REPORT AND INDEX OF

UNDERWAY MARINE GEOPHYSICAL DATA

SERA EXPEDITION

LEG 2

R/V Thomas Washington

(Issued July 1991)

Manzanillo, Mexico (5 May 1991)
to
San Diego, California (22 May 1991)

Chief Scientist:

John Hildebrand (Scripps Institution of Oceanography)

Resident Marine Technician - Bob Wilson

Sea Beam Transit Mode

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
and ONR 00014-89-J-1219

GDC Cruise I.D.# 253

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.)

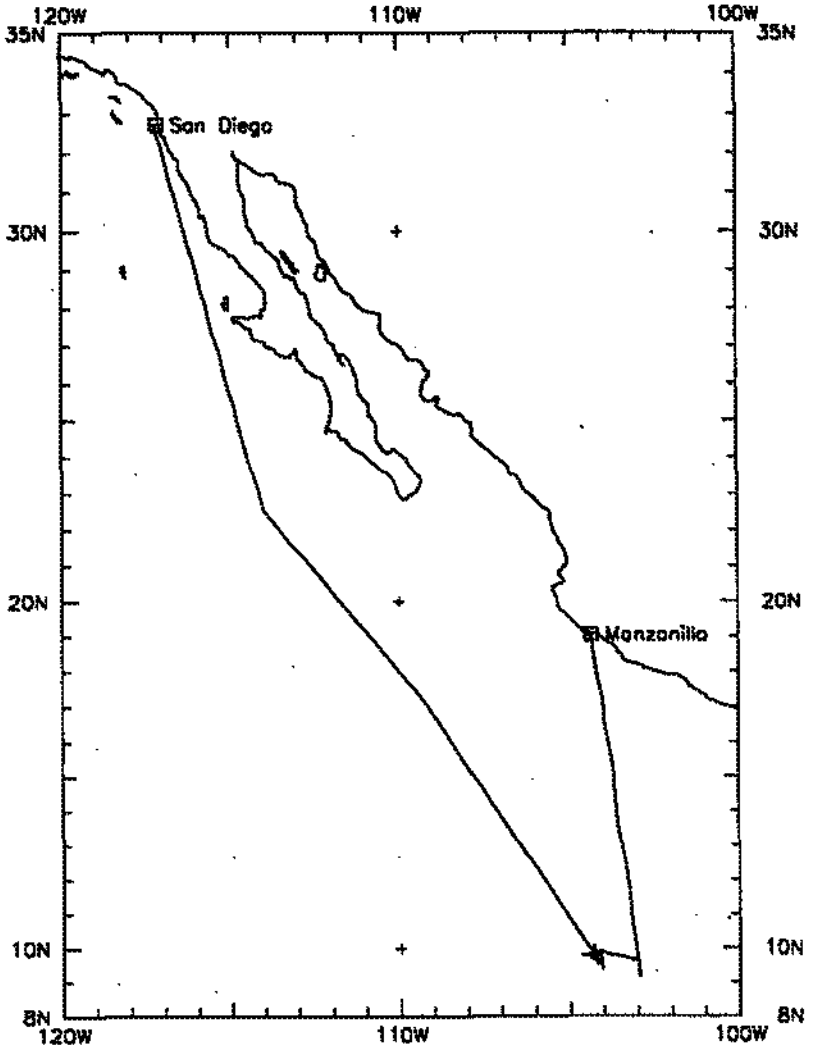
4) Archive contour plots - 16"/degree chart scale, with contour interval nominally 50m, are generated for all transit lines. Some survey areas are plotted at appropriate scales as well. Available for inspection at data center; additional copies may be generated from plot files stored on tape.

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 1988

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



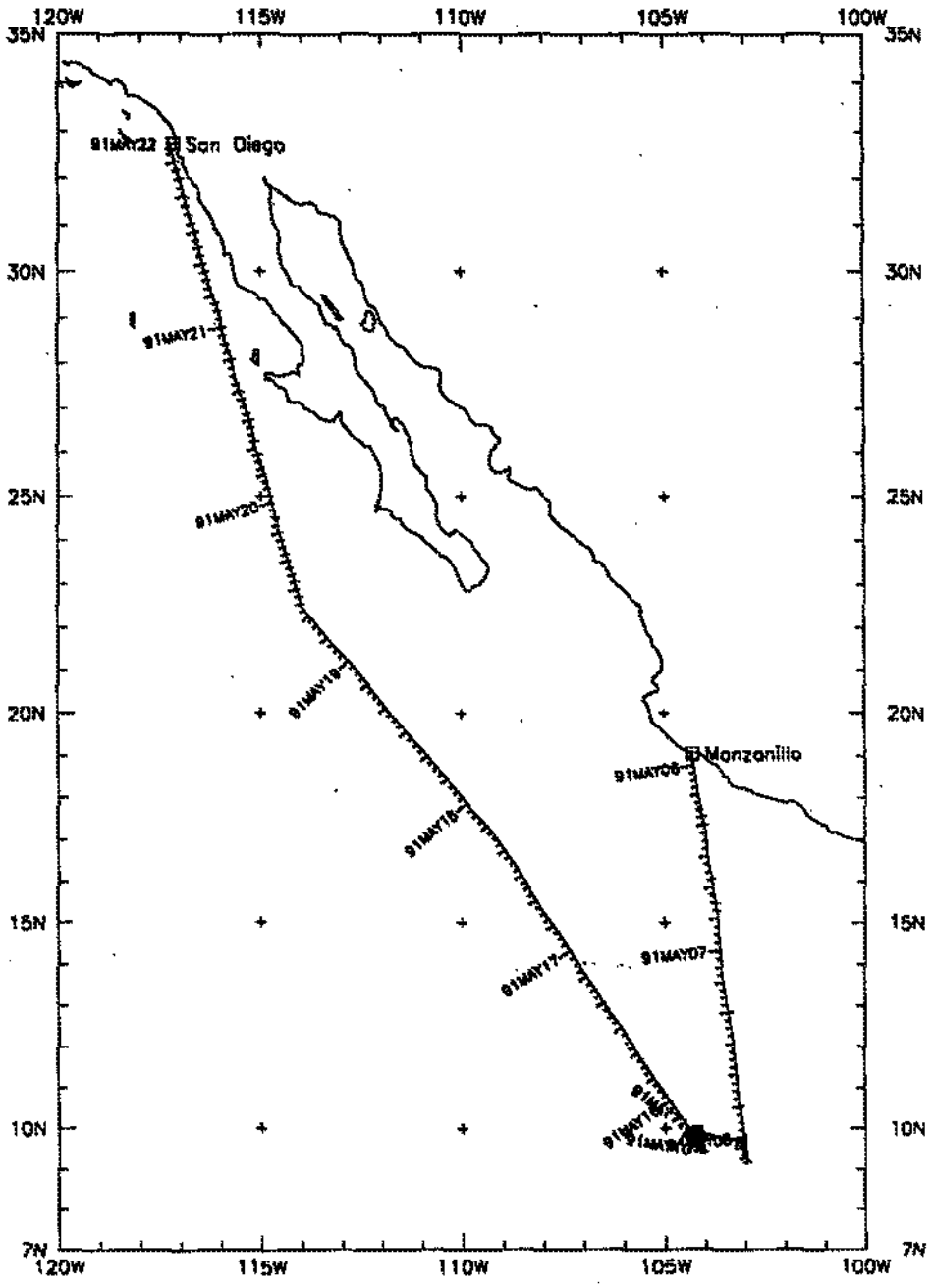
SERA LEG 2 (SERA02WT)

SERA EXPEDITION LEG 2

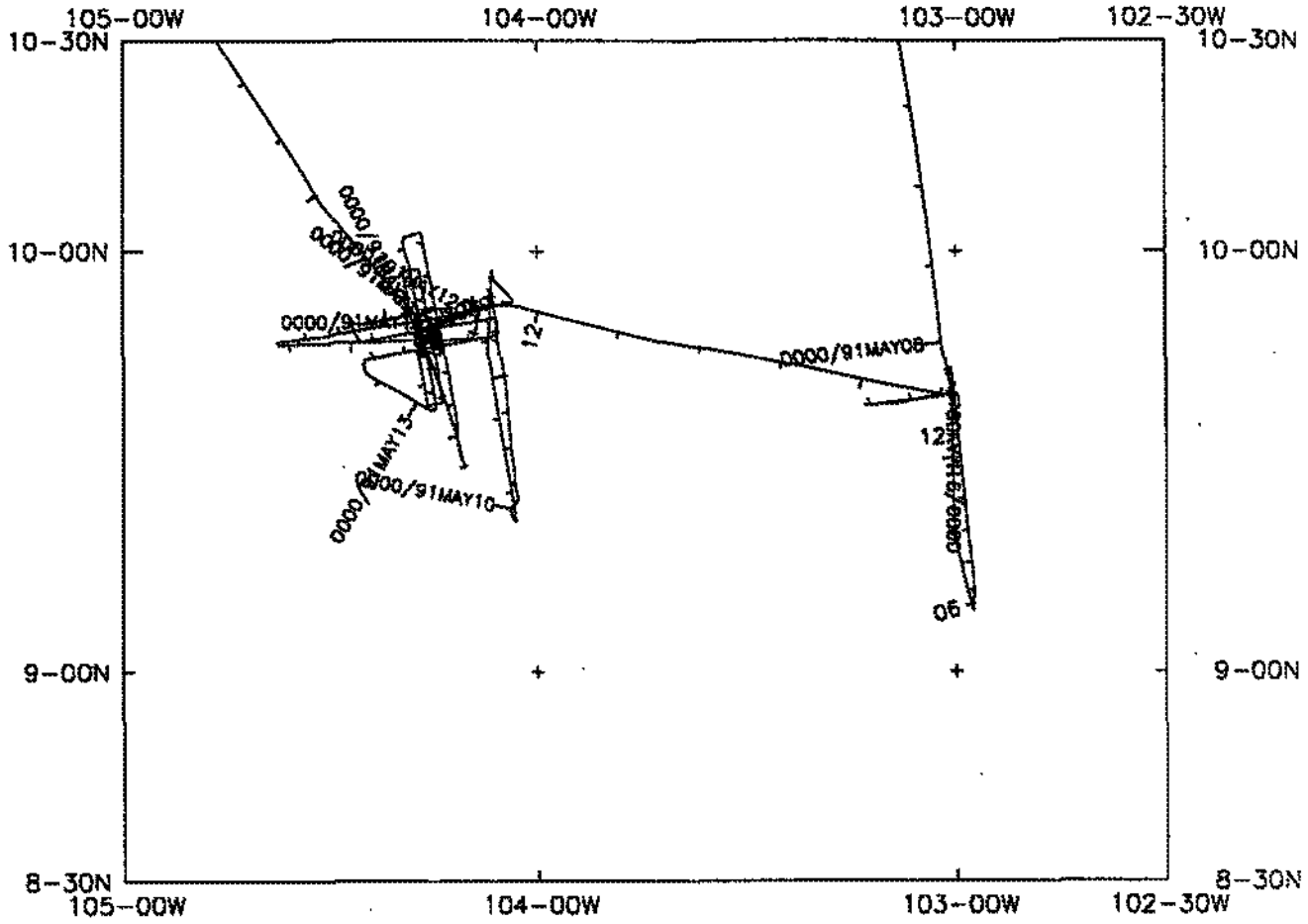
CHIEF SCIENTIST: John Hildebrand
Scripps Institution of Oceanography
PORTS: Manzanillo, Mexico - San Diego, Calif.
DATES: 5 - 21 May 1991
SHIP: R/V T. Washington

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 2813 miles	Magnetics - 815 miles
Bathymetry - 2683 miles	Seismic Reflection - 250 miles
Sea Beam - 2683 miles	Gravity - 2813 miles



SERA LEG 2 (SERA02WT)



SERA LEG 2 SURVEY (SERA02WT)

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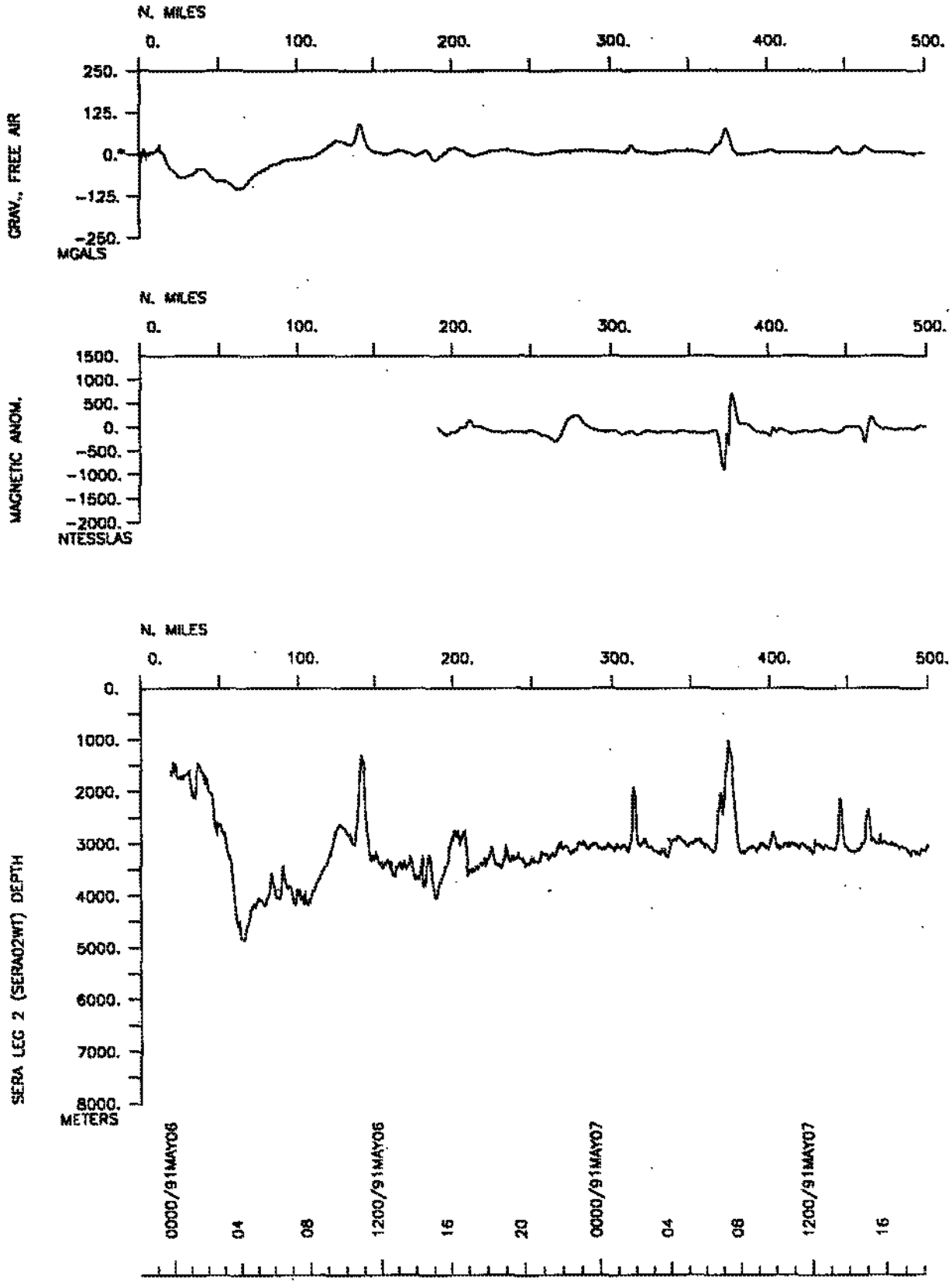
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500.
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1000.
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-500.
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NTESSLAS
MAGNETIC ANOM.
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5000.
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METERS
SERA LEG 2 (SERA02WT) DEPTH
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0000/91MAY07
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08
1200/91MAY07
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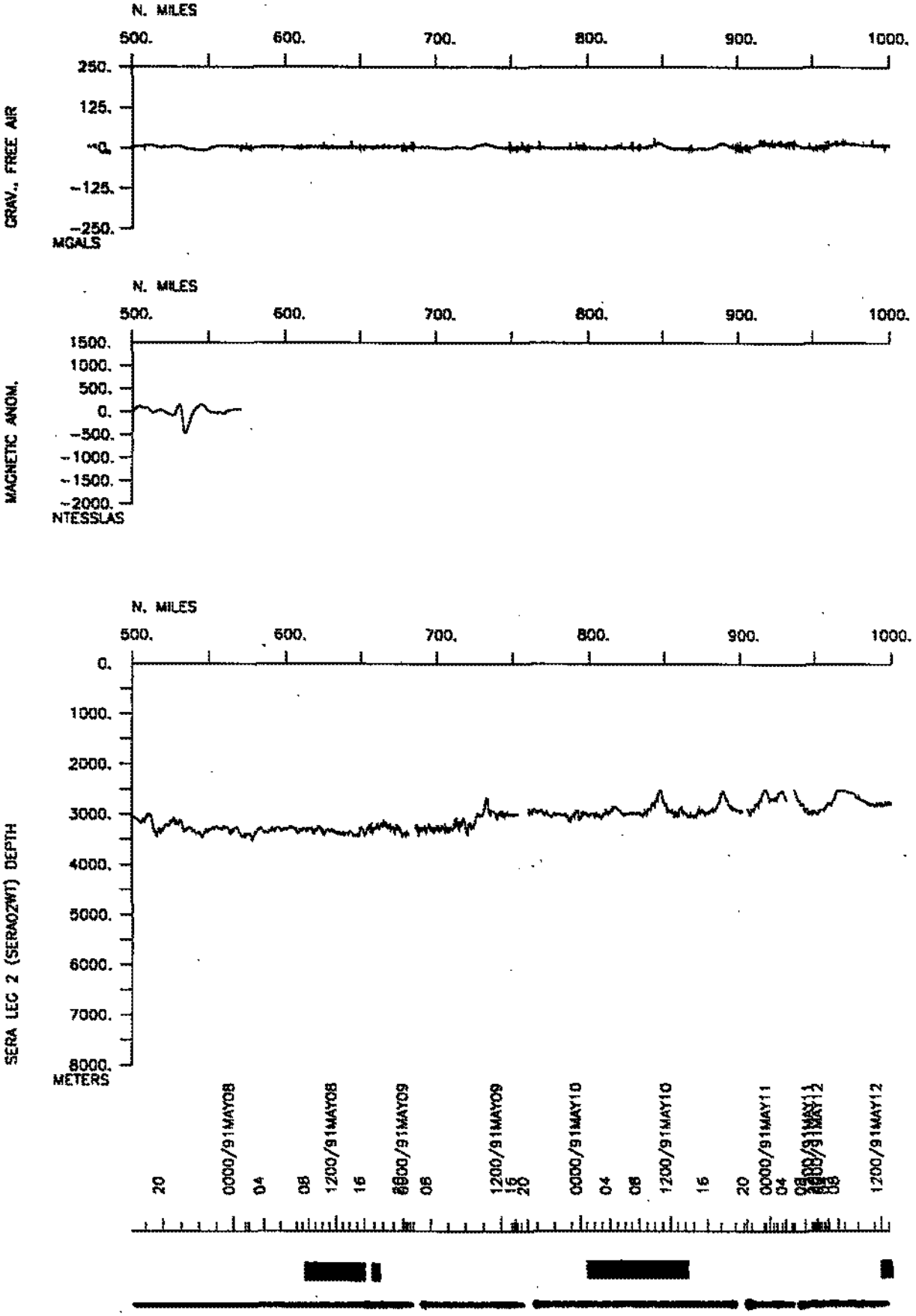
SEABEAM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SERA LEC 2 (SERA02WT) DEPTH
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5000.
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08
1200/91MAY08
16
0000/91MAY09
08
1200/91MAY09
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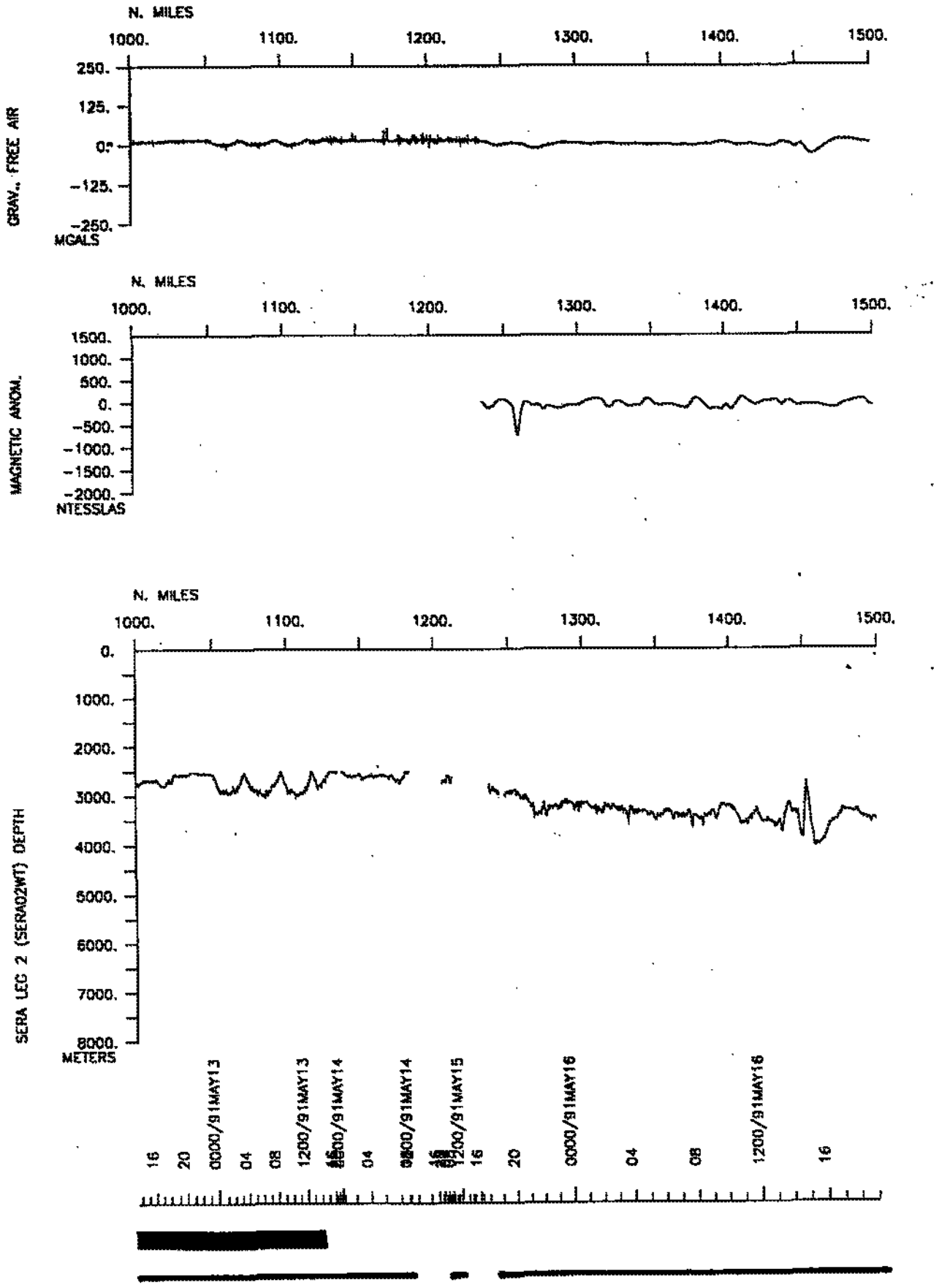
04
08
1200/91MAY12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7000.
8000.
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SERA LEG 2 (SERA02WT) DEPTH
16
20
0000/91MAY13
04
08
1200/91MAY13
0000/91MAY14
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0800/91MAY14
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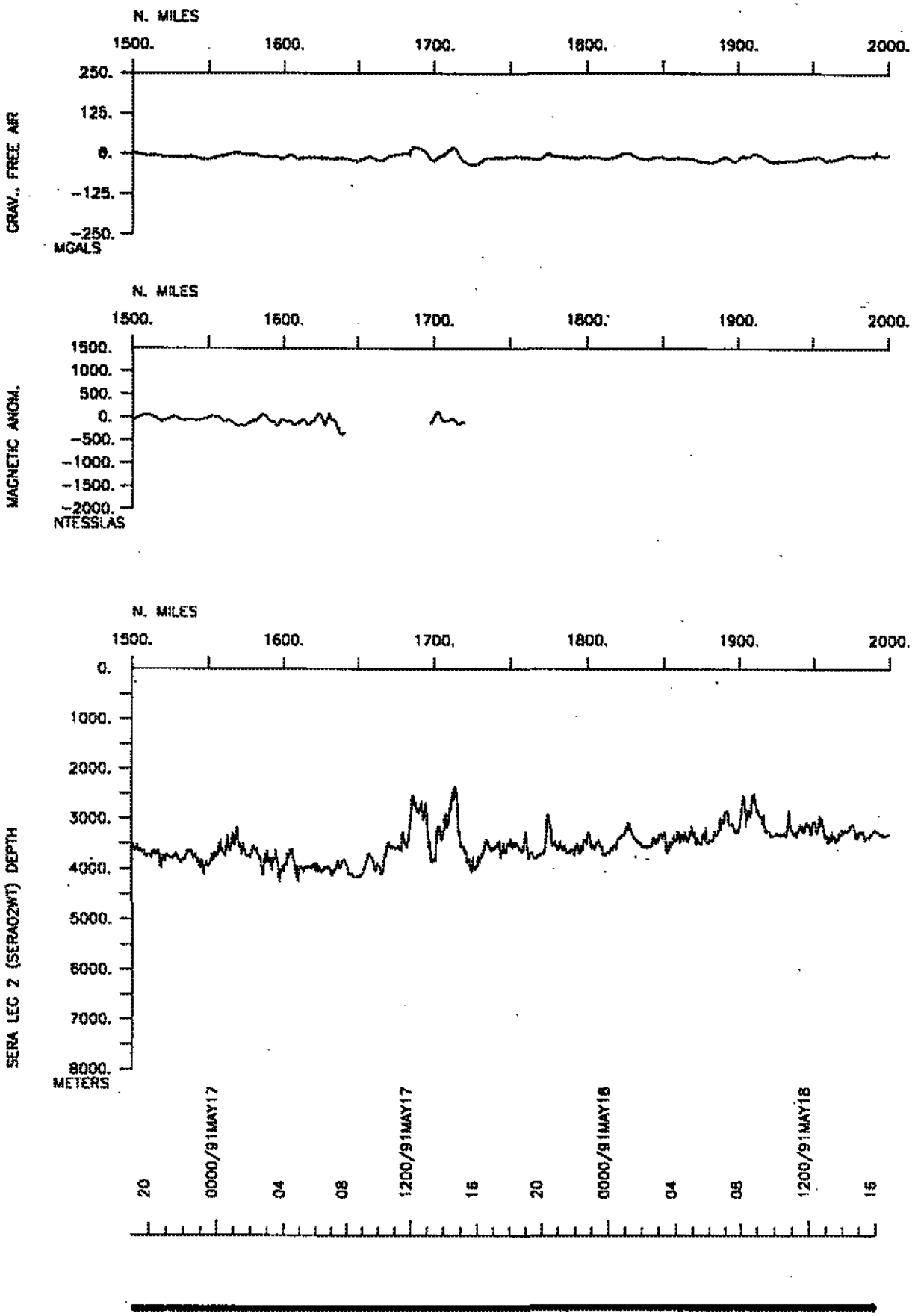
16
20
0000/91MAY16
04
08
1200/91MAY16
16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1700.
1800.
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2000.
MAGNETIC ANOM.
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1700.
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6000.
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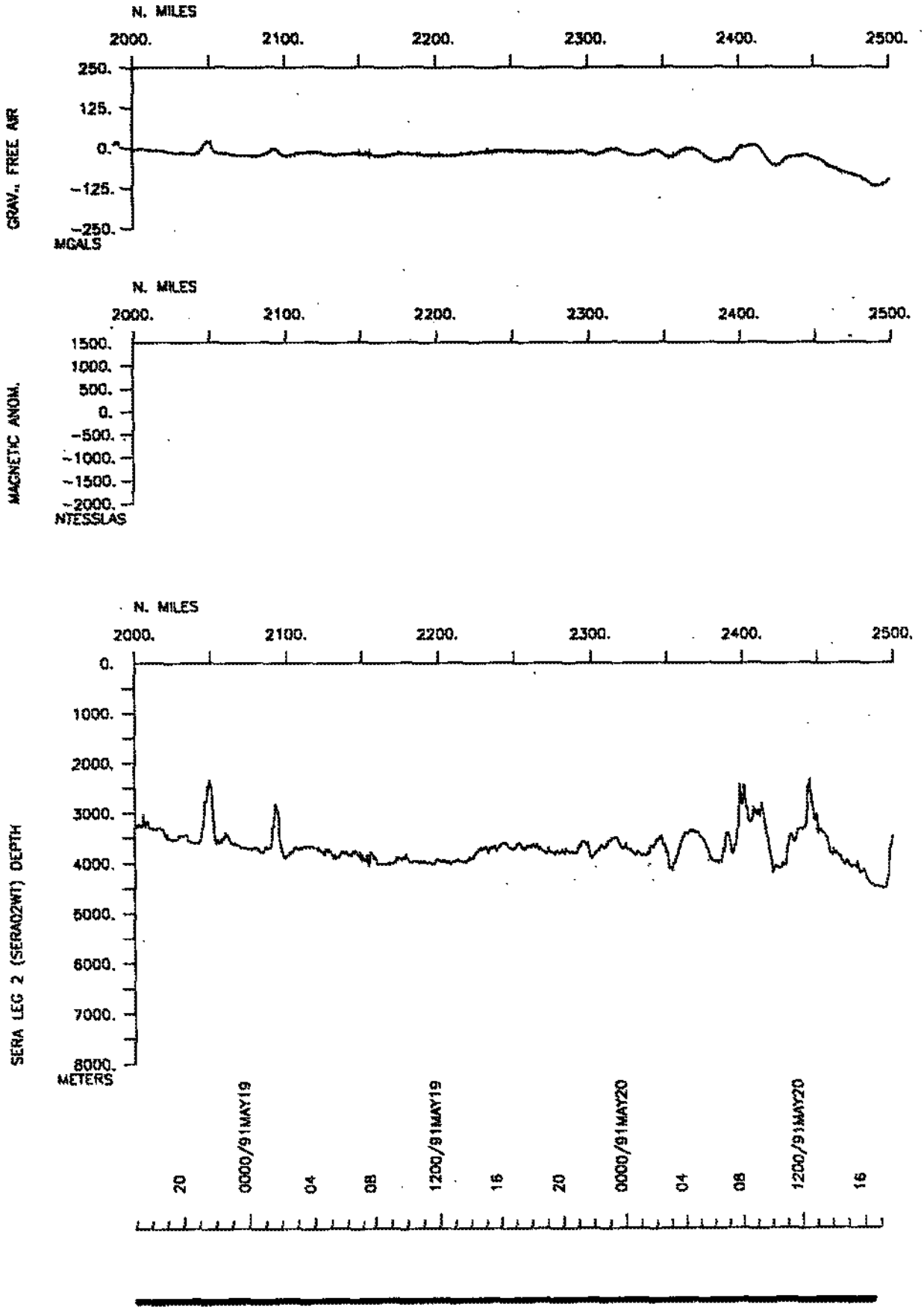
0000/91MAY18
04
08
1200/91MAY18
16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MAGNETIC ANOM.
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2500.
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1000.
2000.
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8000.
METERS
SERA LEG 2 (SERA02WT) DEPTH
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04
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1200/91MAY19
16
20
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1200/91MAY20
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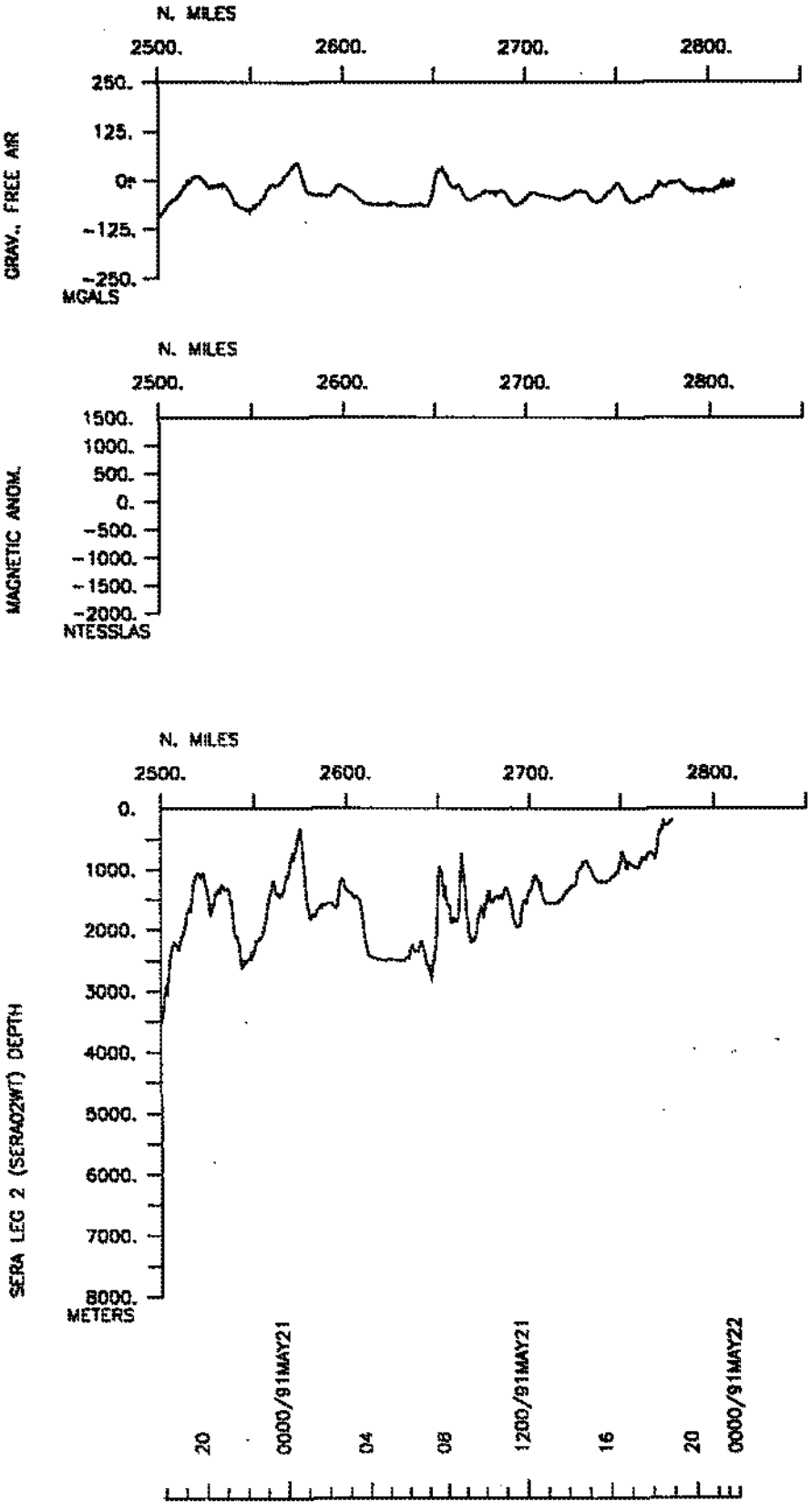
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6000.
7000.
8000.
METERS
SERA LEG 2 (SERA02WT) DEPTH
20
0000/91MAY21
04
08
1200/91MAY21
16
20
0000/91MAY22

S.I.O. SAMPLE INDEX

(Issued July 1991)

SERA EXPEDITION

Leg 2

R/V T. Washington

Manzanillo, Mexico (5 May 1991)
to
San Diego, California (21 May 1991)

Chief Scientist:

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

GDC Cruise I.D.# 253

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** SEISMIC REFLECTION RECORDS ***						
0655 080591	SPRF B	fast sweep r-01	GDC	9-112N	102-575W	sSERA02WT
1432 130591	SPRF E	fast sweep r-01	GDC	9-491N	104-144W	sSERA02WT
0655 080591	SPRS B	slow sweep r-01	GDC	9-112N	102-575W	sSERA02WT
1432 130591	SPRS E	slow sweep r-01	GDC	9-491N	104-144W	sSERA02WT
2005 080591	SRXX	seismic bottom shot	LMD	9-396N	103-005W	sSERA02WT
2016 090591	SRXX	seismic bottom shot	LMD	9-528N	104-066W	sSERA02WT
1623 130591	SRXX	seismic bottom shot	LMD	9-496N	104-173W	sSERA02WT
1721 130591	SRXX	seismic bottom shot	LMD	9-494N	104-172W	sSERA02WT
1816 130591	SRXX	seismic bottom shot	LMD	9-491N	104-172W	sSERA02WT
1917 130591	SRXX	seismic bottom shot	LMD	9-489N	104-172W	sSERA02WT
2034 130591	SRXX	seismic bottom shot	LMD	9-487N	104-171W	sSERA02WT
#*** GRAVITY SURVEY ***						
0137 090591	GVSV	a-01 3372m	MPL	9-397N	103-004W	sSERA02WT
1220 110591	GVSV	c-01 2912m	MPL	9-522N	104-069W	sSERA02WT
1928 110591	GVSV	c-02 2957m	MPL	9-516N	104-078W	sSERA02WT
2200 110591	GVSV	c-03 2926m	MPL	9-516N	104-088W	sSERA02WT
2354 110591	GVSV	c-04 2887m	MPL	9-512N	104-096W	sSERA02WT
0217 120591	GVSV	c-05 2906m	MPL	9-509N	104-109W	sSERA02WT
1000 120591	GVSV X	c-06	MPL	9-392N	104-140W	sSERA02WT
2000 120591	GVSV X	c-07	MPL	9-551N	104-183W	sSERA02WT
0830 140591	GVSV	L-01 2550m	MPL	9-490N	104-172W	sSERA02WT
2118 140591	GVSV	c-08 2731m	MPL	9-498N	104-142W	sSERA02WT
0216 150591	GVSV	c-09 2683m	MPL	9-497N	104-147W	sSERA02WT
0347 150591	GVSV	c-10 2694m	MPL	9-495N	104-153W	sSERA02WT
0518 150591	GVSV	c-11 2645m	MPL	9-493N	104-157W	sSERA02WT

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** OCEAN BOTTOM SEISMOMETERS ***						
0120 080591	SBOB B	obs Nancy	MPL	9-394N	103-004W	sSERA02WT
0600 090591	SBOB E	obs Nancy	MPL	9-391N	103-009W	sSERA02WT
0244 080591	SBOB B	snag obs 12	LMD	9-399N	103-005W	sSERA02WT
0645 090591	SBOB E	snag obs 12	LMD	9-395N	103-012W	sSERA02WT
2300 100591	SBOB B	Webb obs 688	MPL	9-484N	104-171W	sSERA02WT
1044 150591	SBOB E	Webb obs 688	MPL	9-475N	104-173W	sSERA02WT
0109 110591	SBOB B	obs Sid	MPL	9-485N	104-146W	sSERA02WT
1240 150591	SBOB E	obs Sid	MPL	9-478N	104-147W	sSERA02WT
1331 090591	SBOB B	obs Nancy	MPL	9-523N	104-065W	sSERA02WT
2047 100591	SBOB E	obs Nancy	MPL	9-517n	104-082W	sSERA02WT
1529 090591	SBOB B	obs Evita	MPL	9-539N	104-066W	sSERA02WT
1850 100591	SBOB E	obs Evita	MPL	9-529n	104-105W	sSERA02WT
0255 110591	SBOB B	obs Nancy	MPL	9-459N	104-166W	sSERA02WT
1435 150591	SBOB E	obs Nancy	MPL	9-452N	104-164W	sSERA02WT
0500 110591	SBOB B	obs Evita	MPL	9-463N	104-141W	sSERA02WT
1313 150591	SBOB E	obs Evita	MPL	9-452N	104-144W	sSERA02WT
2237 100591	SBOB B	snag obs 12	LMD	9-484N	104-170W	sSERA02WT
0605 110591	SBOB E	snag obs 12	LMD	9-482N	104-172W	sSERA02WT
0901 120591	SBOB B	snag obs 6	LMD	9-472N	104-168W	sSERA02WT
1530 150591	SBOB E	snag obs 6	LMD	9-464N	104-169W	sSERA02WT
0655 110591	SBOB B	snag obs 9	LMD	9-483N	104-171W	sSERA02WT
1107 150591	SBOB E	snag obs 9	LMD	9-475N	104-172W	sSERA02WT

#GMT DDMMYY LOC T #TIME DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
#*** THERMOGRAPH RECORDS ***						
2100 050591	TGRA	B theromograph	GDC	19-033N	104-188W	sSERA02WT
2200 210591	TGRA	E theromograph	GDC	32-364N	117-144W	sSERA02WT
#*** EXPENDABLE BATHYTHERMOGRAPHS ***						
1604 060591	BTXP	xbt 0001 Probe T-4	GDC	15-504N	103-491W	sSERA02WT
1927 060591	BTXP	xbt 0002 Probe T-4	GDC	15-116N	103-419W	sSERA02WT
1435 070591	BTXP	xbt 0003 Probe T-4	GDC	11-354N	103-149W	sSERA02WT
0034 080591	BTXP	xbt 0004 Probe T-4	GDC	9-410N	103-009W	sSERA02WT
2011 080591	BTXP	xbt 0005 Probe T-4	GDC	9-396N	103-005W	sSERA02WT
1309 090591	BTXP	xbt 0006 Probe T-4	GDC	9-523N	104-065W	sSERA02WT
1511 100591	BTXP	xbt 0007 Probe T-4	GDC	9-466N	104-345W	sSERA02WT
1549 130591	BTXP	xbt 0008 Probe T-4	GDC	9-486N	104-171W	sSERA02WT
1315 140591	BTXP	xbt 0009 Probe T-4	GDC	9-485N	104-167W	sSERA02WT
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1404 160591	BTXP	xbt 0011 Probe T-4	GDC	12-457N	106-191W	sSERA02WT
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1518 190591	BTXP	xbt 0015 Probe T-4	GDC	23-256N	114-173W	sSERA02WT
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#***	End Sample Index					