INFORMAL REPORT AND INDEX OF

NAVIGATION, DEPTH, MAGNETIC AND SUBBOTTOM PROFILER DATA

RAPA EXPEDITION

LEG 1

R/V Thomas Washington

(Issued January 1991)

San Diego, California (15 November 1990)
to
Manzanillo, Mexico (15 December 1990)

Chief Scientist:

Ken Macdonald (University of California Santa Barbara)

Resident Marine Technician - Ron Comer

Sea Beam/Underway Data Processor - Stuart Smith (GDC)

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:
ONR Grant Number 1291

GDC Cruise I.D.# 351

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.

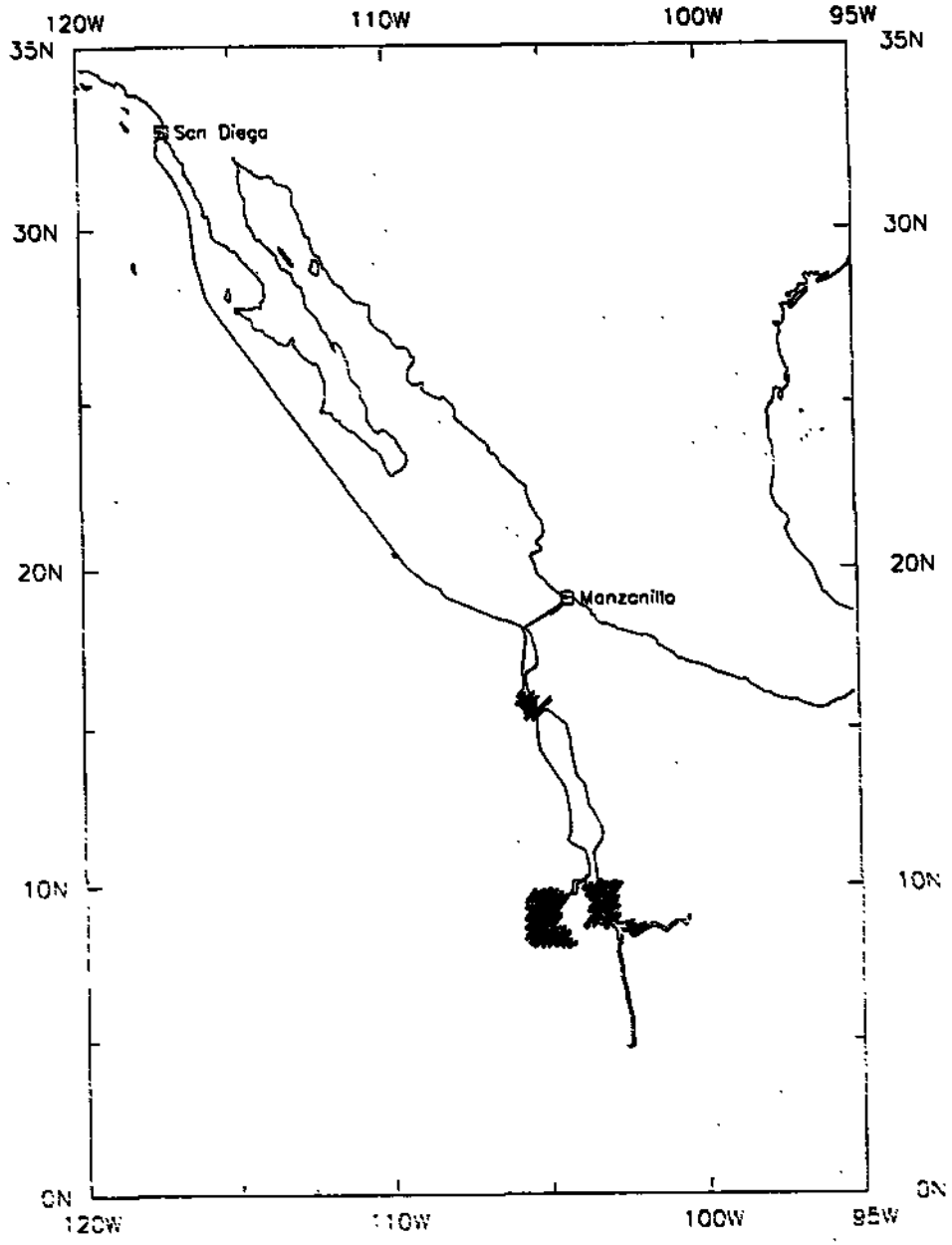
2) Microfilm (35mm flowfilm) containing swath books plus, for some cruises, the Sea Beam monitor record and navigation list.

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).

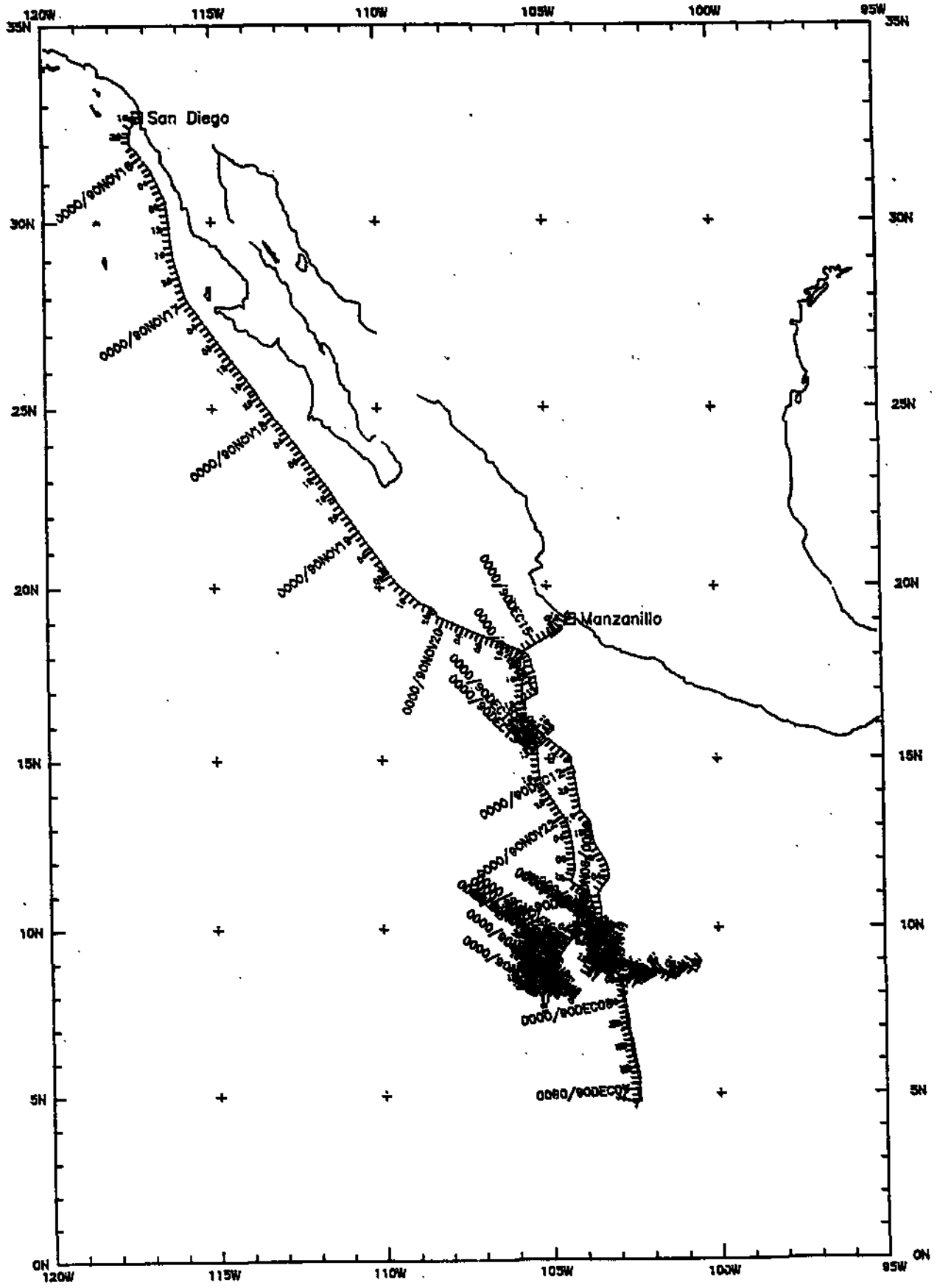
Revised October 1986



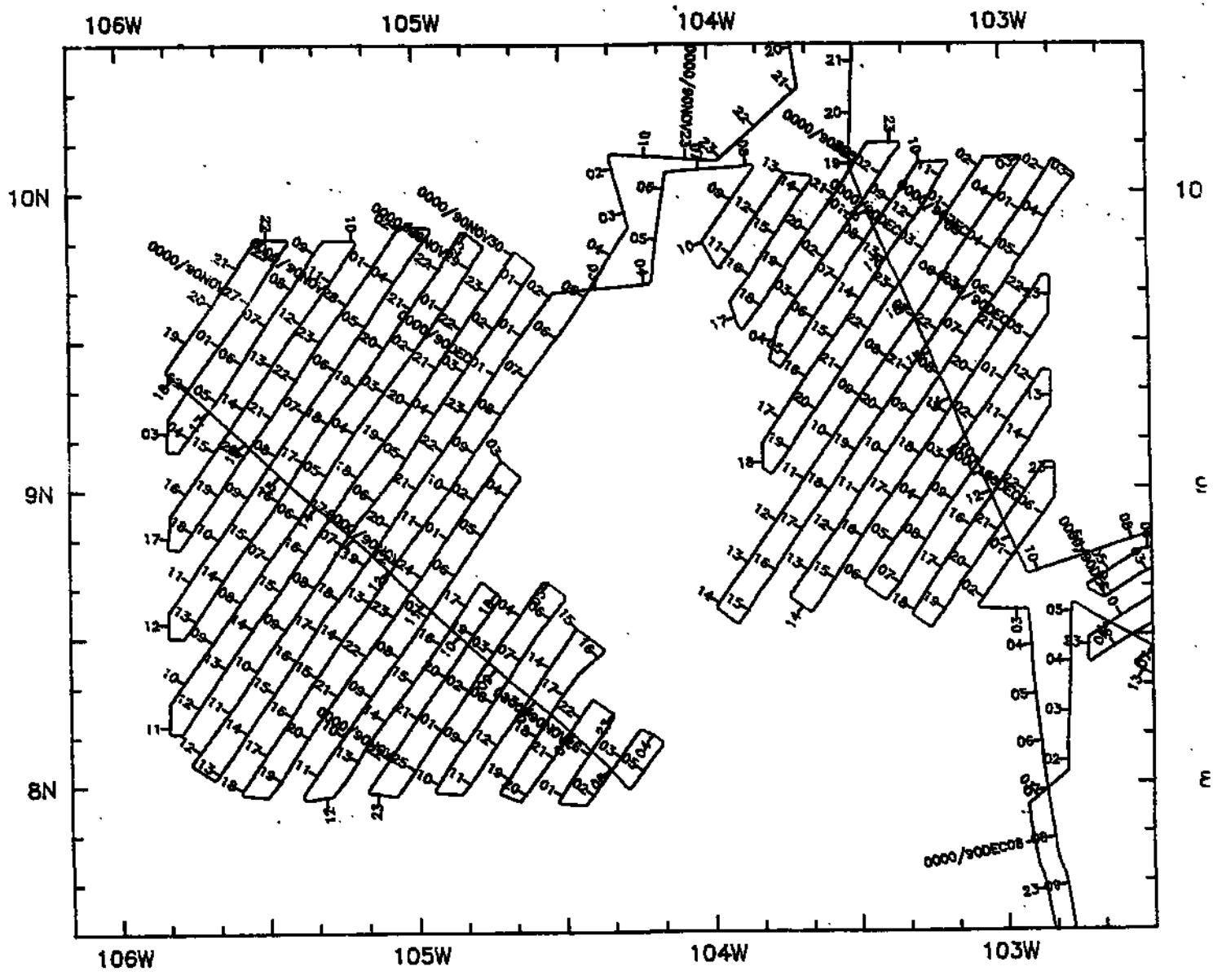
RAPA EXPEDITION LEG 1

CHIEF SCIENTIST:
Ken Macdonald (University of California at Santa Barbara)
PORTS: San Diego, Calif. - Manzanillo, Mexico
DATES: 15 November - 15 December 1990
SHIP: R/V T. Washington

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED
1) Cruise - 7090 miles
2) Bathymetry - 7060 miles
3) Magnetics - 6820 miles
4) Seismic Reflection - none collected
5) Gravity - 7065 miles
6) Sea Beam - 7060 miles
7) Sea Marc - 6406 miles



RAPA Expedition Leg 1
(RAPA01WT)



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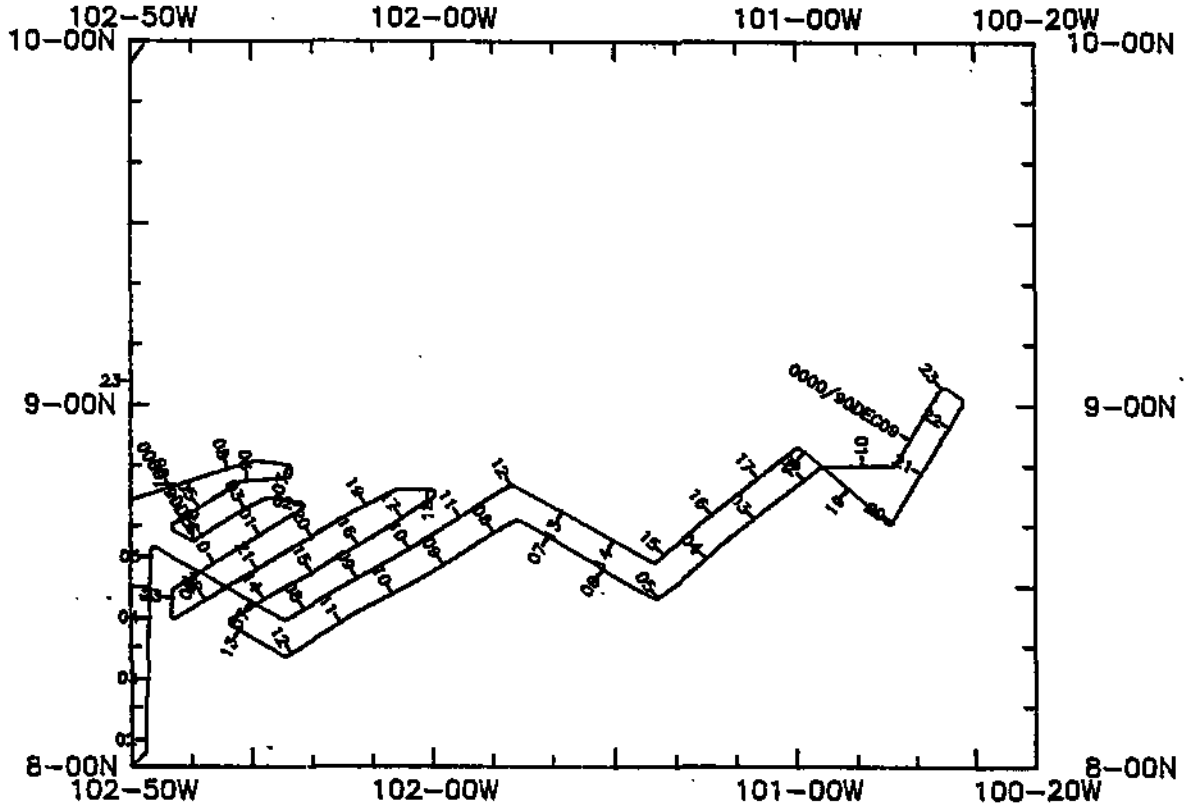

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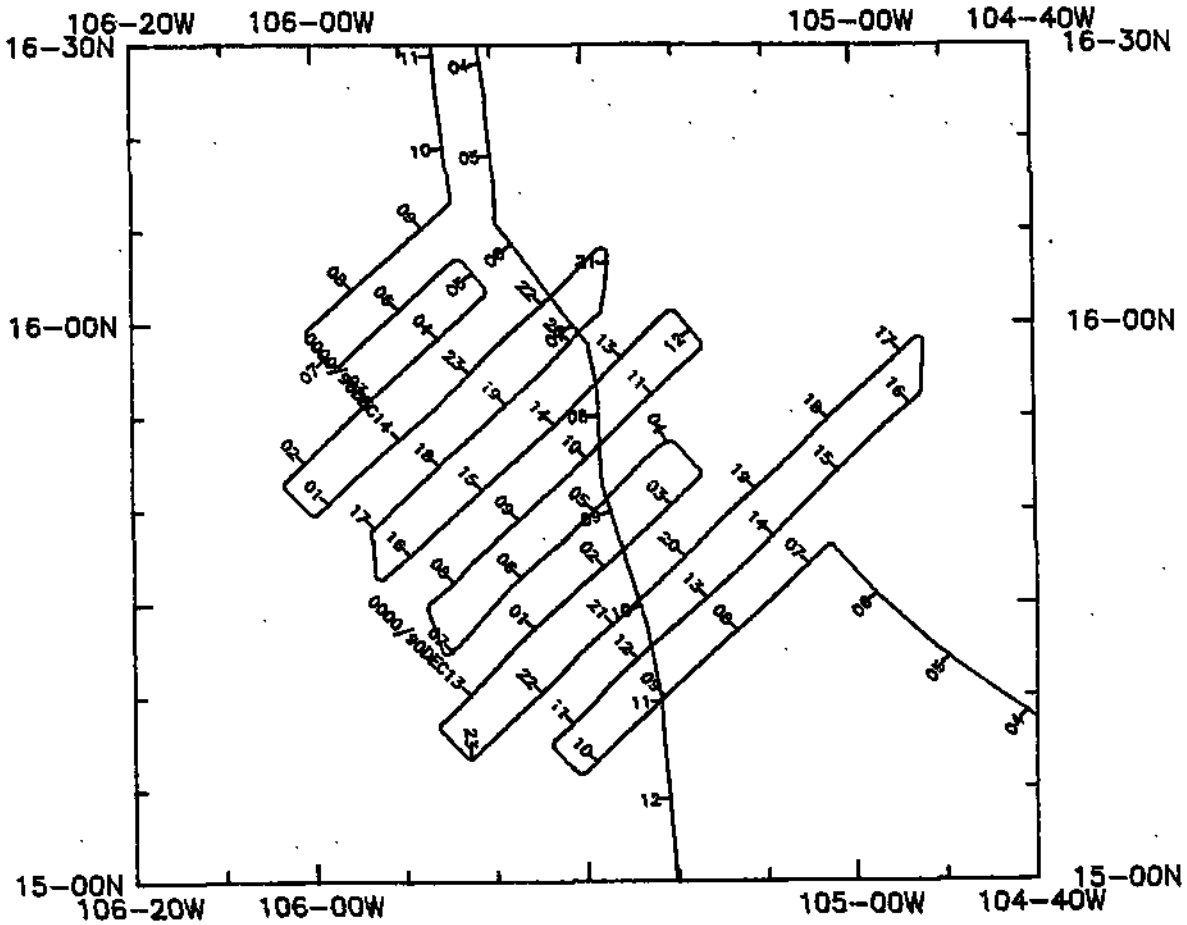

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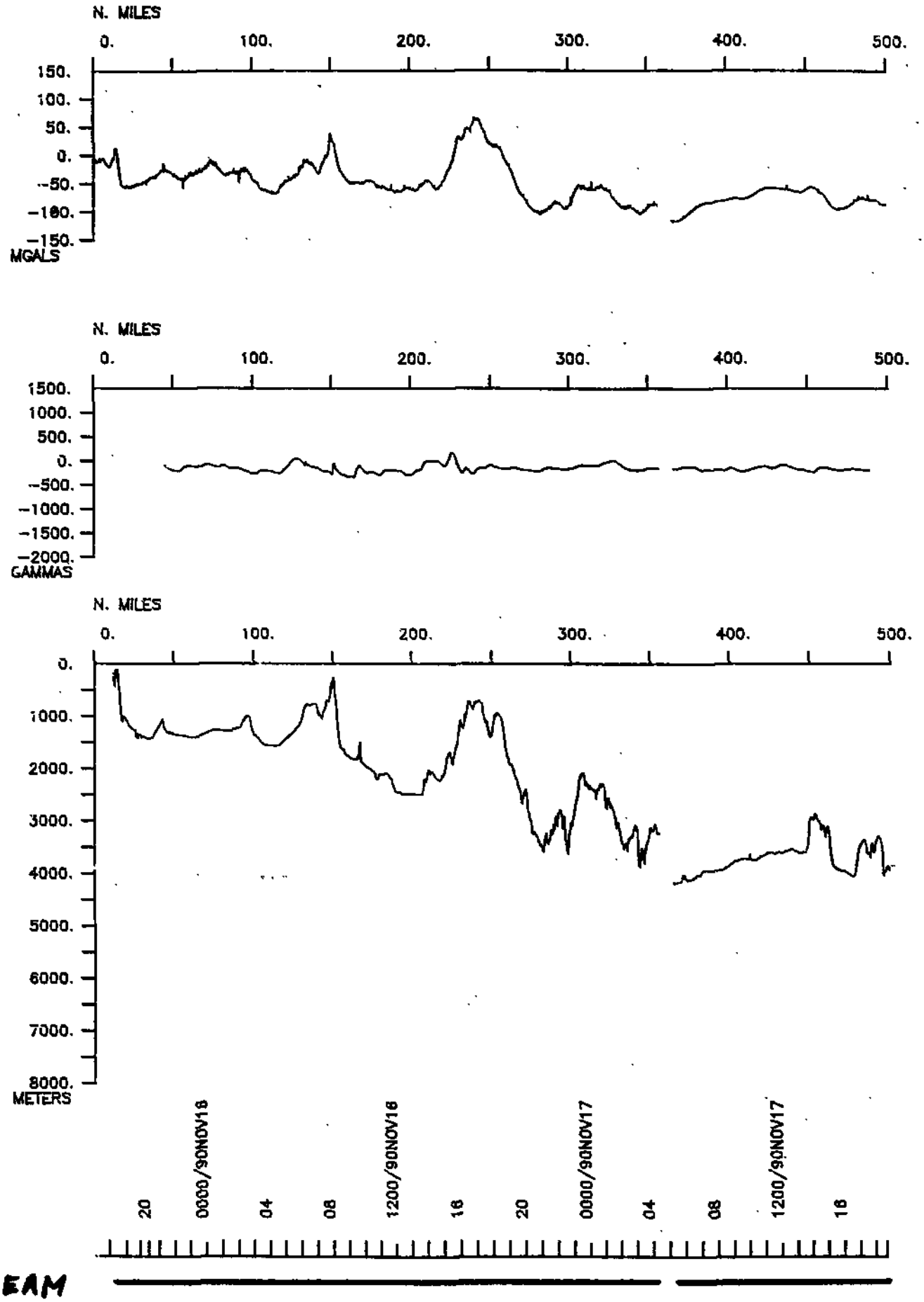
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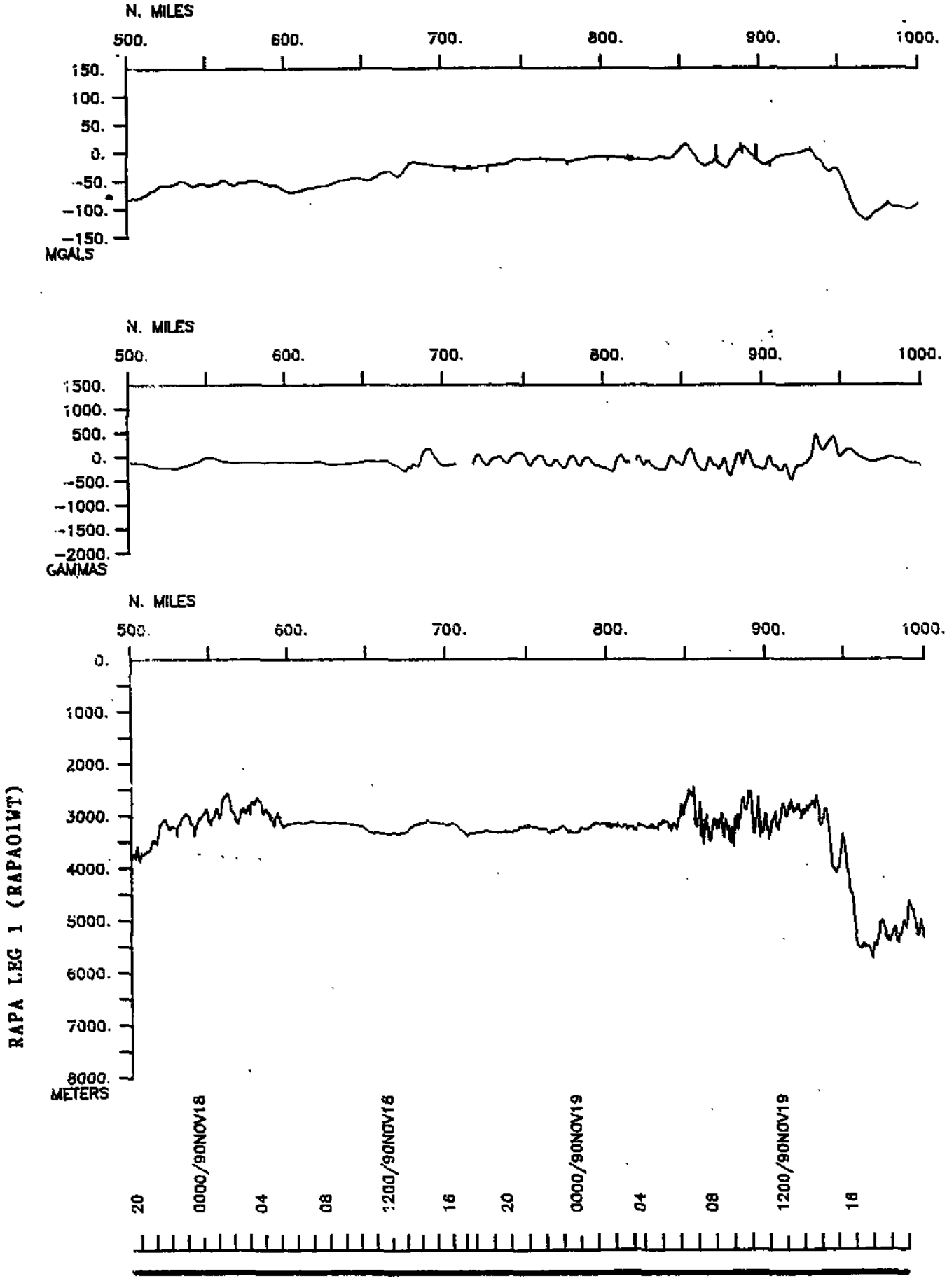
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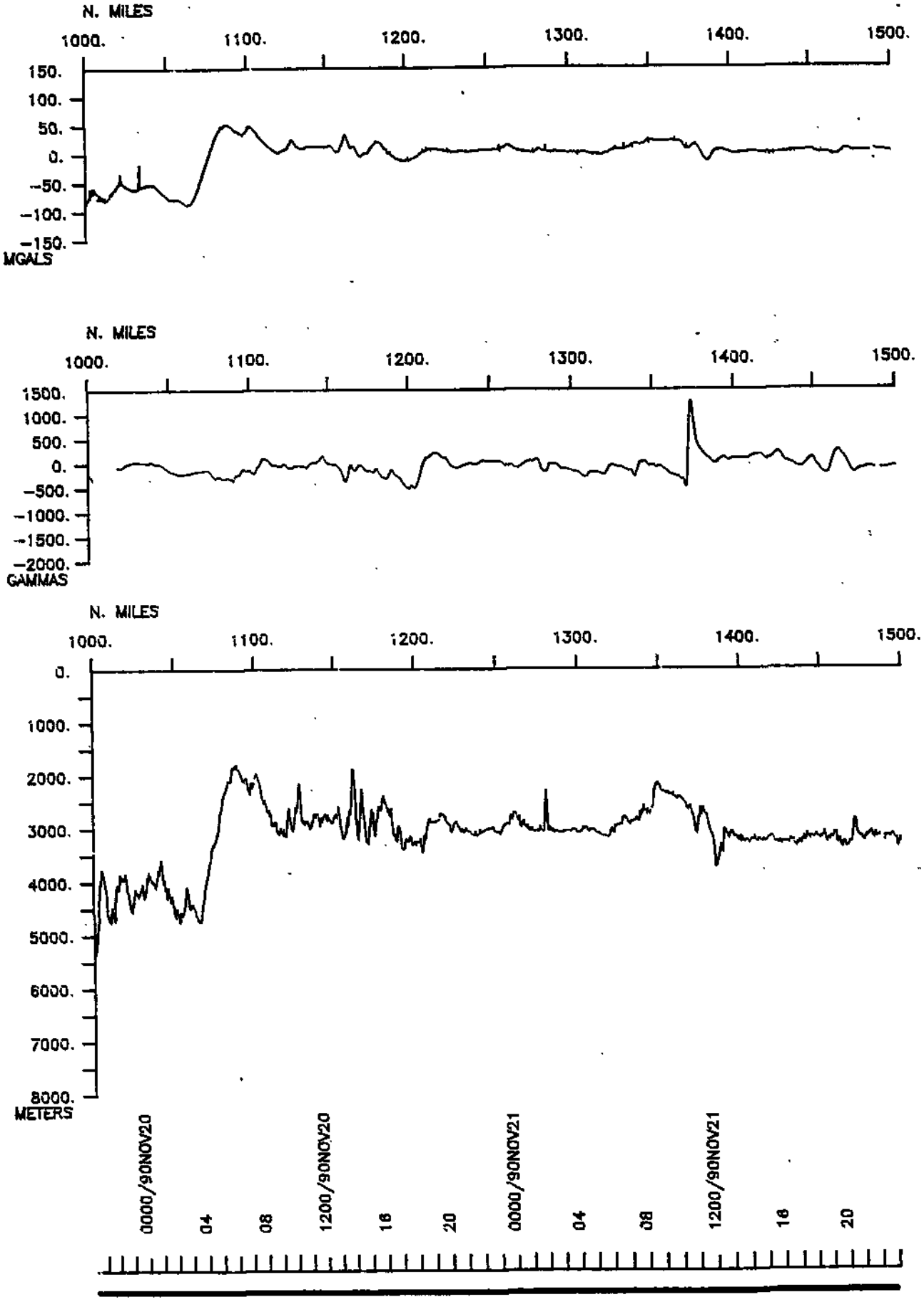
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1200/90NOV21
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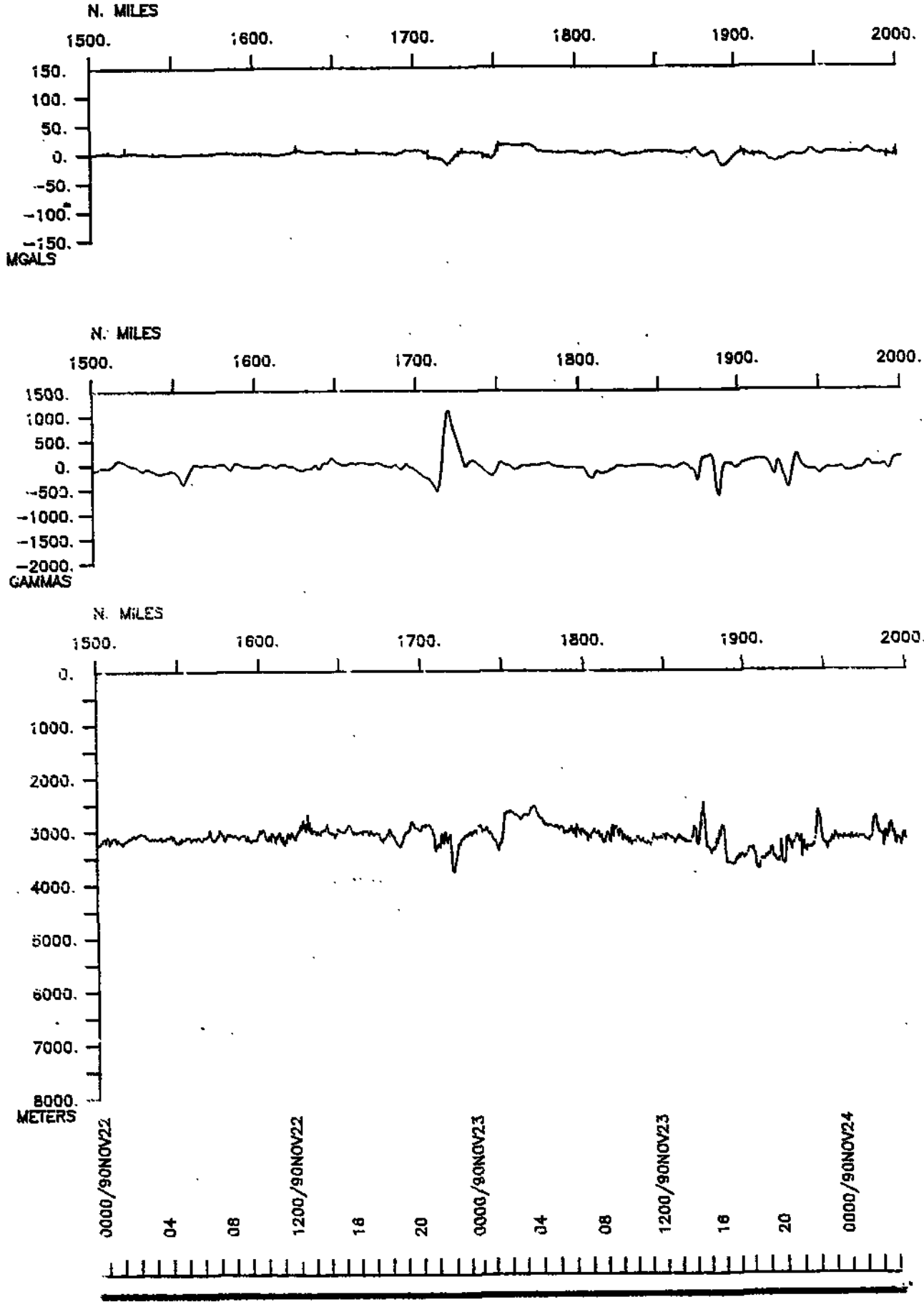
20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GAMMAS
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2000.
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4000.
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7000.
8000.
METERS
RAPA LEG 1 (RAPA01WT)
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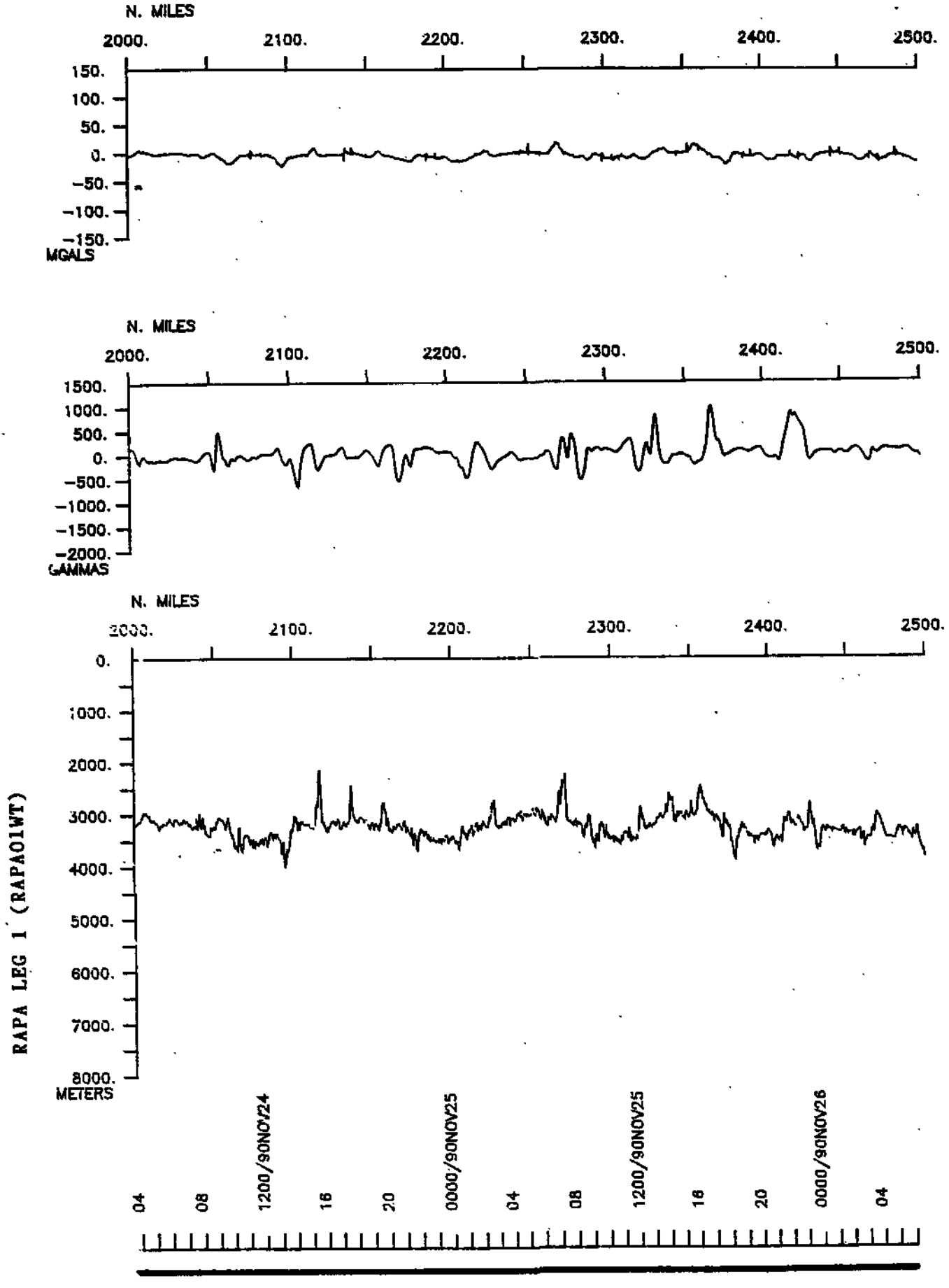
0000/90NOV24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2300.
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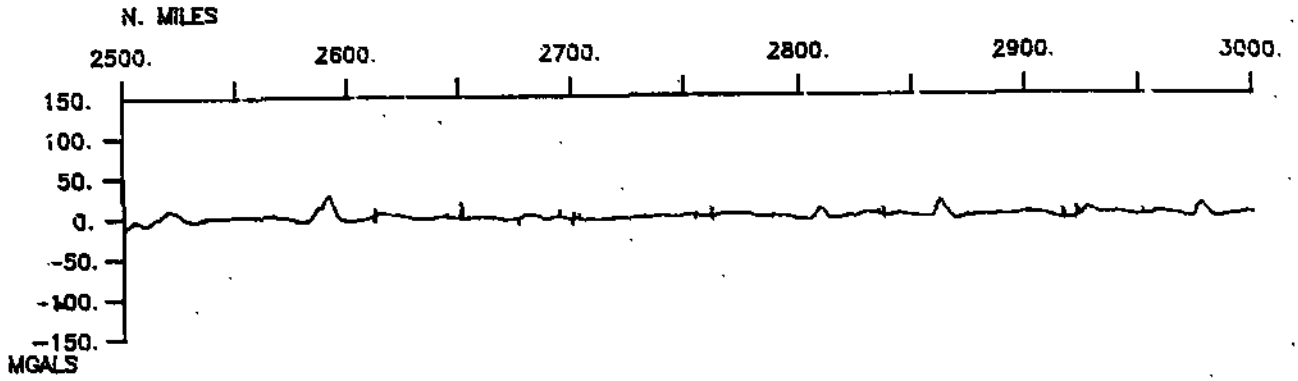
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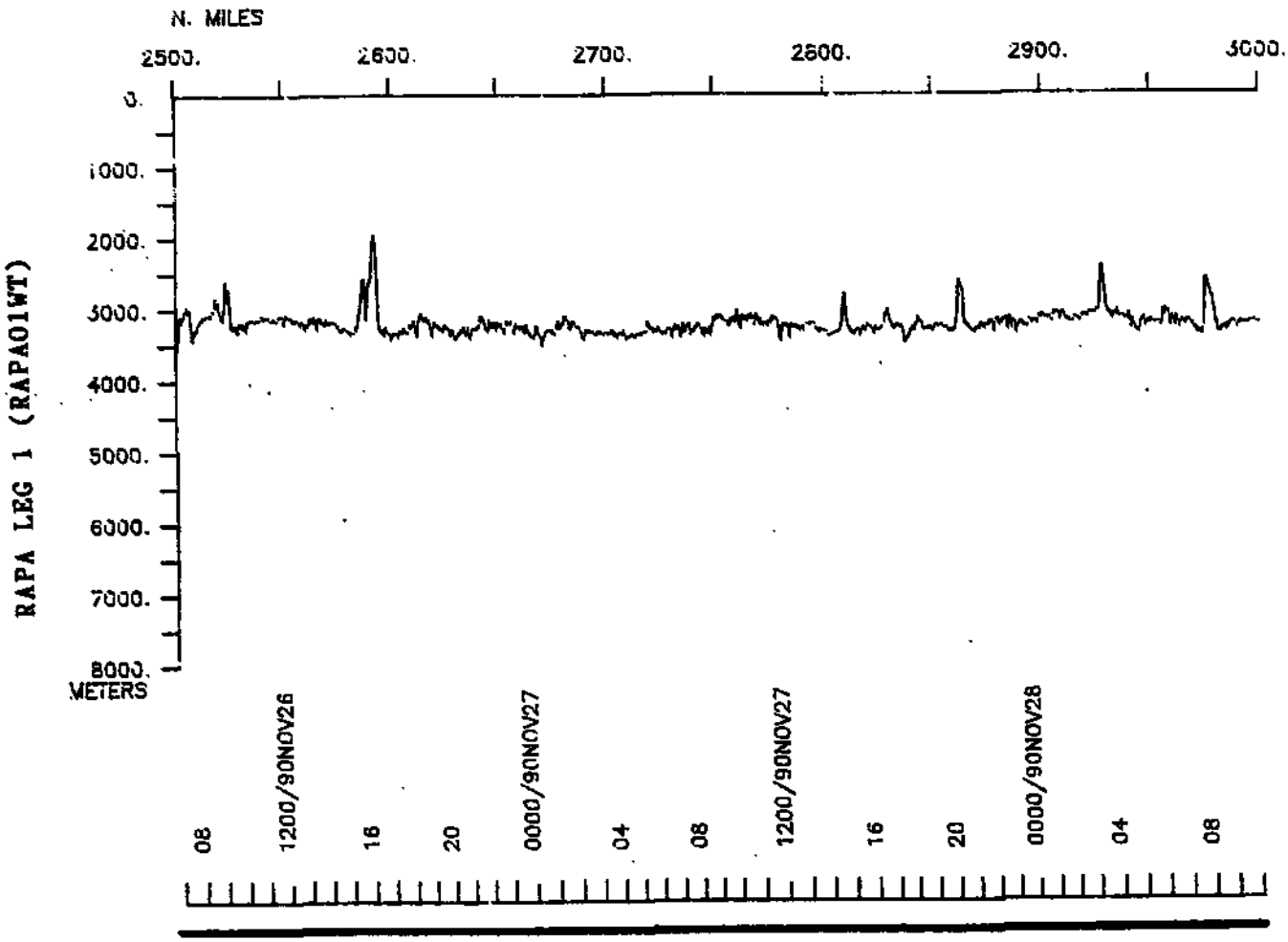
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0000/90NOV28
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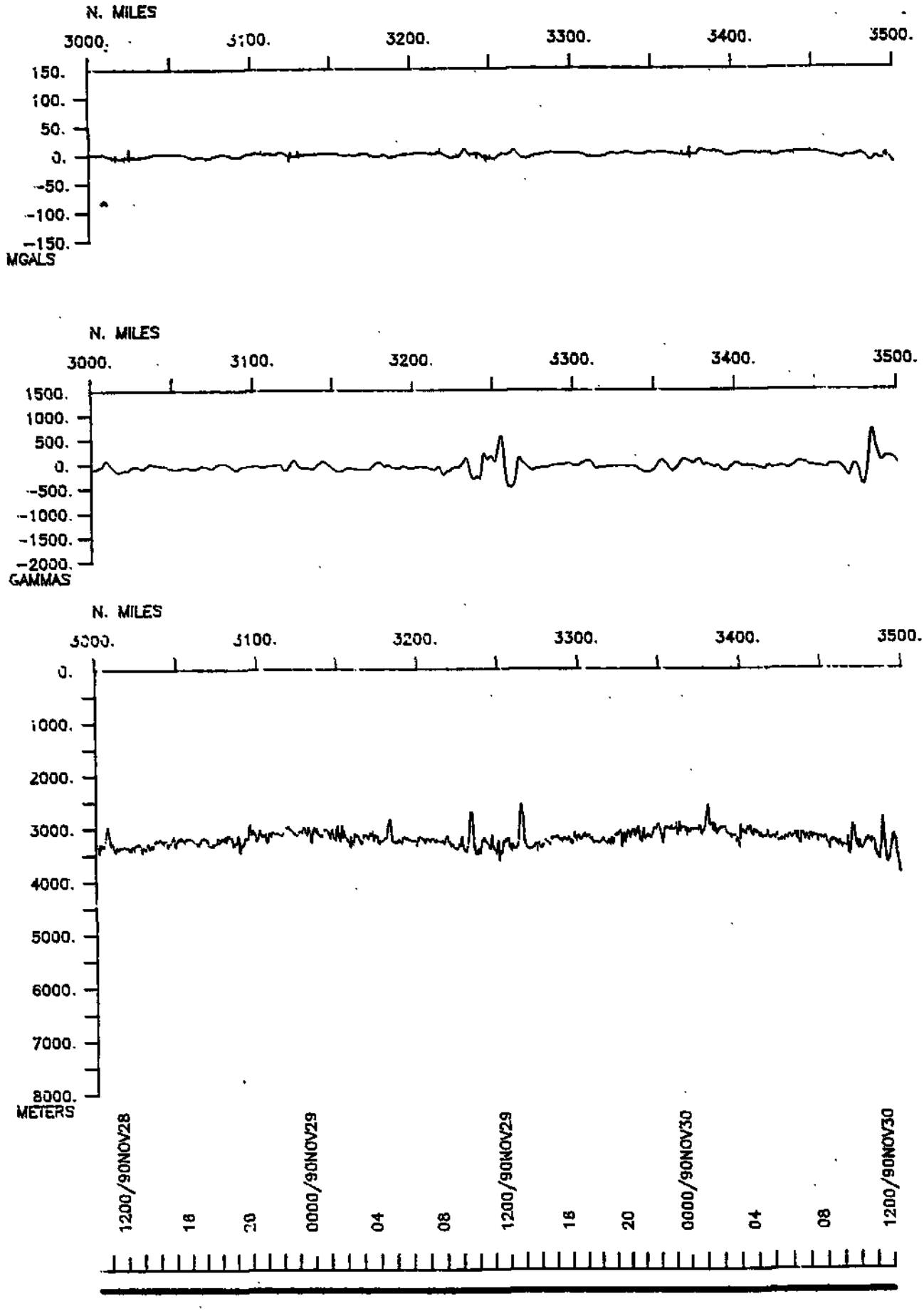
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1200/90NOV28
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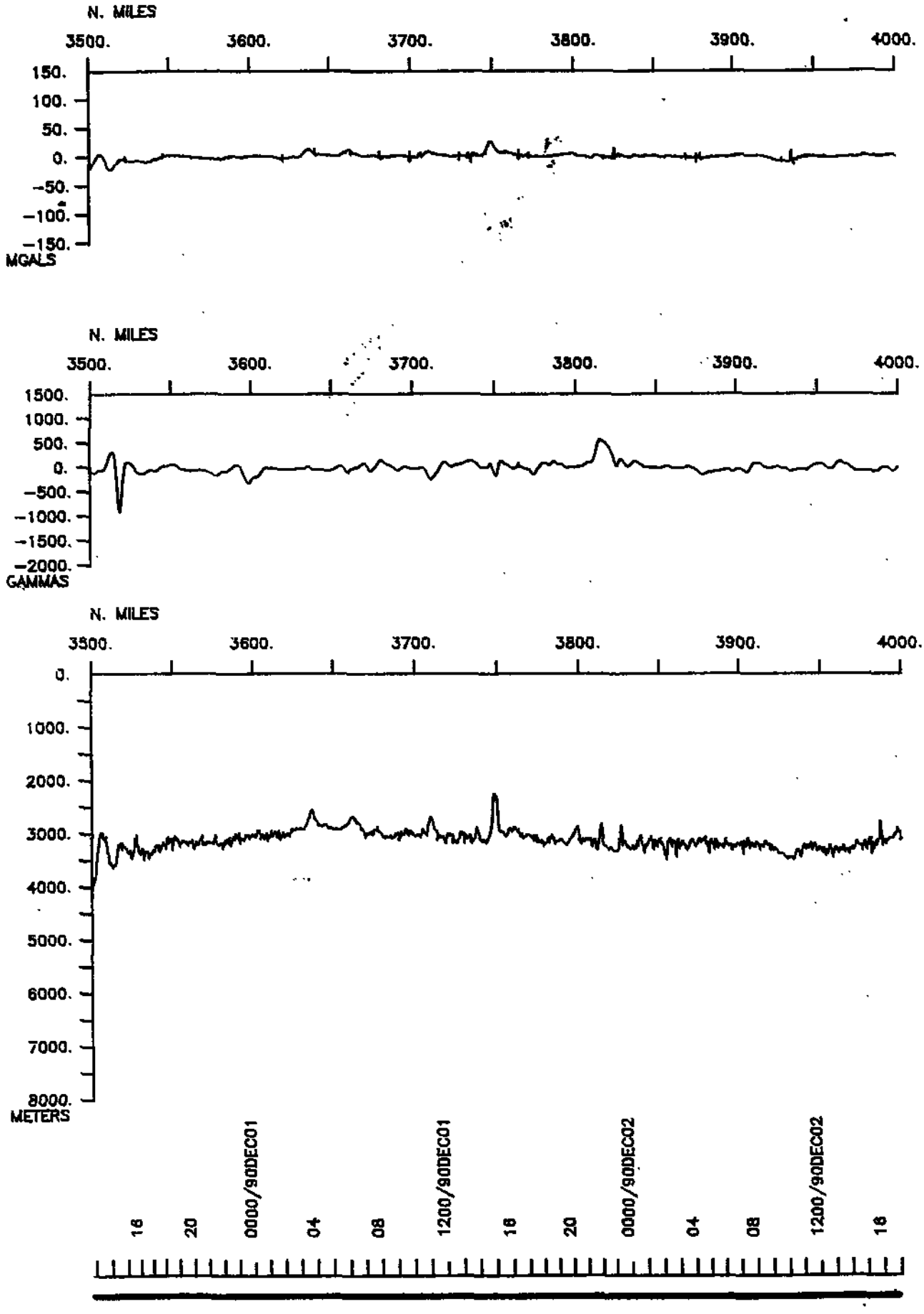
1200/90NOV30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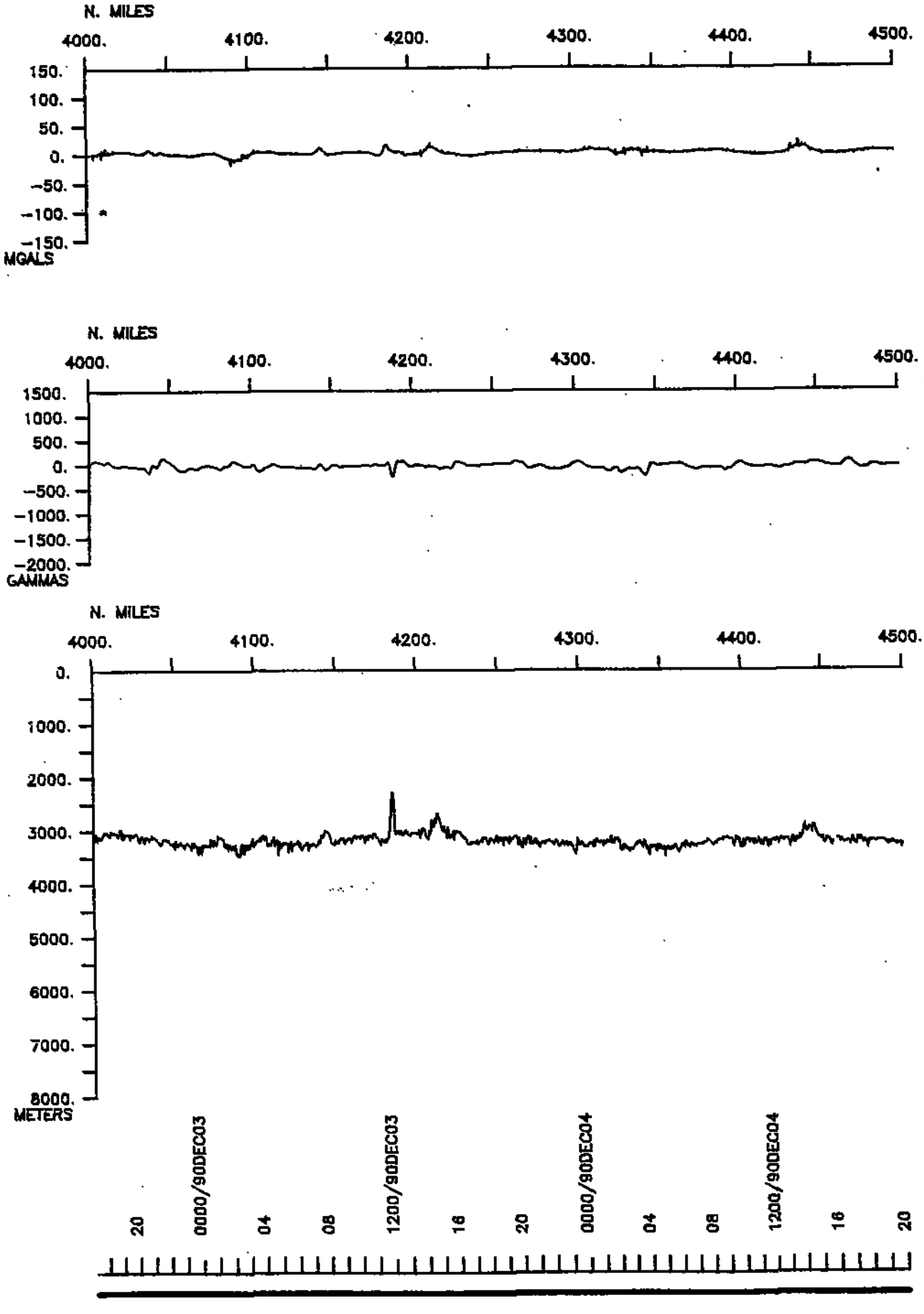
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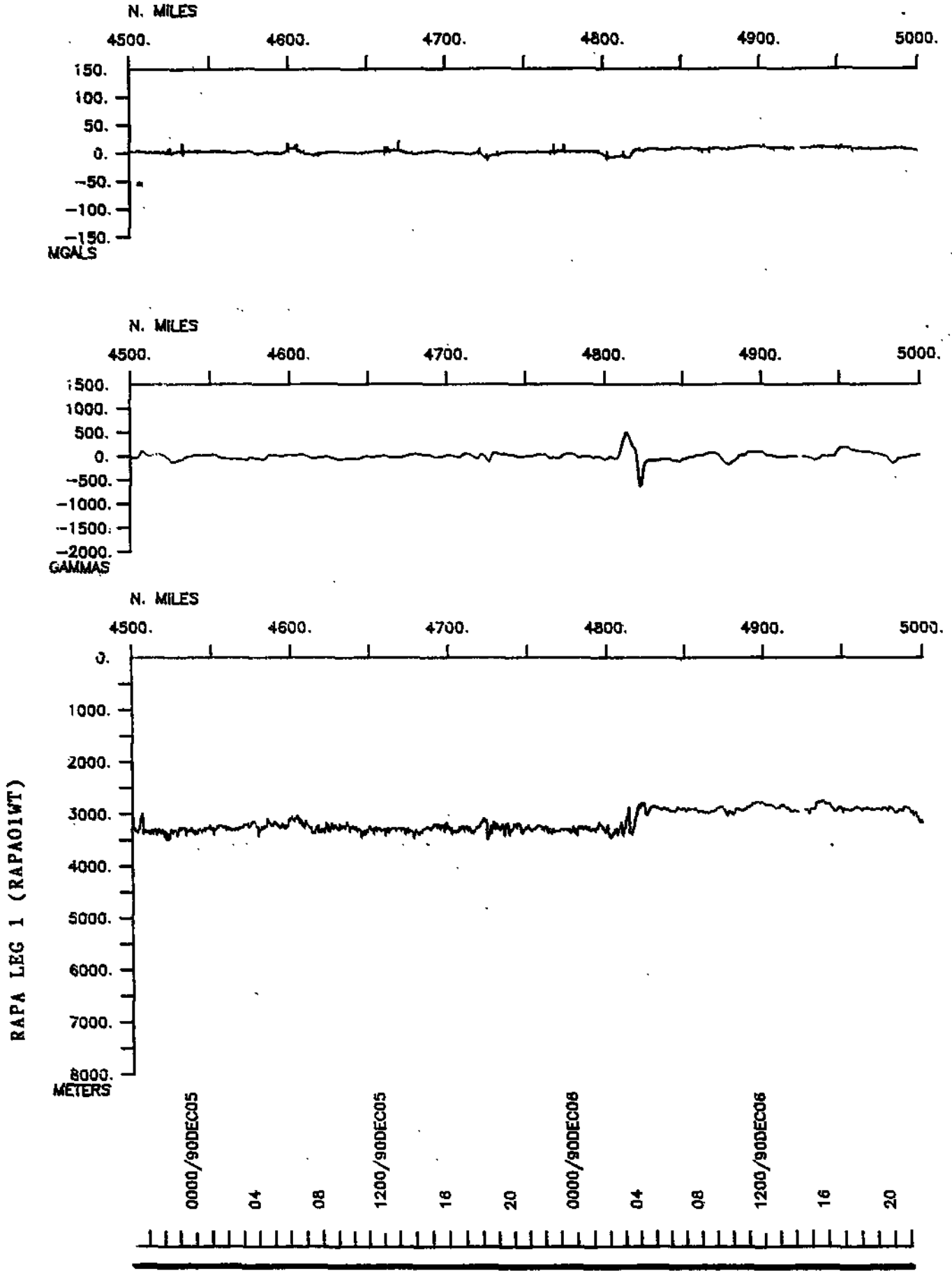
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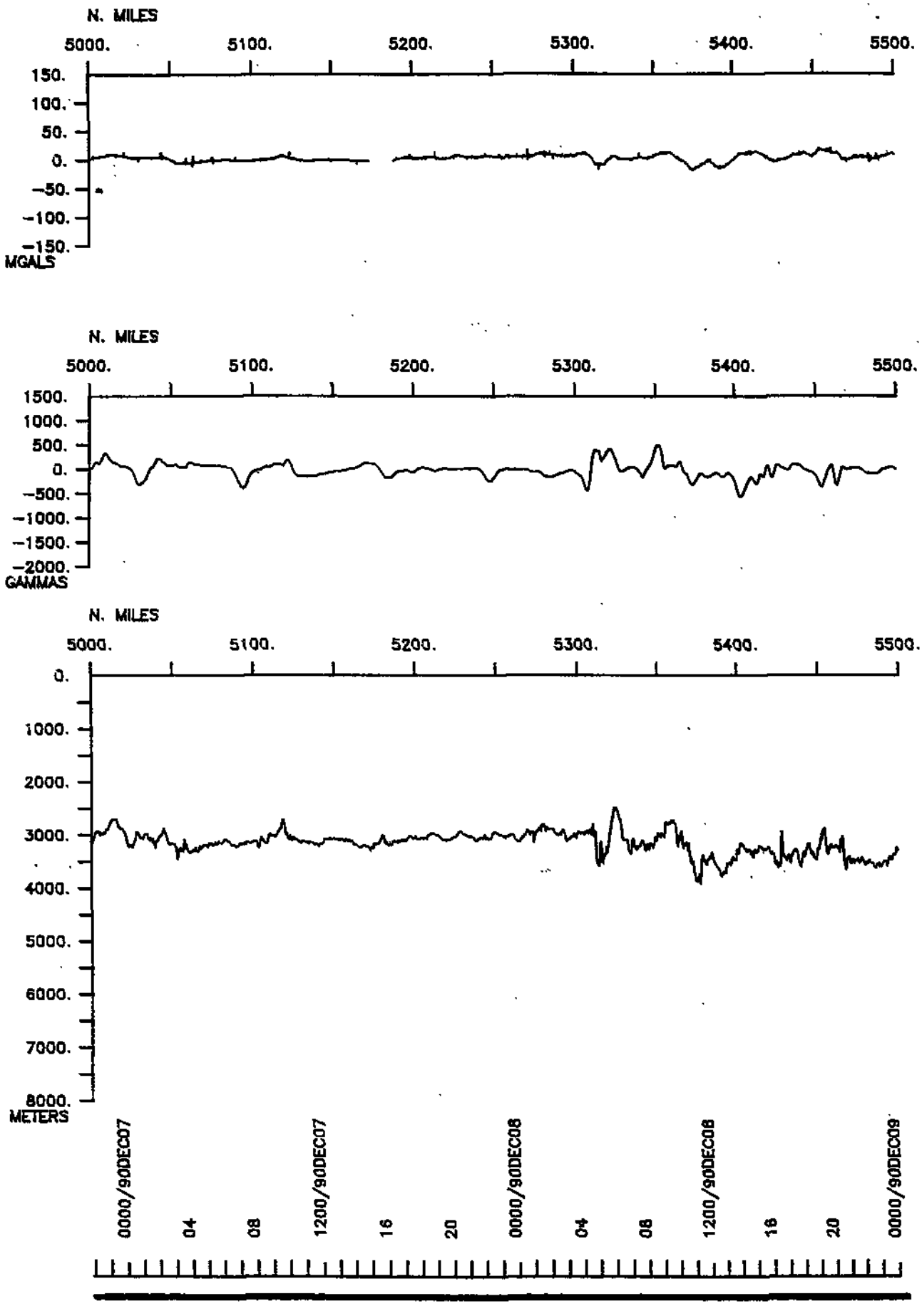
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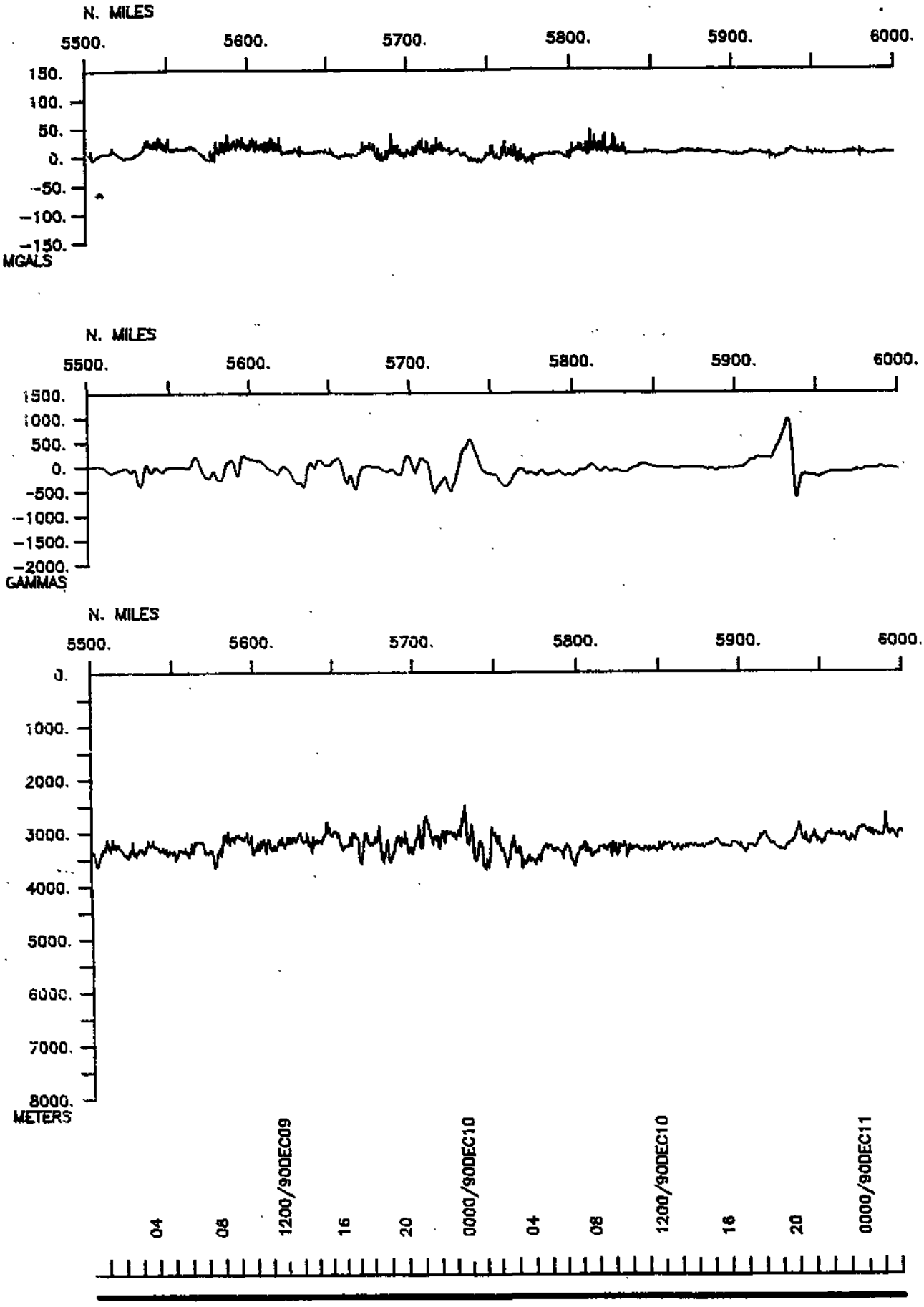
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METERS
RAPA LEG 1 (RAPA01WT)
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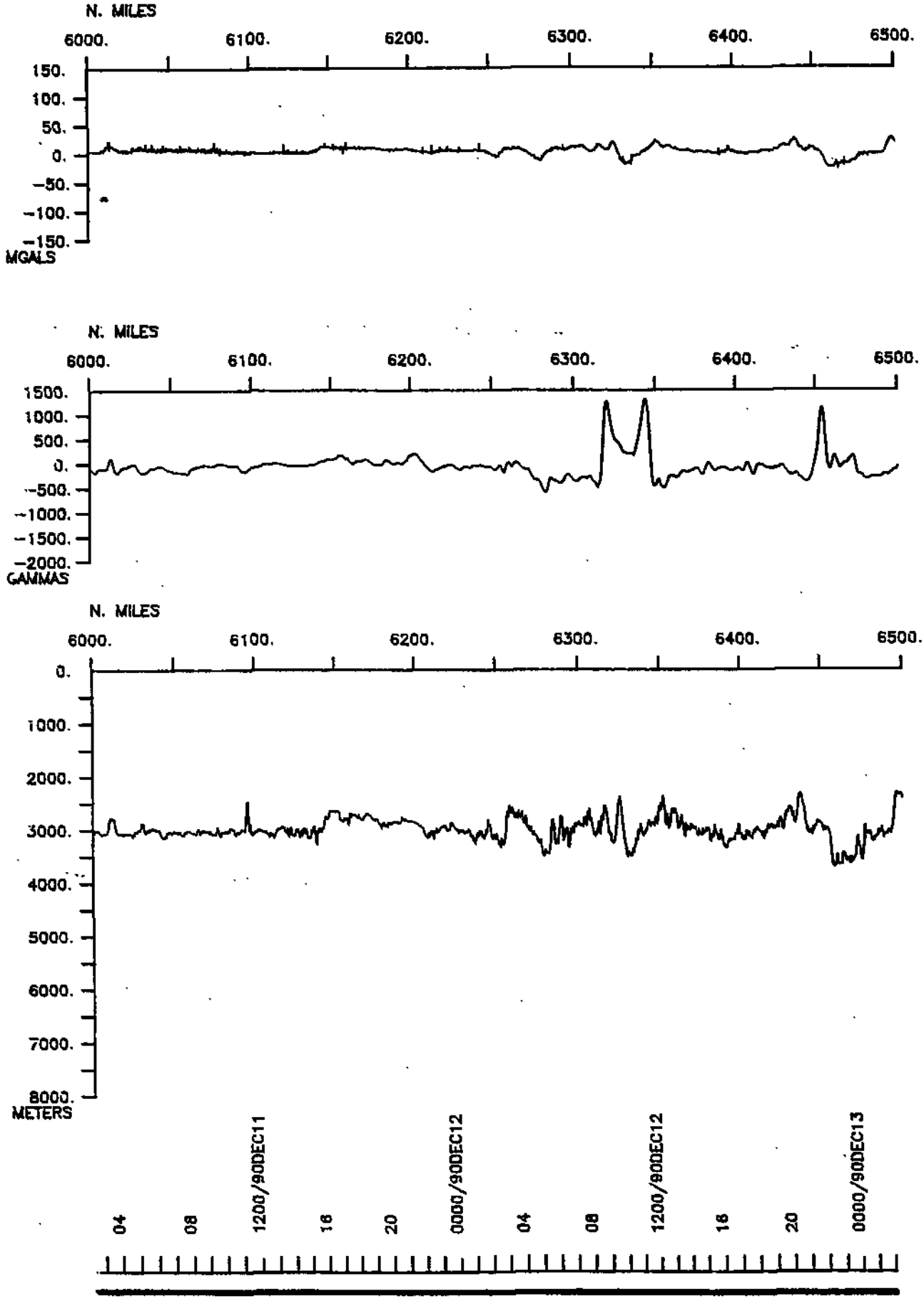
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7000.
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METERS
RAPA LEG 1 (RAPA01WT)
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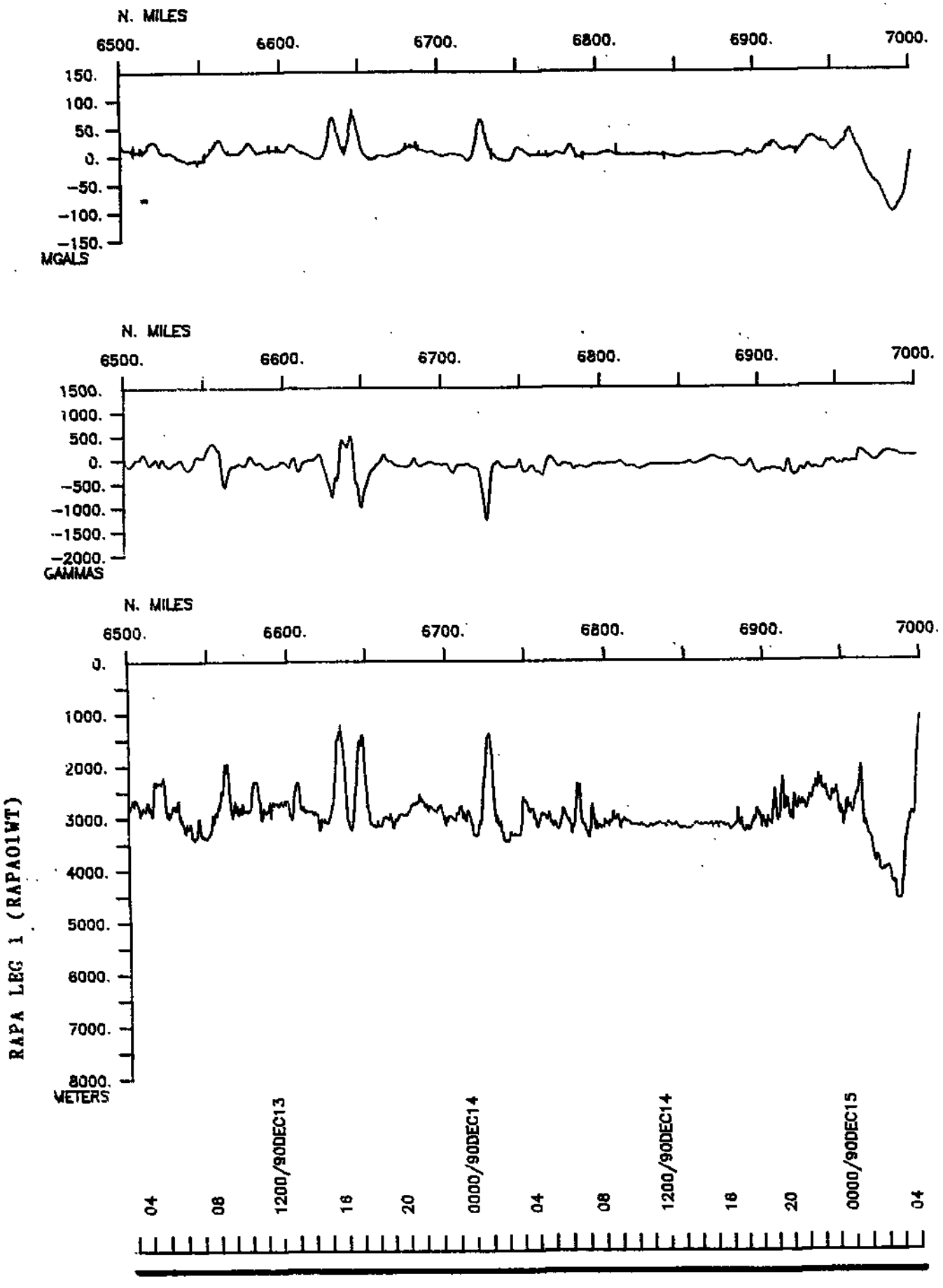
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MGALS
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6800.
6900.
7000.
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-1000.
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-2000.
GAMMAS
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6800.
6900.
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7000.
8000.
METERS
RAPA LEG 1 (RAPA01WT)
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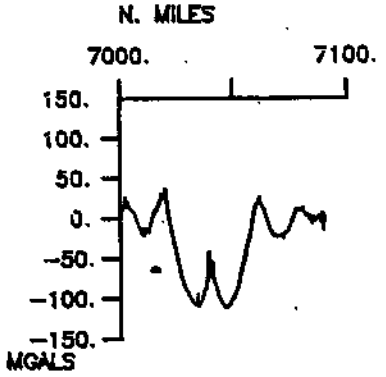
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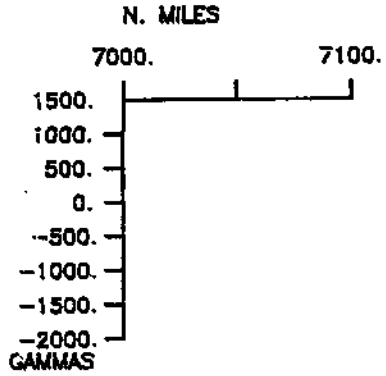
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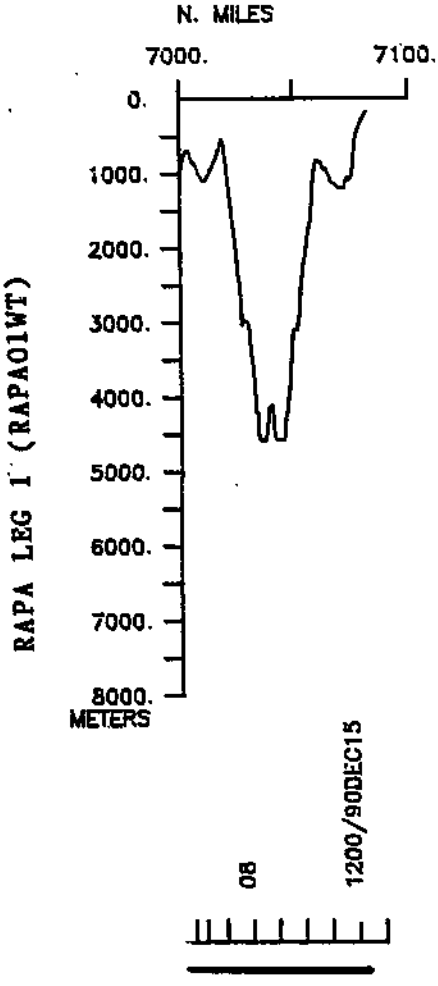
GAMMAS


N. MILES
7000.
7100.
0.
1000.
2000.
3000.
4000.
5000.
6000.
7000.
8000.
METERS
RAPA LEG 1 (RAPA01WT)
1200/90DEC15
08

S.I.O. SAMPLE INDEX

(Issued January 1991)

RAPA EXPEDITION

Leg 1

R/V T. Washington

San Diego, California (15 November 1990)
to
Manzanillo, Mexico (15 December 1990)

Chief Scientist:

Ken Macdonald (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.# 351

#***PORTS***

1600 151190	LGPT B SAN DIEGO, CA.	32-43 N 117-11 W	fRAPA01WT
1230 151290	LGPT E MANZANILLO, MEXICO	19-03 N 104-20 W	fRAPA01WT

#***PERSONNEL***

	NAME	***TITLE***	***AFFILIATION***	**CRID**
PECS UCS	MACDONALD,DR.K.	CHIEF SCIENTIST	U.OF CAL.SANTA BARBARA	RAPA01WT
PESP UCS	HAYMON,DR.R.	RESEARCHER	U.OF CAL.SANTA BARBARA	RAPA01WT
PESP UCS	WILSON,DR.D.	RESEARCHER	U.OF CAL.SANTA BARBARA	RAPA01WT
PESP UCS	PERRAM,DR.L.	POST DOC	U.OF CAL.SANTA BARBARA	RAPA01WT
PESP UHI	NISHIMURA,DR.C.	SEAMARC CHIEF	UNIV. OF HAWAII	RAPA01WT
PESP URI	POCKALNY,DR.R.	POST DOC	UNIV. OF RHODE ISLAND	RAPA01WT
PERT STS	COMER,R.L.	RESIDENT TECH.	SCRIPPS INSTITUTION	RAPA01WT
PECT STS	MOORE,J.M.	COMPUTER TECH.	SCRIPPS INSTITUTION	RAPA01WT
PEBE STS	STUBER,D.	SEA BEAM ENG.	SCRIPPS INSTITUTION	RAPA01WT
PEBO STS	SMITH,S.	SEA BEAM SPEC.	SCRIPPS INSTITUTION	RAPA01WT
PESP UCS	MACIAS,A.	CARTOGRAPHER	U.OF CAL.SANTA BARBARA	RAPA01WT
PESP UHI	ATKINS,B.	SEAMARC LEADER	UNIV. OF HAWAII	RAPA01WT
PESP UHI	KAJIWARA,L.	SEAMARC TEAM	UNIV. OF HAWAII	RAPA01WT
PESP UHI	YAMADA,J.	SEAMARC TEAM	UNIV. OF HAWAII	RAPA01WT
PESP UHI	VALENCIANO,M.	SEAMARC TEAM	UNIV. OF HAWAII	RAPA01WT
PESP UCS	MILLER,DR.S.	RESEARCH SPEC.	U.OF CAL.SANTA BARBARA	RAPA01WT
PEXN UMX	GARCIA,J.	OBSERVER, MEXICO	UNIV. OF MEXICO	RAPA01WT
PEST UCS	WEILAND,C.	GRAD. STUDENT	U.OF CAL.SANTA BARBARA	RAPA01WT
PEST UCS	SCHEIRER,D.	GRAD. STUDENT	U.OF CAL.SANTA BARBARA	RAPA01WT

#***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                          CRUISE
#TIME DATE TIME Z   CODE    IDENTIFIER            CODE  LAT.      LONG.     LEG-SHIP
#-------------------------------------------------------------------------------
#***UNDERWAY DATA CURATOR - S. M. SMITH  EXT. 42752

#***LOG BOOKS***

1800 151190         LBUW B UNDERWAY WATCH LOG     GDC 32-250N 117-239W sRAPA01WT
1230 151290         LBUW E UNDERWAY WATCH LOG     GDC 19-009N 104-248W sRAPA01WT

1600 151190         LBSC B SCIENCE LOG BOOK 1     UCS 32-424N 117-141W sRAPA01WT
1656 291190         LBSC E SCIENCE LOG BOOK 1     UCS  8-545N 105-171W sRAPA01WT

1705 291190         LBSC B SCIENCE LOG BOOK 2     UCS  8-556N 105-163W sRAPA01WT
1230 151290         LBSC E SCIENCE LOG BOOK 2     UCS 19-009N 104-248W sRAPA01WT

1901 151190         LBUW B SEAMARC 2 WATCH LOG    UHI 32-167N 117-251W sRAPA01WT
0533 151290         LBUW E SEAMARC 2 WATCH LOG    UHI 18-497N 104-350W sRAPA01WT


#*** SEA MARC II SIDE SCAN ***

2100 151190         DPSM B SEAMARC II SIDE SCAN   UHI 32-045N 117-262W sRAPA01WT
0432 151290         DPSM E SEAMARC II SURVEY      UHI 18-446N 104-403W sRAPA01WT

0235 161190         DPSM B SEAMARC SIDESCAN R-01  UHI 31-199N 116-494W sRAPA01WT
1821 171190         DPSM E SEAMARC SIDESCAN R-01  UHI 25-277N 113-453W sRAPA01WT

1927 171190         DPSM B SEAMARC SIDESCAN R-02  UHI 25-213N 113-405W sRAPA01WT
2135 171190         DPSM E SEAMARC SIDESCAN R-02  UHI 25-039N 113-271W sRAPA01WT

2202 191190         DPSM B SEAMARC SIDESCAN R-03  UHI 19-146N 108-196W sRAPA01WT
0445 151290         DPSM E SEAMARC SIDESCAN R-03  UHI 18-458N 104-393W sRAPA01WT


#*** ECHO SOUNDER RECORDS - 12KHZ ***

1726 151190         MBMR B SEABEAM MONITOR R-01   GDC 32-304N 117-199W sRAPA01WT
1622 191190         MBMR E SEABEAM MONITOR R-01   GDC 19-452N 109-049W sRAPA01WT

1627 201190         MBMR B SEABEAM MONITOR R-02   GDC 18-038N 105-380W sRAPA01WT
0545 261190         MBMR E SEABEAM MONITOR R-02   GDC  8-013N 104-191W sRAPA01WT

0553 261190         MBMR B SEABEAM MONITOR R-03   GDC  8-023N 104-200W sRAPA01WT
0509 041290         MBMR E SEABEAM MONITOR R-03   GDC  9-455N 102-568W sRAPA01WT

0516 041290         MBMR B SEABEAM MONITOR R-04   GDC  9-446N 102-574W sRAPA01WT
2156 131290         MBMR E SEABEAM MONITOR R-04   GDC 16-025N 105-340W sRAPA01WT

2200 131290         MBMR B SEABEAM MONITOR R-05   GDC 16-025N 105-343W sRAPA01WT
1228 151290         MBMR E SEABEAM MONITOR R-05   GDC 19-006N 104-250W sRAPA01WT
```

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** MAGNETICS (TOTAL EARTH FIELD) RECORDS ***						
2111 151190	MGRA	B MAGNETICS R-01	GDC	32-028N	117-262W	sRAPA01WT
1958 191190	MGRA	E MAGNETICS R-01	GDC	19-249N	108-299W	sRAPA01WT
1958 191190	MGRA	B MAGNETICS R-02	GDC	19-249N	108-299W	sRAPA01WT
2216 301190	MGRA	E MAGNETICS R-02	GDC	9-098N	104-529W	sRAPA01WT
2224 301190	MGRA	B MAGNETICS R-03	GDC	9-108N	104-522W	sRAPA01WT
1132 081290	MGRA	E MAGNETICS R-03	GDC	8-443N	101-510W	sRAPA01WT
1141 081290	MGRA	B MAGNETICS R-04	GDC	8-451N	101-497W	sRAPA01WT
0442 151290	MGRA	E MAGNETICS R-04	GDC	18-456N	104-395W	sRAPA01WT
#*** CONTINUOUS COMPUTER LOGGED GRAVITY ***						
1600 151190	GVCR	B GRAVIMETER	GDC	32-424N	117-141W	sRAPA01WT
1330 151290	GVCR	E GRAVIMETER	GDC	19-034N	104-188W	sRAPA01WT
#*** ECHO SOUNDER RECORDS ***						
1722 151190	DPR3	B 3.5KHZ RECORD R-01	GDC	32-310N	117-194W	sRAPA01WT
0815 191190	DPR3	E 3.5KHZ RECORD R 01	GDC	20-217N	109-427W	sRAPA01WT
0813 191190	DPR3	B 3.5KHZ RECORD R-02	GDC	20-220N	109-429W	sRAPA01WT
2135 281190	DPR3	E 3.5KHZ RECORD R-02	GDC	9-419N	104-569W	sRAPA01WT
2139 281190	DPR3	B 3.5KHZ RECORD R-03	GDC	9-419N	104-569W	sRAPA01WT
2200 031290	DPR3	E 3.5KHZ RECORD R-03	GDC	9-318N	103-134W	sRAPA01WT
2205 031290	DPR3	B 3.5KHZ RECORD R-04	GDC	9-325N	103-129W	sRAPA01WT
0754 081290	DPR3	E 3.5KHZ RECORD R-04	GDC	8-256N	102-221W	sRAPA01WT
0759 081290	DPR3	B 3.5KHZ RECORD R-05	GDC	8-261N	102-214W	sRAPA01WT
1300 151290	DPR3	E 3.5KHZ RECORD R-05	GDC	19-037N	104-199W	sRAPA01WT

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** SEA BEAM SWATH BOOKS ***						
1716 151190	MBSB	B SEABEAM SWATH BK 01	GDC	32-424N	117-141W	sRAPA01WT
1921 171190	MBSB	E SEABEAM SWATH BK 01	GDC	25-219N	113-409W	sRAPA01WT
1921 171190	MBSB	B SEABEAM SWATH BK 02	GDC	25-219N	113-409W	sRAPA01WT
1916 191190	MBSB	E SEABEAM SWATH BK 02	GDC	19-276N	108-376W	sRAPA01WT
1916 191190	MBSB	B SEABEAM SWATH BK 03	GDC	19-276N	108-376W	sRAPA01WT
2214 211190	MBSB	E SEABEAM SWATH BK 03	GDC	13-332N	104-470W	sRAPA01WT
2214 211190	MBSB	B SEABEAM SWATH BK 04	GDC	13-332N	104-470W	sRAPA01WT
0244 241190	MBSB	E SEABEAM SWATH BK 04	GDC	9-036N	104-441W	sRAPA01WT
0244 241190	MBSB	B SEABEAM SWATH BK 05	GDC	9-036N	104-441W	sRAPA01WT
0553 261190	MBSB	E SEABEAM SWATH BK 05	GDC	8-023N	104-200W	sRAPA01WT
0553 261190	MBSB	B SEABEAM SWATH BK 06	GDC	8-023N	104-200W	sRAPA01WT
0815 281190	MBSB	E SEABEAM SWATH BK 06	GDC	9-049N	105-296W	sRAPA01WT
0815 281190	MBSB	B SEABEAM SWATH BK 07	GDC	9-049N	105-296W	sRAPA01WT
1113 301190	MBSB	E SEABEAM SWATH BK 07	GDC	8-131N	105-393W	sRAPA01WT
1113 301190	MBSB	B SEABEAM SWATH BK 08	GDC	8-131N	105-393W	sRAPA01WT
1600 021290	MBSB	E SEABEAM SWATH BK 08	GDC	9-225N	103-406W	sRAPA01WT
1600 021290	MBSB	B SEABEAM SWATH BK 09	GDC	9-225N	103-406W	sRAPA01WT
1620 041290	MBSB	E SEABEAM SWATH BK 09	GDC	8-529N	103-273W	sRAPA01WT
1620 041290	MBSB	B SEABEAM SWATH BK 10	GDC	8-529N	103-273W	sRAPA01WT
1754 061290	MBSB	E SEABEAM SWATH BK 10	GDC	6-109N	102-332W	sRAPA01WT
1754 061290	MBSB	B SEABEAM SWATH BK 11	GDC	6-109N	102-332W	sRAPA01WT
1958 081290	MBSB	E SEABEAM SWATH BK 11	GDC	8-405N	100-444W	sRAPA01WT
1958 081290	MBSB	B SEABEAM SWATH BK 12	GDC	8-405N	100-444W	sRAPA01WT
2217 101290	MBSB	E SEABEAM SWATH BK 12	GDC	10-398N	103-319W	sRAPA01WT
2217 101290	MBSB	B SEABEAM SWATH BK 13	GDC	10-398N	103-319W	sRAPA01WT
0132 131290	MBSB	E SEABEAM SWATH BK 13	GDC	15-308N	105-317W	sRAPA01WT
0132 131290	MBSB	B SEABEAM SWATH BK 14	GDC	15-308N	105-317W	sRAPA01WT
0042 151290	MBSB	E SEABEAM SWATH BK 14	GDC	18-238N	105-152W	sRAPA01WT
0042 151290	MBSB	B SEABEAM SWATH BK 15	GDC	18-238N	105-152W	sRAPA01WT
1227 151290	MBSB	E SEABEAM SWATH BK 15	GDC	19-004N	104-251W	sRAPA01WT

#GMT TIME	DDMMYY- DATE	LOC T TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** THERMOGRAPH RECORDS ***								
1800	151190		TGRC B	THERMOGRAPHS 1-28	GDC	32-250N	117-239W	sRAPA01WT
1404	151290		TGRC E	THERMOGRAPHS 1-28	GDC	19-033N	104-188W	sRAPA01WT
#*** EXPENDABLE BATHYTHERMOGRAPHS ***								
0348	171190		BTXP	XBT 0001 PROBE T-6	GDC	27-232N	115-197W	sRAPA01WT
1810	181190		BTXP	XBT 0002 PROBE T-7	GDC	22-245N	111-189W	sRAPA01WT
0235	211190		BTXP	XBT 0003 PROBE T-7	GDC	16-419N	105-434W	sRAPA01WT
1634	231190		BTXP	XBT 0004 PROBE T-7	GDC	8-097N	105-283W	sRAPA01WT
1512	261190		BTXP	XBT 0005 PROBE T-7	GDC	9-043N	105-288W	sRAPA01WT
0258	011290		BTXP	XBT 0007 PROBE T-4	GDC	9-407N	104-233W	sRAPA01WT
1523	031290		BTXP	XBT 0008 PROBE T-4	GDC	8-384N	103-508W	sRAPA01WT
1538	051290		BTXP	XBT 0009 PROBE T-4	GDC	8-553N	103-048W	sRAPA01WT
1548	051290		BTXP	XBT 0010 PROBE T-4	GDC	8-539N	103-058W	sRAPA01WT
1556	051290		BTXP	XBT 0011 PROBE T-6	GDC	8-528N	103-066W	sRAPA01WT
1654	071290		BTXP	XBT 0012 PROBE T-6	GDC	6-389N	102-419W	sRAPA01WT
1604	091290		BTXP	XBT 0013 PROBE T-6	GDC	8-370N	102-119W	sRAPA01WT
1618	111290		BTXP	XBT 0014 PROBE T-6	GDC	13-306N	104-072W	sRAPA01WT
1408	131290		BTXP	XBT 0015 PROBE T-6	GDC	15-481N	105-344W	sRAPA01WT
1438	141290		BTXP	XBT 0016 PROBE T-6	GDC	17-047N	105-454W	sRAPA01WT
#***				END SAMPLE INDEX				