

**REPORT AND INDEX OF
UNDERWAY MARINE GEOPHYSICAL DATA**

RAPA EXPEDITION

LEG 4
=====

R/V Thomas Washington

(Issued April 1991)

Easter Island (20 February 1991)
to
San Diego, California (8 March 1991)

Chief Scientist:

Dan Scheirer (University of California, Santa Barbara)

No Resident Marine Technician on board

Transit Mode - No Sea Beam/Underway Data Processor on board

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

Data Collection and Processing Funded by:
NSF Grant Number OCE89-11587

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
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Geological Data Center, Scripps Institution of Oceanography,
La Jolla, California 92093.

GDC Cruise I.D.# 251

INFORMAL 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 anomaly and gravity free air anomaly vs. distance. Sections of track having subbottom profile (airgun or watergun) records have a wide black line along the bottom of the profile. Sections having Sea Beam are indicated by a narrow black line.

Sample Index - list of beginning and end times and positions of all underway records as well as all other samples and measurements (geology, biology, physical oceanography, etc.) 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, CA 92093-0223. Phone (619)534-2752. Fax (619)534-5306.

1. Navigation listing with times and positions of course and speed changes, fixes and drift velocity.
2. Depth compilation plots - compilation plots at the traditional scale of 4in/degree longitude (1:1,000,000) are no longer produced for Sea Beam cruises. Custom plots may be requested of vertical beam (2 $\frac{2}{3}$ degree beam width) depths retrieved at one minute intervals of ship time.
3. Plots of depths, magnetics or gravity profiles along track - custom plots at various map and profile scales on Mercator projection may be requested.
4. Separate time series files of navigation, depth, gravity and magnetics as well as these data merged in the MGD77 Exchange format on magnetic tape.
5. Microfilm or Xerox copies of:
 - a. Echosounder records - 12 and 3.5 kHz frequency
 - b. Subbottom profiler records
 - c. Magnetometer records
 - d. Underway data log book

SIO Sea Beam Data Information

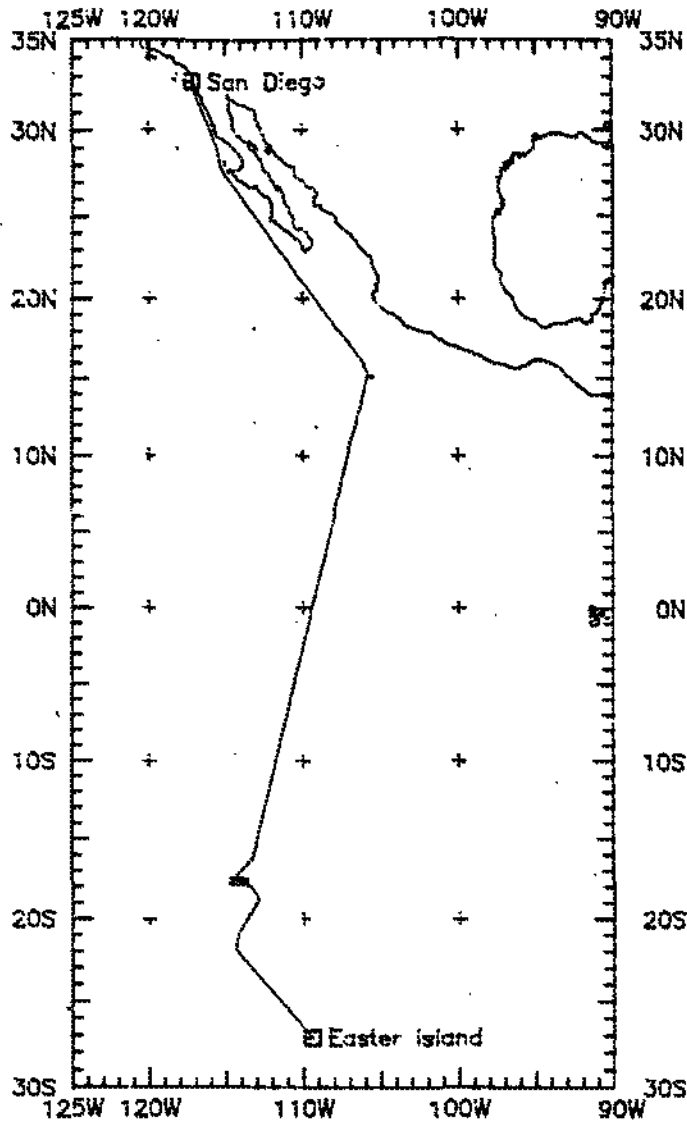
The following forms are available, subject to approval of the cruise leg chief scientist:

- 1) Archive copy of contour swath books generated in real time on board ship available for inspection at the data center.
- 2) Microfilm (35mm flowfilm) containing swath books plus, for some cruises, the Sea Beam monitor record and navigation list.
- 3) Sea Beam merged tapes - Sea Beam data merged with navigation. (Navigation is edited to the extent that DR courses and speeds are edited and poor fixes are removed after inspection of drift vectors between fix pairs. No editing is done on the basis of adjusting to overlapping Sea Beam swaths.)
- 4) Archive contour plots - 16"/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; additional copies may be generated from plot files stored on tape.
- 5) Custom generated plots of Sea Beam 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 October 1986

NOTE: Sea Beam data collection and processing were not funded by extramural grants on this leg. Instead, they have been collected and processed in "transit mode" by the SIO Shipboard Technical Support group as part of an experimental program to optimize ship usage and to increase the amount of available Sea Beam data. At this time, policies for processing these data are under review. For more information, contact the Geological Data Center curator.

April 1989



RAPA EXPEDITION LEG 4

CHIEF SCIENTIST:

Dan Scheirer (University of California Santa Barbara)

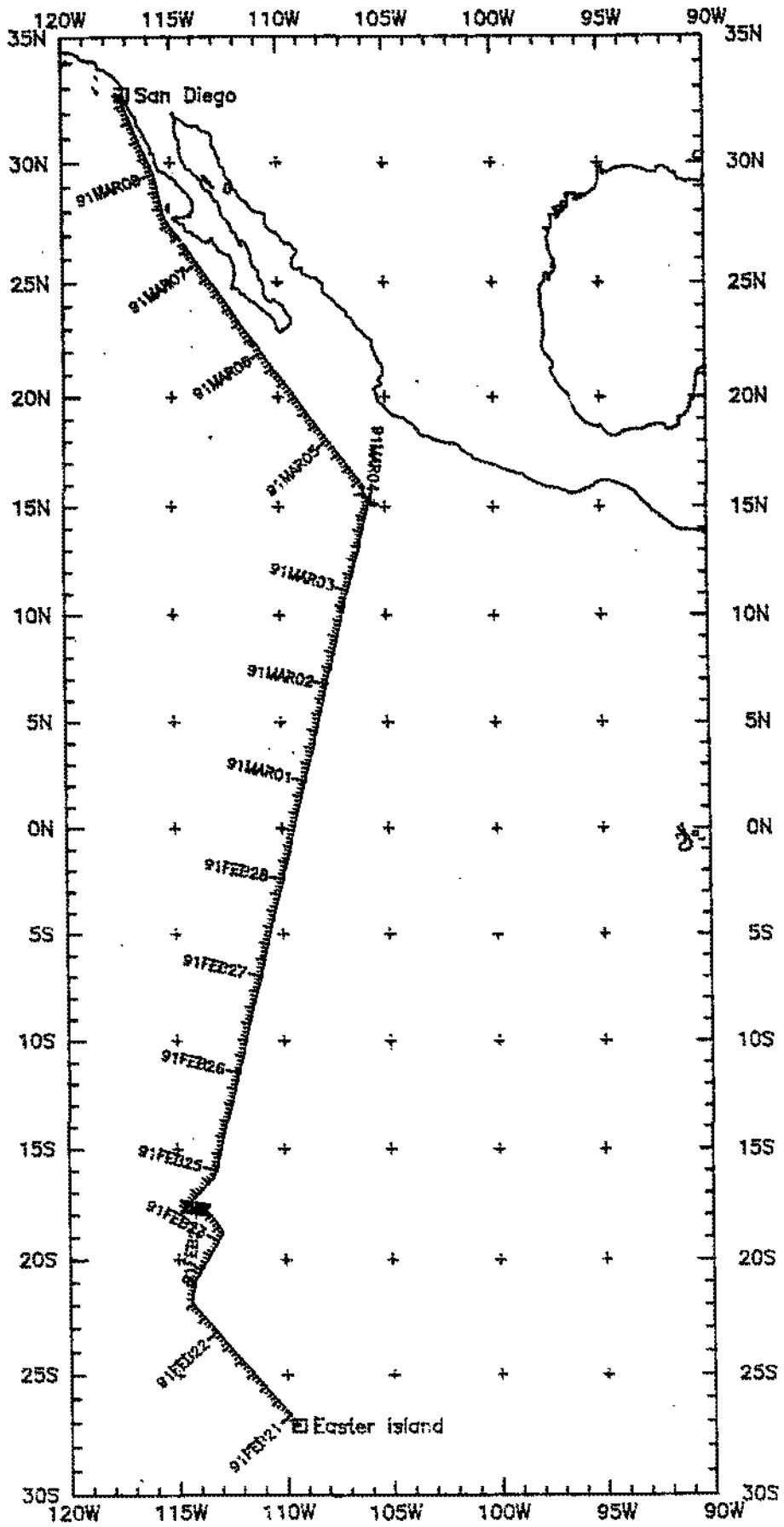
PORTS: Easter Island - San Diego, California

DATES: 20 February - 8 March 1991

SHIP: R/V T. Washington

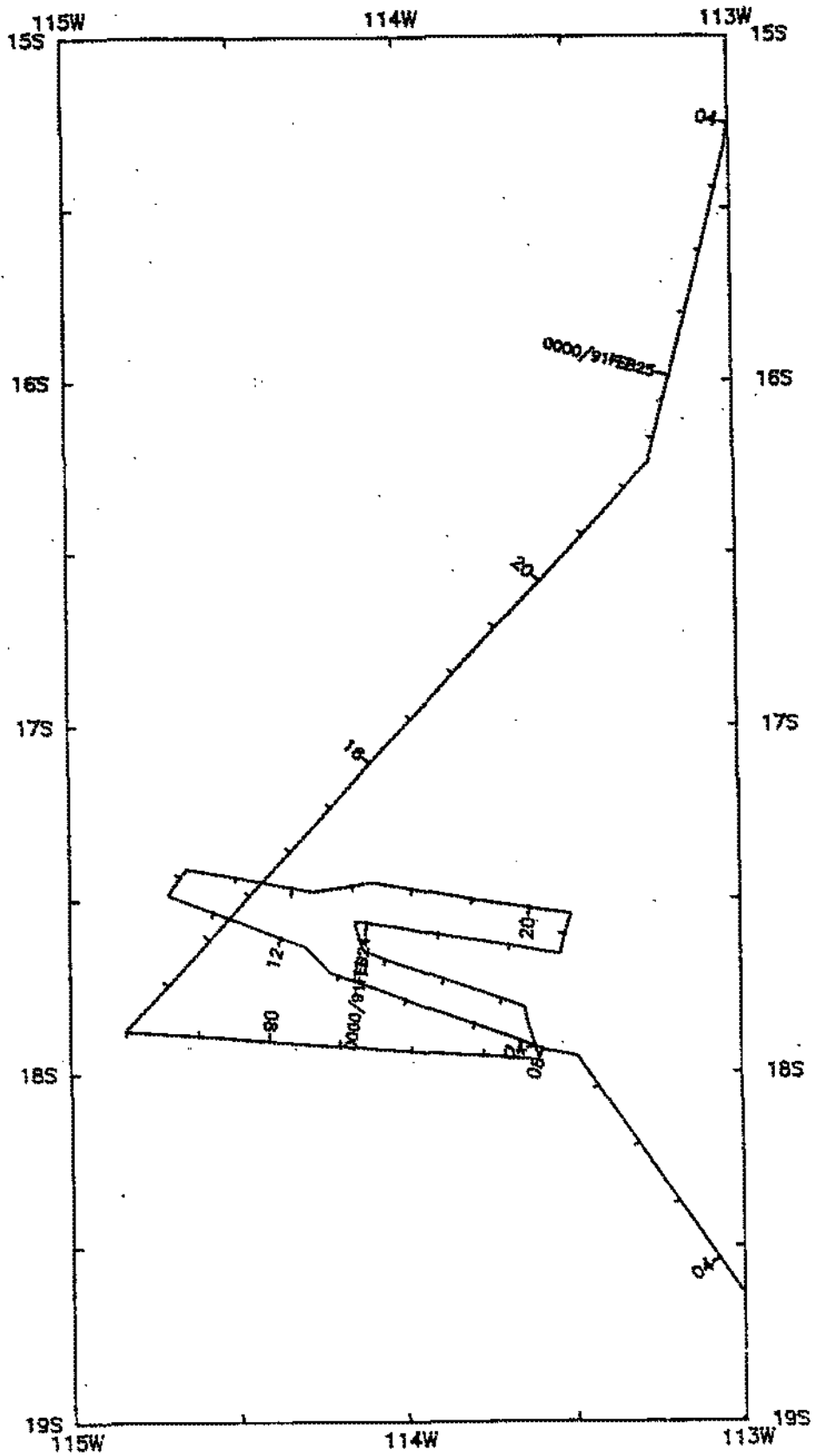
TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

- 1) Cruise - 4364 miles
- 2) Bathymetry - 3585 miles
- 3) Magnetics - 2960 miles
- 4) Seismic Reflection - none collected
- 5) Gravity - 4363 miles
- 6) Sea Beam - 3585 miles



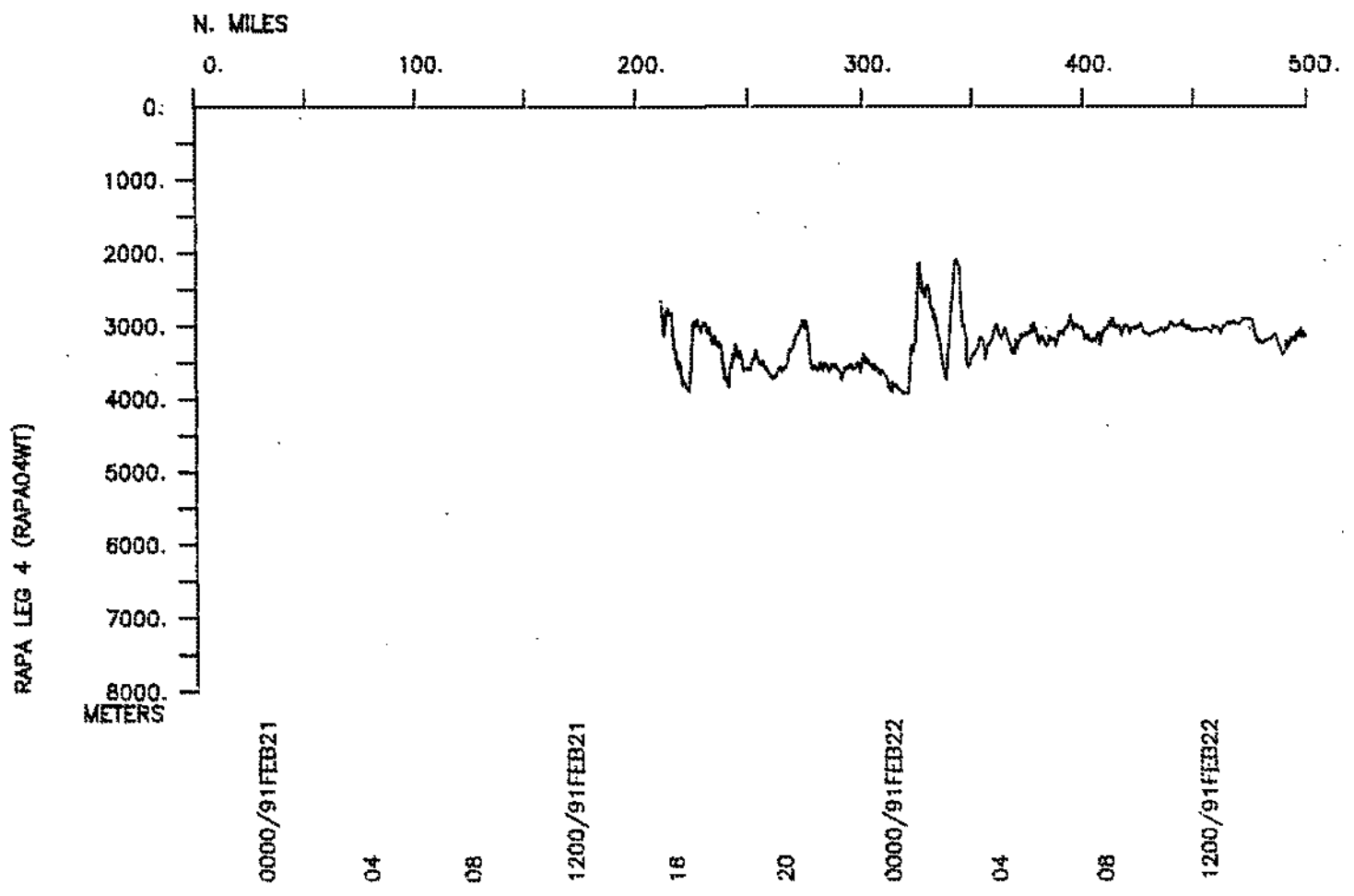
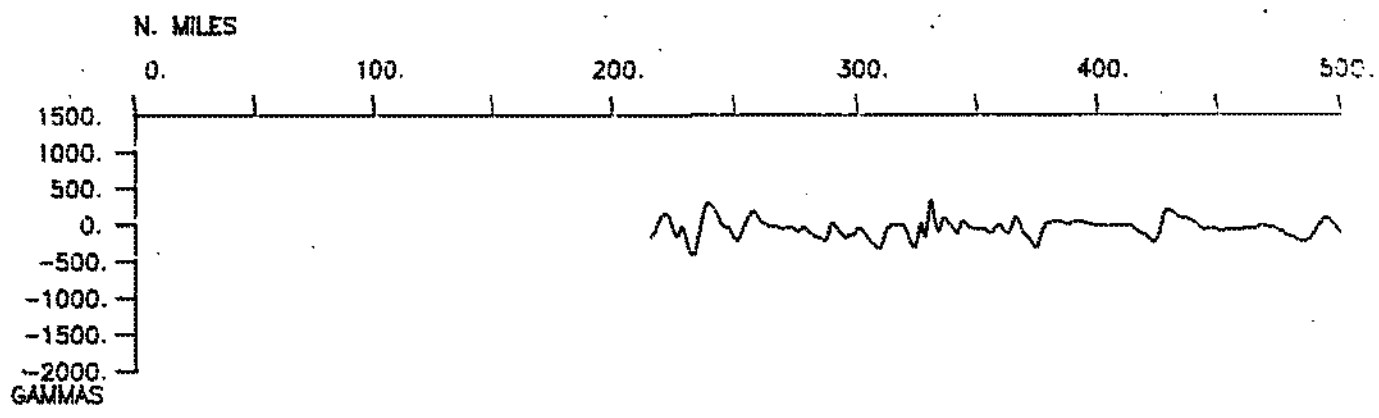
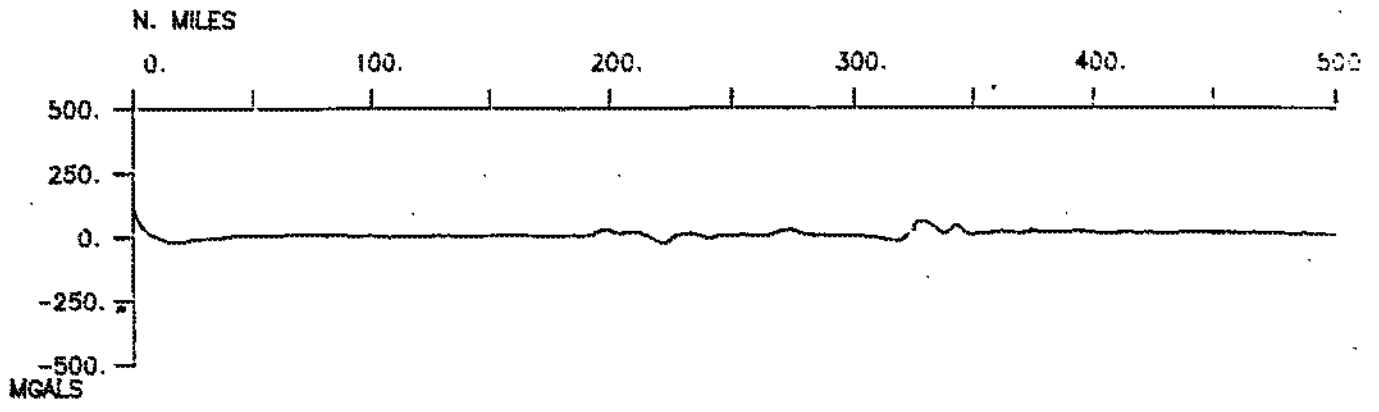
RAPA LEG 4 (RAPA04WT)

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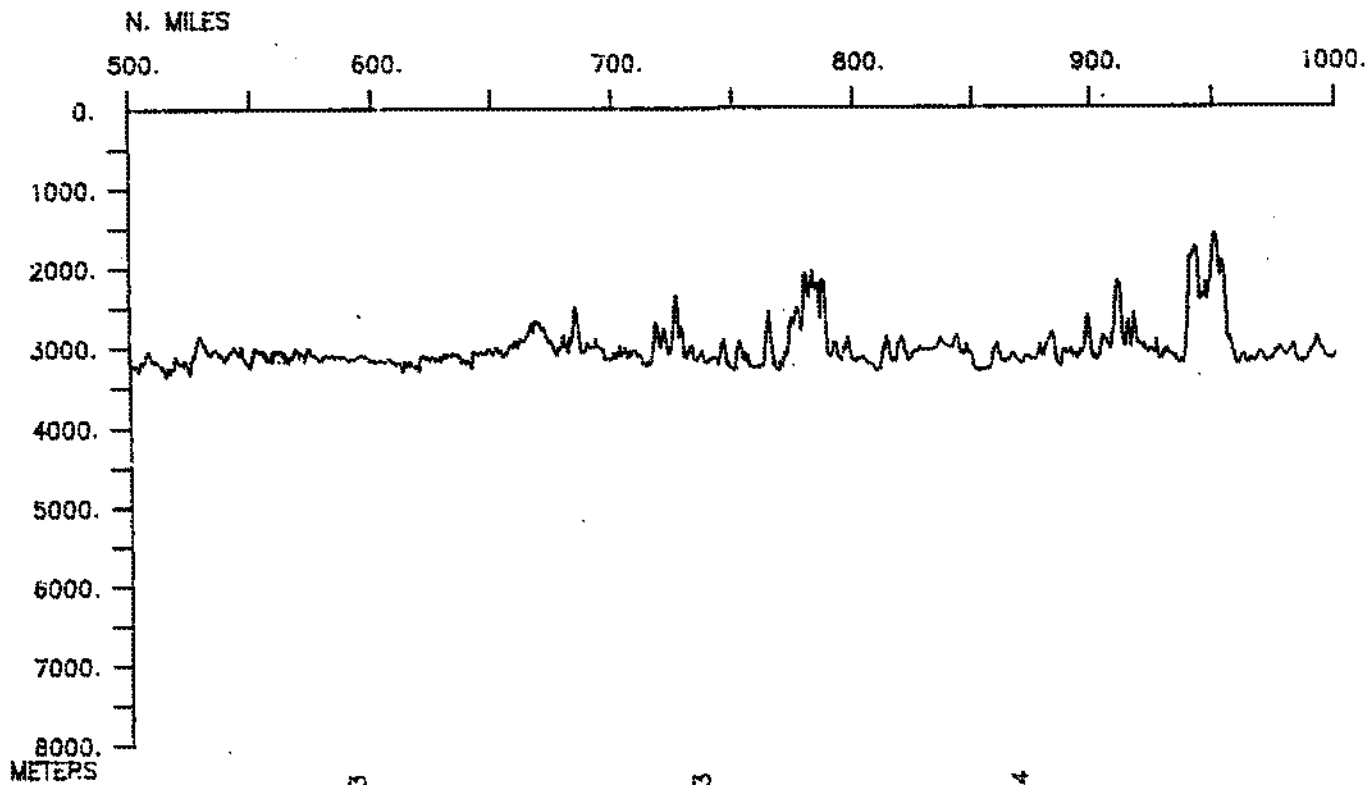
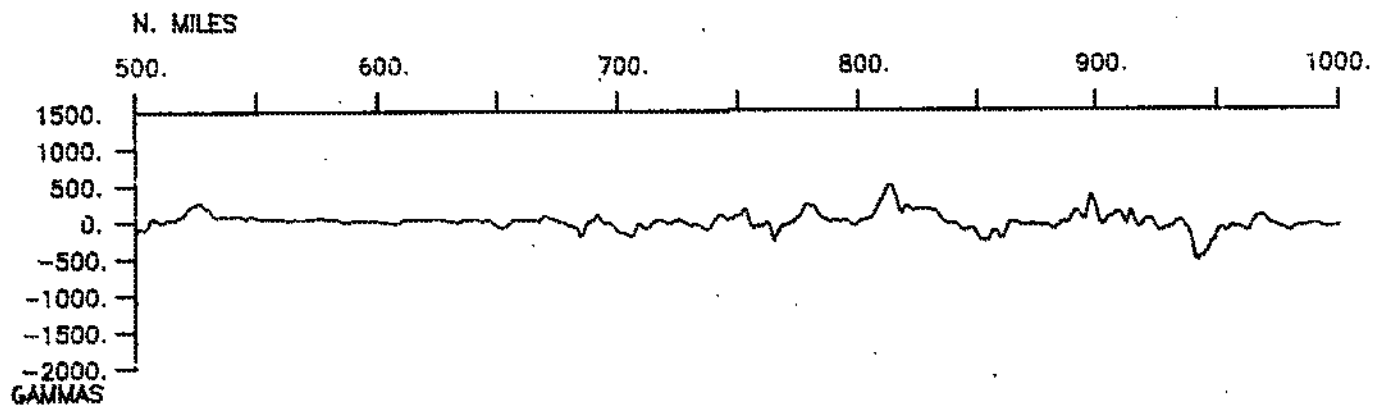
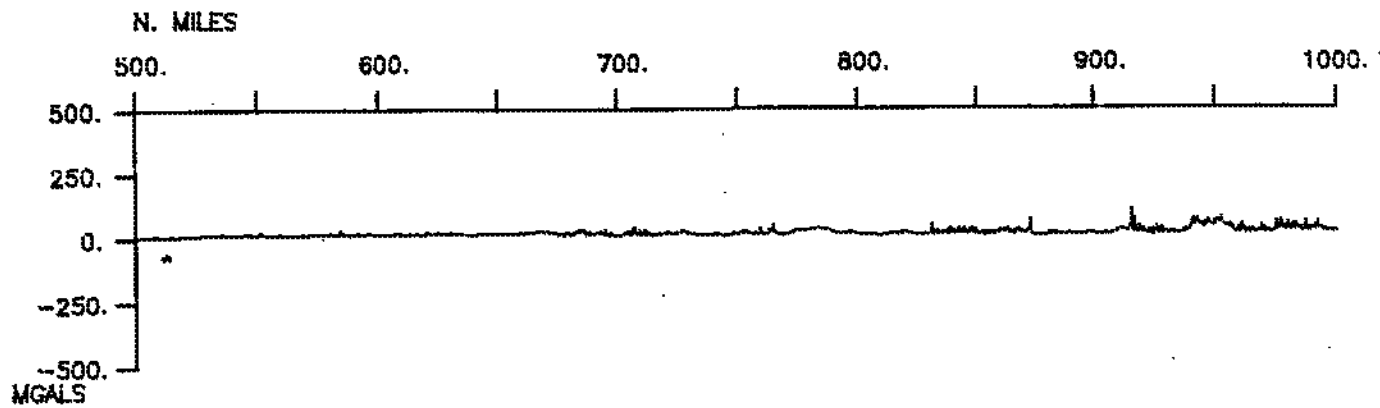


RAPA LEG 4 (RAPA04WT)
Survey Area

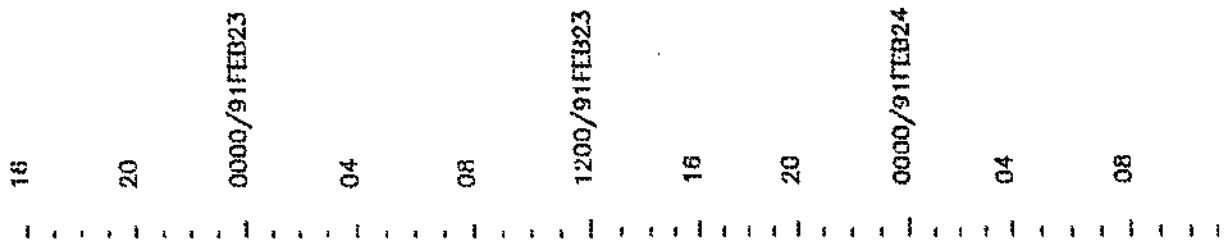
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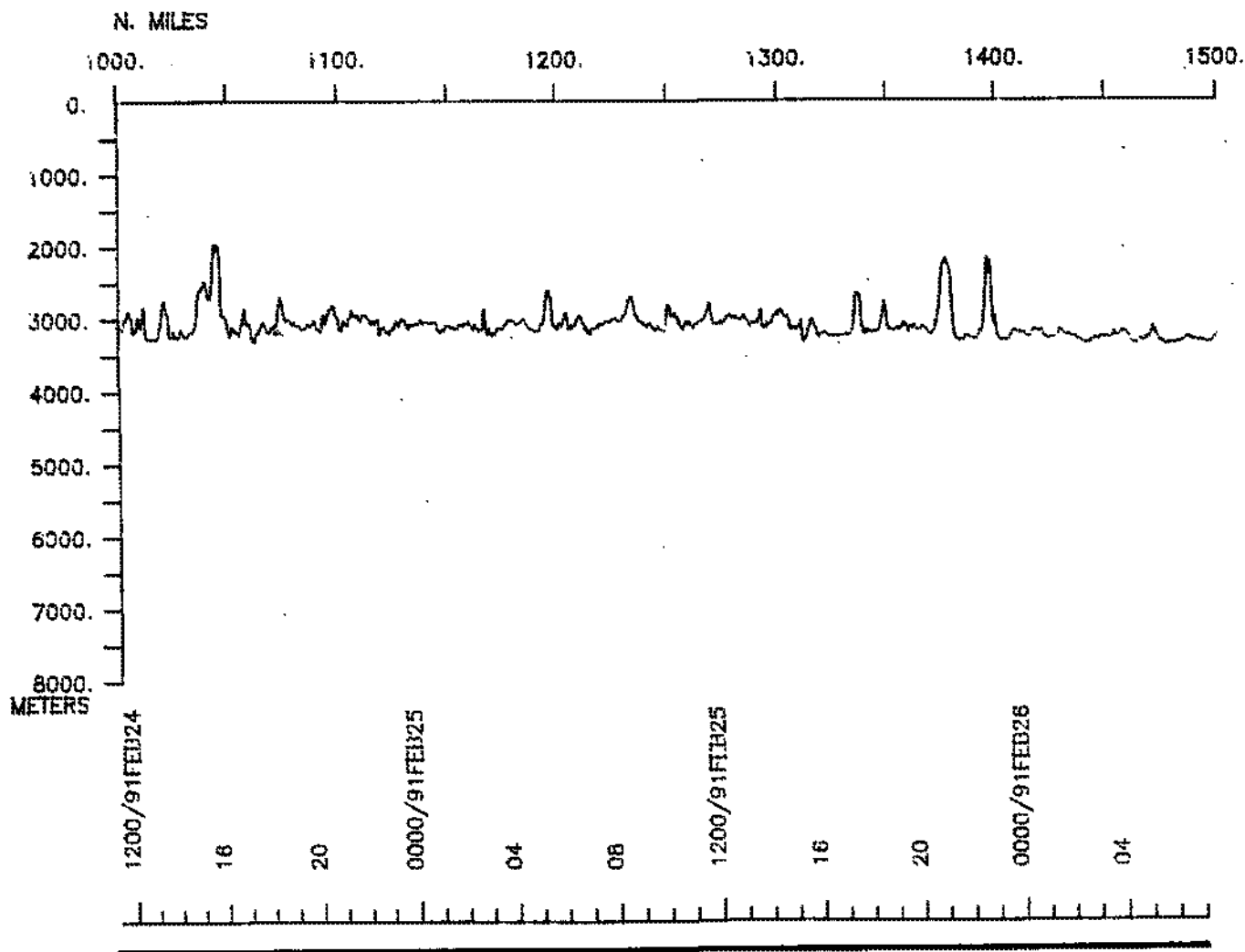
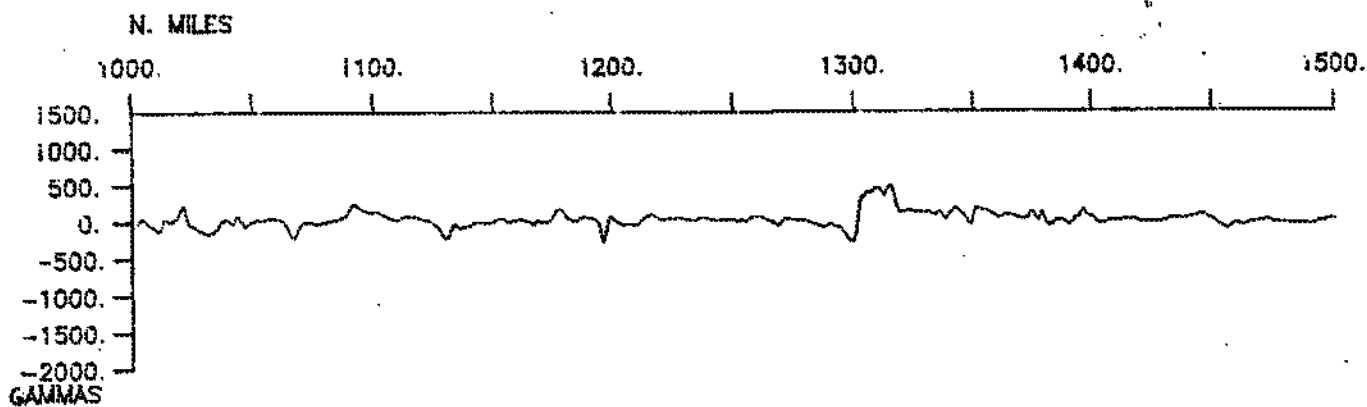
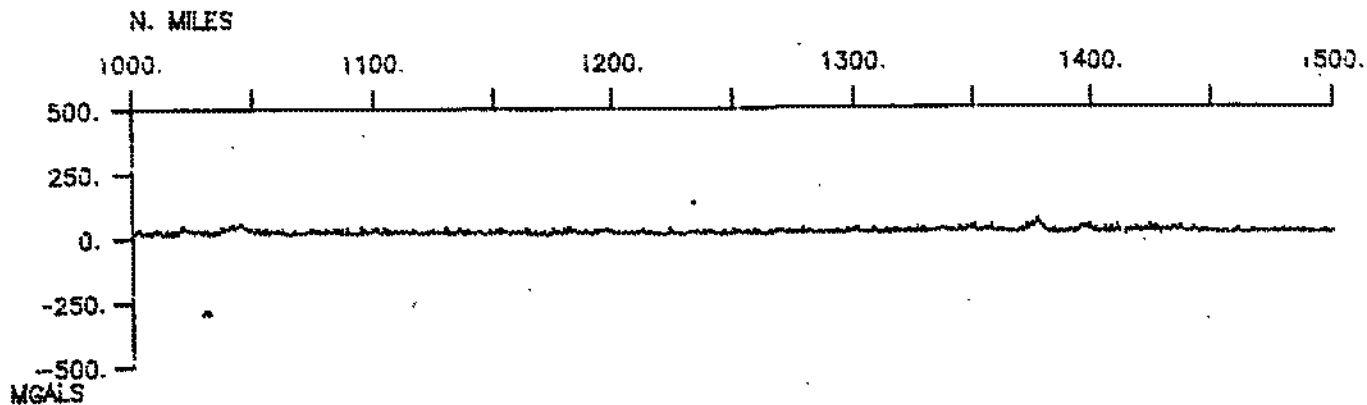


SEABEAM

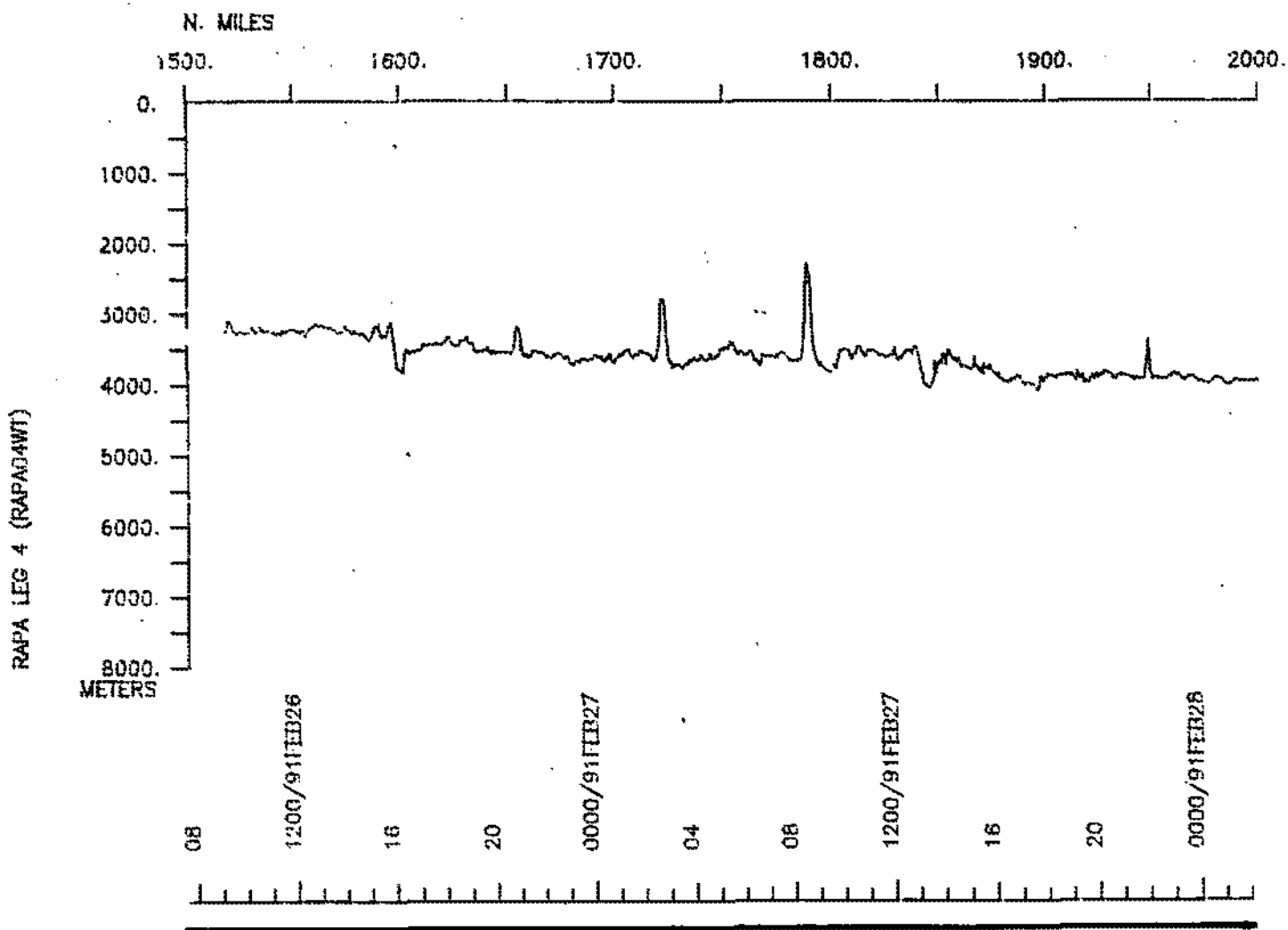
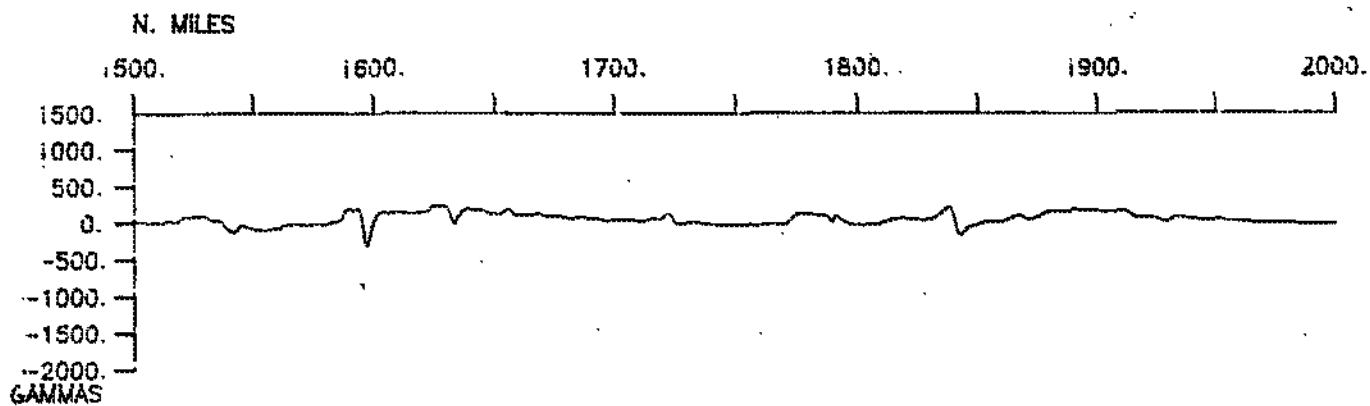
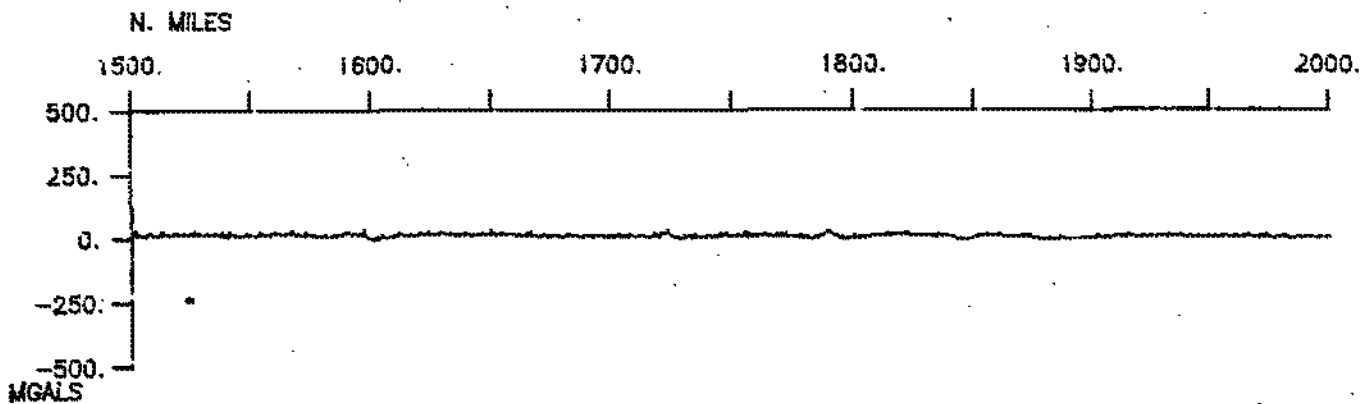


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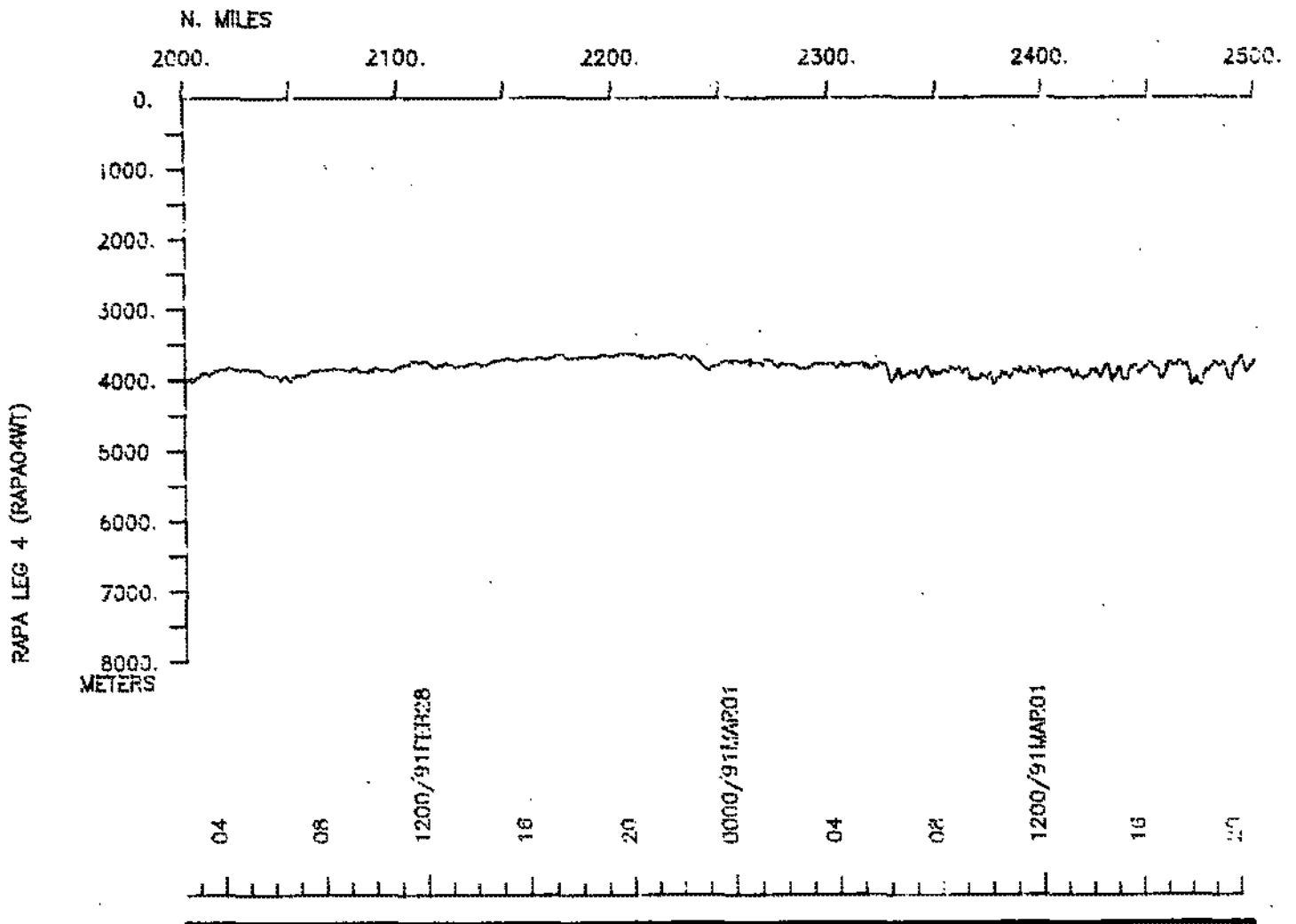
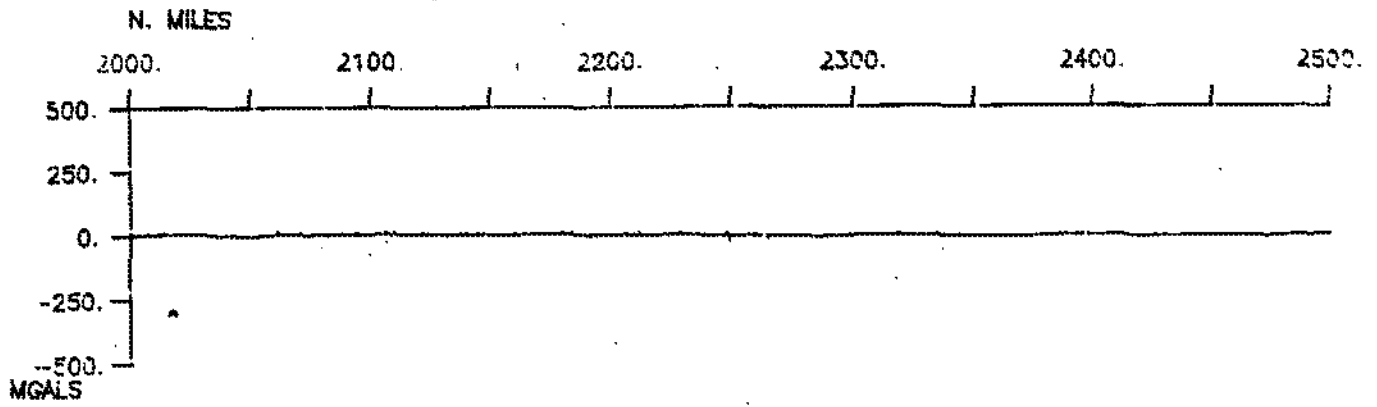


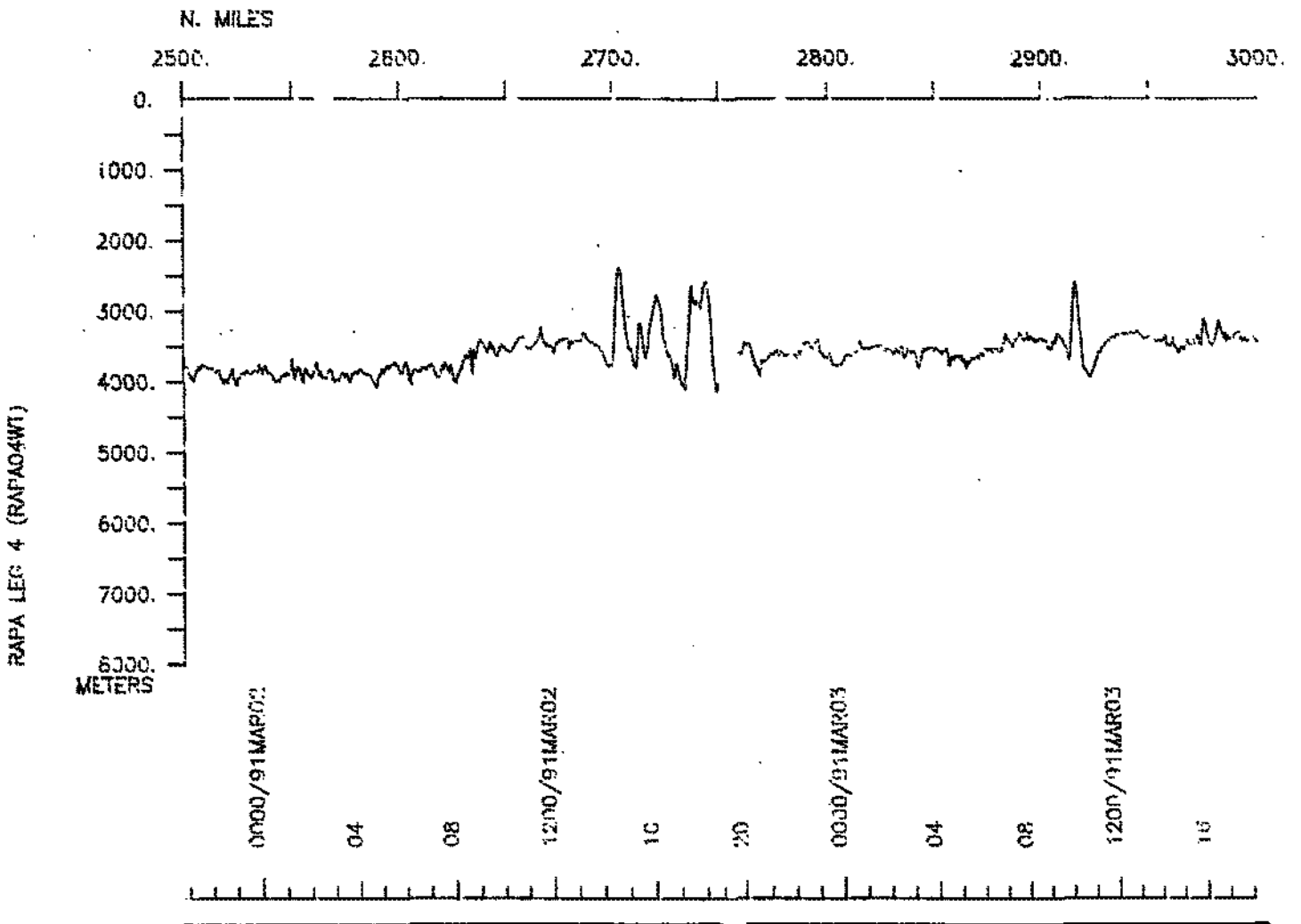
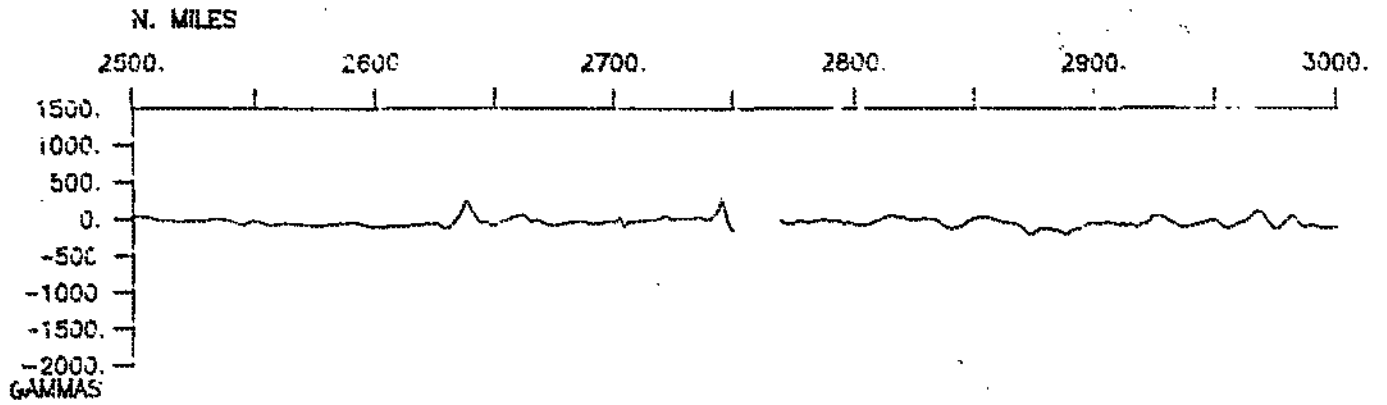


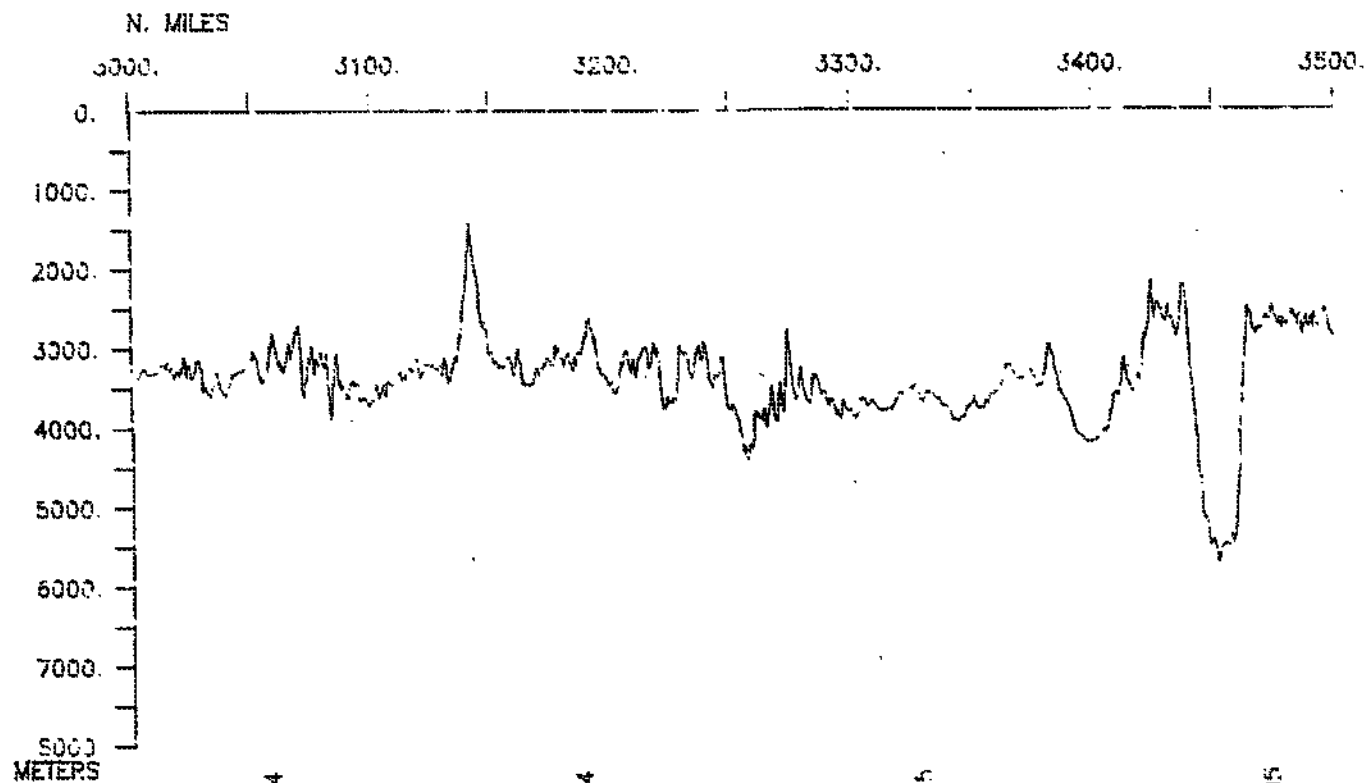
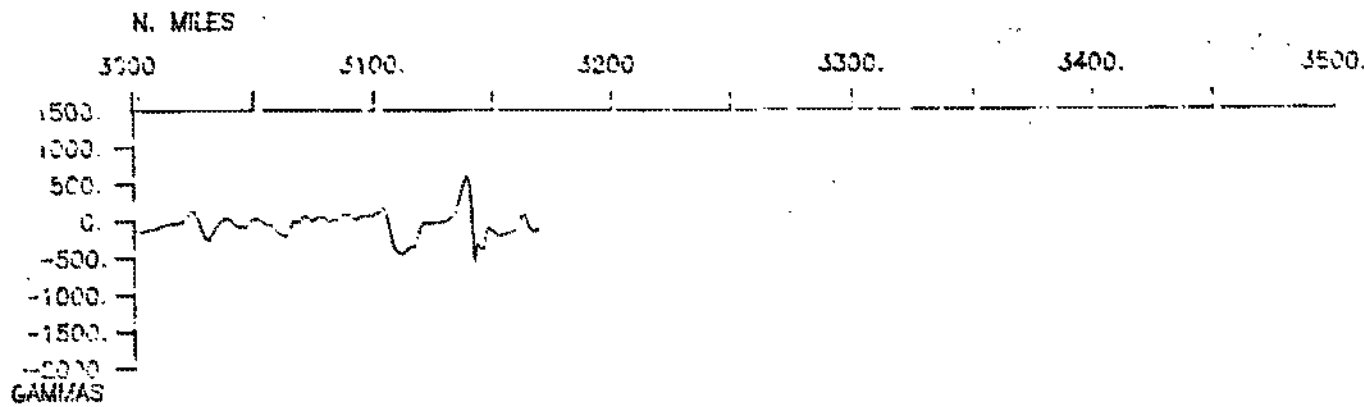
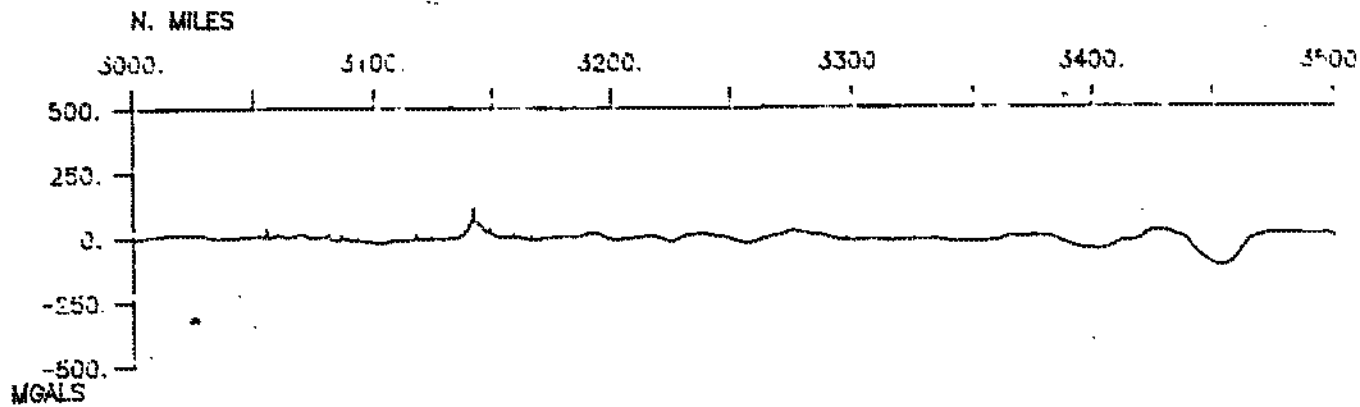
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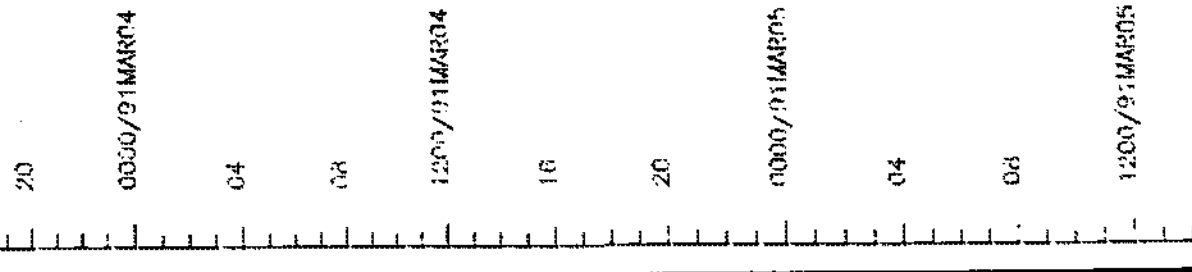
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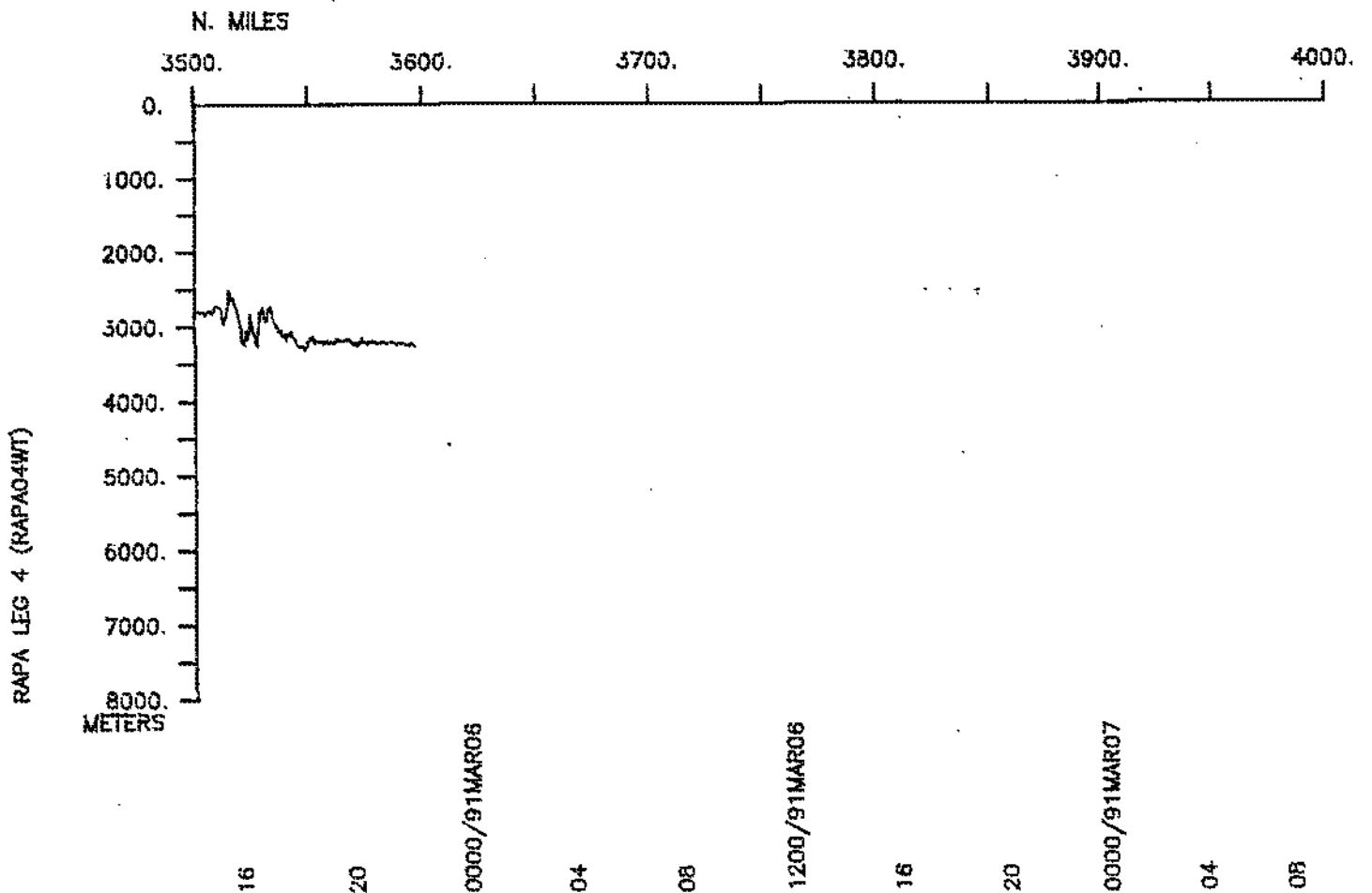
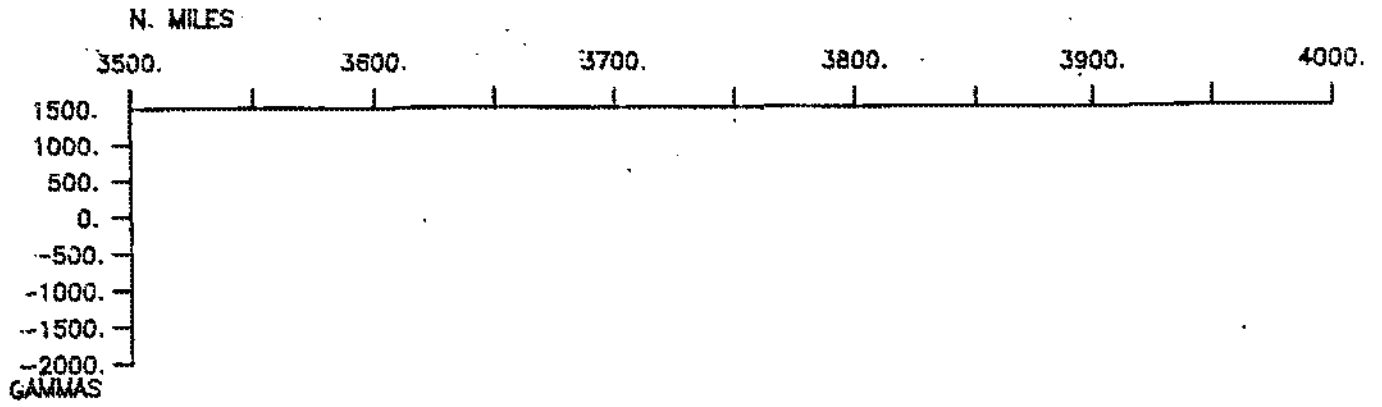
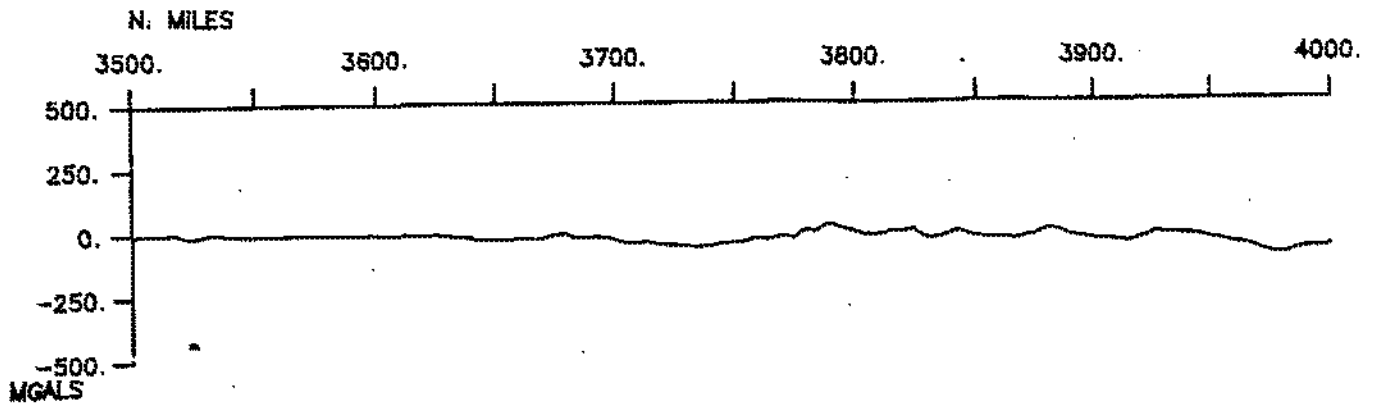


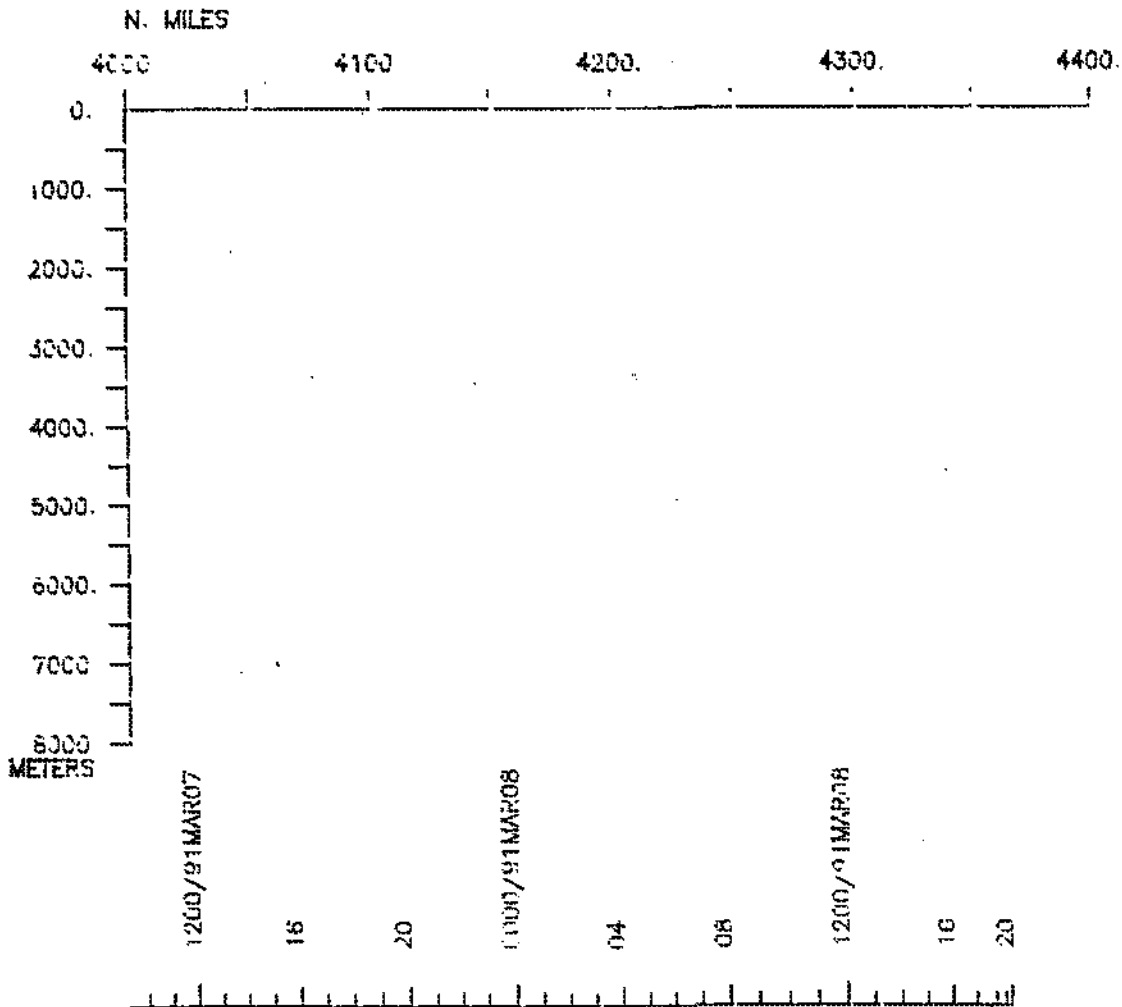
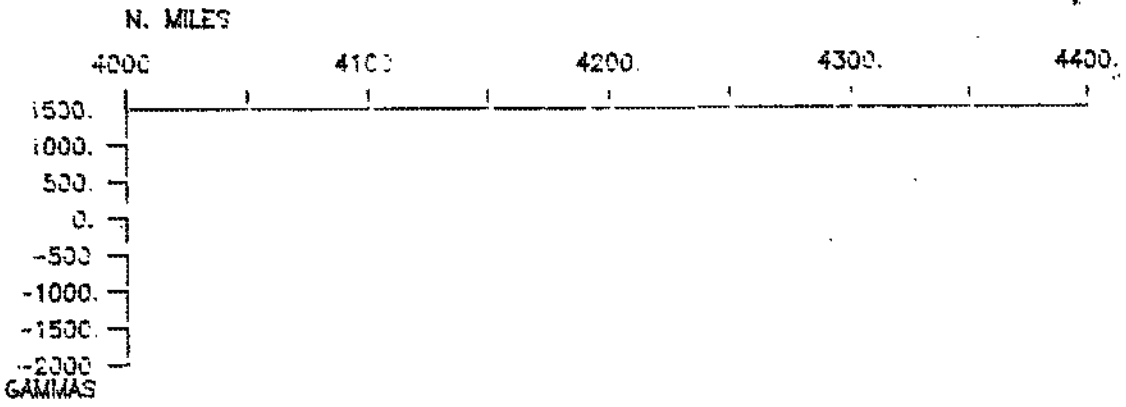
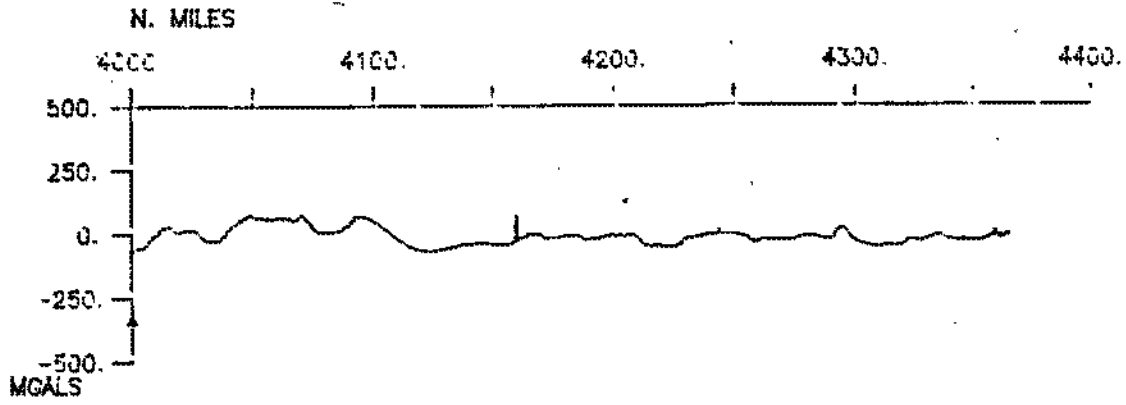




RAFA LEG 4 (RAPAD4WT)







RAPA LEG 4 (RAPADAWT)

S.I.O. SAMPLE INDEX

(Issued April 1991)

RAPA EXPEDITION

Leg 4

R/V T. Washington

Easter Island (20 February 1991)
to
San Diego, California (8 March 1991)

Chief Scientist:

Dan Scheirer (University of California Santa Barbara)

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 further computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

GDC Cruise I.D.# 251

****PORTS****

2100 200291	LGPT B EASTER ISLAND, CHILE	27 09 S 109 27 W	FRAPAO4WT
1930 080391	LGPT E SAN DIEGO, CALIFORNIA	32 43 N 117 11 W	FRAPAO4WT

****PERSONNEL****

****NAME****	****TITLE****	****AFFILIATION****	**CRID**
PECS UCS SCHEIRER, D.	GRAD STUDENT	U. OF C. SANTA BARBARA	RAPAO4WT
PESP SIX GOODWILLIE, A.	GRAD STUDENT	OXFORD	RAPAO4WT
PECT STS MOE, R.	COMPUTER TECH	SCRIPPS INSTITUTION	RAPAO4WT
PESP UCS WIELAND, C.	GRAD STUDENT	U. OF C. SANTA BARBARA	RAPAO4WT

****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. POSITIONS ARE IN TENTHS
 #OF MINUTES.

#GMT	DDMMYY	LOC	T	SAMP	SAMPLE	DISP	LAT.	LONG.	CRUISE
#TIME	DATE	TIME	Z	CODE	IDENTIFIER	CODE			LEG-SHIP

****UNDERWAY DATA CURATOR - S. M. SMITH EXT. 42752

****LOG BOOKS****

2100 200291	LBUW B UNDERWAY WATCH LOG	GDC 27-084S 109-263W	sRAPAO4WT
1930 180391	LBUW E UNDERWAY WATCH LOG	GDC 32-424N 117-141W	sRAPAO4WT

**** ECHO SOUNDER RECORDS ****

2113 200291	DPR3 B 3.5 KHZ RECORD R-01	GDC 27-070S 109-277W	sRAPAO4WT
0250 250291	DPR3 E 3.5 KHZ RECORD R-01	GDC 15-283S 113-031W	sRAPAO4WT
0253 250291	DPR3 B 3.5 KHZ RECORD R-02	GDC 15-277S 113-030W	sRAPAO4WT
1937 010391	DPR3 E 3.5 KHZ RECORD R-02	GDC 5-560N 107-596W	sRAPAO4WT
1940 010391	DPR3 B 3.5 KHZ RECORD R-03	GDC 5-566N 107-594W	sRAPAO4WT
0124 040391	DPR3 E 3.5 KHZ RECORD R-03	GDC 15-054N 105-258W	sRAPAO4WT

#GMT #TIME	DDMMYY DATE	LOC TIME	T Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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*** ECHO SOUNDER RECORDS ***

1420	210291			MBRM B	SEABEAM MONITOR R-01	GDC	24-347S	111-527W	sRAPAO4WT
2009	270291			MBRM E	SEABEAM MONITOR R-01	GDC	3-098S	110-088W	sRAPAO4WT
2014	270291			MBRM B	SEABEAM MONITOR R-02	GDC	3-088S	110-086W	sRAPAO4WT
2156	050391			MBRM E	SEABEAM MONITOR R-02	GDC	21-366N	110-318W	sRAPAO4WT

*** MAGNETICS (EARTH TOTAL FIELD) RECORDS ***

1530	210291			MGRA B	MAGNETICS RECORD R-01	GDC	24-255S	112-014W	sRAPAO4WT
0810	020391			MGRA E	MAGNETICS RECORD R-01	GDC	8-135N	107-282W	sRAPAO4WT
0815	020391			MGRA B	MAGNETICS RECORD R-02	GDC	8-145N	107-280W	sRAPAO4WT
0947	040391			MGRA E	MAGNETICS RECORD R-02	GDC	15-543N	106-012W	sRAPAO4WT

*** CONTINUOUS COMPUTER LOGGED GRAVITY ***

2100	200291			GVSV B	GRAVITY DATA	GDC	27-084S	109-263W	sRAPAO4WT
1930	180391			GVSV E	COMPUTER LOGGED	GDC	32-424N	117-141W	sRAPAO4WT

*** BATHYTHERMOGRAPH RECORDS ***

2100	200291			TGRC B	THERMOGRAPH RECORDS	GDC	27-084S	109-263W	sRAPAO4WT
1930	180391			TGRC E	THERMOGRAPH RECORDS	GDC	32-424N	117-141W	sRAPAO4WT

*** END SAMPLE INDEX