REPORT AND INDEX OF UNDERWAY MARINE GEOPHYSICAL DATA

BOOMERANG EXPEDITION

LEG 1

(BMRG01MV)

R/V MELVILLE

(Issued February 1996)

Ports:

San Diego, California (15 October 1995) to Papeete, Tahiti (23 November 1995)

Chief Scientist: John Orcutt

(Scripps Institution of Oceanography)
Resident Marine Techician - Ron Comer
Computer Technician - Todd Porteous

Post-Cruise Processing and Report Preparation by the Geological Data Center, Scripps Institution of Oceanography La Jolla, California 92093-0223

Data Collection and Processing Funded by: NSF OCE94-00707

NOTE: This is an index of underway geophysical data edited and processed after the completion of the cruise leg and is intended primarily for informal use within the institution. This document is not to be reproduced or distributed outside Scripps without prior approval of the chief scientist or the Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093-0223

GDC Cruise I.D.# 267

REPORT AND INDEX OF NAVIGATION AND UNDERWAY GEOPHYSICAL DATA

Processed by the Geological Data Center Scripps Institution of Oceanography

Contents:

Index Chart - gives track of cruise leg, dates, ports, and mileage of each type of data collected.

Track Charts - annotated with dates and hour ticks.

Profiles - depth, magnetic and gravity free air anomaly vs. distance. (Sections of track with seismic reflection data have a wide black line along the bottom of the profile.)

Sample Index - list of begin/end times and positions of all underway records as well as samples and measurements from other disciplines if collected on the cruise leg.

NOTE: One or more of the underway data types may not be collected on a given cruise leg. For information on the availability and reproduction costs of data in the following forms, contact S.M. Smith, Curator, Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093-0223.

Phone: (619)534-2752, FAX: (619)534-5306, Internet email: ssmith@ucsd.edu

- 1. Files on Exabyte, DAT or 1/2 inch magnetic tape:
 - a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
 - b) These same data in a merged ASCII file in the MGD77 Exchange Format.
 - c) SeaBeam depth data (binary, Sun byte order) in SIO Swath Bathymetry Format (not available on 1/2" tape).
 - d) SeaBeam Sidescan data (not available on 1/2" tape).
- 2. Microfilm (35 mm flowfilm) or hard copies of:
 - a) Underway watch log book
 - b) SeaBeam vertical beam profile/Sidescan records.
 - c) Echosounder records 3.5 kHz frequency.
 - d) Magnetometer records.
 - e) Seismic reflection profiler records.
- Navigation listing with times and positions of fixes and course and speed changes.
- 4. Plots:
 - a) Copies of archived track plots.
 - b) Copies of archived SeaBeam contour plots.
 - c) Custom plots in Mercator projection:
 - 1) Track plots.
 - 2) SeaBeam depth contour plots.
 - 3) Depth, magnetic or gravity values printed or profiled along track.

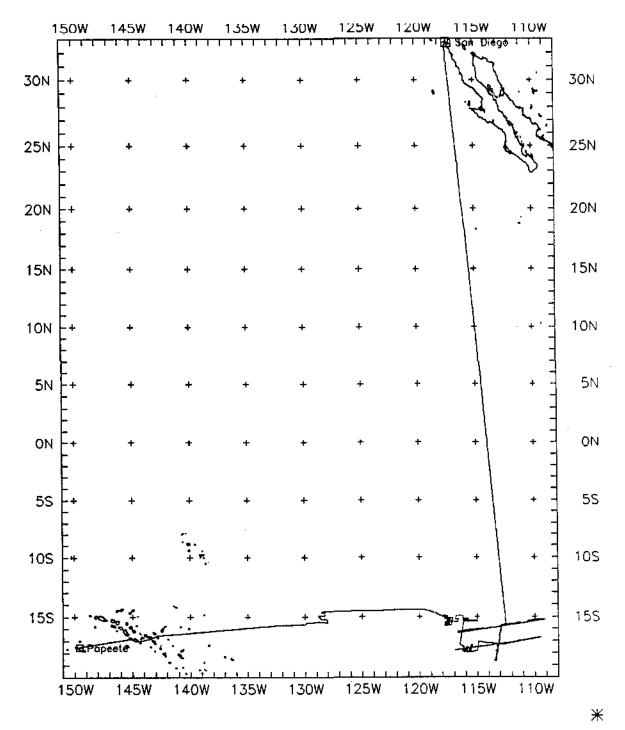
rev 7/93

Sea Beam 2000 Data Collected in Ancillary Mode

In the absence of funding for Sea Beam operations on this leg, Sea Beam data were collected in "ancillary mode". In this mode of operation, no Hardware Technician or SB/Underway Processor were on board and the types of realtime records and post-processed data products are reduced from those available under the fully funded mode.

The Sea Beam data remain proprietary to the SIO Shipboard Technical Support Group, not the chief scientist.

May 1993



BOOMERANG EXPEDITION LEG 1

CHIEF SCIENTIST: John Orcutt Scripps Institution of Oceanography

PORTS: San Diego, Calif. - Papeete, Tahiti DATES: 15 October - 23 November 1995

SHIP: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 9024 miles

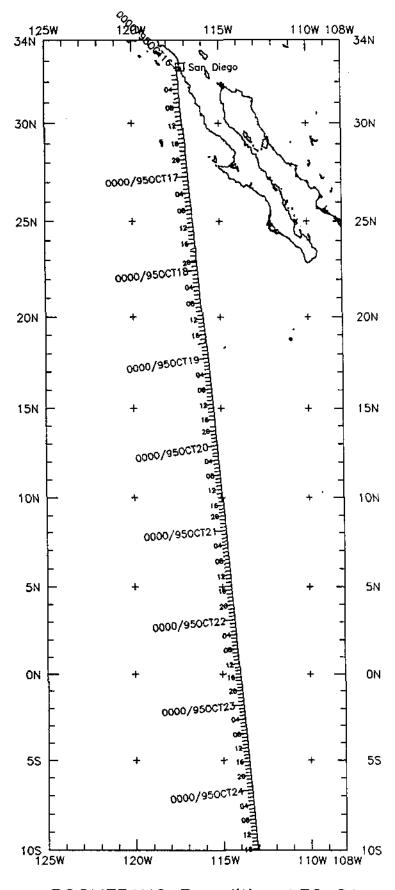
Magnetics - 4615 miles

Bathymetry - 7704 miles

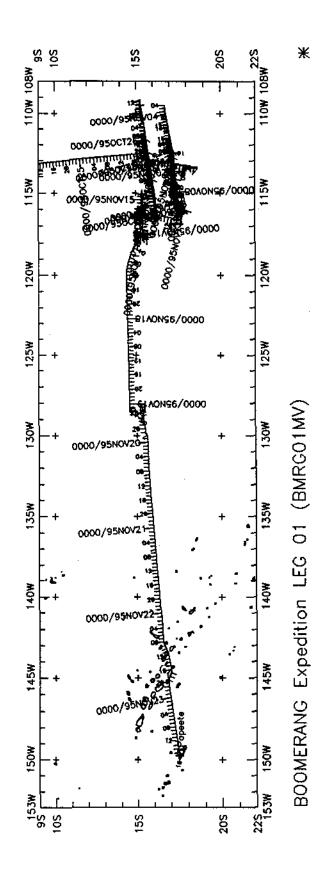
Seismic Reflection - 240 miles

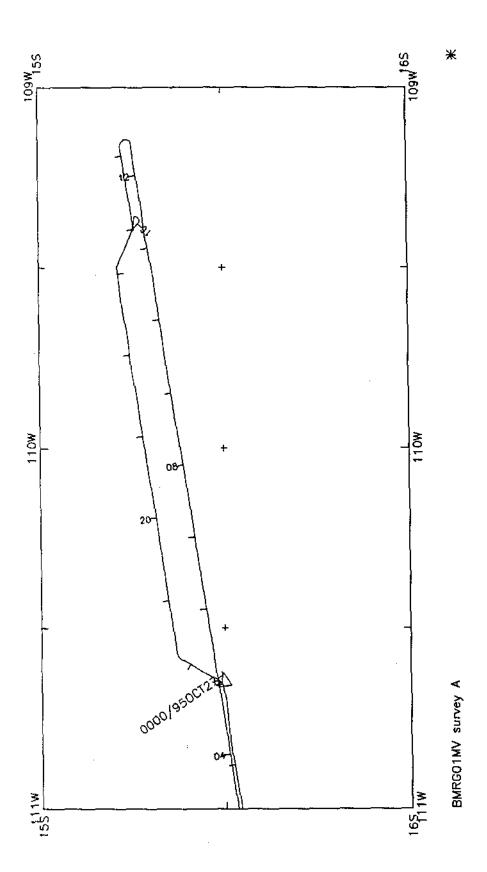
Sea Beam - 7704 miles

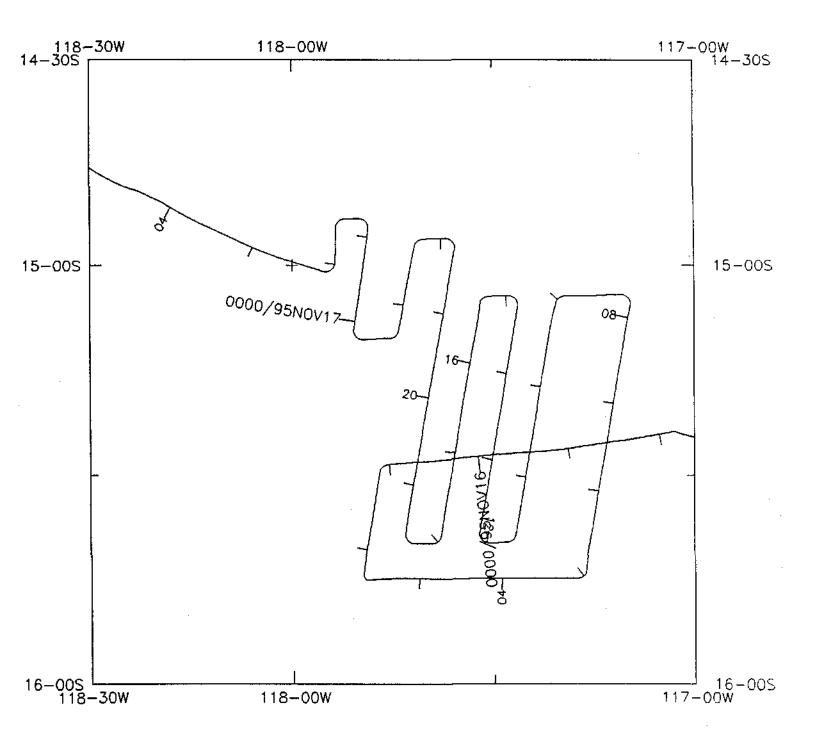
Gravity - 8899 miles

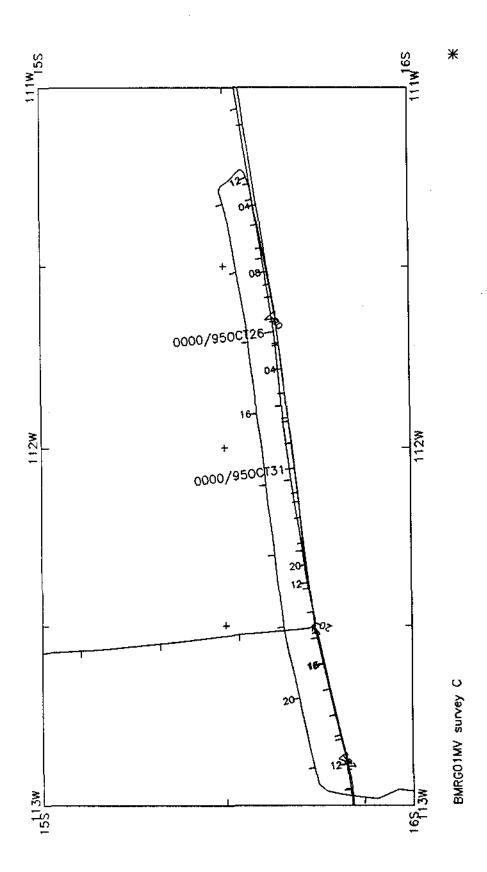


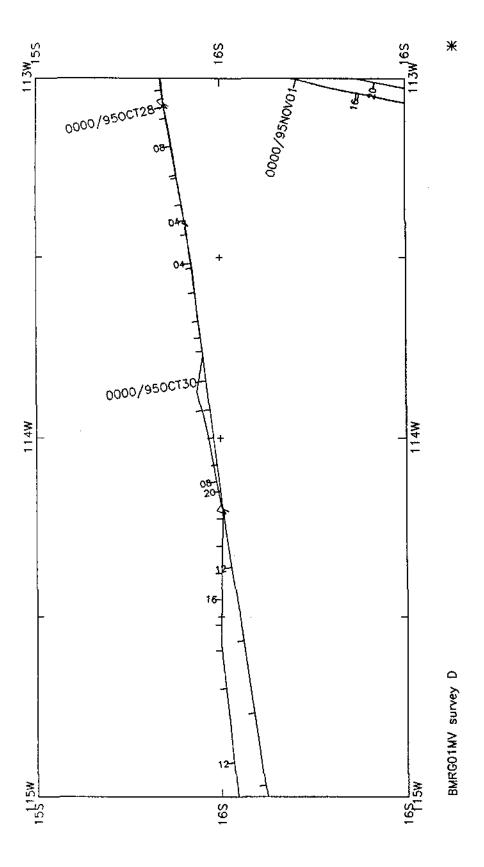
BOOMERANG Expedition LEG 01 $_{*}$

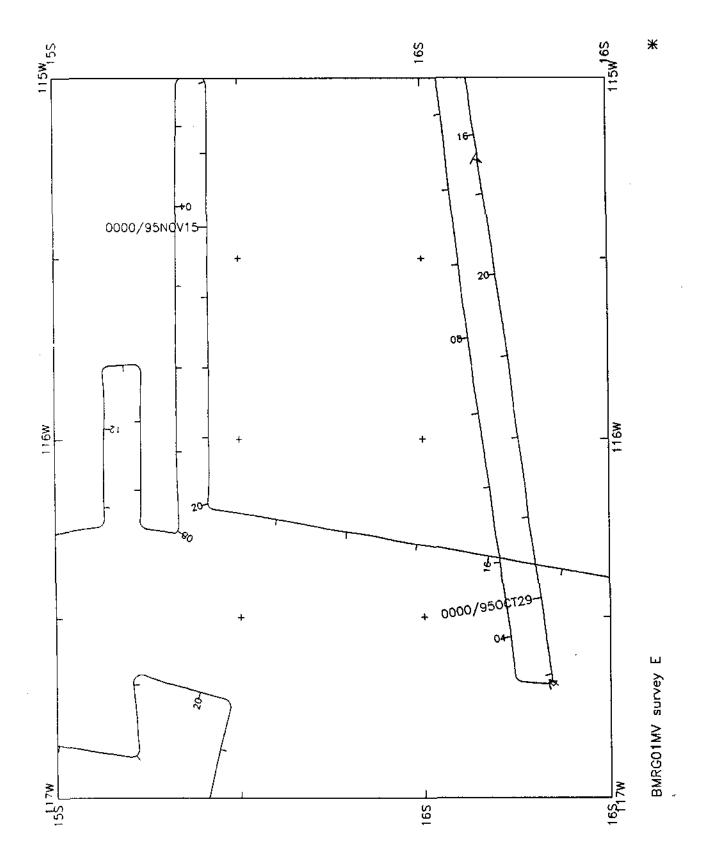


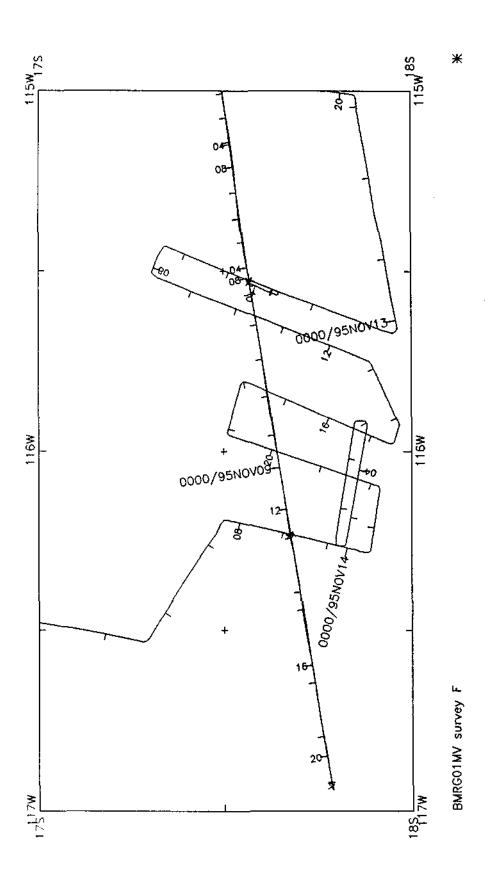


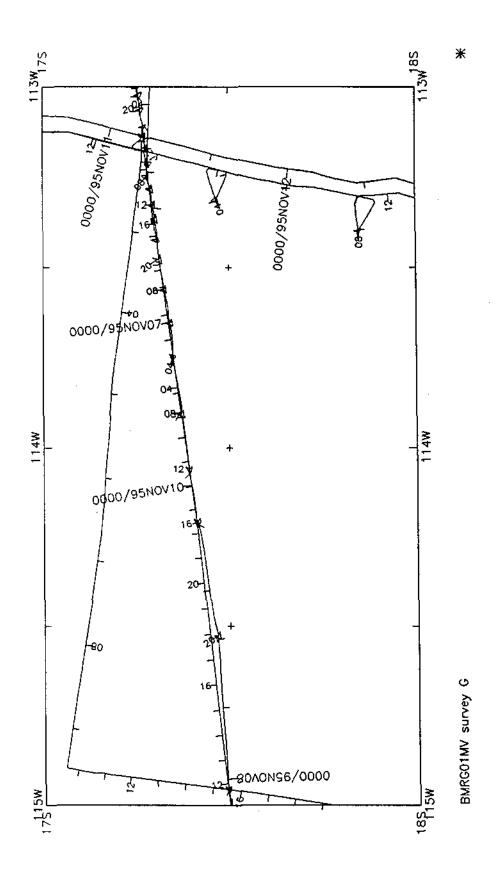


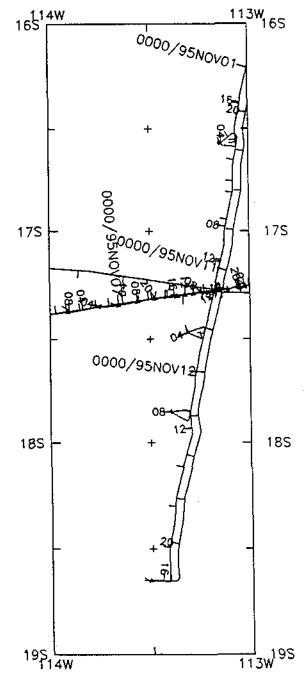




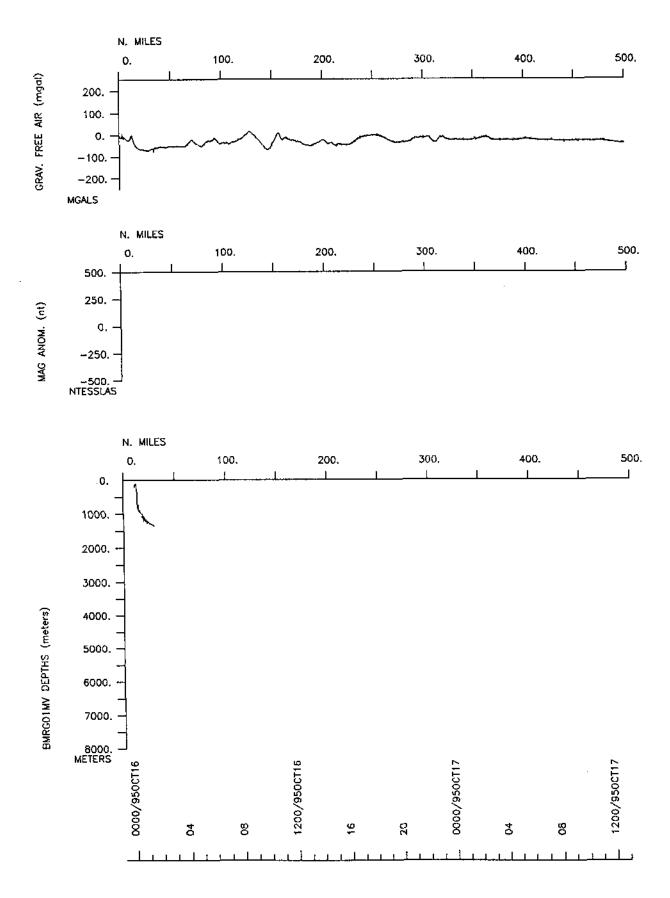


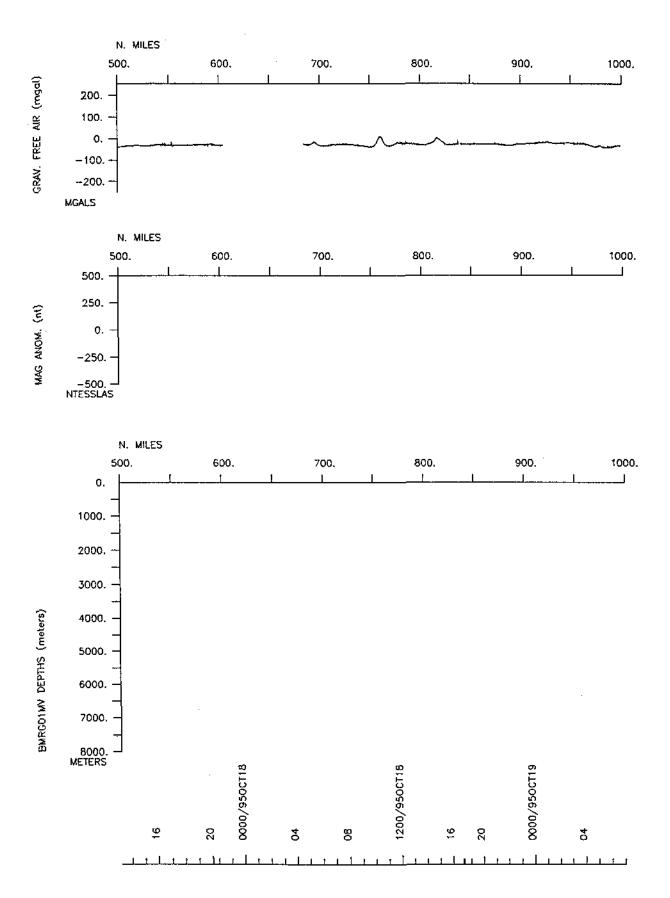


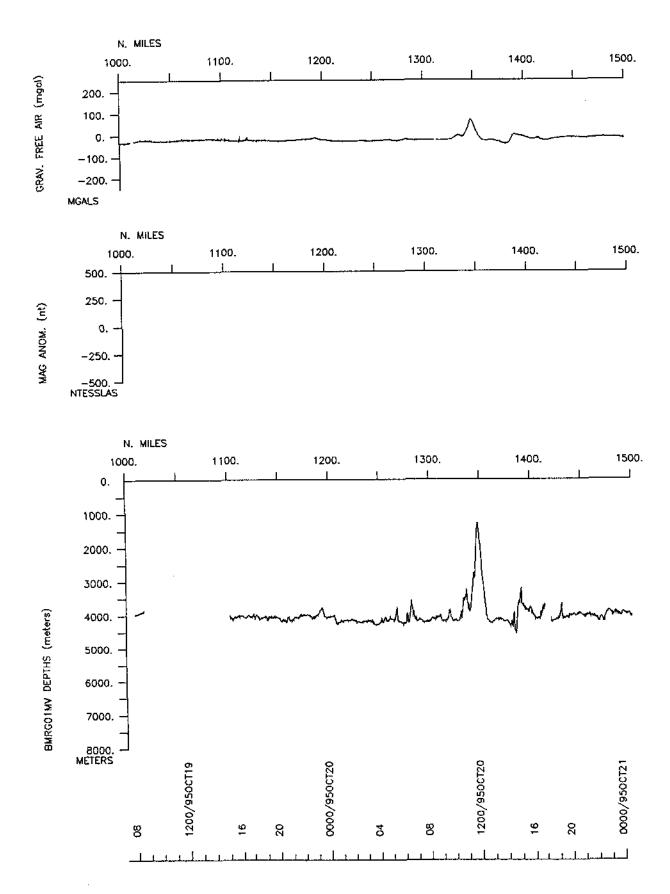


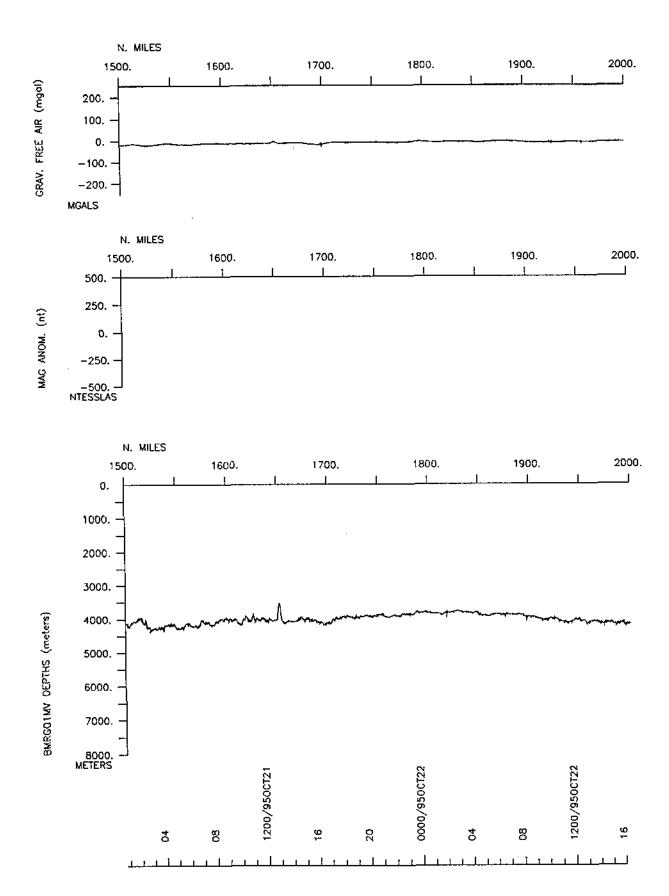


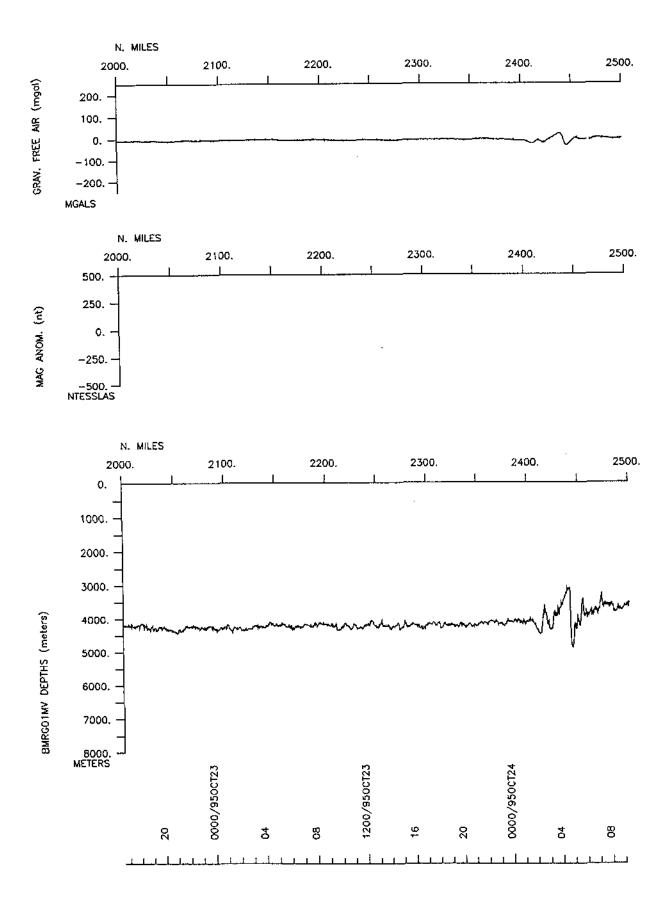
BMRG01MV survey H

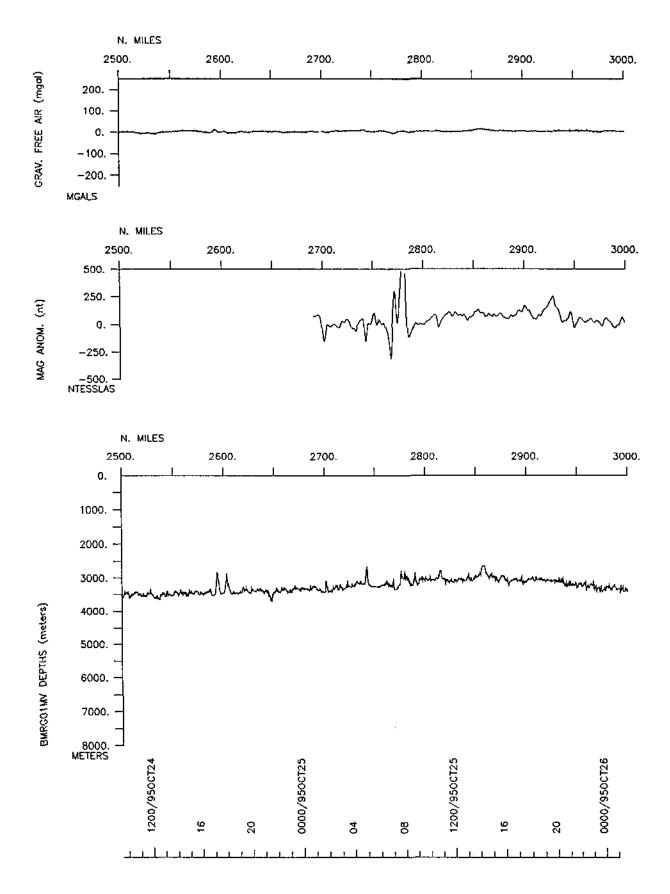


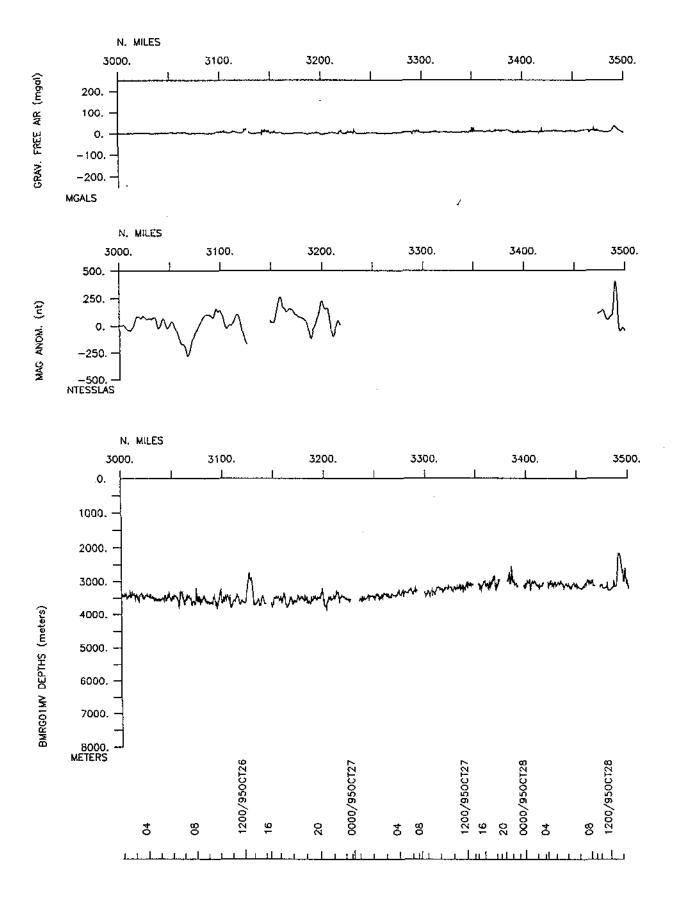


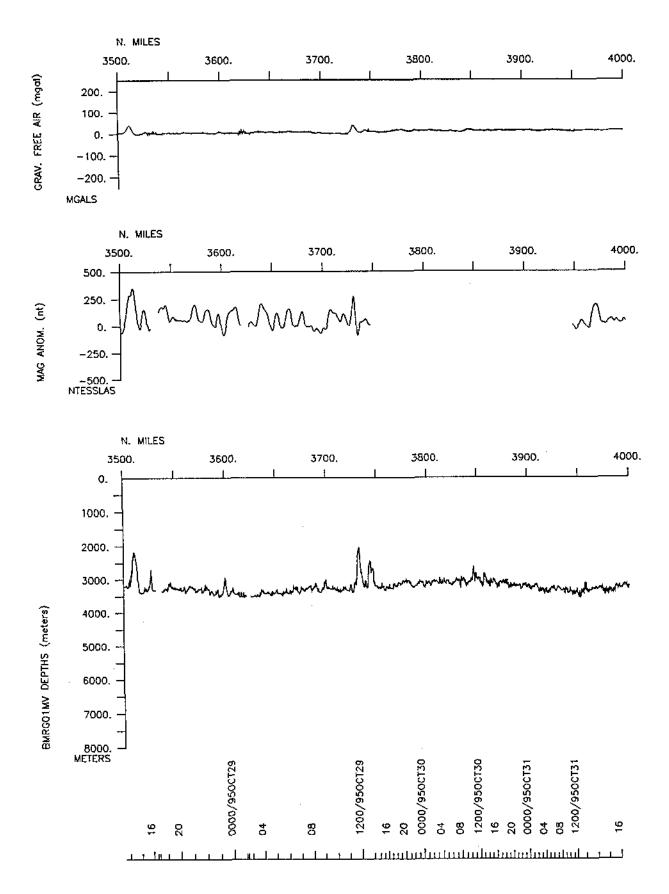


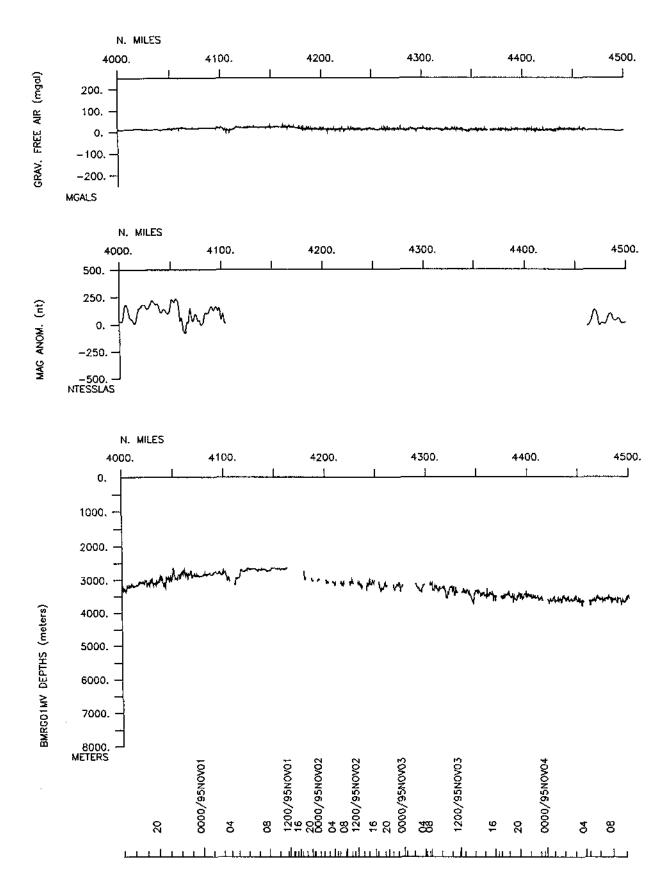


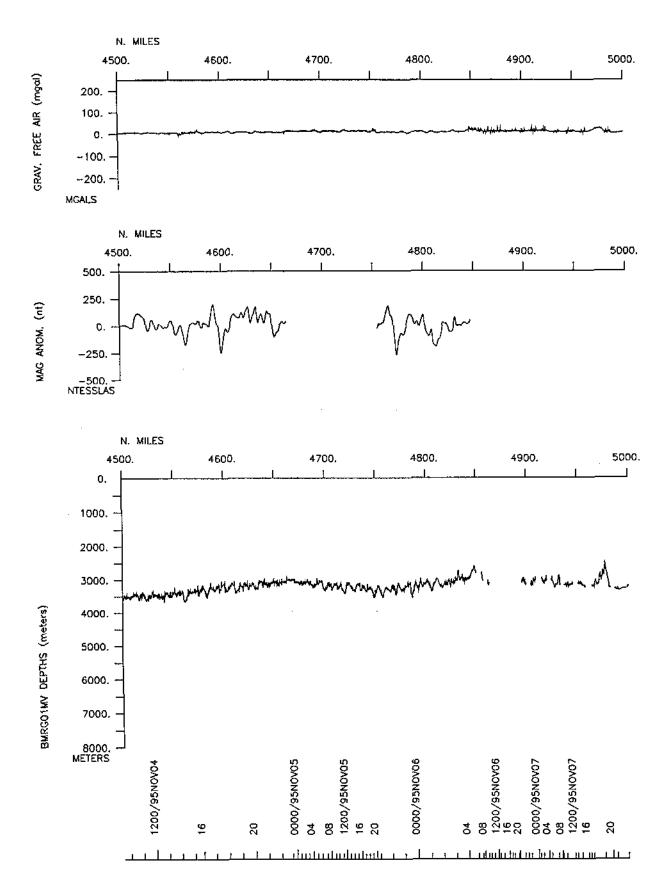


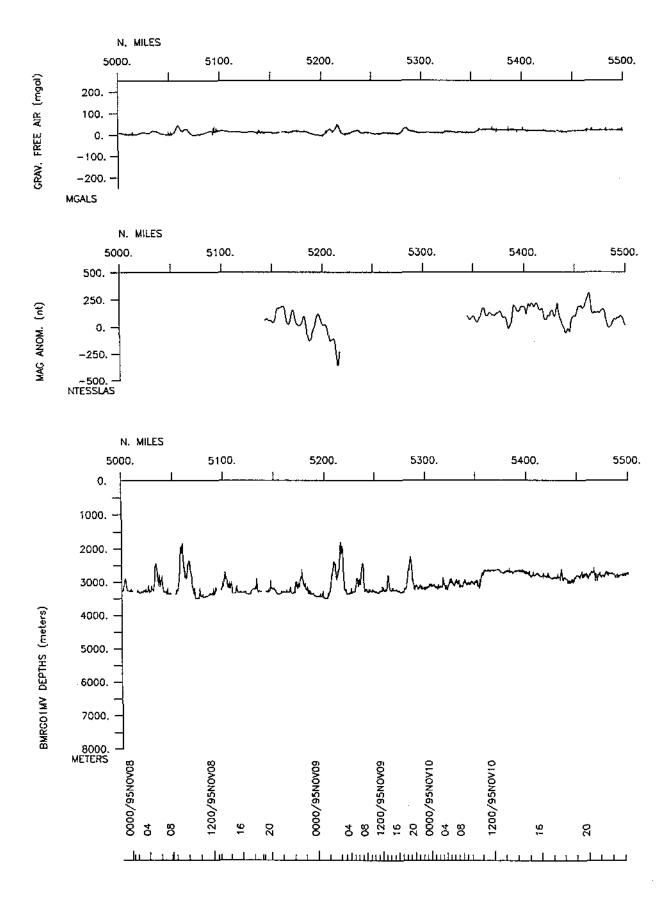


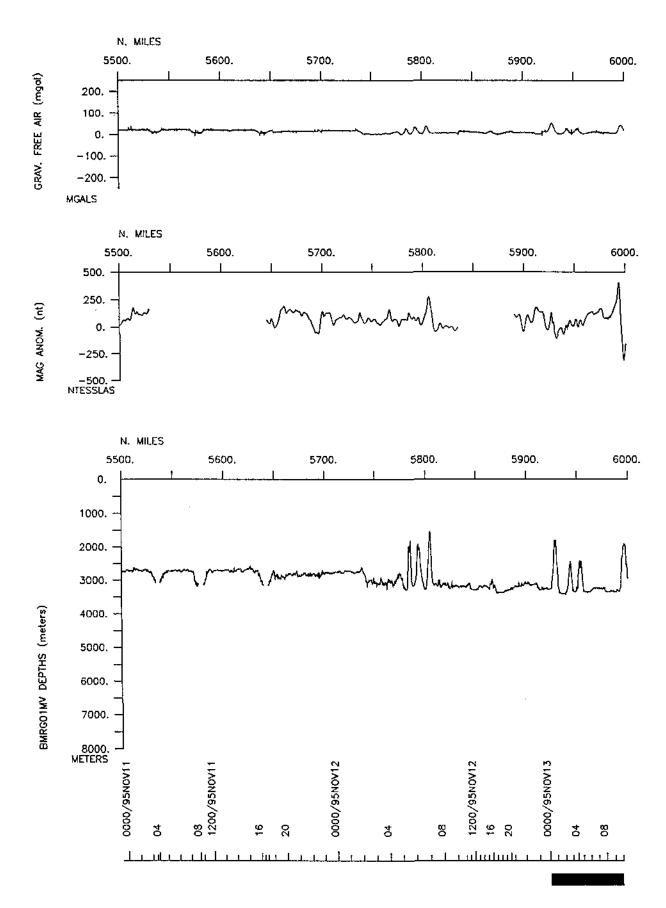


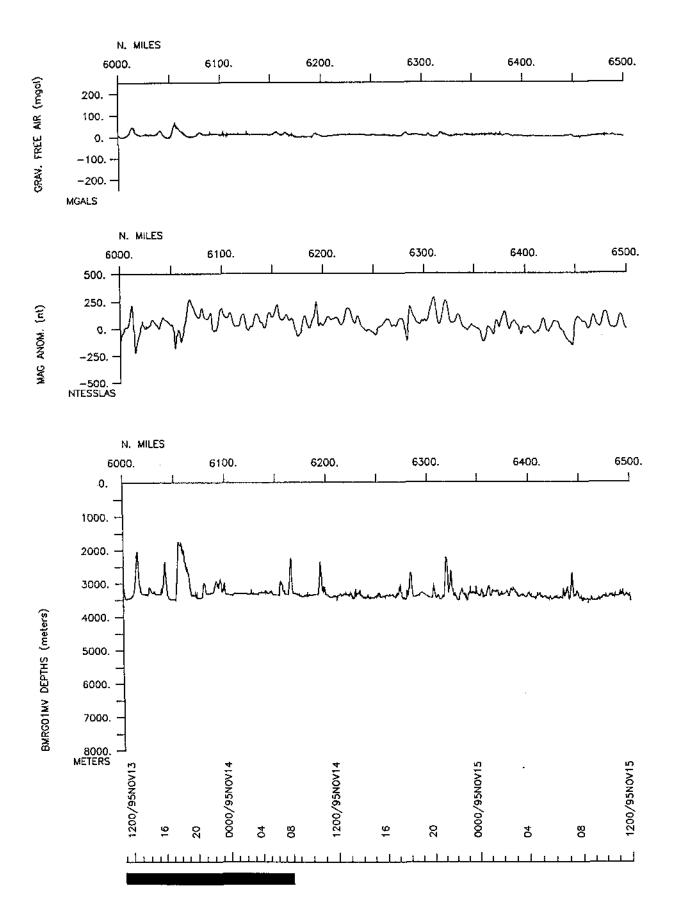


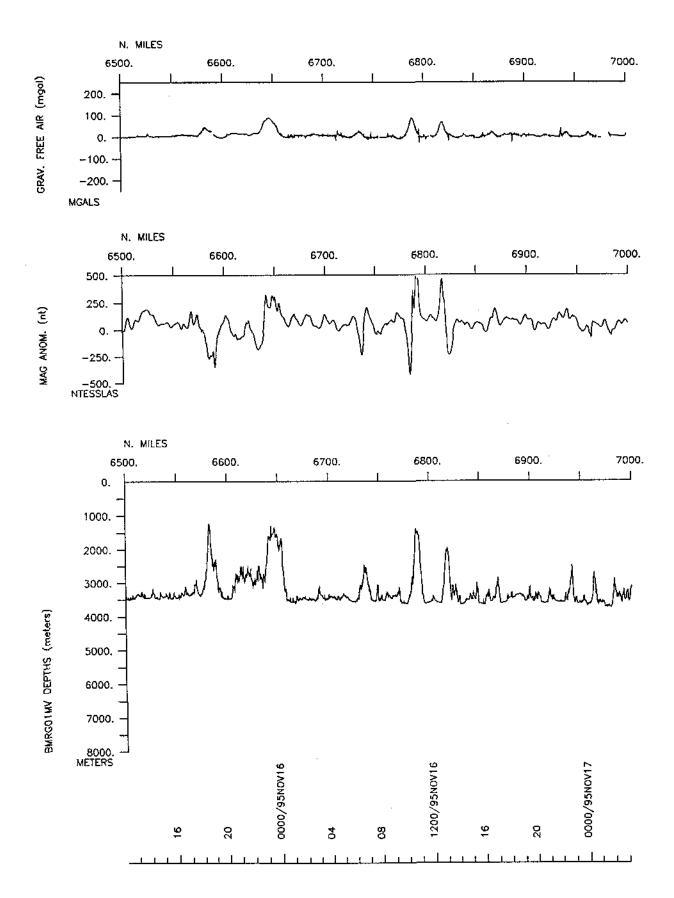


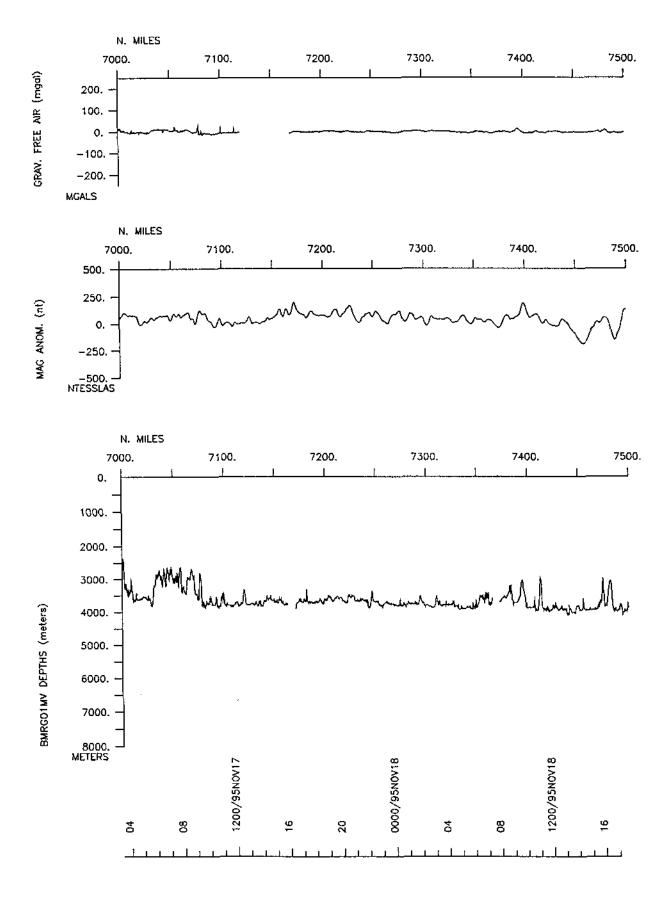


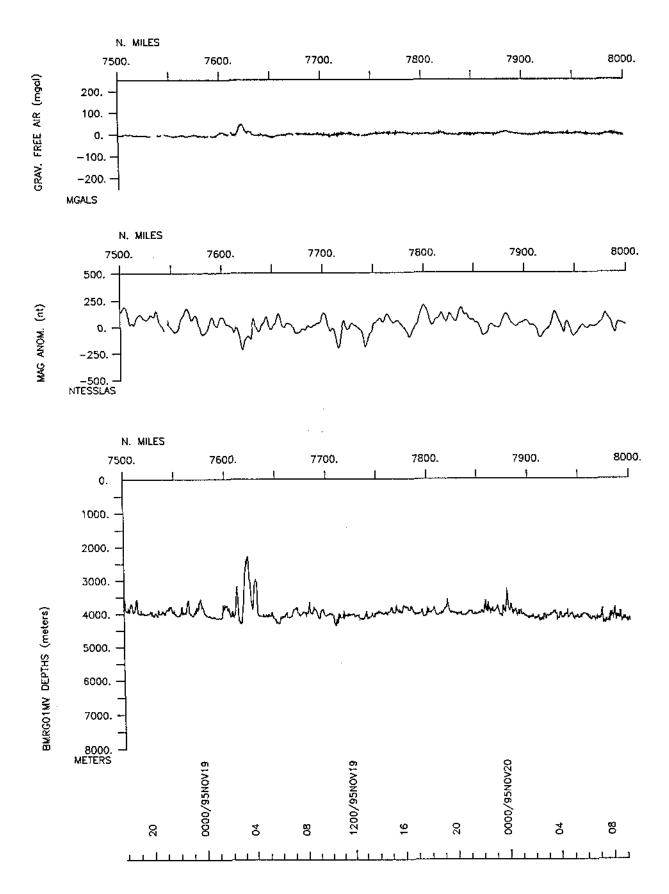


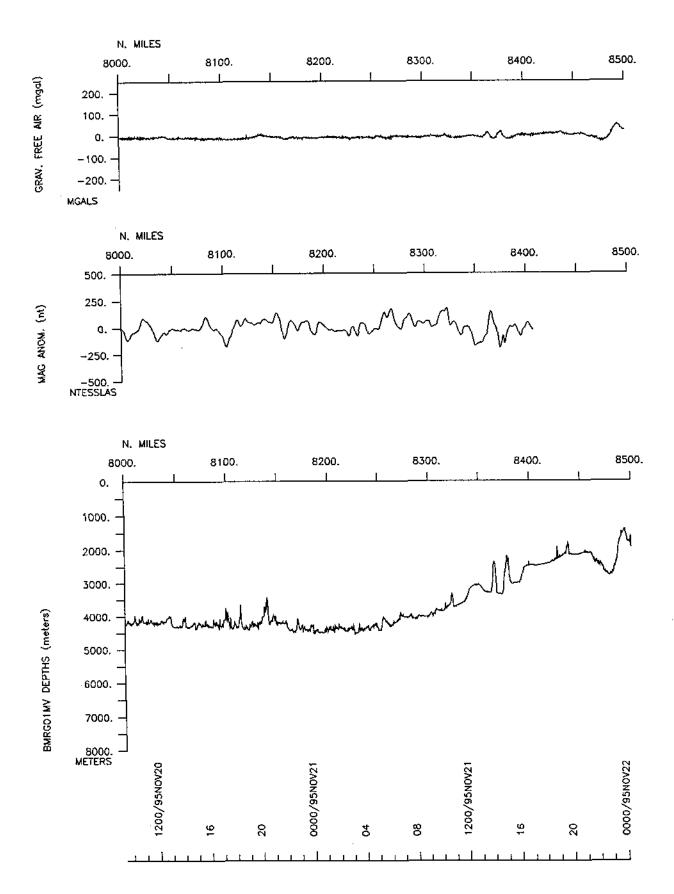


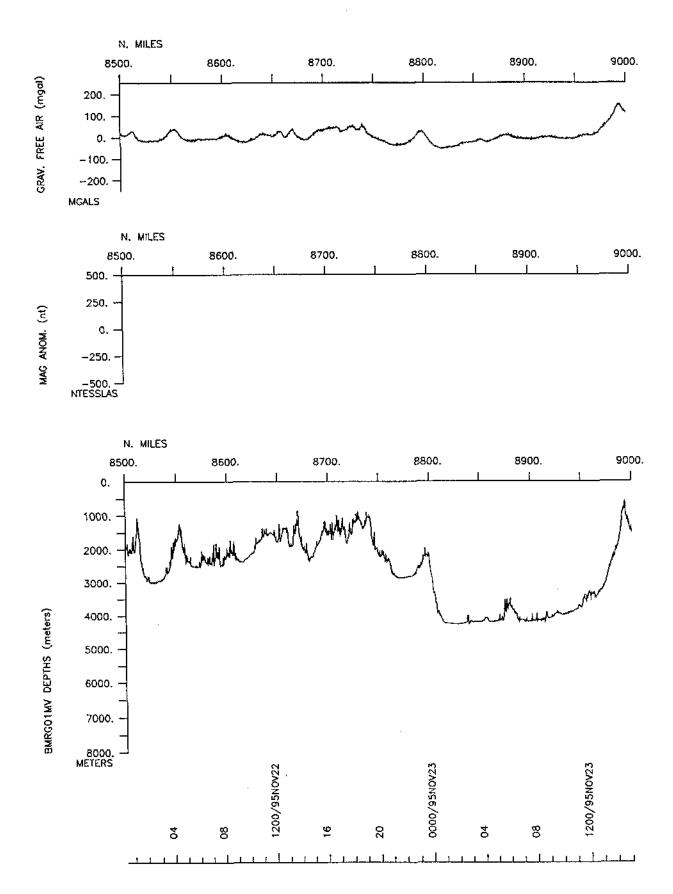


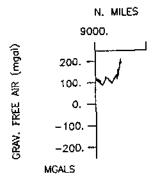


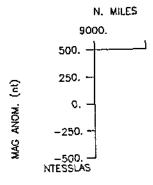


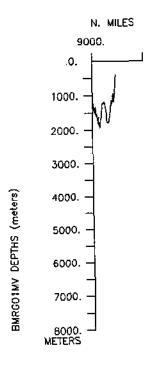












S.I.O. SAMPLE INDEX

(Issued February 1996)

BOOMERANG EXPEDITION LEG 1

(BMRG01MV) R/V Melvi!le

San Diego, California (15 October 1995) to Papeete, Tahiti (23 November 1995)

Chief Scientist: John Orcutt

(Scripps Institution of Oceanography)

The Sample Index is a first level interdisiplinary listing of time, position, sample identification and disposition of all samples, records and measurements collected on this cruise leg. The index data are encoded at sea by the resident marine technician and processed on shore by the S.I.O. Geological Data Center shortly after the completion of the cruise leg.

Positions are interpolated on the basis of sample time by comparison to a single, edited navigation file. Samples beginning at one time and position and ending at another are entered on two consecutive lines. Disposition and sample type are represented by three and four character codes to permit future computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

GDC Cruise I.D.# 267

#*** Ports *** 2300 151095 0 LGPT B San Diego, Ca. GDC 32-43.00N 117-11.00W f BMRG01MV 1800 231195 0 LGPT E Papeete, Tahiti GDC 17-32.00S 149-34.00W f BMRG01MV #*** Personnel *** ********NAME****** *****TITLE***** ****AFFILIATION*** **CRID** PECS IGPP Orcutt, Dr.J. Chief Scientist Professor Brown Univ. BMRG01MV PESP GRD Dorman, Dr.L. Professor Scripps Institution BMRG01MV PESP WHOI Detrick, Dr.R. Senior Scientist Woods Hole BMRG01MV PESP MPL Webb, Dr.S. Asst. Researcher Scripps Institution BMRG01MV PESP MPL Wiggins, Dr.S. Post Grad Res. Post Grad Res. Scripps Institution BMRG01MV PESP IGPP Bradley, Dr.C. Post Grad Res. Scripps Institution BMRG01MV PEST IGPP Brodley, Dr. Computer Tech. Pesp WHOI Hallinan, J. Res. Engineer PESP WHOI Balley, Dr. Res. Associate Pesp WHOI DuBois, D. Pesp WHOI DuBois, D. Pesp WHOI Bailey, J. Pesp WHOI Bailey, J. Pest IGPP Golden, C. Grad. Student Scripps Institution BMRG01MV BMRG01MV Scripps Institution BMRG01MV BMRG01MV Scripps Institution BMRG01MV BMRG01MV Scripps Institution BMRG01MV B Chief Scientist Scripps Institution BMRG01MV Professor Brown Univ. BMRG01MV Professor Scripps Institution BMRG01MV PECS IGPP Orcutt, Dr.J.

#*** NOTES ***

#An 'X' in the (B)egin/(E)nd column following the sample code indicates no #sample or data recovered. A 'C' indicates continuation of data collection #from before the beginning or after the end of a particular leg, (moored #bottom instruments, for example.) The number appearing in the columns #between the sample identifier and the disposition code, for many sample #entries, is the water depth in corrected meters.

```
#GMT DDMMYY SAMP B SAMPLE DISP p CRUISE
#TIME DATE TZ CODE E IDENTIFIER CODE LATITUDE LONGITUDE C LEG-SHIP
#*** Underway data curator - S. M. Smith ext. 42752
#*** Log books***
2300 151095 0 LBUW B Underway watch log GDC 32-42.17N 117-14.05W g BMRG01MV
0400 231195 0 LBUW E Underway watch log GDC 17-32.16S 149-34.48W g BMRG01MV
2300 151095 0 LBSC B Scientific Log book IGPP 32-42.17N 117-14.05W g BMRG01MV
#*** Sea Beam Records (vertical beam and side scan) ***
1503 191095 0 MBSR B v.beam&sidescan r-01 GDC 14-34.15N 115-22.96W g BMRG01MV
1808 311095 0 MBSR E v.beam&sidescan r-01 GDC 15-38.19S 112-19.77W g BMRG01MV
1813 311095 0 MBSR B v.beam&sidescan r-02 GDC 15-38.29S 112-20.78W g BMRG01MV 2111 171195 0 MBSR E v.beam&sidescan r-02 GDC 14-27.74S 122-04.41W g BMRG01MV
2116 171195 0 MBSR B v.beam&sidescan r-03 GDC 14-27.75S 122-05.53W g BMRG01MV
1800 231195 0 MBSR E v.beam&sidescan r-03 GDC 17-32.18S 149-34.49W g BMRG01MV
#*** Magnetics (Earth Total Field) Records ***
0043 251095 0 MGRA B Magnetics r-01 GDC 11-42.88S 112-53.75W g BMRG01MV 0308 141195 0 MGRA E Magnetics r-01 GDC 17-52.88S 115-56.29W g BMRG01MV
#*** Continuous Recorded Gravity ***
2300 151095 0 GVCR B Gravity auto record GDC 32-42.17N 117-14.05W g BMRG01MV
1800 231195 O GVCR E Gravity auto record GDC 17-32.18S 149-34.49W g BMRG01MV
```

#GMT DDMMYY SAMP B SAMPLE #TIME DATE TZ CODE E IDENTIFIER #									DISP CODE	LATITUDE	LONGITUDE	р с -	CRUISE LEG-SHIP
#*** Seismic Reflection ***													
							S 100 se vey line				114-34.98W 111-16.84W		
							S 100 se vey line				112-59.31W 111-33.94W		
	121195 121195	0	SPRS SPRS	B E	6 AG end s	OE sur	S 100 se	ec.			114-54.26W 115-00.68W		
0000 0824	131195 141195	0	SPSV SPSV	B E	1 WG end s	St	rm. vey line	,	IGPP IGPP	17-57.57S 17-29.78S	115-38.35W 116-11.92W	g	BMRG01MV BMRG01MV
0000 131195 0 SPSV B 1 WG Strm. IGPP 17-57.57S 115-38.35W g BMRG01M 141195 0 SPSV E end survey line IGPP 17-29.78S 116-11.92W g BMRG01M #*** Ocean Bottom Seismometer *** #*** SIX=LeRoy Dorman, SIO ***													
			SBOB SBOB								109-23.45W 109-23.45W		
	261095 241195	0	SBOB SBOB	B C	OBS OBS	2					110-39.30W 110-39.30W		
			SBOB SBOB								111-38.66W 111-38.66W		
			SBOB SBOB			4 4	Judy Judy	3085M 3085M	IGPP IGPP	15-44.40S 15-44.40S	112-30.42W 112-30.42W	i g	BMRG01MV BMRG01MV
			SBOB SBOB				Frank Frank				112-52.01W 112-52.01W		
	_,	_	SBOB SBOB								113-04.20W 113-04.20W		
	281095 241195	_	SBOB SBOB		-		Abe Abe	3045M 3045M			113-24.21W		
	281095 241195						Helmut Helmut				114-11.99W 114-11.99W		
	281095 241195		SBOB SBOB				MPL03 MPL03	3320M 3320M			115-13.61W		

#GMT #TIME #	DDMMYY DATE	TZ	SAMP CODE	E B	SAMP	LE TIF	IER	 	DISP CODE	LATITUDE	LONGITUDE	p c -	CRUISE LEG-SHIP
	291095 241195		SBOB SBOB								116-40.89W 116-40.89W		
	011195 241195		SBOB SBOB								113-08.51W 113-08.51W		
	011195 241195		SBOB SBOB								113-10.30W 113-10.30W		
	011195 241195		SBOB SBOB								113-08.19W 113-08.19W		
	011195 241195		SBOB SBOB								113-06.79W 113-06.79W		
	011195 241195		SBOB SBOB								113-03.90W 113-03.90W		
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	011195 241195		SBOB SBOB								112-59.21W 112-59.21W		
	021195 241195		SBOB SBOB								112-55.52W 112-55.52W		
	021195 241195							3092M 3092M			112-51.76W 112-51.76W		
	021195 241195										112-47.82W 112-47.82W		
	021195 241195							3085M 3085M			112-43.30W 112-43.30W		
	021195 241195		SBOB SBOB								112-38.23W 112-38.23W		
	021195 241195		SBOE SBOE					3020M 3020M			112-30.14W 112-30.14W		
	021195 241195										112-21.19W		

#GMT #TIME	DDMMYY DATE	TZ.	SAMP CODE	B E	SAMP IDEN	LE	IER			DISP CODE	LATITUDE	LONGITUDE	р с -	CRUISE LEG-SHIP
2344	021195	٥	SBOB	В	OBS	25	Jani Jani	ce ce	3137M 3137M	IGPP IGPP	17-09.58S 17-09.58S	112-10.80W 112-10.80W	g g	BMRG01MV BMRG01MV
0413 1800	031195 241195	0	SBOB SBOB	B C	OBS OBS	26 26	Hill Hill	ary ary	3156M 3156M	MPL MPL		111-53.15W 111-53.15W		
	031195 241195		SBOB SBOB						3392M 3392M	SIO SIO	17-01.28S 17-01.28S	111-25.19W 111-25.19W	g g	BMRG01MV BMRG01MV
	031195 241195		SBOB SBOB							WHOI	16-56.50S 16-56.50S	110-49.62W 110-49.62W	g	BMRG01MV BMRG01MV
2230 1800	031195 241195	0 0	SBOB SBOB	B C	OBS OBS	29 29	Frm Frm	9 9	3630M 3630M	SIO SIO	16-48.10S 16-48.10S	110-07.41W 110-07.41W	g g	BMRG01MV BMRG01MV
	041195 241195		\$BOB \$BOB						3660M 3660M	TOHW IOHW	16-43.30S 16-43.30S	109-29.61W 109-29.61W	g	BMRG01MV BMRG01MV
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		241195		SBOB						2995M	MPL	17-20.915	113-45.23W	g	BMRG01MV
		071195 241195	0	SBOB SBOB	B C	OBS OBS	41 41	Cold Cold	Dk Dk	3150M 3150M	IGPP IGPP	17-22.30S 17-22.30S	113-54.50W 113-54.50W	g	BMRG01MV BMRG01MV
		071195 241195		SBOB SBOB						3120M 3120M		17-23.51S 17-23.51S	114-03.51W 114-03.51W	g g	BMRG01MV BMRG01MV
		071195 241195		SBOB SBOB						3175M 3175M			114-12.50W 114-12.50W	g g	BMRG01MV BMRG01MV
		071195 241195		SBOB SBOB						3260M 3260M	IGPP IGPP	17-28.00S	114-31.59W 114-31.59W	g	BMRG01MV BMRG01MV
		081195 241195		SBOB SBOB						3275M 3275M			114-57.41W		
		081195 241195		SBOB SBOB									115-31.61W 115-31.61W		
- .		081195 241195	0	SBOB	С	OBS	47	Frm	1	3232M	SIO	17-40.635	116-14.04W) g	BMRG01MV
		081195 241195		SBOB SBOB						3290M 3290M	NHOI WHOI	17~47.218 17~47.218	116-55.60W 116-55.60W	i g	BMRG01MV BMRG01MV
		111195 241195		SBOB SBOB							WHOI	17-27.995 17-27.995	3 113-19.000 3 113-19.000	ī g	BMRG01MV BMRG01MV
		111195 241195		SBOB SBOB								17~51.008 17~51.008	5 113-23.91W 5 113-23.91W	∛ g √ g	BMRG01MV BMRG01MV
		111195 241195		SBOE SBOE						3145M 3145M	NHOI	18-39.008 18-39.008	3 113-30.59W 3 113-30.59W	v g v g	BMRG01MV BMRG01MV
	#***			End	sa	mple	in	dex							BMRGUIMV