.1 872.3
			0830				081.6 872.5
			0845				096.6 872.4
			0900				109.6 872.9
			0915				122.9 872.8
			0930				136.9 872.3
			0945				150.3 872.4
			1000				164.1 872.7
			1015				177.4 872.3
			1030				190.2 872.2
			1045				203.3 872.4
			1100				217.4 872.0
			1115				230.0 872.6
			1130				243.7 872.0
			1145				258.0 872.7
			1200				271.8 872.3
			1209	c/c			280.5 872.5

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Depart WH dock @ 0650 - on route to start line down Vineyard Sound to Rhode Island Sound. Aboard O'Hara, Farrabee, Forrestal Line # 22
							69,872.5 - LOP Start Line # 22 down Vineyard Sound out to Rhode Island Sound
							Speed ~4.8 knots 1000 RPM
							con't line # 22
							Weather + seas couldn't be more ideal
							c/c continue line # 22

LORAN-C NAVIGATION

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	CAPE RACE	DANA
26	06	75	1216		SE		38 280.4	69 874.9
			1230				280.2	880.4
			1245				280.1	885.3
			1249:30		c/c		279.6	886.9
			1300				271.7	887.1
			1316				258.9	886.9
			1328		c/c		299.4	887.5
			1345				250.2	880.2
			1355				249.7	875.7
			1400				249.7	873.7
			1415				250.1	867.4
			1430				249.7	861.3
			1445				249.8	854.8
			1500				250.0	848.6
			[illegible]				[illegible]	[illegible]
			1511		c/c		248.8	843.9
			1515				246.7	844.2
			1525		c/c		238.1	844.9
			1530				236.2	846.0
			1545				238.0	850.7
			1600				238.2	855.8
			1615				238.3	860.5
			1630				238.5	865.8
			1645				237.7	870.3
			1700				238.1	875.3
			1715				38 238.1	69 880.2
			1730				237.9	885.1
			1745				238.2	890.3
			1800				239.9	995.1
			1813:10		d/c		237.7	899.2

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							course change end line #22 then / line 23 LOP 69,887
							c/c End line 23 temporarily - start / line 24 LOP 38,250
							c/c LOP - 69844.0
							c/c End Line #24 start Line # 25 LOP-38,238
							SEAS A LITTLE ROUGH
							con't line # 24 LOP 69,899.0

69,897

LORAN-C

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION CAPE RACE	OANN
26	06	75	1815				38236.4	69899.0
			1825	:30	c/c		225.7	898.9
			1845				225.6	892.1
			1900				226.0	886.2
			1915				226.0	879.9
			1930				226.0	873.4
			1945				226.1	866.9
			1950				226.1	864.8
			2130					

64,865

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							C/c End line 29 Start line 25 LOP 38,226.0
							~~END LINE 25 Temp.~~
							END LINE 25 END THE LONGEST DAY
							ON ROUTE TO CUTTYHUNK FOR THE NIGHT
							SECURED DOCKSIDE - COASTGUARD FACILITY CUTTYHUNK

DAWN OF A NEW DAY
FRIDAY 27 JUNE, 1975 — beautiful morning

LORAN - C

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION 38,	69,
27	06	75	0500					
			0700				38226.3	69865.1
		✓	0700				38226.3	69865.1
			0701				226.5	864.7
			0715				226.0	859.0
		✓	0730				226.0	852.9
			0745				225.9	846.8
		✓	0758				226.1	842.2
		✓	0826				225.7	840.7
			0830				225.8	839.0
			0845				225.9	832.8
		✓	0852	4c			226.1	829.9
			0855				224.6	828.8
		✓	0900				222.0	827.0
			0905				219.4	825.4
			0910				216.5	823.8
		✓	0914				213.9	822.4
		✓	0921				213.7	821.1
			0930				213.6	824.3
			0945				214.2	829.9
		✓	1000				213.8	835.1
			1015				214.1	839.8
		✓	1030				214.0	844.4
			1035				213.8	845.9
			1037				214.2	846.6
			1045				214.0	848.8

L-C DOCKSIDE - CUTTYHUNK
38,104.8 69,857.5

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO	STA	COMMENTS AND OBSERVATIONS
							Depart dockside - Cuttyhunk - Offam, Farrabee Forrestel - on route to RI sound west of Cuttyhunk to resume Umboom survey of line 25 - Weather just fine
							LOP 38,226.3
							Resume line #25
							Rude Awakening Taped up wires ——— through red hot wire chafed
							Power Source shorting out due to exposed wire
							Resume line #25
							C/C cont. Line #25
							End Line #25, Change Paper & Belt
							Start Line #26 End Roll #5 Begin Roll #6
							LOP - 38,214
							Slow speed - make way to sail boat
							RESUME SPEED AND COURSE

GMT DAY	GMT MO	GMT YR	GMT TIME	TIME ZONE ±	SHIPS COURSE	SHIPS SPD	NAVIGATION 38	NAVIGATION 69	
27	06	~~75~~ 81	1100	-			213.8	1	8536
			1115				214.2		8584
		X	1130	-			214.0		8634
			1145				214.0		8684
		X	1200	-			213.8		8732
			1215				214.1		8781
		X	1230	-			214.5		8833
			1245				213.9		8881
		X	1300	-			213.9		8930
			1315				215.8		8977
			1330				213.9		9027
		X	1331	c/c			213.6		9029
		X	1345	c/c			201.6		9034
		X	1400	-			202.2		8967
			1415				202.2		8907
		X	1430	-			202.3		8846
			1445				201.7		8782
		X	1500	-			201.9		8727
			1515				202.0		8668
		X	1530	-			202.2		8609
			1545				202.0		8552
		X	1600	-			201.9		8494
			1615				202.3		8434
			1627				202.2		8383
			1629				202.1		8372
		X	1630	-			202.1		8371
			1645				201.2		8308
		X	1700	-			202.3		8248
		X	1701	9c			202.2		8245
			1705				198.6		8244

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Cont. line #26
							cont line 26 on route to start of line #27
							End line 26 start line 27 COP 38,202
							Shut Down recorder to change Belt
							Back ON
							c/c cont. 27

GMT				TIME ZONE	SHIPS		NAVIGATION		
DAY	MO	YR	TIME	±	COURSE	SPD	38,	69,	
27	06	75	1710				194.7		824.2
			1715		C/C		190.3		823.9
			1730				190.1		829.3
			1745				189.8		834.5
			1800				190.2		839.6
			1815				190.5		844.9
			1830				189.8		850.1
			1845				190.7		855.4
			1900				190.2		860.2
			1915				190.1		864.9
			1930				190.2		870.1
			1945				189.8		874.8
			2000				189.4		880.0
			2125						

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	

C/C End Line 27 - Resume Line 10 @ 18,190.0

END LINE 10 CALL IT A DAY
IN ROUTE TO CUTTYHUNK

SECURED DOCKSIDE - CUTTYHUNK COAST GUARD FACILITY

85.2.7
20-1.3

LORAN - C NAVIGATION

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	CAPE RACE 38 .	DANA 69 .
28	06	75	0500					
			0552	4C			135.6	853.0
			0600				142.8	852.4
			0615				158.8	853.0
			0618				162.0	852.5
			0630				173.6	852.2
			0645				188.2	852.3
			0700				202.6	852.5
			0715				217.4	852.4
			0730				231.9	852.8
			0745				246.4	852.8
			0755	4C			256.1	852.5
			0800				254.3	850.8
			0805				252.5	848.5
			0810				250.8	846.3
			0815				248.5	844.3
			0820				247.0	842.7
			0825				245.0	840.7
			0830				243.0	838.2
			0835				241.1	836.2
			0840				239.5	834.8
			0845				237.4	833.1
			0850				235.0	833.6
			0853				236.0	834.8
			0900				230.4	835.4
			0915				216.9	834.9
			0930				204.1	835.0
			0945				190.5	834.7
			1000				177.7	835.2
			1015				164.9	835.6

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							DEPART CUTTYHUNK - ON ROUTE TO START OF LINE 28
							TIE LINE - OFF CUTTYHUNK (WEST) O'HARA, FORRESTEL
							FARRADEE - BEAUTIFUL MORN - FLAT CALM
							Due North Texas Tower
							C/C Cont. Line #28
							Show - change in tow - in fog bank
							origins - ship traffic
							End line #28 start line #29 COP 69,835.0

m

69,897 c/c

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	LORAN-C NAVIGATION CAPE RACE	DANA
28	06	88	1030				38 151.2	69 835.4
			1040	C/C			38 142.0	69 835.2
			1045				142.0	837.3
			1100				141.4	842.9
			1115				142.4	848.3
			1130				142.4	854.0
			1133				142.3	854.7
			1146				142.2	853.7
			1200				142.0	858.8
			1215				141.5	864.5
			1230				141.9	870.2
			1245				142.1	875.7
			1258	10			142.0	880.0
			1300				143.1	880.0
			1315				154.6	880.0
			1330				167.4	879.8
			1345				180.3	880.1
			1356				190.0	880.2
							[redacted]	[redacted]0
			1438				249.6	880
			1445				250.8	890.5
			1454:30	C/C			250.2	897.0
			1500				245.1	894.4
			1515				231.0	893.9
			1525				221.6	894.2
			1529				219.4	894.3
			1530				218.0	894.0
			1545				202.5	894.1
			1600				167.7	894.0

JT 190 Pulgean
RESUME SMALL SEGMENT OF LINE 29
START LINE 30

OPS 12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA	COMMENTS AND OBSERVATIONS
							CONTINUE LINE 29
							CC RESUME LINE 6 LOP 38,142.0
							Slowing down making circle to change speed +Bdt
							RESUME SPEED AND COURSE
							CC RESUME TO LINE 11 LINE 6 TERMINATE TEMP.
							END LINE 11 TEMP. UNIBOOM ABOARD AND SECURE UNDER WAY-FULL STEAM TO RESUME LINE 24
							RESUME LINE 24
							End line 24 start line 30 LOP 69,894.0
							SLOW TO CHANGE RECORDER BELT
							RESUME COURSE + SPEED

GMT				TIME ZONE	SHIPS		NAVIGATION		
DAY	MO	YR	TIME	±	COURSE	SPD	36,	69,	
28	06	75	1615				172.9	894.3	
			1630				157.5	894.0	
			1645				142.6	894.5	
			[redacted]				[redacted]	[redacted]	
			1657				130.0	894.0	
			1700				130.0	893.0	
			1715				129.7	887.3	
			1730				130.0	881.4	
			1745				130.0	875.4	
			1800				130.8	869.5	
			1812				130.0	869.2	
			~~2100~~						
			2030						

OPS							
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	COMMENTS AND OBSERVATIONS
							CC TO LINE 31 LOP 38,130.0
							SHUT DOWN SYSTEMS - ADOARD + SECURE
							ON ROUTE TO WOODS HOLE FOR THE NIGHT
							ETA ~ 2030
							DOCKSIDE · WOODS HOLE

NEW DAY

SUNDAY 29 JUNE, 1975

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	LORAN-C NAVIGATION CAPE RACE	DANA
29	06	75	0850				.	.
							.	.
							.	.
							.	.
							.	.
		X	0823				37957.7	69865.0
			0830				9669	864.9
			0845				9872	865.0
		X	0900				38006.4	865.1
			0915				024.4	865.0
		X	0930				040.3	865.4
			0945				052.7	864.9
		X	1000				38068.1	864.6
			1015				081.8	865.0
		X	1030				38096.7	864.9
			1045				38113.7	865.1
		X	1100				126.5	865.2
			1115				141.8	865.3
		X	1122	4/			148.7	864.6
		X	1142	30			129.3	865.4
			1145				129.1	864.5
		X	1157		c/c		129.9	860.0
			1200				127.2	860.1
			1205				122.2	860.8
		X	1209	30	c/c		118.0	860.9
			1215				118.3	863.0
			1220				117.9	864.9
		X	1230				118.9	868.9
			1245				117.5	874.5
		X	1300		c/c		117.8	879.3
			1315				128.8	879.7

38 154

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Depart WH - on route to start of the line - Vineyard Sound - Western side - Elizabeth Islands. O'Hara, Farrabee, Winget
							Resume line 12 - SW down Vineyard Sound LOP 69,865.0
							END LINE 12 in Route to resume line 31 Resume line 31 LOP 38,130
							continue line #31 - on route to resume line #21
							End line #31 Commence resumption line #21 LOP 38,118
							c/c End line #21 Resume line 11 LOP 69,880

LORAN - C

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION CAPE RACE		DANA	
29	06	75	1330				38	190.0	69	880.1
		X	1333		o/c			192.9		880.0
			1345					142.0		884.3
		X	1400					142.3		889.4
			1415					142.0		894.6
		X	1430					142.3		900.7
			1445					142.0		906.8
		X	1458	30				142.3		908.1
			1500					131.8		908.1
		X	1502	:30	c/c			129.6		908.3
			1515					130.3		903.9
		X	1530					129.7		898.6
		X	1543					130.0		894.0
			1545					127.6		893.8
		✓	1555					118.0		894.1

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA	
							Con't line 11
							C/C End line 11 Resume line #6 LOP 38, 142
							CC CONTINUE LINE 6 LOP 69, 909.0
							C/C End line 6 Resume line #31 LOP 38, 130
							C/C End line 31 Resume line 30
							End line 30 Call it a Day
							END OF SURVEY

GMT				TIME ZONE	SHIPS		NAVIGATION	
DAY	MO	YR	TIME	±	COURSE	SPD	CAPE RACE	DANA
17	10	75	1330				37, .	69, .
							.	.
							.	.
							.	.
			1415				37,957.9	69,860.1
			1421				37955.3	69860.1
			1430				37951.4	69860.4
		dc	1434.30				37949.8	69860.6
			1445				37950.1	69863.7
			1500				37950.3	69867.0
			1515				37950.0	69870.1
		dc	1518.30				37950.1	69871.2
			1519				.	.
			1525				37946.3	69870.9
			1530				37943.5	69870.8
			1535				37941.0	69870.2
		dc	1540.5				37937.9	69871.0
			1545				37938.3	69868.9
			1600				37937.9	69863.5
			1615				37938.1	69858.0
		dc	1619				37937.7	69856.7
							.	.
			1625				37933.1	69856.9
			1630				37928.7	69856.9
		dc	1633				37925.8	69857.2
			1700				37926.0	69866.7
			1706				37926.1	69869.3
			1709				37925.9	69870.2
			1718				37926.1	69872.8
			1730				37926.7	69878.0

OPS						COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO. STA.	
						DEPART WOODS HOLE - UNIBOOM SEISMIC
						NANTUCKET SOUND (WOODS HOLE - MONOMOY IS)
						O'HARA, FERKEBEE, FORRESTEL
						on route to start of line # 33
						Start line # 33
						4c Cont. line # 33
					4c	End Line # 33, , START line # 34
						Change R.P.M.'S From 900 to 1000
						4c Cont. line # 34
						End line # 34 Start line # 35
						LANE 69,857
						Cont. line # 35
						home 37,925.
						CHANGE STYLUS/BELT
						EPC ON

GMT				TIME ZONE	SHIPS		NAVIGATION	
DAY	MO	YR	TIME	±	COURSE	SPD	CAPE RACE	DANA
17	10	75	1737.5				37926.4	69880.9
20	10	75	0800					
			0903				37926.2	69885.2
			0915				37926.7	69889.6
			0926				37926.1	69894.1
			1259				37951.0	69870.1
			1315				37942.8	69870.0
			1330				37935.7	69869.9
			1400				37920.8	69870.1
			1415				37915.1	69869.9

OPS							
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	

COMMENTS AND OBSERVATIONS

→ TEMPORARY 3V

End line #35 for Tonight
Going back to Woods Hole

DEPART WOODS HOLE - ON ROUTE TO RESUME
LINE #35 - WILL TRY A-DYNE HYDROPHONE
IN PLACE OF EG+G O'HARA, FERREDEE
FORRESTEL

CONT LINE 35

Recorder down lost 5V
START LINE 36

GMT				TIME ZONE	SHIPS		NAVIGATION	
DAY	MO	YR	TIME	±	COURSE	SPD		
21			0730					
			0820				37 902.1	69861.4
			0838				37 902.0	69862.1
			0845				37 902.1	69864.7
			0900				37 899.1	69868.9
			0905				37 899.9	69870.1
			0909				37 901.7	69870.4
			0915				37 902.0	69872.7
			0930				37 902.3	69879.1
			0945				37 902.8	69885.0
			1000				37902.0	69892.0
			1015				37901.9	69898.1
			1030				37901.7	69903.5
			1045				37902.2	69909.1
			1100				37902.1	69913.6

OPS								COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.		
								Depart Woods Hole - Tuesday - beautiful morning
								~~START Line #38~~ - Recorder not getting signal
								Start Line #38
								End Line #38 Temp.

GMT				TIME ZONE	SHIPS		NAVIGATION	
DAY	MO	YR	TIME	±	COURSE	SPD	CAPE RACE	DANA
24	07	75	1400				37 .	69 .
							.	.
			1420				37961.6	69860.2
			1430				37958.2	69860.0
			1442				37949.7	69860.1
			1500				37949.8	69866.1
			1515				37950.0	69870.8
			1521				37949.9	69872.8
			1525				37946.8	69872.3
			1530				37943.4	69872.1
			1535				37940.2	69871.3
			1540				37938.0	69870.9
			1545				37938.1	69868.5
			1600				37938.0	69863.3
			1615				37938.3	69857.6
			1618				37937.3	69856.6
			1625				37932.5	69856.1
			1631				37927.8	69856.1
			1633.5				37925.9	69854.3
			1645				37926.4	69859.9
			1700				37926.0	69863.4
			1715				37926.1	69867.4
			1730				37926.4	69870.2
			1745				37926.3	69872.8
			1800				37926.6	69875.4
			1803				37926.7	69875.6
							.	.
							.	.
							.	.
							.	.
							.	.

Friday Aft. Oct. 24

Gorgeous Day

OPS: 12 KHz | 3.5 KHz | CSP | MAG | GRAV. | SONO. | STA.

COMMENTS AND OBSERVATIONS

Depart WHOI Dock with new diaphragm in Transducer.

START Line #33 Lane #69,860

C/C Cont. Line #33 Lane #37,950

C/C End Line #33, Commence Line #34

C/C Cont. Line #34 Lane #37,938

C/C End Line #34 Commence Line #35 Lane #69,856

C/C Cont. Line #35 Lane #37,926

Slowing down to avoid Motor Boat Haul Gear, going back to Woods Hole

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION CAPE RACE	DANA
25	10	75	0605				37 .	69 .
			0700				37926.2	69875.0
			0715				37926.2	69877.4
			0730				9257	69880.8
			0745				9269	8851
			0800				37925.9	69888.9
			0815				37926.2	69893.3
		C/C	0830				37926.2	69897.7
			0830				37922.3	69897.2
			0840				37918.1	69896.7
		C/C	0845				37914.4	69896.2
			0900				37914.1	69890.0
			0915				37914.5	69884.7
			0930				37914.2	69878.8
			0945				37913.9	69873.6
			1000				37912	69868.6
			1015				37914.2	69864.0
			1030				37913.9	69859.2
		C/C	1031				37914.0	69859.0
			1035				37911.0	69859.3
			1040				37907.5	69859.9
			1045				37902.7	69860.7
			1048	30 C/C			9023	860.9
		C/C	1100				37901.9	69864.8 ←
			1115				37909.7	865.0
			1130				37917.4	69864.9
			1145				37924.5	69864.8

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO	STA	
							Depart WHOI Dock
							Continue Line #35 Lane #37,926
							C/C End Line #35 Commence Line #36
							C/C Cont. Line #36 Lane #37,914
							C/C End Line #36 Commence Line #37
							C/C con't line #37
							C/C End Line #37 Temp. Begin Line #38 Lane #69,865 - change in Survey plans due to increasingly rough sea - wind SE 2/5 Knots + building This line on route to Woods Hole

GMT				TIME ZONE	SHIPS		NAVIGATION	
DAY	MO	YR	TIME	±	COURSE	SPD	CAPE RACE	DANA
25	10	75	1200				37931.0	69865.0
			1215				37937.1	69865.3
			1219				37938.6	69865.2
26	10	75	0915				37902.4	69868.9
			0930				37902.1	69874.5
			0945				37901.9	69879.7
			1000				37901.9	69886.2
			1015				37902.0	69892.1
			1030				37902.1	69897.8
			1045				37902.0	69903.6
			1100				902.0	69908.9
			1115				37901.9	69913.2
			1130				37901.8	69917.4
			1145				902.2	920.9
			1159				901.9	925.2
			1212				69925.2	37889.6
			1215				37888.8	69924.5
			1230				39888.8	69920.4
			1249				889.9	918.2
			1245				891.6	917.5
			1250				893.6	916.3

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	

Cont. Line # 38

End Line # 38 TEMP Rough Seas, return to Wt

NEW DAY SUN 26 OCT 75
DEPART Wt @ 0800 en route to resume line # 37 just south of L'Hommedieu shoal
Sea conditions favorable

Resume line # 37 (37,902) SE

cont line # 37

c/c End line 37 Commence line # 39 (69,925)
c/c continue line 37 37889.0

c/a due to shoaling - heading west to deeper H2O (Channel)

LORAN - C

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION CAPE RACE	DNA
26	10	75	1255				37895.6	69915.0
			1300				37898.1	69913.9
			1305				37900.7	69913.3
							[redacted]	
			1310				37899.3	69911.8
			1315				37897.0	69910.4
			1320				37899.0	69909.2
			1325				37891.7	69907.7
			1330				37889.6	69906.7
			1555				37890.0	69905.3
			1340				889.8	903.8
			1345				889.8	902.7
			1350				889.6	901.5
			1351				37889.6	69901.0
28	10	75	0800		DEPART		HOLE	
			0838				37967.3	69870.2
			0845				963.4	870.3
			0900				955.3	870.0
			0915				948.2	869.9
			0930				940.7	869.5
			0945				933.7	870.3
			1000				924.3	870.1

OPS

12 KHz | 3.5 KHz | CSP | MAG | GRAV | SONO | STA

COMMENTS AND OBSERVATIONS

still heading for Montague I channel

Con't line 39

Resume line 37, & 20 Con't line 39

Discontinue line 39 temp.

TUE 28 OCT MEN DAY — OTTAWER, COMMEAU

ON ROUTE TO START OF LINE # 40

SEA CONDITIONS FINE

Begin Uniboom Survey - start Line 40

DANA LAKE 69, 870.0

LORAN-C

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION Cape Race	DANA
28	07	75	1015				37914.1	69870.2
			1030				902.7	869.9
			1045				890.4	870.2
			1100				877.3	870.0
			1115				863.7	870.1
			1117:30		C/A		861.0	870.0
			1128				862.5	869.9
			1125				865.4	869.2
			1130				867.7	868.2
			1135				862.7	868.0
			1140				857.6	868.0
			1145				854.9	869.1
			1146:30		C/A		854.6	869.7
			1200				840.8	870.0
			1215				826.0	870.1
			1230				811.1	870.1
			1245				796.3	870.0
			1300				781.7	870.3
			1315				766.4	870.3
			1330				751.1	870.3
			1336		C/C		746.2	870.4
			1345				745.7	873.6
			1356		C/A		745.7	877.8
			1400				744.1	879.0
			1405				742.3	881.0
			1410		C/A 200°T		742.1	882.5
			1415				745.3	884.3
			1416				746.0	884.9
			1430				745.8	889.6
			1431		C/C		745.8	890.0

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Adj course due to shoals
							L-C LANE Back on Line 40 L-C 69,870
							End Line 40 Start Line 41 (L-C 37,746)
							Adj course due to shoals
							Adj course - Bell Buoy #1 A beam
							Back on lane 37,796 con't Line 41
							End Line 41 Temporarily - Start Line 42 (L-C 69,890.0)

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION Cape Race	Dana
28	10	75	1445				37755.5	69890.0
			1500				767.4	69890.0
			1515				779.6	890.2
			1530				792.0	890.2
			1545				804.4	890.1
			1600				816.8	890.1
			1615				829.1	889.9
			1630				841.3	890.1
			1645				853.2	889.8
			1700				864.7	889.9
			1715				877.4	889.9
			1730				890.3	889.7
			1745				903.1	890.0
			1800				915.8	889.6
29	10	75	0655					
			0853				37858.9	69903.0
			0900				890.2	900.8
			0915				889.6	895.5
			0930				889.7	889.2
			0945				890.3	883.4
			1000				890.2	877.3
			1010				589.7	873.2
			1015				893.6	872.6

d/a

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO.	STA.	
							Cont. Line 42 (L-C6988 0.0)
							End Line 42 Return to W.H.
							Depart Woods Hole - on route to resume line # 39 - O'Hara
							Commence resumption of line #39 37,890.0
							Line #39
							comm adj due to shoaling

LORAN-C

GMT DAY	MO	YR	TIME	TIME ZONE ±	SHIPS COURSE	SPD	NAVIGATION CAPE RACE		DANA	
29	10	75	1020				37	895.8	69	871.3
			1025					892.3		870.4
			1029	15				889.0		869.2
	C/C		1043	30				890.0		863.7
			1050					885.9		864.7
			1055					882.9		865.3
			1100					879.5		865.8
	C/C		1102	30				877.7		865.8
			1115					878.0		869.8
			1130					878.3		874.8
			1145					878.3		879.9
			1200					878.1		884.9
			1215					878.2		890.0
			1230					878.5		894.8
			1245					877.9		899.6
			1300				37	878.2	69	904.2
			1315					877.9		909.3
	C/C		1316	30				878.0		910.0
			1328					865.8		910.3
			1345					866.3		905.3
			1400					866.1		901.0
			1415					865.6		896.6
			1430					866.3		892.3
			1445					866.0		888.1
			1500					865.7		883.5
			1515					866.1		879.5
			1522					866.1		877.3
			1530	30				866.0		877.8
			1545					866.2		873.6
			1600				37	866.3	69	869.7

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV.	SONO	STA	
							cont line #39
							cont C/A
							back on L-C lane 6~~9,8~~ 37,890
							c/c End line #39 Commence line #43
							c/c con't line #43 Cape Rose 37,878.0
							con't line #43
							c/c End line #43 commence line #44 (69,910.0)
							c/c con't line #44 (37,866)
							Line #44
							Paper + Belt change
							Resume line #44 START ROLL #3
							End line #44 End survey for the Day
							on route to Woods Hole

GMT				TIME ZONE	SHIPS		NAVIGATION	
DAY	MO	YR	TIME	±	COURSE	SPD	Cape Race	Dana
30	10	75	0845					
			0852				3796 1.9	6985 9.2
			0900				962.2	861.7
			0915				961.9	865.2
			0930				962.3	867.9
			0945				962.0	872.2
			0946	C/C			962.0	872.4
			0957	:30 C/C			974.0	872.5
			1015				974.5	868.6
			1030				973.9	865.6
			1045				974.0	862.1
			1054	:30 C/C			974.6	859.8
			1100				980.4	860.5
			1105				986.5	861.2
			1115				986.2	864.0
			1130				986.1	868.9
			1145	C/C			986.0	874.0
			1150				989.3	874.4
			1155				993.8	874.7
			1200	C/C			998.0	875.0
			1215				998.0	872.4
			1230				998.2	869.0

OPS							COMMENTS AND OBSERVATIONS
12 KHz	3.5 KHz	CSP	MAG	GRAV	SONO	STA	
							THUR OCT 30 - 75
							ON ROUTE TO NE PART OF VINEYARD SOUND TO RERUN LINES 1-5
							Depart W H
							Start-On Line 1A (37,962) NE Vineyard Sound
							Cont. Line 1A (69,872.5)
							End Line 1A - Begin Line 2A (37,974)
							Cont. Line 2A
							End Line 2A - Start Line 3A (37,986)
							Cont. 3A
							End Line 3A - Start Line 4A (37,998)
							End Survey for day - ROUGH SEAS ASTERIAS w/ ENGINE TROUBLE

OVERTIME LOG

OPS 12 KHz	OPS 3.5 KHz	OPS CSP	OPS MAG	OPS GRAV.	OPS SONO.	OPS STA	COMMENTS AND OBSERVATIONS
6							0600 - 2000 HRS THUR 19 JUNE O'HARA - ROBB
4¼							0800 - 2015 HRS FRI 20 JUNE O'HARA - FORRESTEL
14							0600 - 2000 HRS SAT 21 JUNE O'HARA - JENNINGS
12½							0500 - 1730 HRS SUN 22 JUNE O'HARA - JENNINGS
							MON 23 JUNE NO GO - WEATHER
							TUE 24 JUNE NO GO - WEATHER
6¾							0600 - 2045 WED 25 JUNE O'HARA, PURDY, TAUSEY
7½							0600 - 2130 THUR 26 JUNE O'HARA, FARRABEE, FORRESTEL
8¼							0500 - 2125 FRI 27 JUNE O'HARA, FARRABEE, FORRESTEL
15½							0500 - 2030 SAT 28 JUNE O'HARA, FARRABEE, FORRESTEL
10							0800 - 1800 SUN 29 JUNE O'HARA, FARRABEE, WINGET

O'HARA
FORRESTEL
JENNINGS
PURDY
TAUSEY
FARRABEE
WINGET

} R/V ASTERIAS

JUNE 19 THUR
THRU
JUNE 29 SUN