REPORT AND INDEX OF

UNDERWAY MARINE GEOPHYSICAL DATA

RAPA EXPEDITION

LEG 2

R/V Thomas Washington

(Issued April 1991)

Manzanillo, Mexico (18 December 1990)
to
Easter Island (5 January 1991)

Chief Scientist - Don Forsyth (Brown University)

Resident Marine Technician - Gene Pillard

Sea Beam/Underway Data Processor - Andra Bobbitt (MPL)

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

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&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.

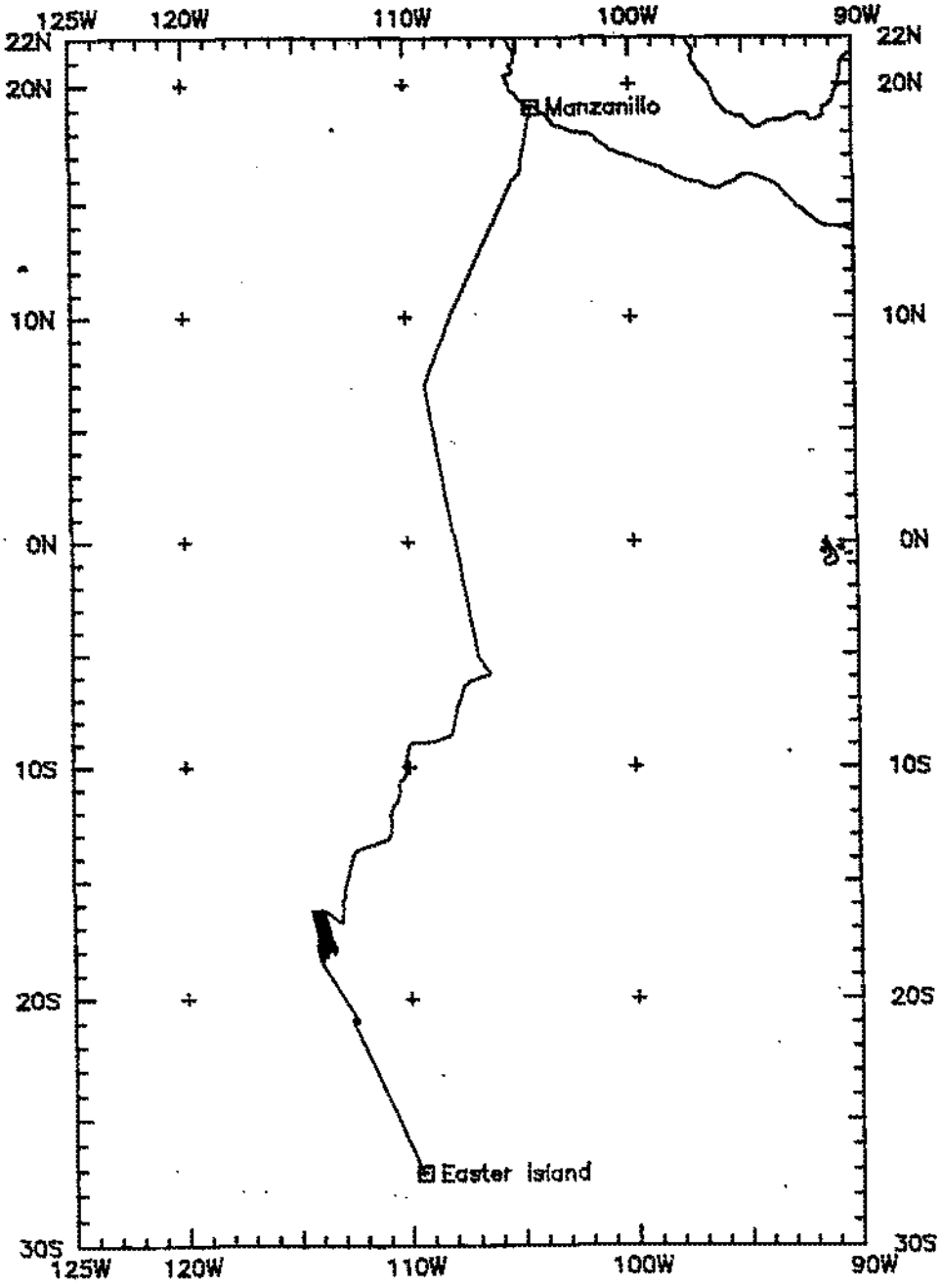
2) Microfilm (35mm flowfilm) containing swath books plus, for some cruises, the Sea Beam monitor record and navigation list.

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).

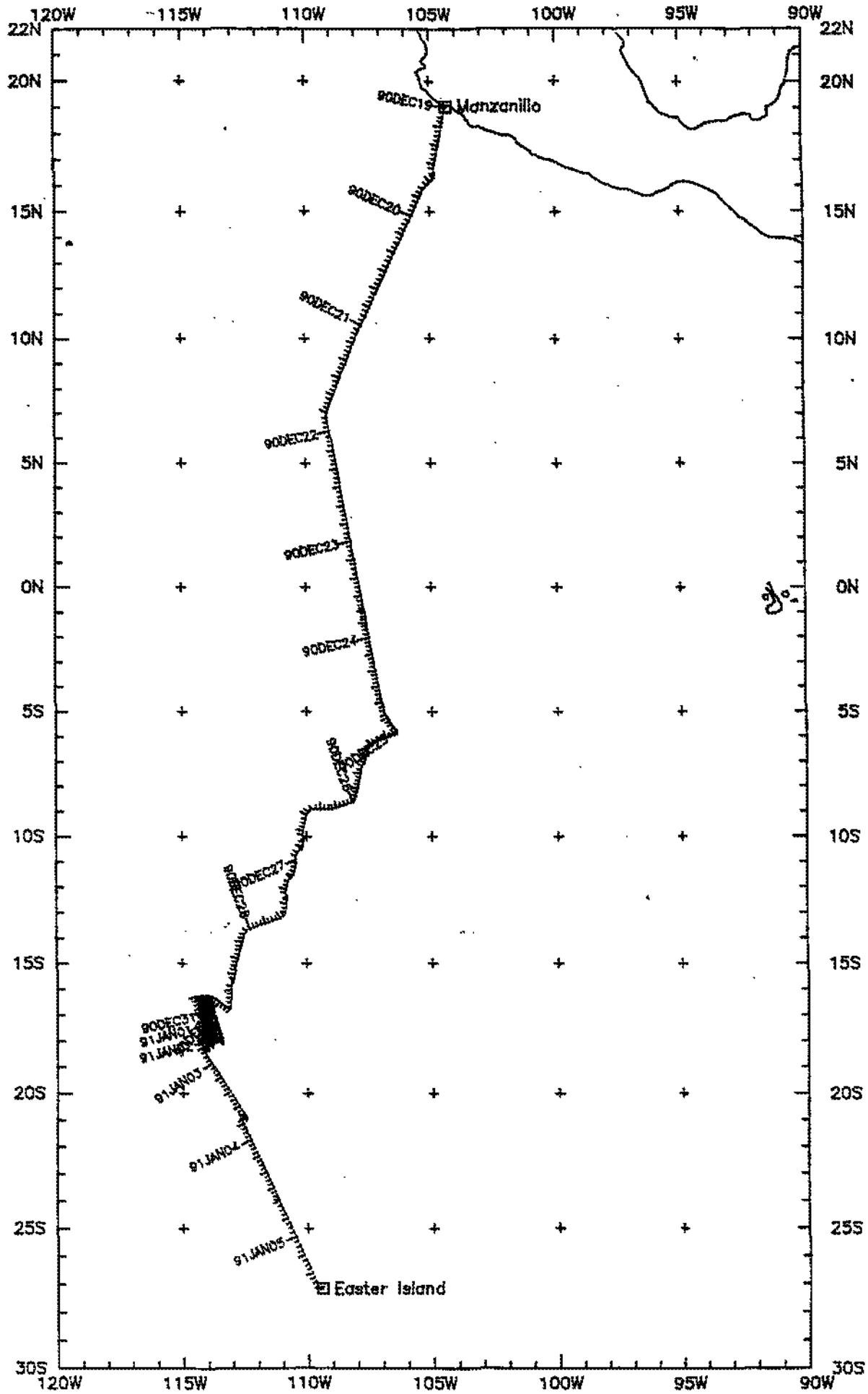
Revised October 1986



RAPA EXPEDITION LEG 2

CHIEF SCIENTIST:
Don Forsyth (Brown University)
PORTS: Manzanillo, Mexico - Easter Island
DATES: 18 December 1990 - 5 January 1991
SHIP: R/V T. Washington

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED
1) Cruise - 4249 miles
2) Bathymetry - 4239 miles
3) Magnetics - 3799 miles
4) Seismic Reflection - none collected
5) Gravity - 4249 miles
6) Sea Beam - 4239 miles
7) Sea Marc - 2545 miles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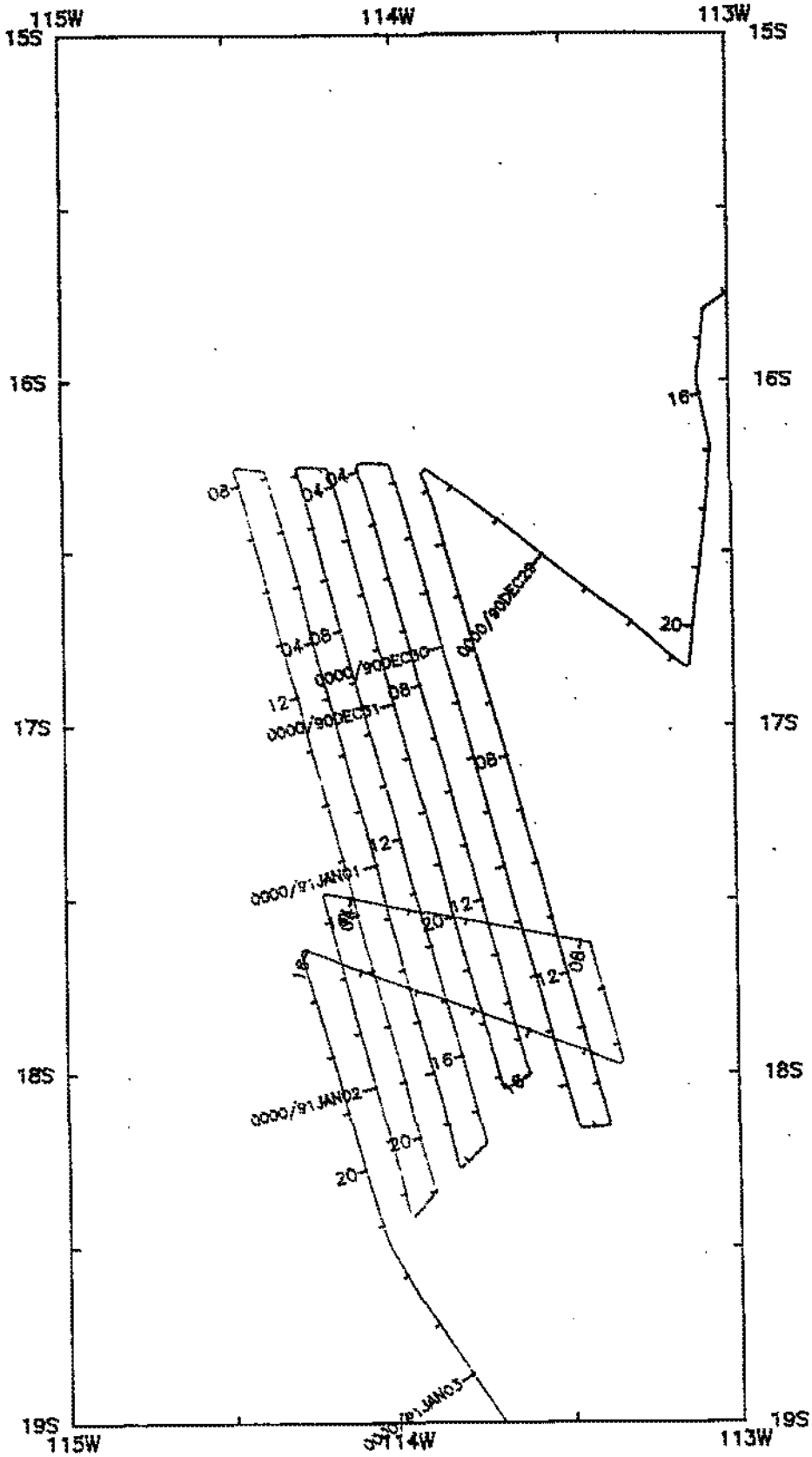
Easter Island



RAPA LEG 2 (RAPA02WT)
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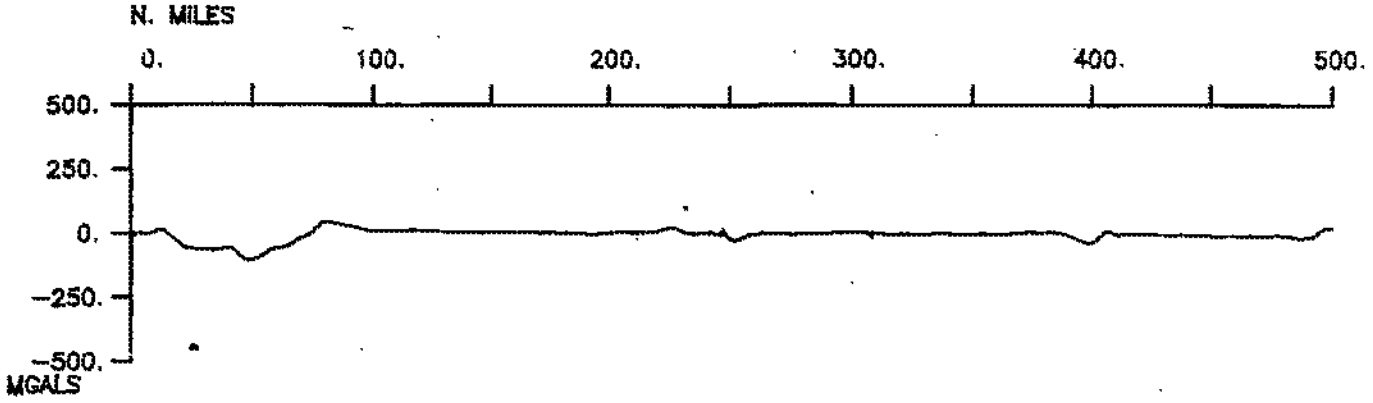
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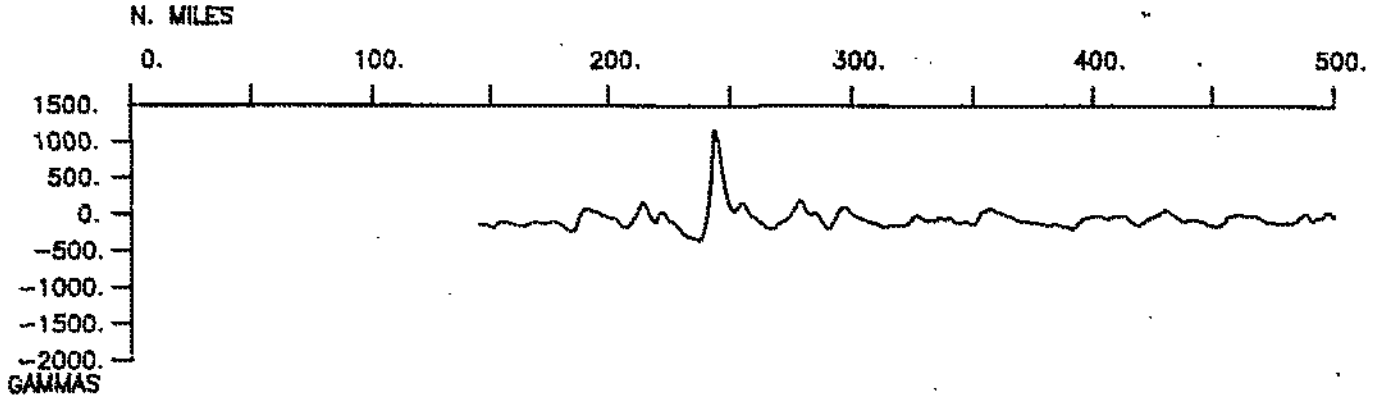
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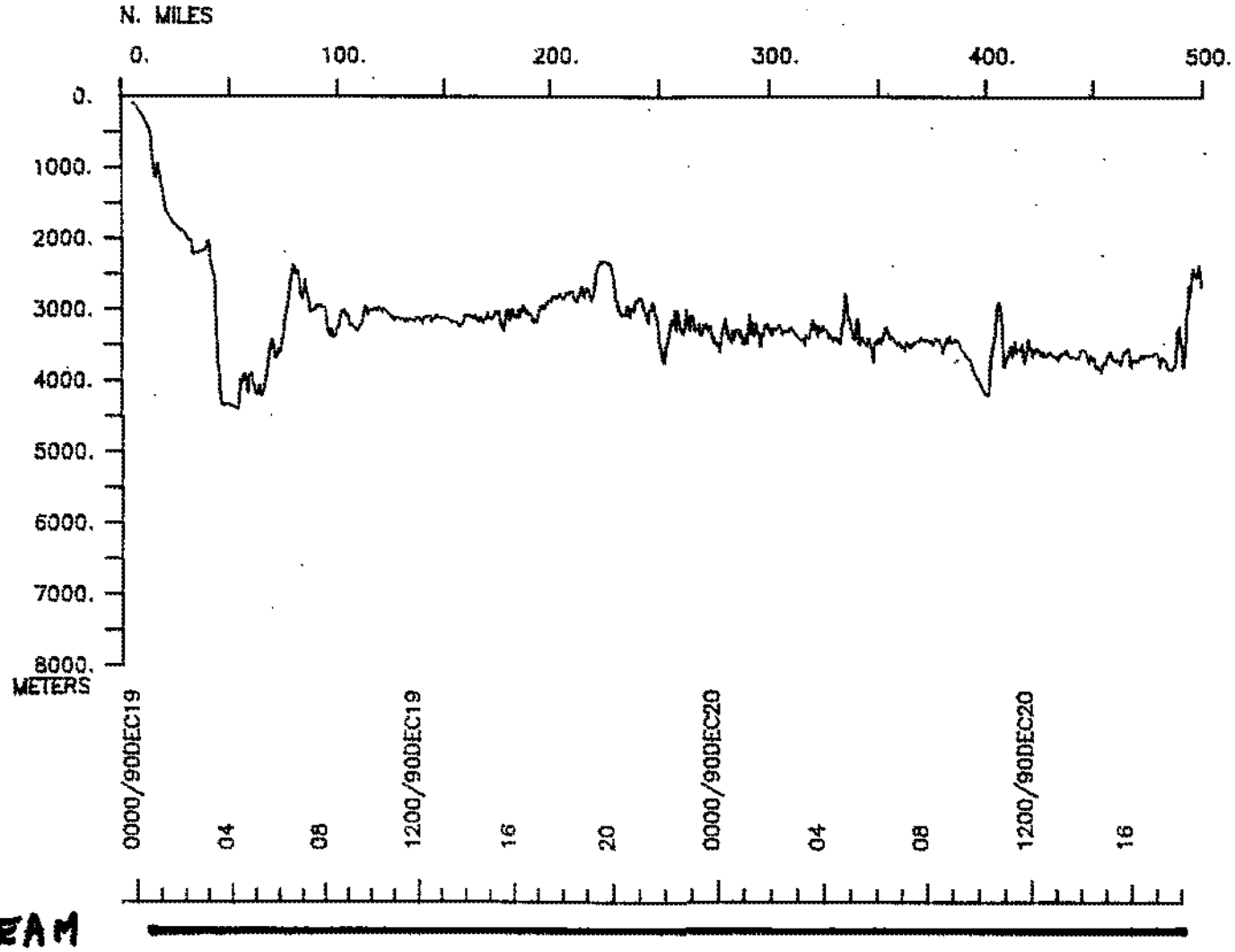
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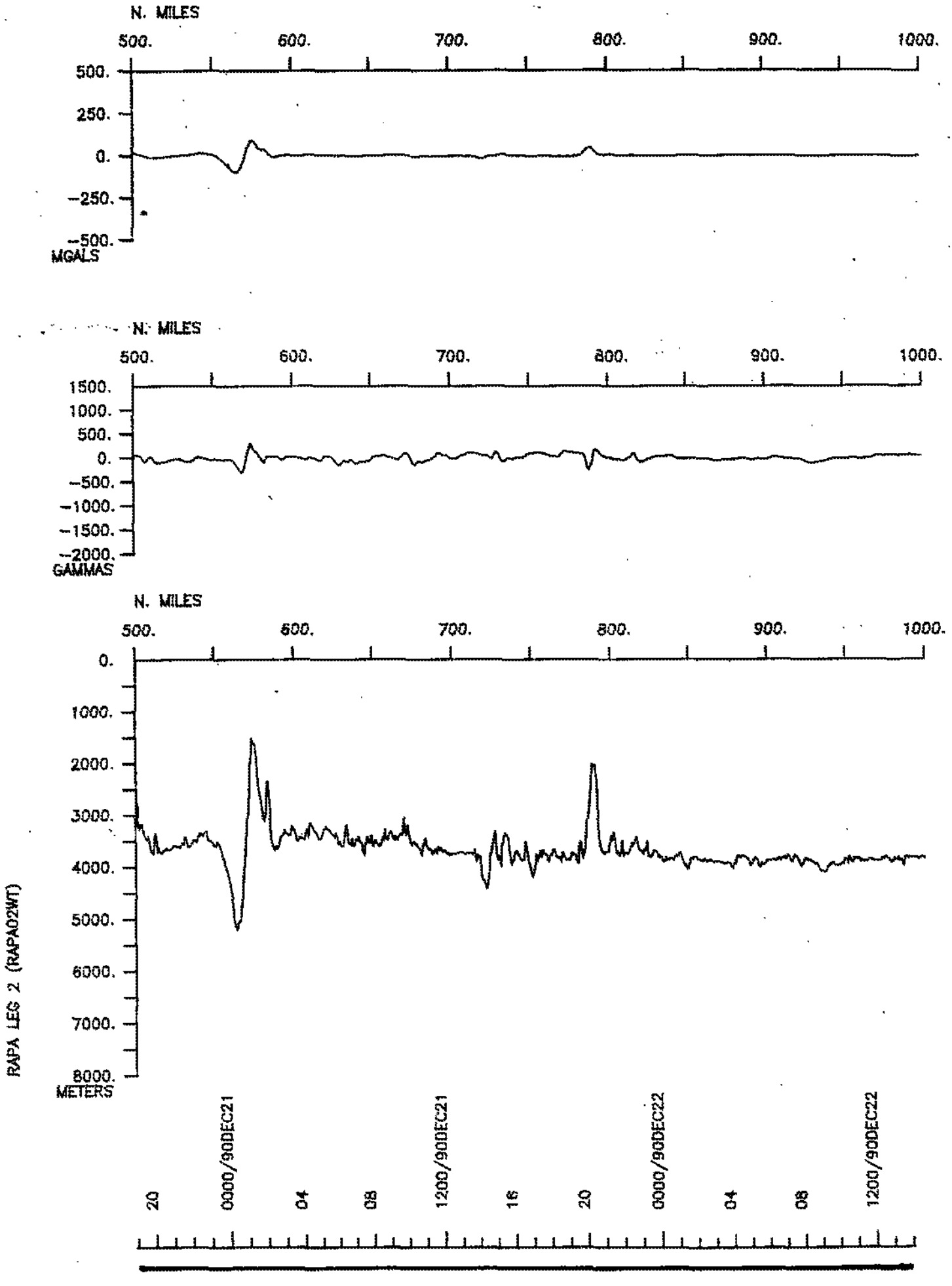
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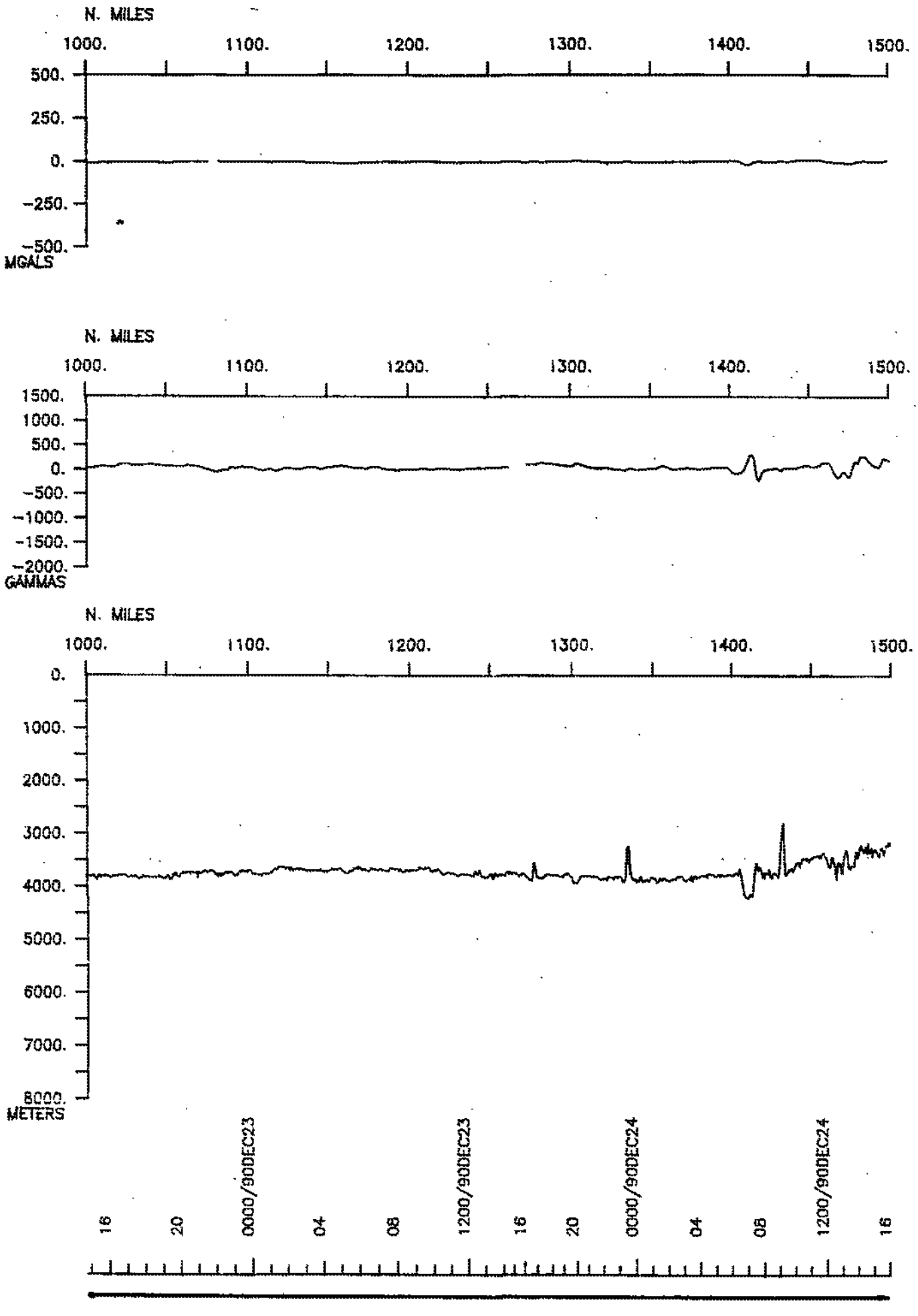
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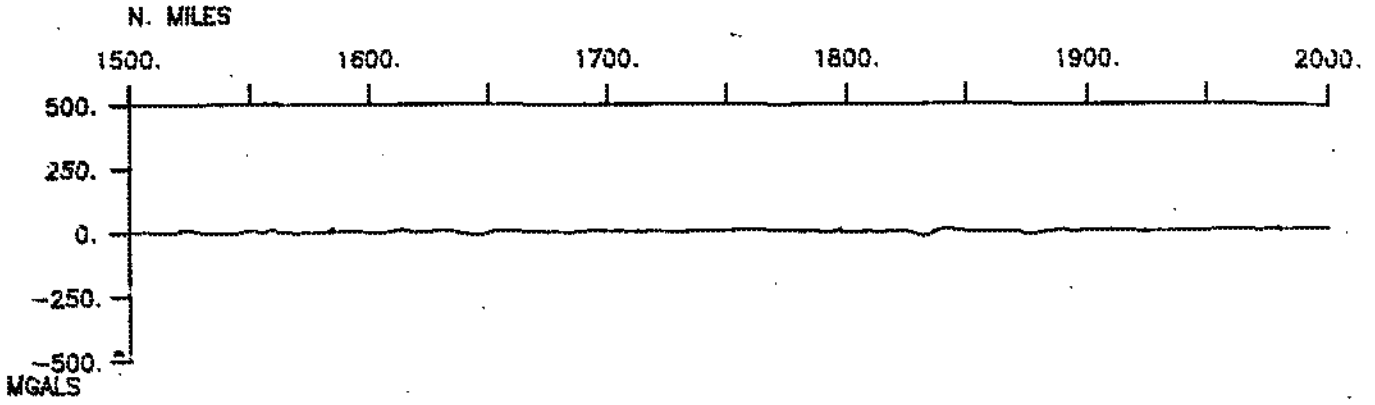
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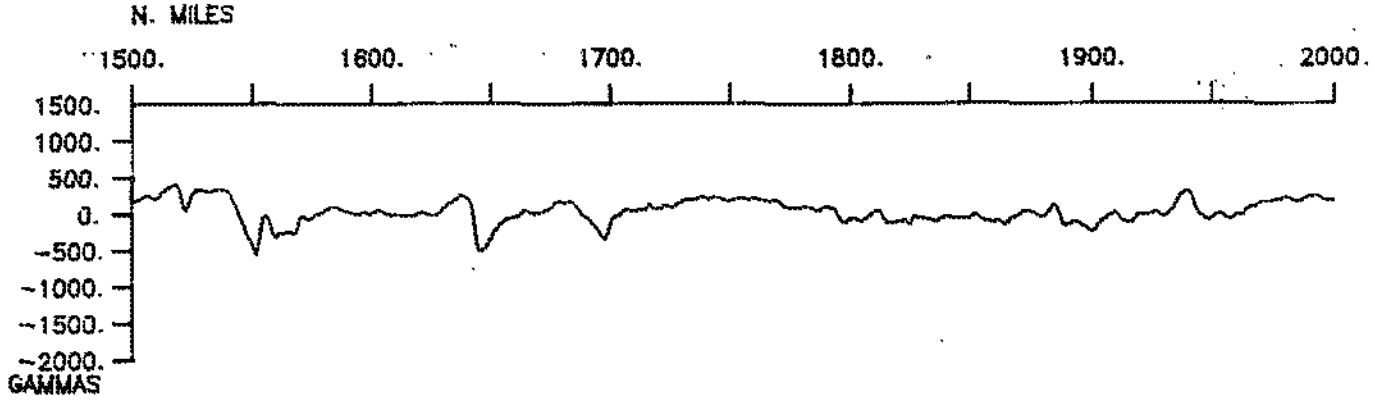
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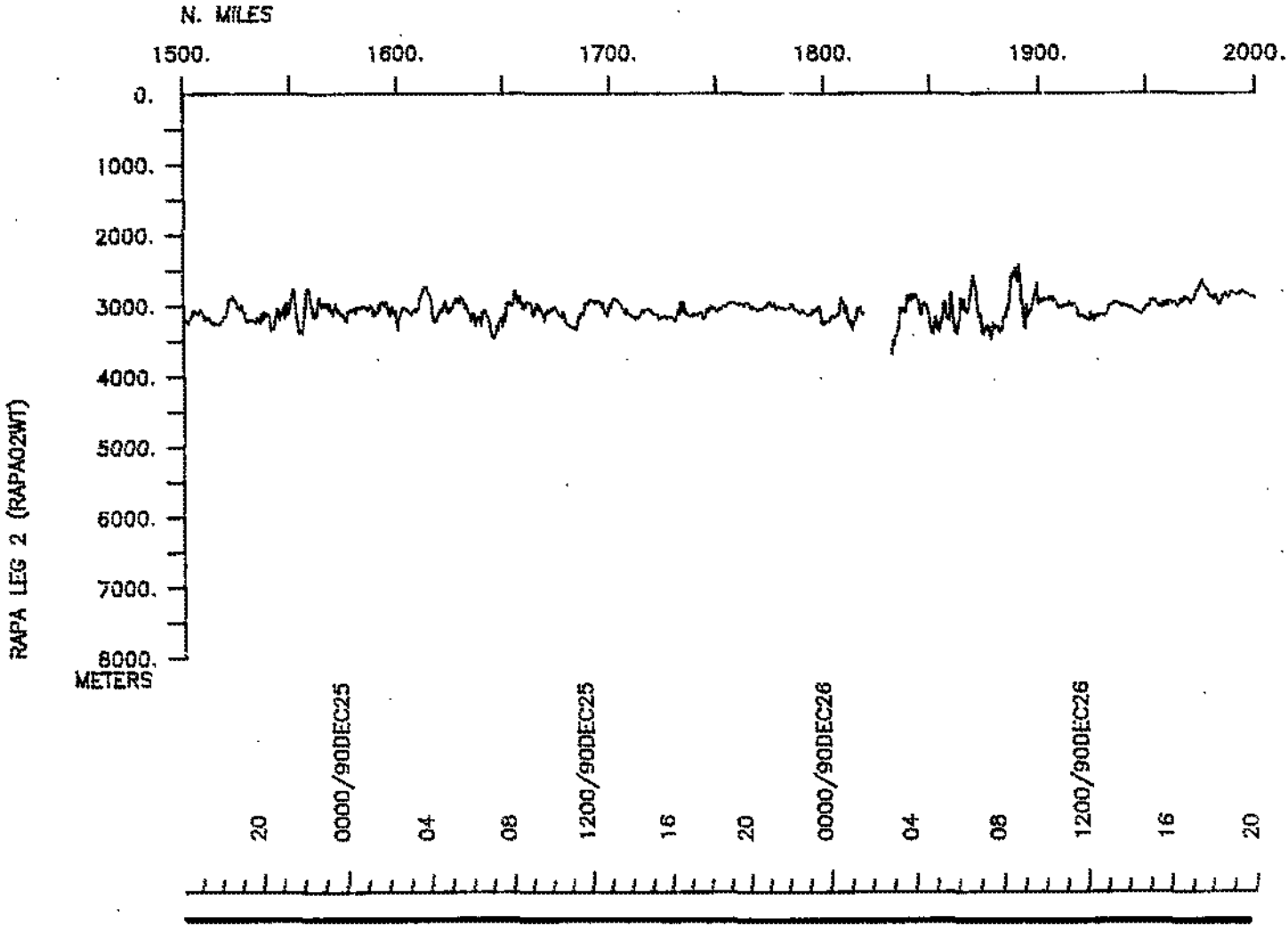
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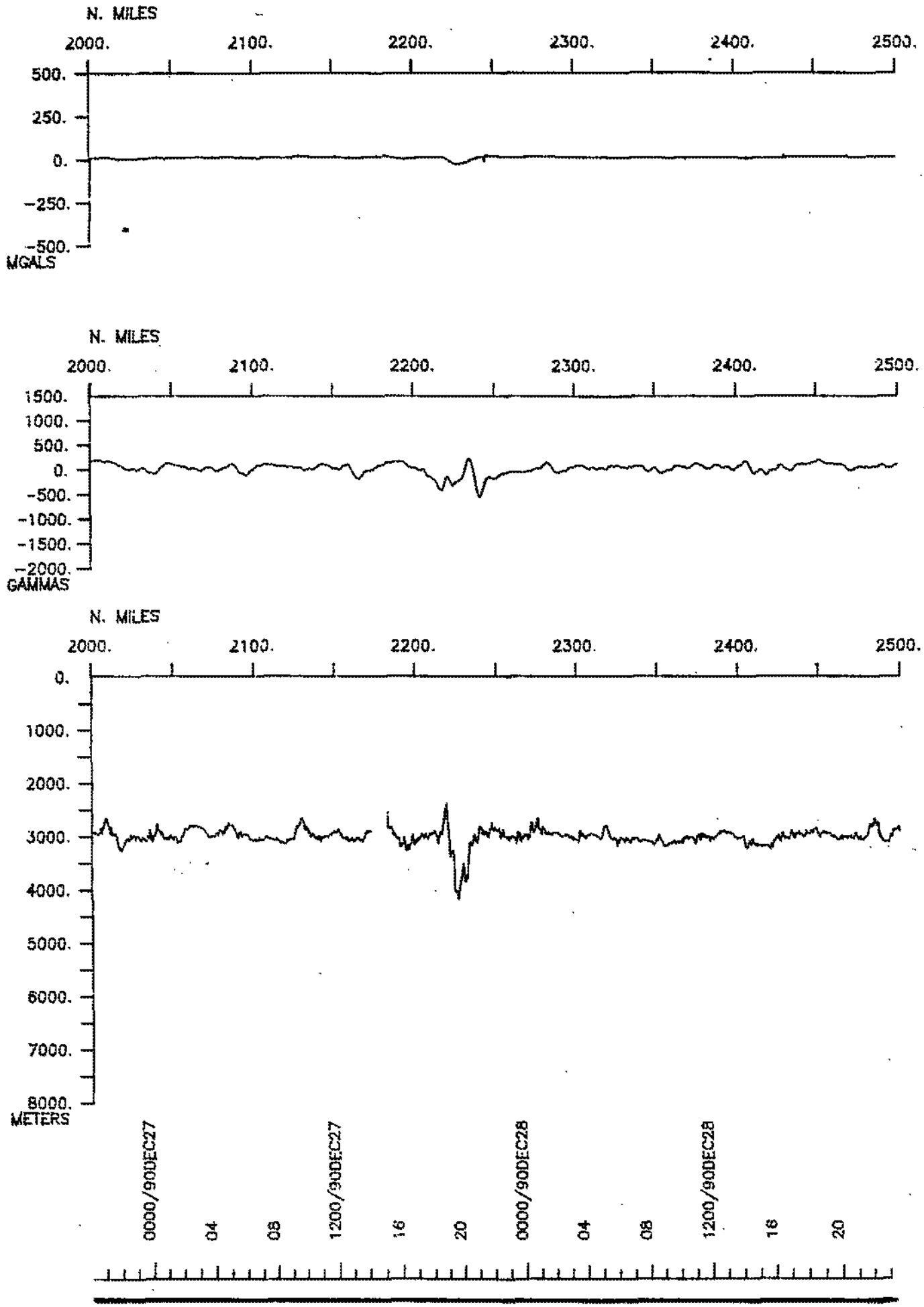
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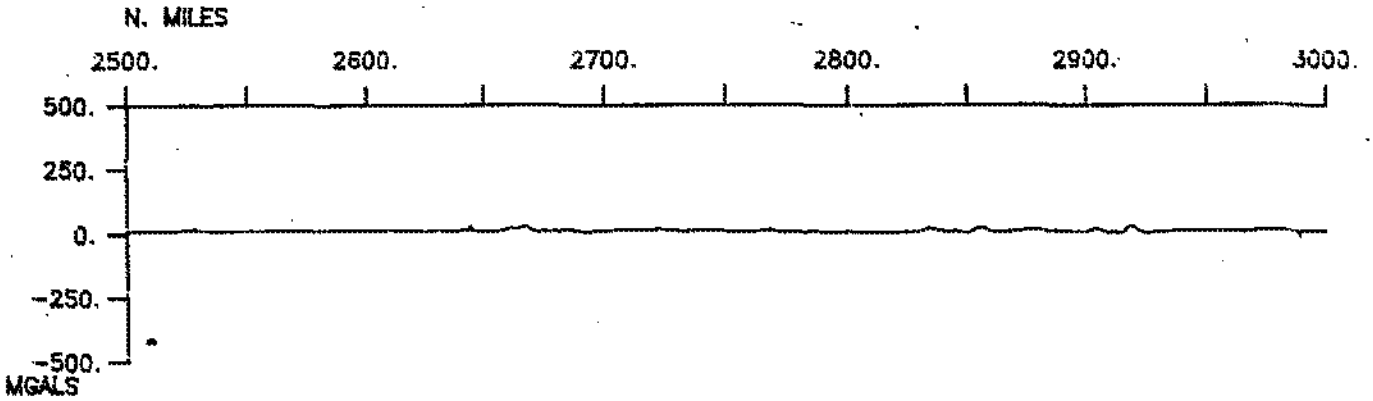

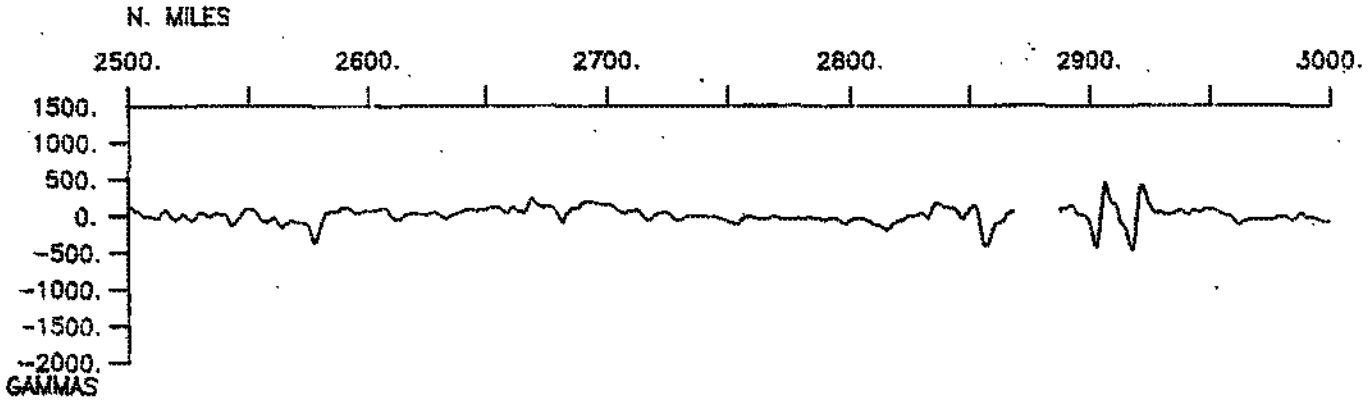

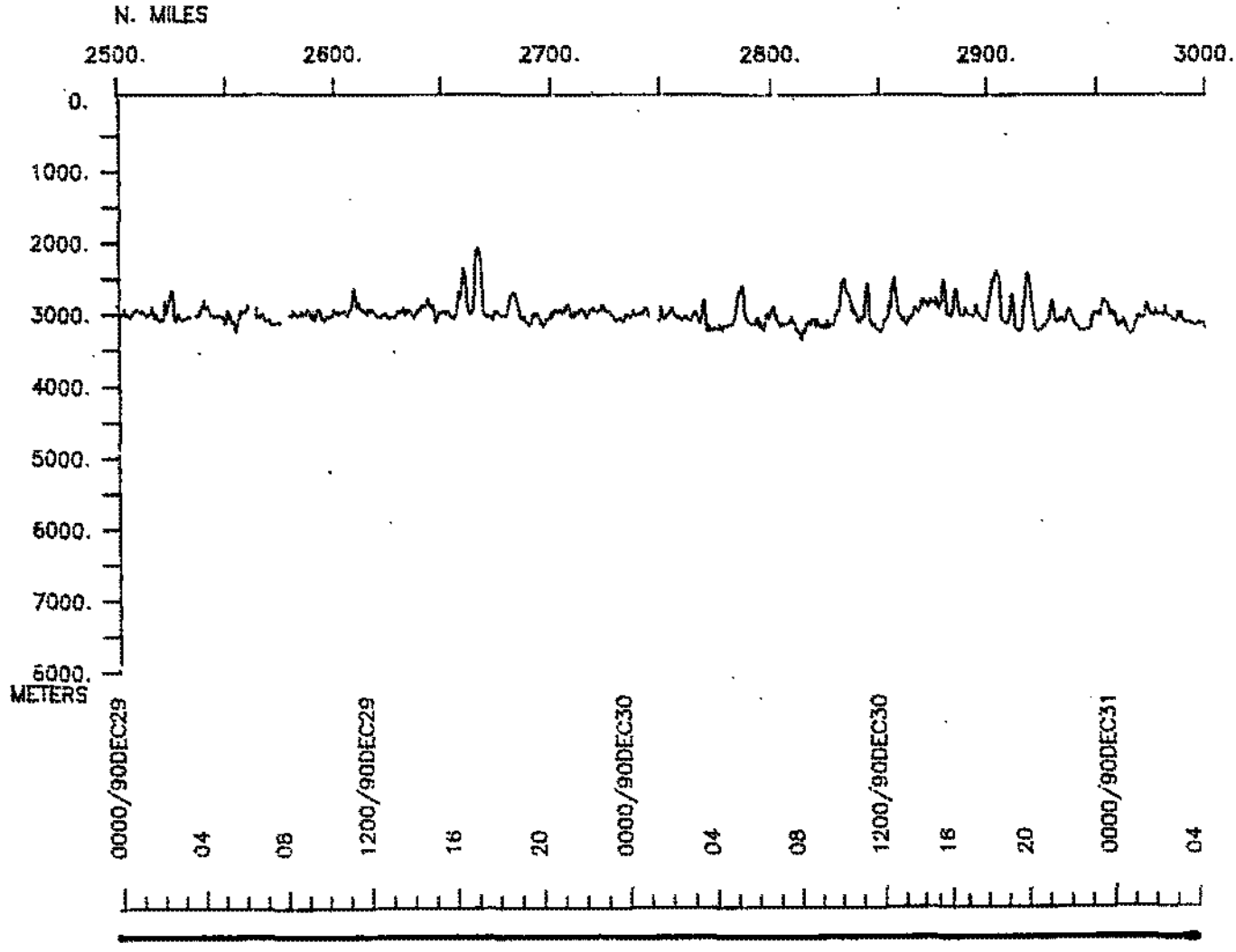

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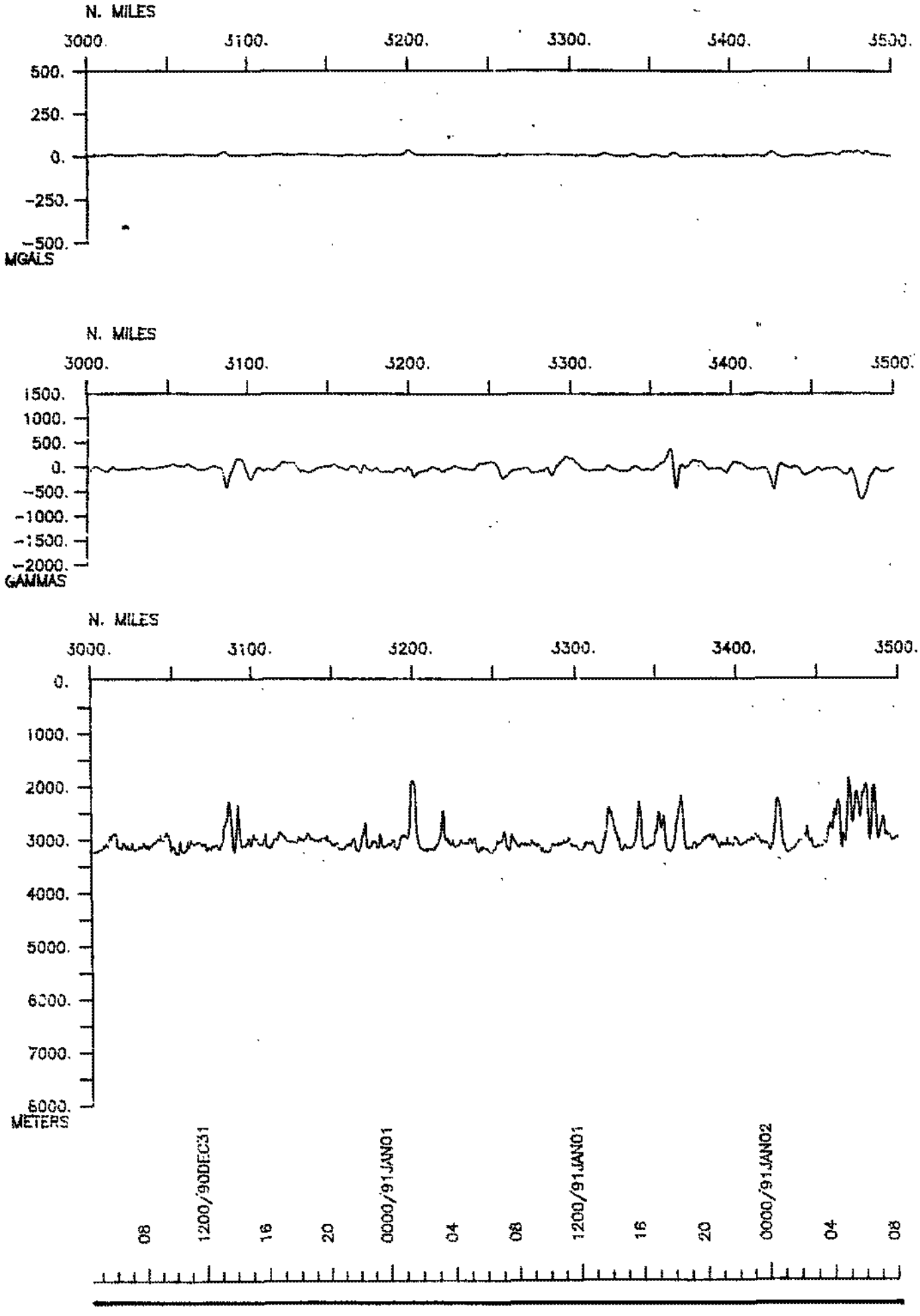
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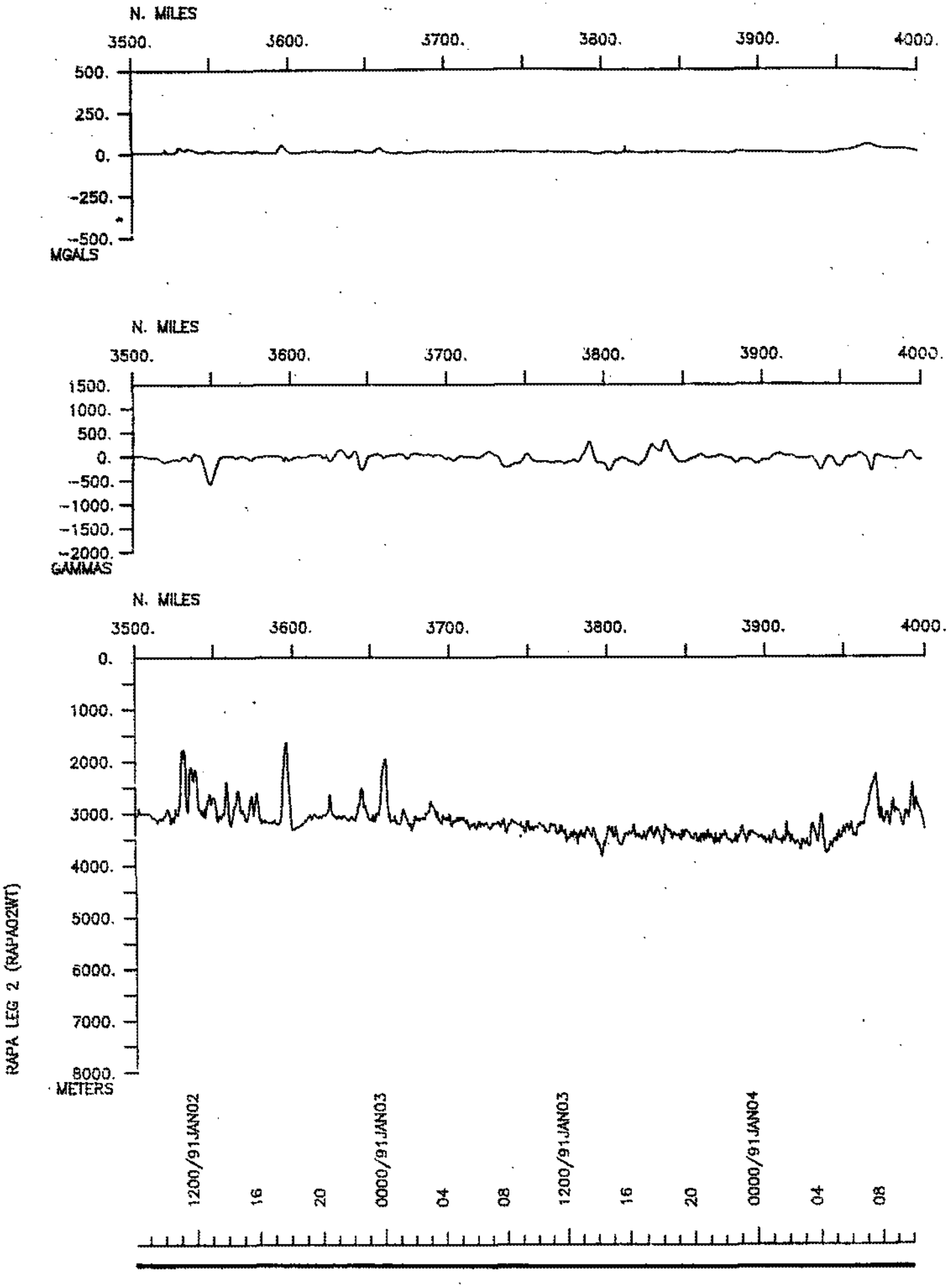
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METERS
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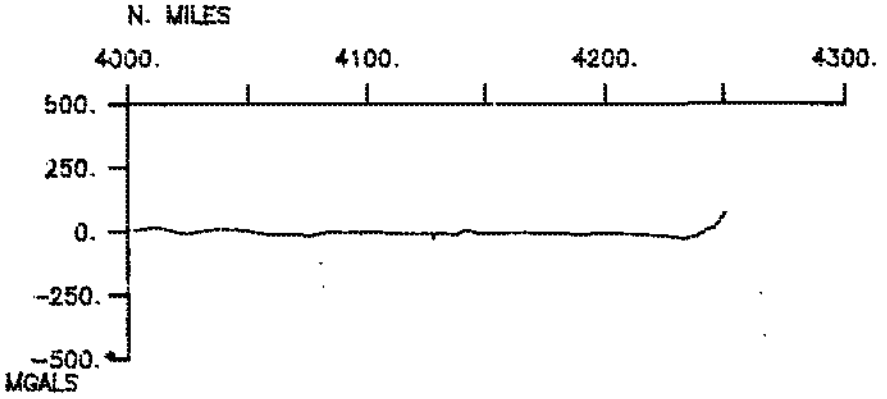
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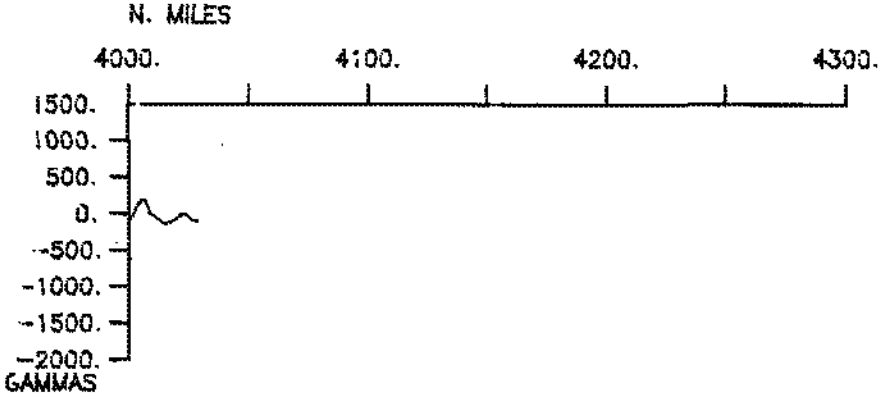
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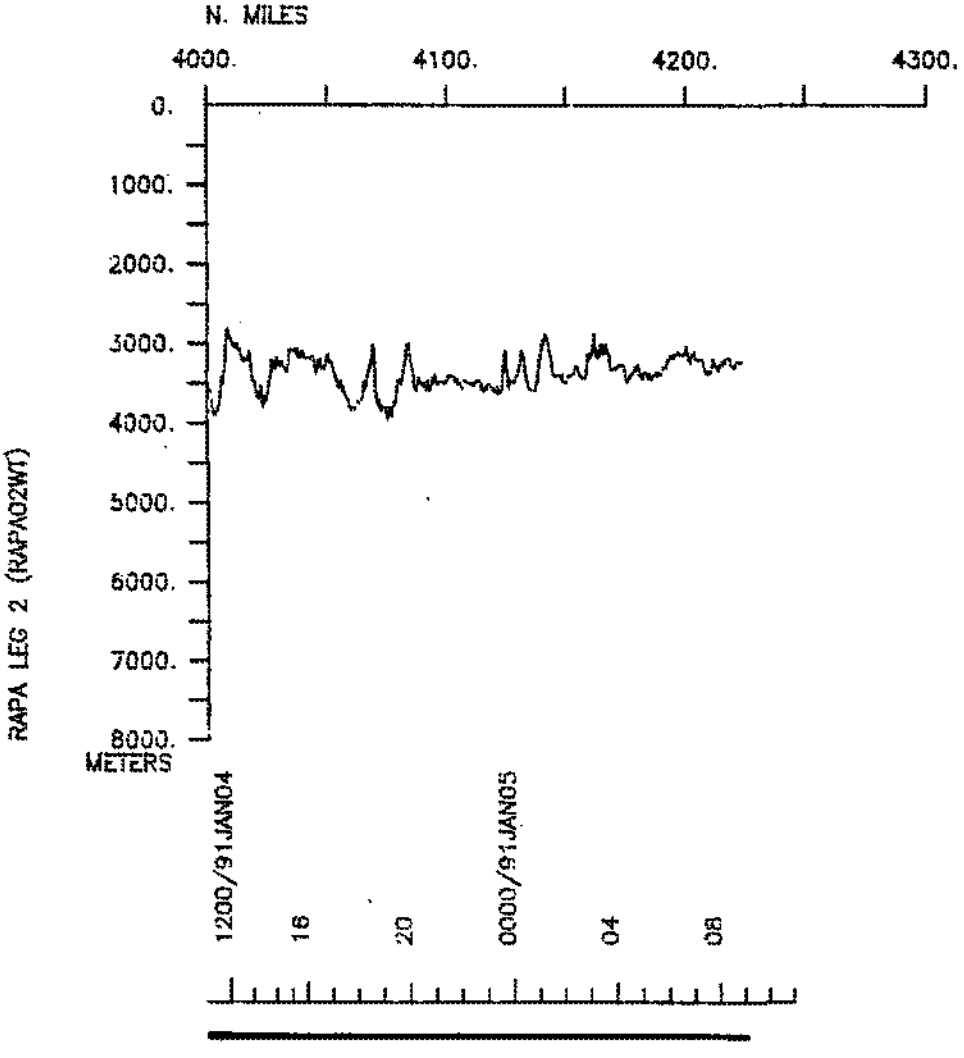
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RAPA LEG 2 (RAPA02WT)
1200/91JAN04
16
20
0000/91JAN05
04
08

S.I.O. SAMPLE INDEX

(Issued April 1991)

RAPA EXPEDITION

Leg 2

R/V T. Washington

Manzanillo, Mexico (18 December 1990)
to
Easter Island (5 January 1991)

Chief Scientist:

Don Forsyth (Brown University)

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 ***

```
2200 181290     *    LGPT B MANZANILLO, MEXICO          19-03 N 104-20 W fRAPA02WT
1300 050191          LGPT E EASTER ISLAND               27-09 N 109-27 W fRAPA02WT
```

#*** PERSONNEL ***

	NAME	***TITLE***	***AFFILIATION***	**CRID**
PECS SIX	FORSYTH,D.	CHIEF SCIENTIST	BROWN UNIVERSITY	RAPA02WT
PEVL MPL	ARANCIO,R.A.	STAFF VOLUNTEER	SCRIPPS INSTITUTION	RAPA02WT
PEBO MPL	BOBIBTT,A.	SEA BEAM OPERATOR	SCRIPPS INSTITUTION	RAPA02WT
PECT STS	CHARTERS,J.	COMPUTER TECH	SCRIPPS INSTITUTION	RAPA02WT
PESP UHI	ERICKSON,J.	SEAMARC ENGINEER	UNIV. OF HAWAII	RAPA02WT
PEBE STS	JAIN,J.	SEA BEAM ENG.	SCRIPPS INSTITUTION	RAPA02WT
PERT STS	PILLARD,E.	RESIDENT TECH	SCRIPPS INSTITUTION	RAPA02WT
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PEST SIX	WEST,B.	STUDENT	BROWN UNIVERSITY	RAPA02WT
PESP UHI	VALENCIANO,M.	SEAMARC TECH.	UNIV. OF HAWAII	RAPA02WT

#*** 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 #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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#*** LOG BOOKS ***						
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1300 050191	LBUW E	UNDERWAY WATCH LOG	GDC	27-105S	109-302W	sRAPA02WT
2315 181290	LBSC B	SCIENCE LOG BOOK	UCS	19-034N	104-190W	sRAPA02WT
0900 050191	LBSC E	SCIENCE LOG BOOK	UCS	26-461S	109-424W	sRAPA02WT
1537 231290	LBUW B	SEAMARC LOG BOOK	UHI	0-520S	107-409W	sRAPA02WT
1447 040191	LBUW E	SEAMARC LOG BOOK	UHI	23-533S	111-092W	sRAPA02WT
#*** ECHO SOUNDER RECORDS ***						
2350 181290	MBRM B	SEABEAM MONITOR R-01	GDC	19-021N	104-225W	sRAPA02WT
0521 271290	MBRM E	SEABEAM MONITOR R-01	GDC	11-424S	110-422W	sRAPA02WT
0526 271290	MBRM B	SEABEAM MONITOR R-02	GDC	11-430S	110-428W	sRAPA02WT
0900 050191	MBRM E	SEABEAM MONITOR R-02	GDC	26-461S	109-424W	sRAPA02WT
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1044 211290	DPR3 E	3.5 KHZ R-01	GDC	8-399N	108-319W	sRAPA02WT
1055 211290	DPR3 B	3.5 KHZ R-02	GDC	8-381N	108-328W	sRAPA02WT
0545 301290	DPR3 E	3.5 KHZ R-02	GDC	16-319S	114-016W	sRAPA02WT

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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1856 201290	MBSB B	SEABEAM SWATH BK 02	GDC	11-259N	107-201W	sRAPA02WT
1417 231290	MBSB E	SEABEAM SWATH BK 02	GDC	0-454S	107-429W	sRAPA02WT
1417 231290	MBSB B	SEABEAM SWATH BK 03	GDC	0-454S	107-429W	sRAPA02WT
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1354 030191	MBSB E	SEABEAM SWATH BK 05	GDC	20-447S	112-310W	sRAPA02WT
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0900 050191	MBSB E	SEABEAM SWATH BK 06	GDC	26-461S	109-424W	sRAPA02WT
#*** MAGNETIC (EARTH TOTAL FIELD) RECORDS ***						
1300 191290	MGRA B	MAGNETICS R-01	GDC	16-416N	104-500W	sRAPA02WT
0424 311290	MGRA E	MAGNETICS R-01	GDC	16-151S	114-124W	sRAPA02WT
0433 311290	MGRA B	MAGNETICS R-02	GDC	16-150S	114-139W	sRAPA02WT
1400 040191	MGRA E	MAGNETICS R-02	GDC	23-486S	111-116W	sRAPA02WT
#*** SEA MARC II SIDE SCAN RECORDS ***						
1549 231290	DPSM B	SEAMARC MULTIPLE	UHI	0-533S	107-405W	sRAPA02WT
0430 291290	DPSM E	SIDESCAN RECORD -01	UHI	16-331S	113-500W	sRAPA02WT
0435 291290	DPSM B	SEAMARC MULTIPLE	UHI	16-339S	113-498W	sRAPA02WT
1447 040191	DPSM E	SIDESCAN RECORD -02	UHI	23-533S	111-092W	sRAPA02WT
1549 231290	DPSM B	SEAMARC REALTIME	UHI	0-533S	107-405W	sRAPA02WT
1447 040191	DPSM E	RAW DATA RECORD -01	UHI	23-533S	111-092W	sRAPA02WT

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** THERMOGRAPH RECORDS ***						
2200 181290	TGRC B	THERMOGRAPH RECORDS	GDC	19-034N	104-190W	sRAPA02WT
1300 050191	TGRC E	THERMOGRAPH RECORDS	GDC	27-105S	109-302W	sRAPA02WT
#*** CONTINUOUS COMPUTER LOGGED GRAVITY ***						
2200 181290	GVCR B	GRAVITY DATA	GDC	19-034N	104-190W	sRAPA02WT
1300 050191	GVCR E	GRAVITY DATA	GDC	27-105S	109-302W	sRAPA02WT
#*** EXPENDABLE BATHYTHERMOGRAPH RECORDS ***						
2058 191290	BTXP	XBT 0001 PROBE T-6	GDC	15-231N	105-306W	sRAPA02WT
2032 201290	BTXP	XBT 0002 PROBE T-6	GDC	11-086N	107-278W	sRAPA02WT
1810 211290	BTXP	XBT 0003 PROBE T-6	GDC	7-215N	109-012W	sRAPA02WT
2020 221290	BTXP	XBT 0004 PROBE T-6	GDC	2-300N	108-192W	sRAPA02WT
1944 231290	BTXP	XBT 0005 PROBE T-6	GDC	1-235S	107-357W	sRAPA02WT
1410 251290	BTXP	XBT 0006 PROBE T-6	GDC	7-131S	107-480W	sRAPA02WT
1422 251290	BTXP	XBT 0007 PROBE T-6	GDC	7-148S	107-489W	sRAPA02WT
1605 261290	BTXP	XBT 0008 PROBE T-6	GDC	9-479S	110-095W	sRAPA02WT
1617 271290	BTXP	XBT 0009 PROBE T-6	GDC	13-152S	111-075W	sRAPA02WT
1720 281290	BTXP	XBT 0010 PROBE T-6	GDC	16-159S	113-039W	sRAPA02WT
1732 281290	BTXP	XBT 0011 PROBE T-6	GDC	16-180S	113-042W	sRAPA02WT
1438 311290	BTXP	XBT 0012 PROBE T-6	GDC	17-441S	113-528W	sRAPA02WT
1513 030191	BTXP	XBT 0013 PROBE T-6	GDC	20-556S	112-235W	sRAPA02WT
#		END SAMPLE INDEX				RAPA02WT