

*REPORT AND INDEX OF
UNDERWAY MARINE GEOPHYSICAL DATA*

BOOMERANG EXPEDITION

LEG 2

(BMRG02MV)

R/V MELVILLE

(Issued April 1996)

Ports:

Papeete, Tahiti (28 November 1995)

to

Chatham Is., New Zealand (10 December 1995)

Chief Scientist: Peter Lonsdale

(Scripps Institution of Oceanography)

Resident Marine Technician - Bob Wilson

Computer Technician - Ron Moe

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

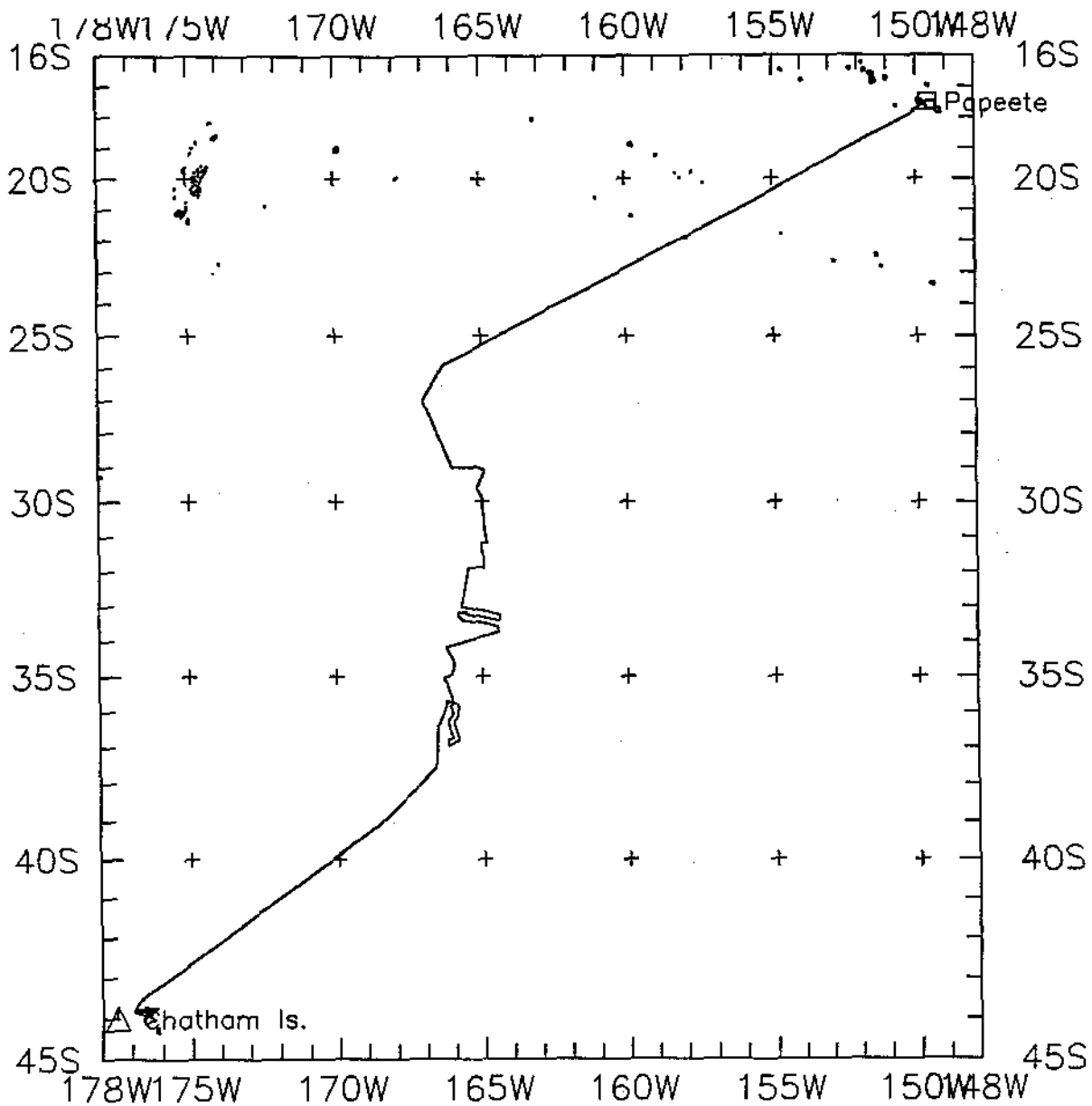
1. Files on Exabyte, DAT or 1/2 inch magnetic tape:
 - a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
 - b) These same data in a merged ASCII file in the MGD77 Exchange Format.
 - c) SeaBeam depth data (binary, Sun byte order) in SIO Swath Bathymetry Format (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.
3. 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.

SIO SEABEAM 2000 DATA INFORMATION

The following items are available, subject to the approval of the cruise leg chief scientist:

- 1) Hardcopy of realtime contour swath records and records with vertical beam and sidescan grayscale display are available for inspection at the data center.
- 2) Microfilm (35 mm .flowfilm) of vertical beam/sidescan records.
- 3) SeaBeam merged tapes - SeaBeam data merged with GPS-based navigation. (Navigation is edited to the extent that DR courses and speeds are edited and poor fixes are removed after inspection of speeds and drift vectors between fix pairs. No editing is done on the basis of adjusting to overlapping SeaBeam swaths.)
- 4) Archive contour plots - 8 inches/degree chart scale, with contour interval nominally 50m, are generated for all transit lines. Some survey areas are plotted at appropriate scales as well. Available for inspection at data center.
- 5) Custom generated plots of SeaBeam swaths on Mercator projection in four colors at variable plot scales and contour intervals. There are provisions to adjust positions of individual track lines and to edit out beams (bad data or overlapping data on inside of turns.)

Revised September 1995



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BOOMERANG EXPEDITION LEG 2

CO-CHIEF SCIENTISTS: Peter Lonsdale, Scripps Institution

James Hawkins, Scripps Institution

Paterno Castillo, Scripps Institution

PORTS: Papeete, Tahiti - Chatham Island, New Zealand

DATES: 28 November - 10 December 1995

SHIP: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 3015 miles

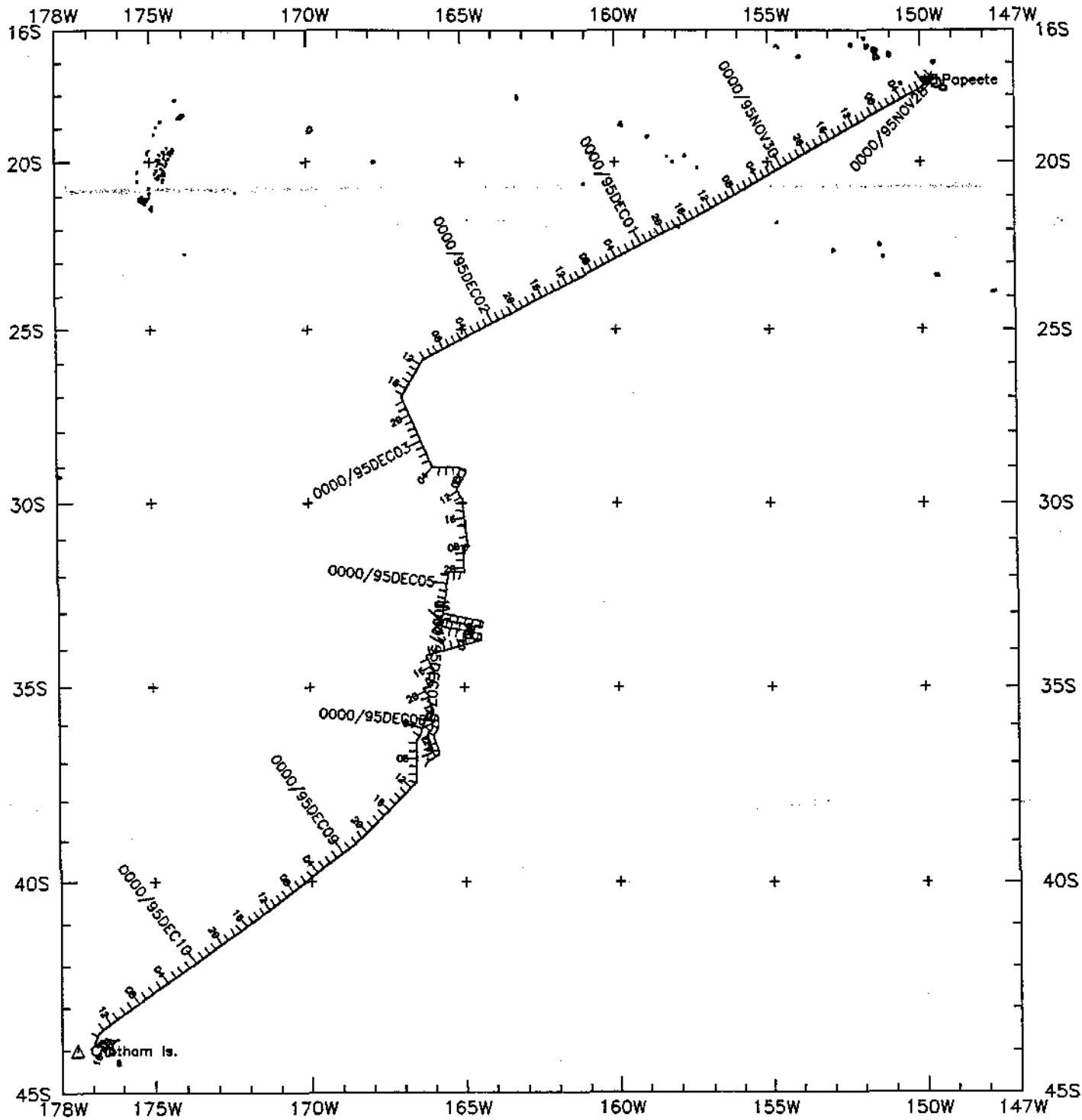
Magnetics - 2680 miles

Bathymetry - 2960 miles

Seismic Reflection - none collected

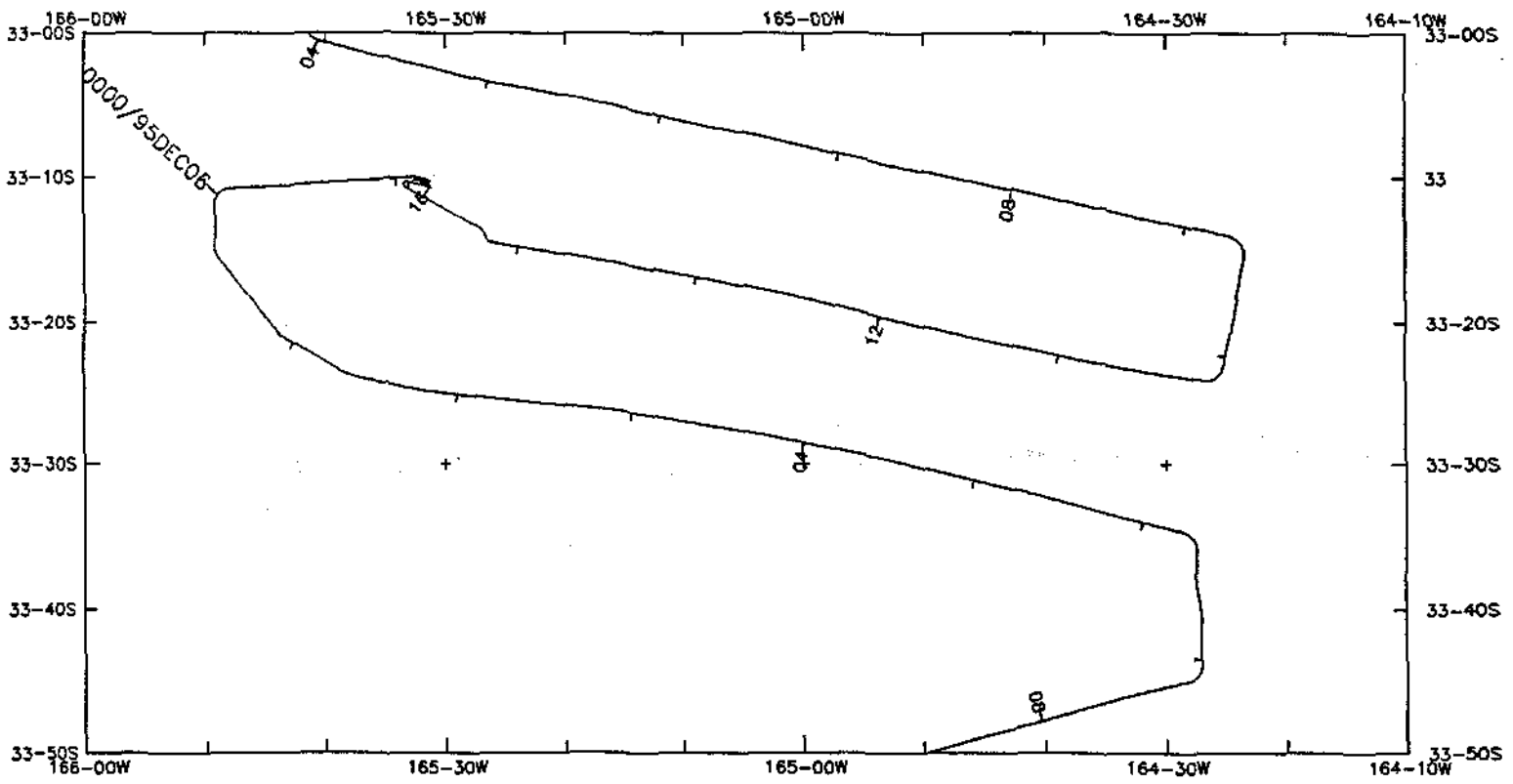
Sea Beam - 2960 miles

Gravity - 2988 miles



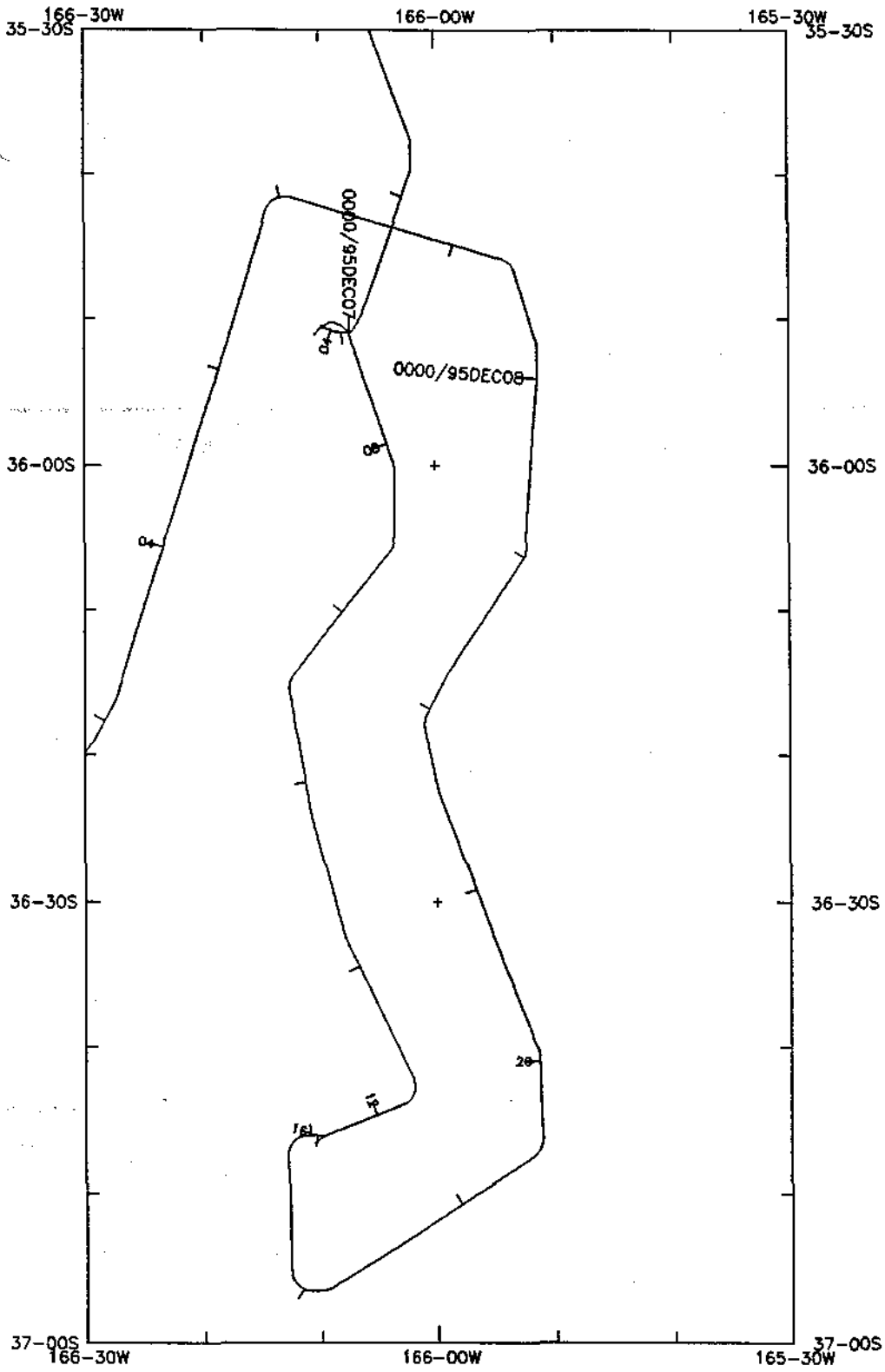
BOOMERANG Leg 2 (BMRG02MV)

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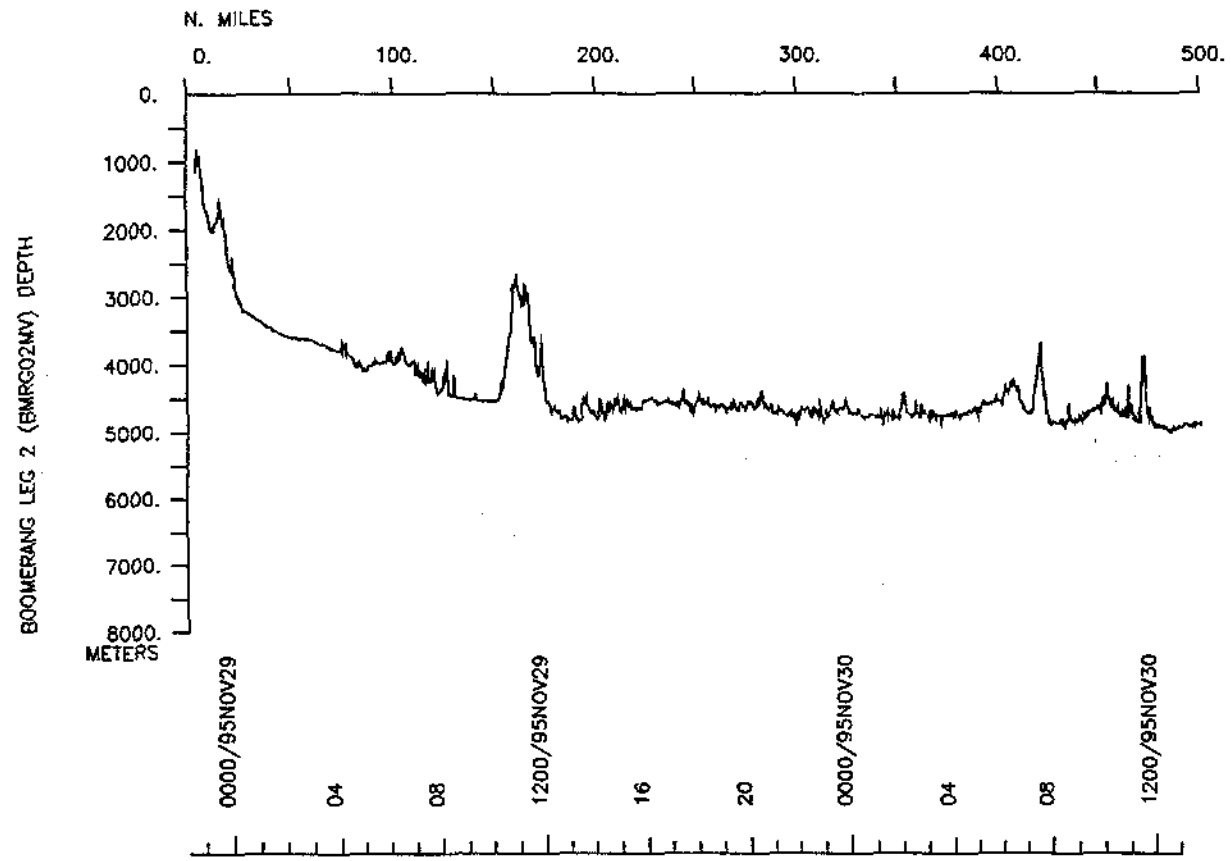
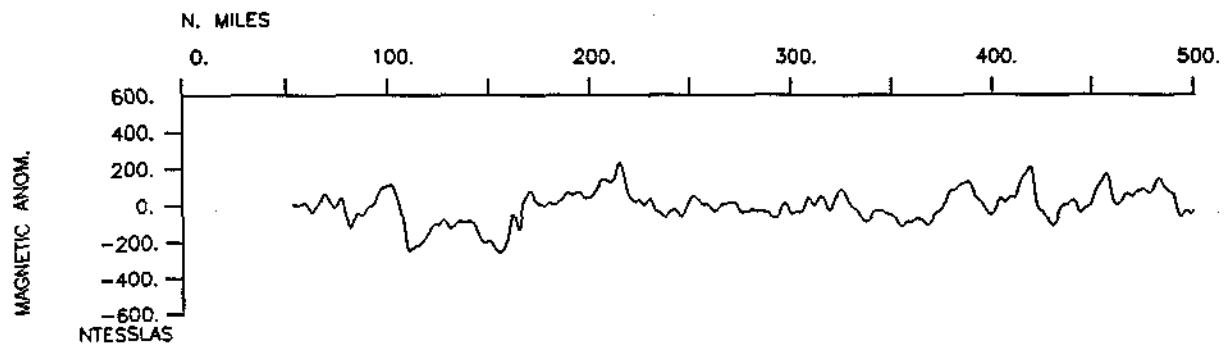
BMRG02MV Survey area A

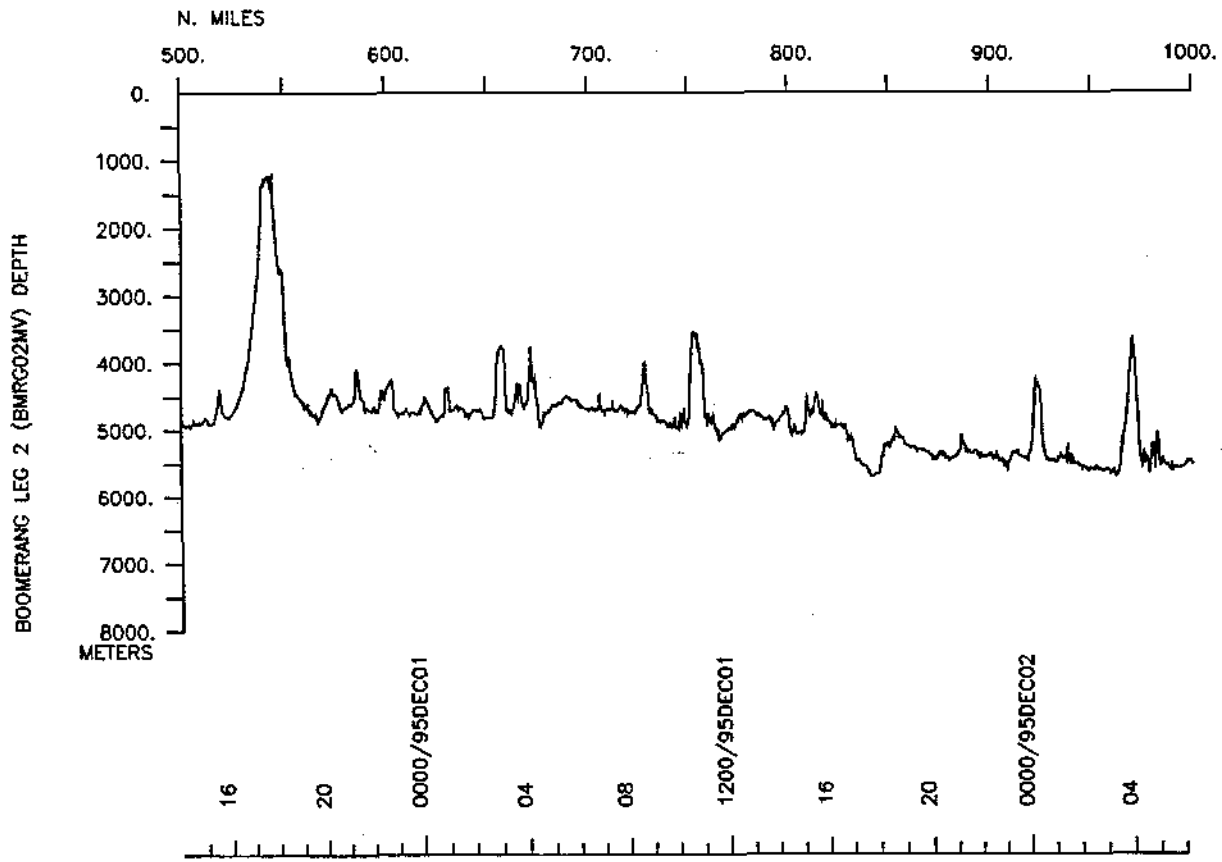
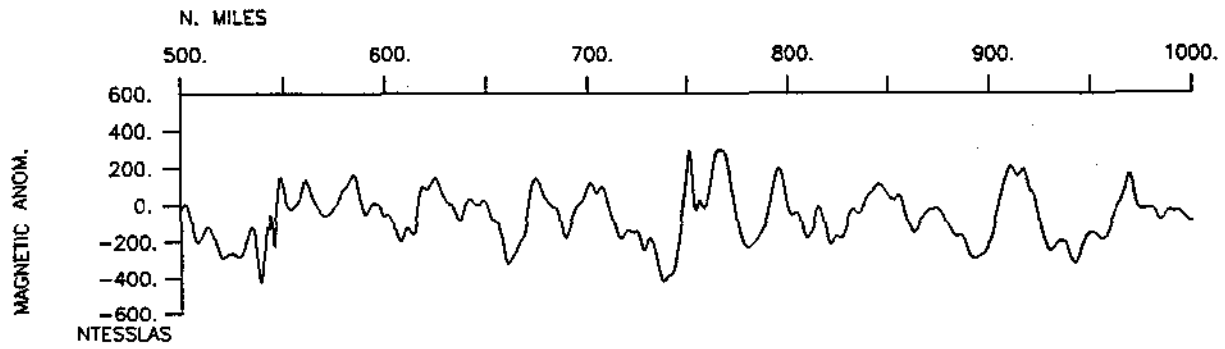
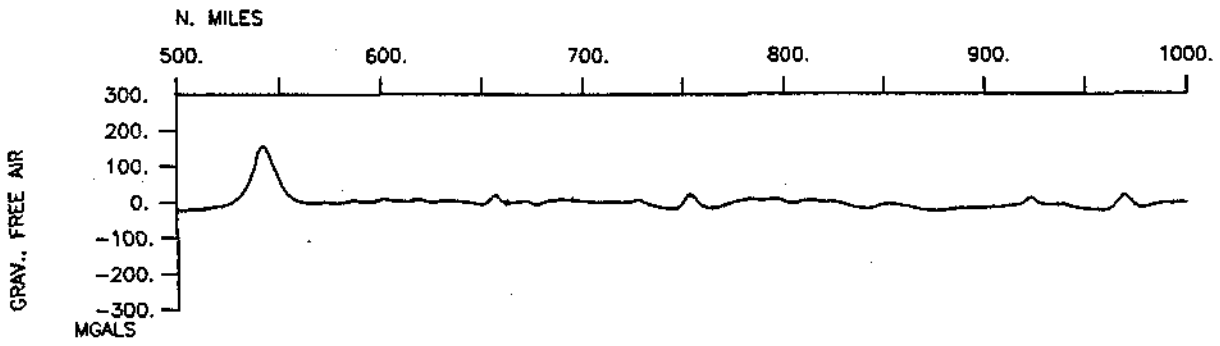
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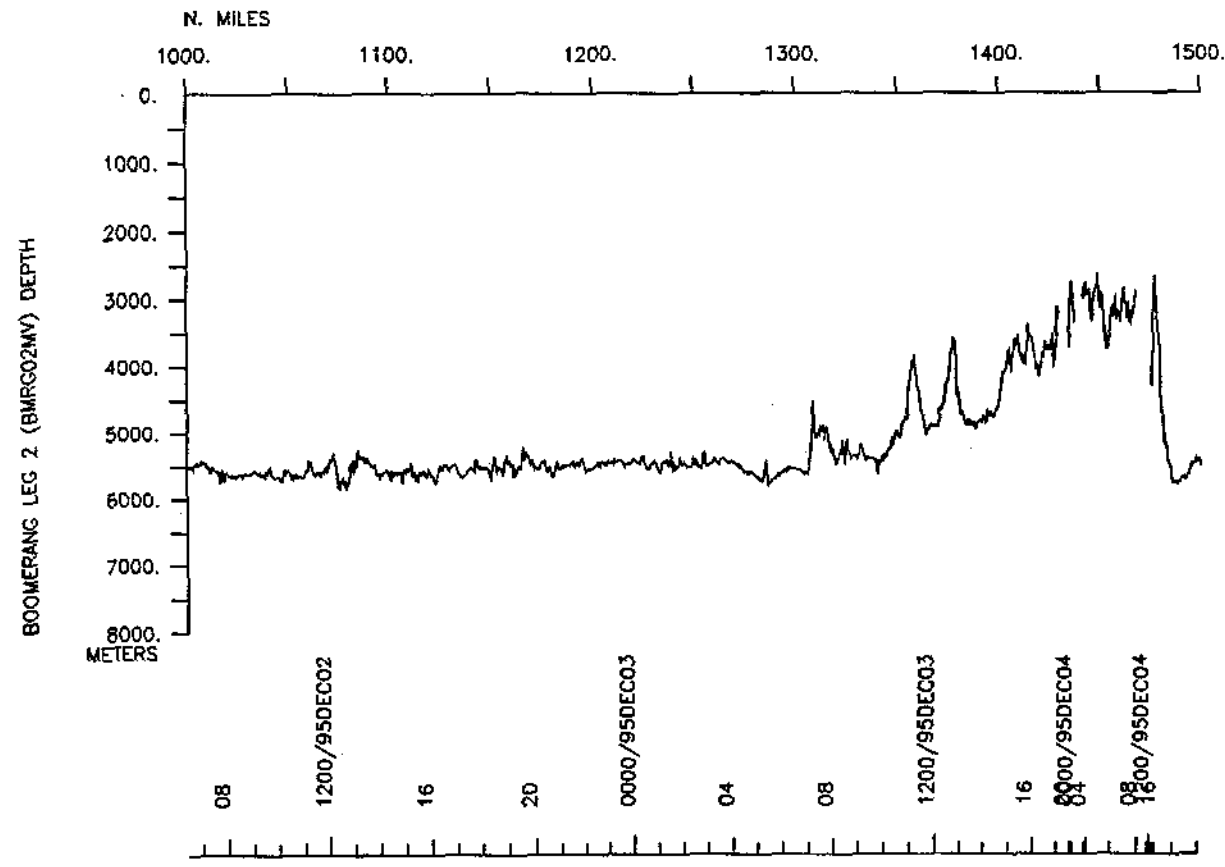
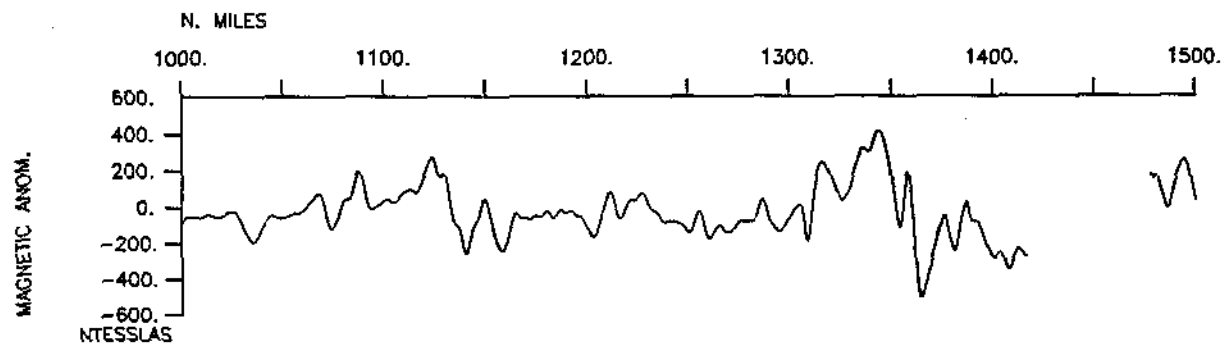


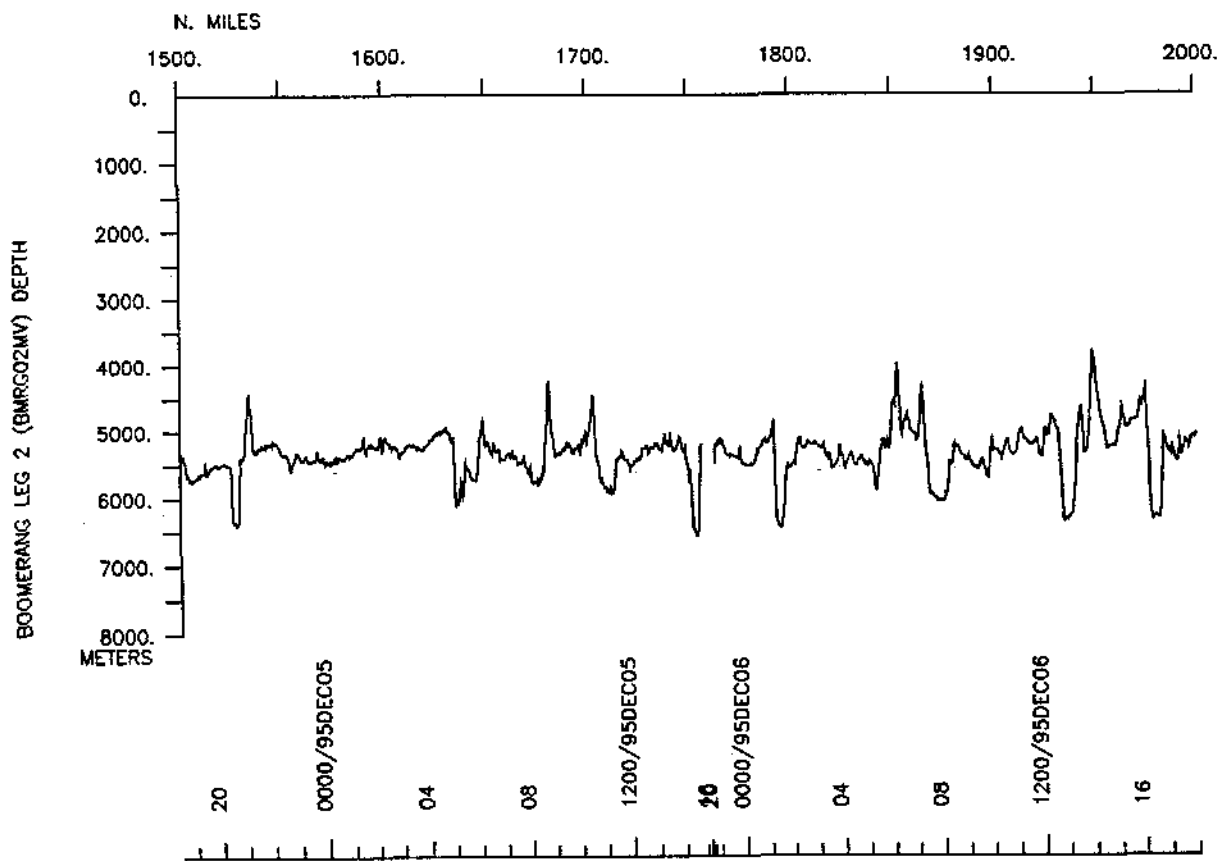
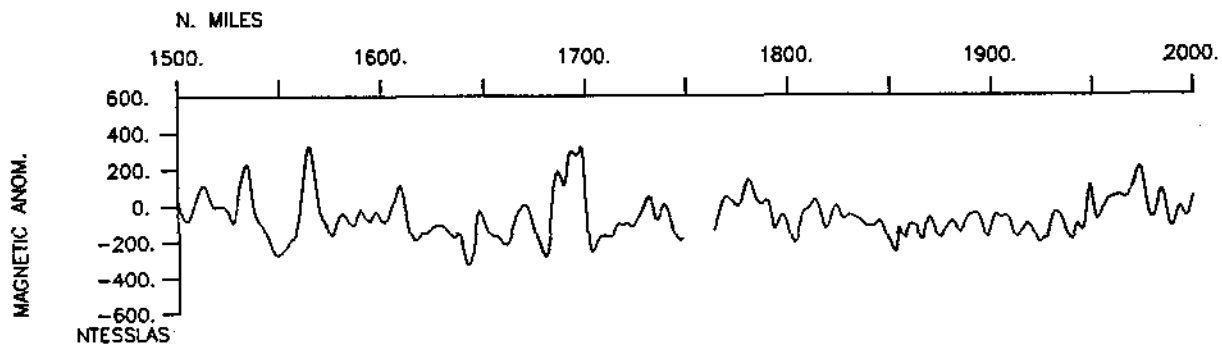
BMRG02MV Survey area B

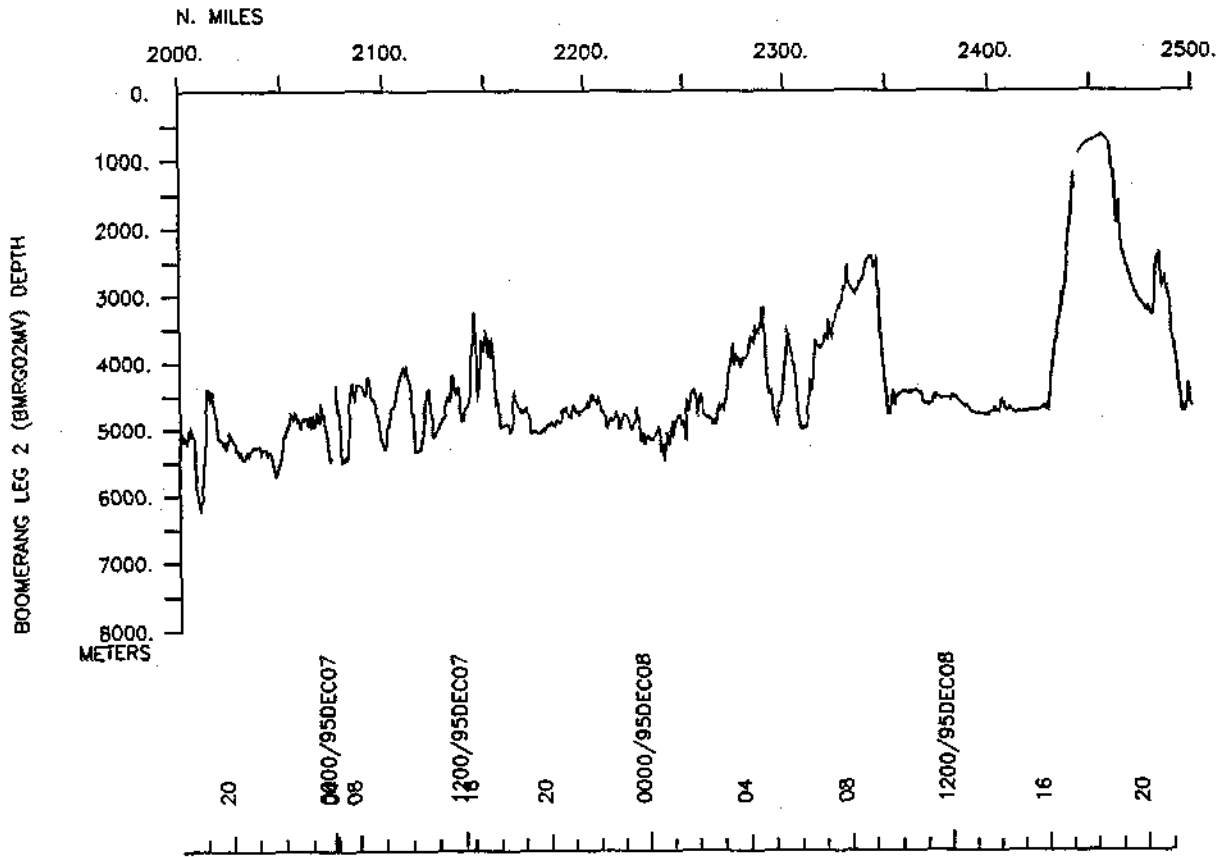
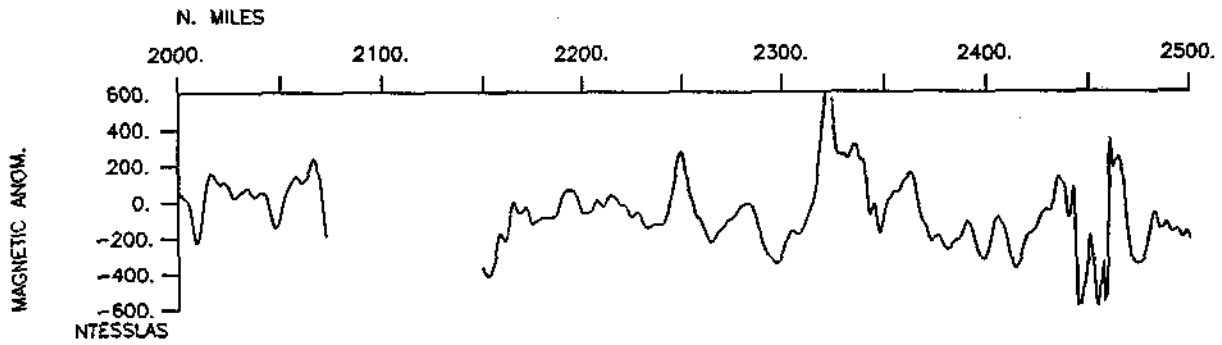
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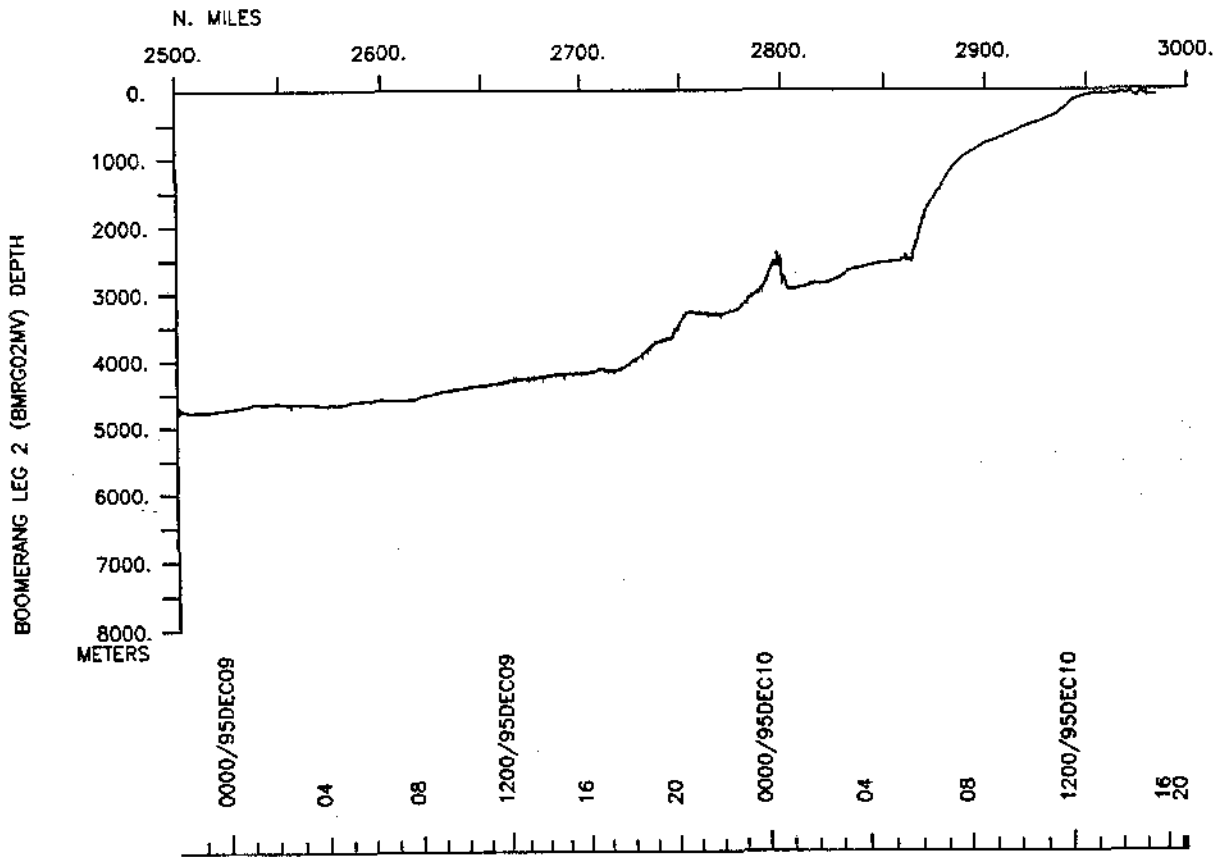
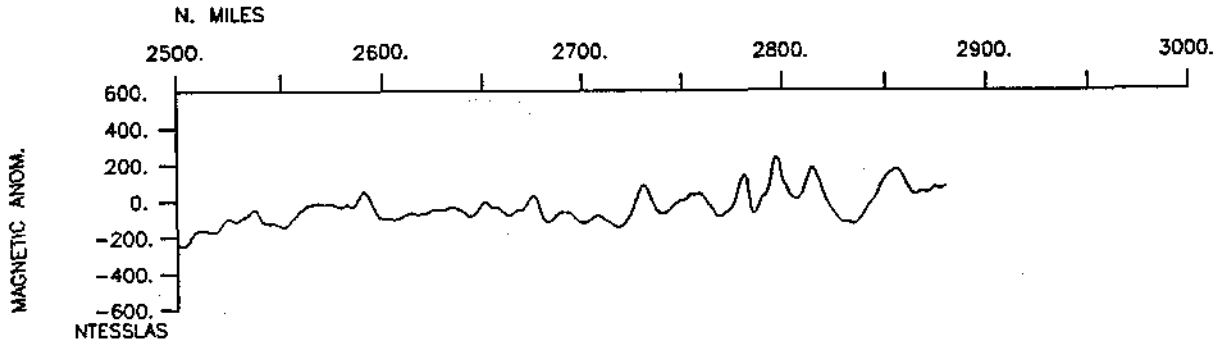
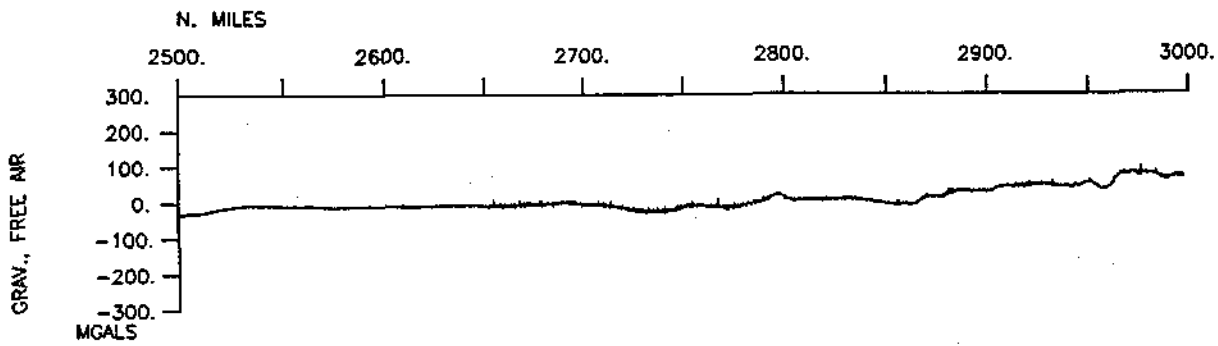












S.I.O. SAMPLE INDEX

BOOMERANG EXPEDITION

LEG 2

(BMRG02MV)

R/V Melville

(Issued April 1996)

Papeete, Tahiti (28 November 1995)
to
Chatham Is., New Zealand (10 December 1995)

Chief Scientist: Peter Lonsdale

(Scripps Institution of Oceanography)

The Sample Index is a first level interdisciplinary 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 ***

2200	281195	LGPT B	Papeete, Tahiti	17-32.00S	149-34.00W	f	BMRG02MV
1800	101295	LGPT E	Chatham Is, N.Z.	44-00.00S	177-30.00E	f	BMRG02MV

**** Personnel ***

#	-----	*****NAME*****	*****TITLE*****	*****AFFILIATION*****	**CRID**
PECS	SIO	Lonsdale, P.	Chief Scientist	Scripps Institution	BMRG02MV
PESP	SIO	Hawkins, J.	Co-Principal	Scripps Institution	BMRG02MV
BESP	SIO	Castillo, P.	Co-Principal	Scripps Institution	BMRG02MV
PEST	SIO	Tryon, M.	Student	Scripps Institution	BMRG02MV
PESP	SIO	Hawkins, D.	Student	Scripps Institution	BMRG02MV
PECT	SIO	Moe, R.	Computer tech	Scripps Institution	BMRG02MV
PERT	SIO	Wilson, R.	Resident tech	Scripps Institution	BMRG02MV

**** 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 ***

2240	281195	0	LBUW	B	underway watch log	GDC	17-30.90S	149-37.37W	g	BMRG02MV
0700	101295	0	LBUW	E	underway watch log	GDC	42-46.32S	175-18.36W	g	BMRG02MV

**** Sea Beam Records (vertical beam and side scan) ***

2240	281195	0	MBSR	B	v.beam&sidescan r-01	GDC	17-30.90S	149-37.37W	g	BMRG02MV
0000	091295	0	MBSR	E	v.beam&sidescan r-01	GDC	39-18.28S	168-58.55W	g	BMRG02MV
0001	091295	0	MBSR	B	v.beam&sidescan r-02	GDC	39-18.39S	168-58.76W	g	BMRG02MV
1530	101295	0	MBSR	E	v.beam&sidescan r-02	GDC	43-52.56S	176-48.10W	g	BMRG02MV

**** Magnetism (Earth Total Field) Records ***

0222	291195	0	MGRA	B	magnetism roll 1	GDC	17-57.44S	150-18.80W	g	BMRG02MV
0702	101295	0	MGRA	E	magnetism roll 1	GDC	42-46.54S	175-18.80W	g	BMRG02MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		c	LEG-SHIP

*** Dredges ***

1935	031295	0	DRRO	B dredge 1	4296m	GCR	30-41.76S	164-54.16W	g	BMRG02MV
2305	031295	0	DRRO	E dredge 1	3226m	GCR	30-41.92S	164-55.16W	g	BMRG02MV
0247	041295	0	DRRO	B dredge 2	3656m	GCR	30-44.72S	164-54.01W	g	BMRG02MV
0455	041295	0	DRRO	E dredge 2	2940m	GCR	30-44.89S	164-55.10W	g	BMRG02MV
1034	041295	0	DRRO	B dredge 3	4977m	GCR	31-10.73S	164-47.54W	g	BMRG02MV
1432	041295	0	DRRO	E dredge 3	3803m	GCR	31-11.52S	164-48.84W	g	BMRG02MV
1754	051295	0	DRRO	B dredge 4	6091m	GCR	33-10.62S	165-31.15W	g	BMRG02MV
2030	051295	0	DRRO	E dredge 4	5214m	GCR	33-10.22S	165-32.01W	g	BMRG02MV
0205	071295	0	DRRO	B dredge 5	5370m	GCR	35-50.98S	166-07.62W	g	BMRG02MV
0517	071295	0	DRRO	E dredge 5	4458m	GCR	35-50.60S	166-09.79W	g	BMRG02MV
1359	071295	0	DRRO	B dredge 6	3914m	GCR	36-46.17S	166-09.83W	g	BMRG02MV
1435	071295	0	DRRO	E dredge 6	3483m	GCR	36-46.08S	166-10.31W	g	BMRG02MV

#

End Sample Index

BMRG02MV