

INFORMAL REPORT AND INDEX OF
NAVIGATION, DEPTH, MAGNETIC AND SUBBOTTOM PROFILER DATA
(Issued October 1989)

VENTURE EXPEDITION

LEG 1

=====

R/V Washington

San Diego, California (28 August 1989)
to
Manzanillo, Mexico (2 October 1989)

Chief Scientist:

Nicholas Pisiias - Oregon State University

Resident Marine Technician - Bob Wilson

Post-Cruise Processing and Report Preparation
by Geological Data Center, Scripps Institution of Oceanography

Data Collection and Processing Funded by:
NSF Grant Number OCE87-02835

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.

GDC Cruise I.D.# 245

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 profiles (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. Phone (619)534-2752.

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

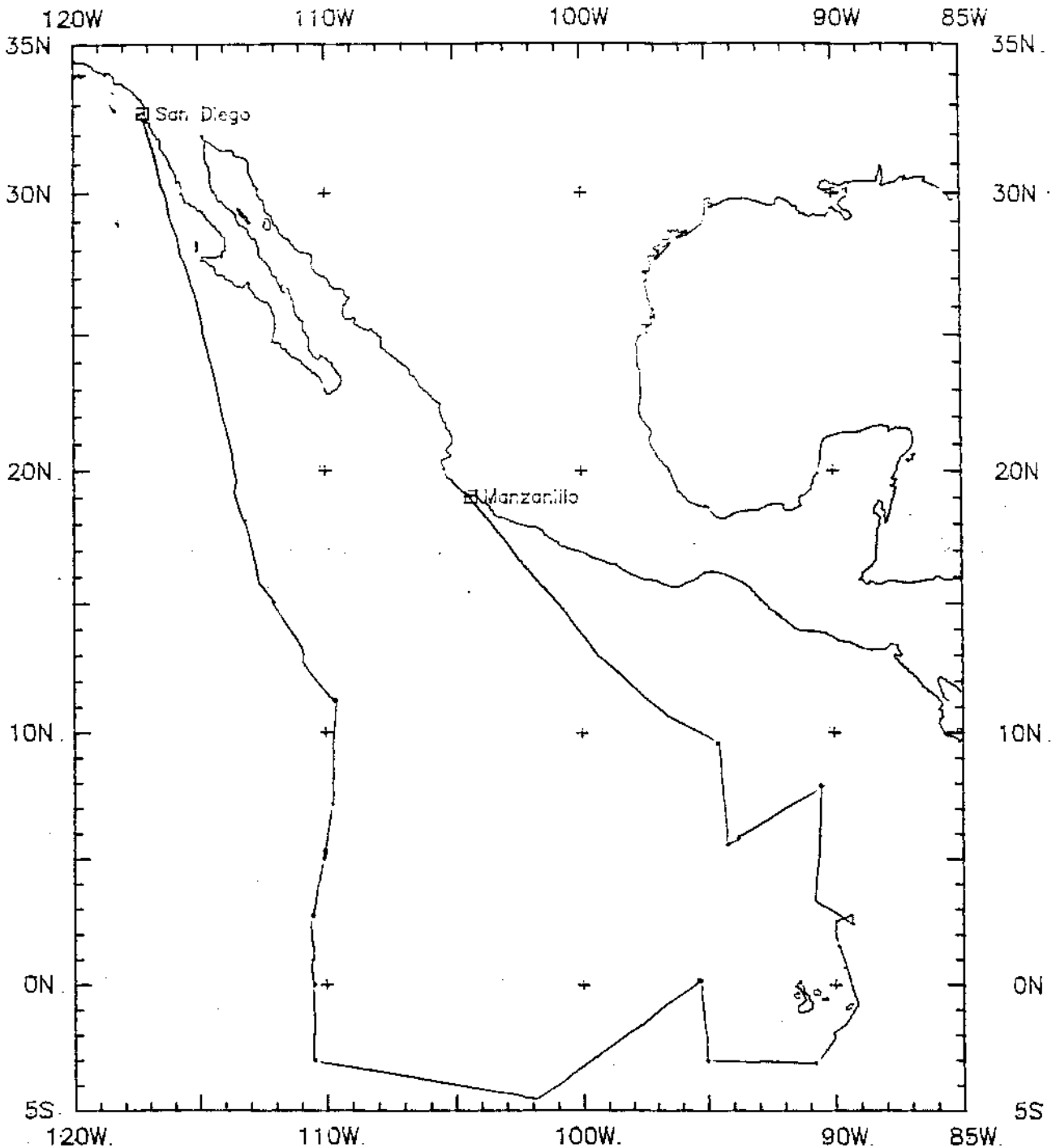
Revised September 1987

SIO Sea Beam Data

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



VENTURE EXPEDITION LEG 1

CHIEF SCIENTIST:

Nicholas Piasias - Oregon State University

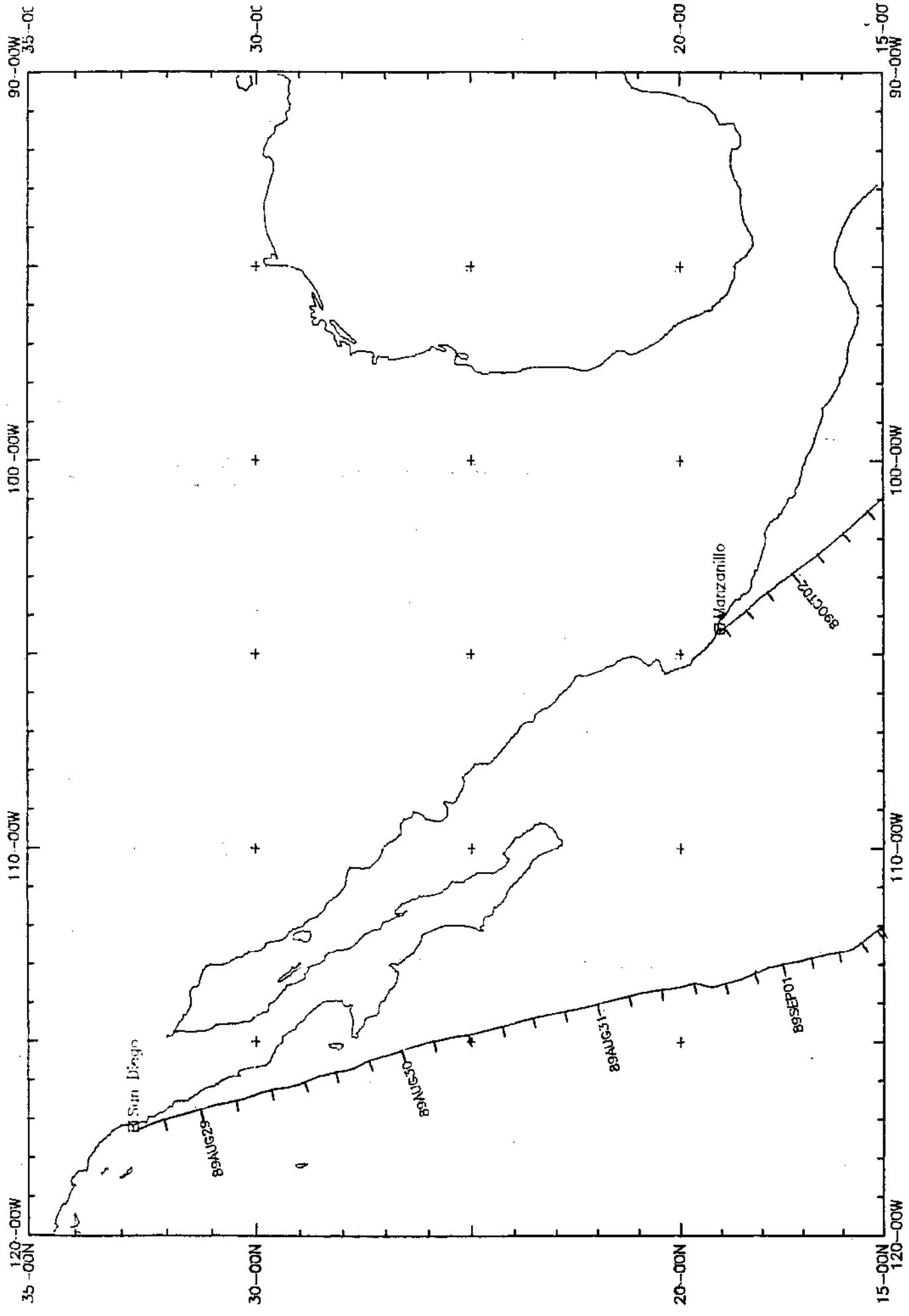
PORTS: San Diego, Calif. - Manzanillo, Mexico

DATES: 28 August - 2 October 1989

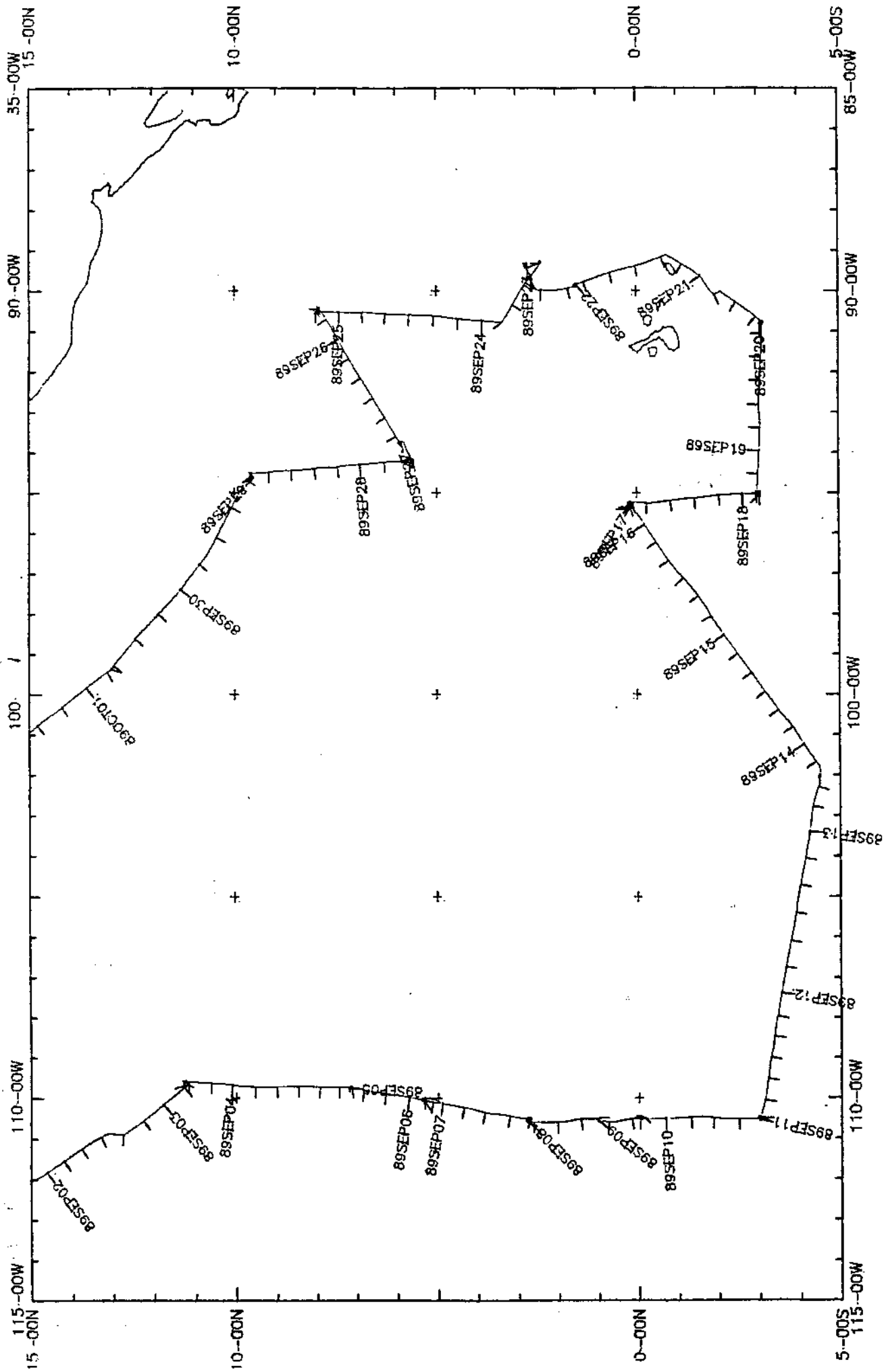
SHIP: R/V T. Washington

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

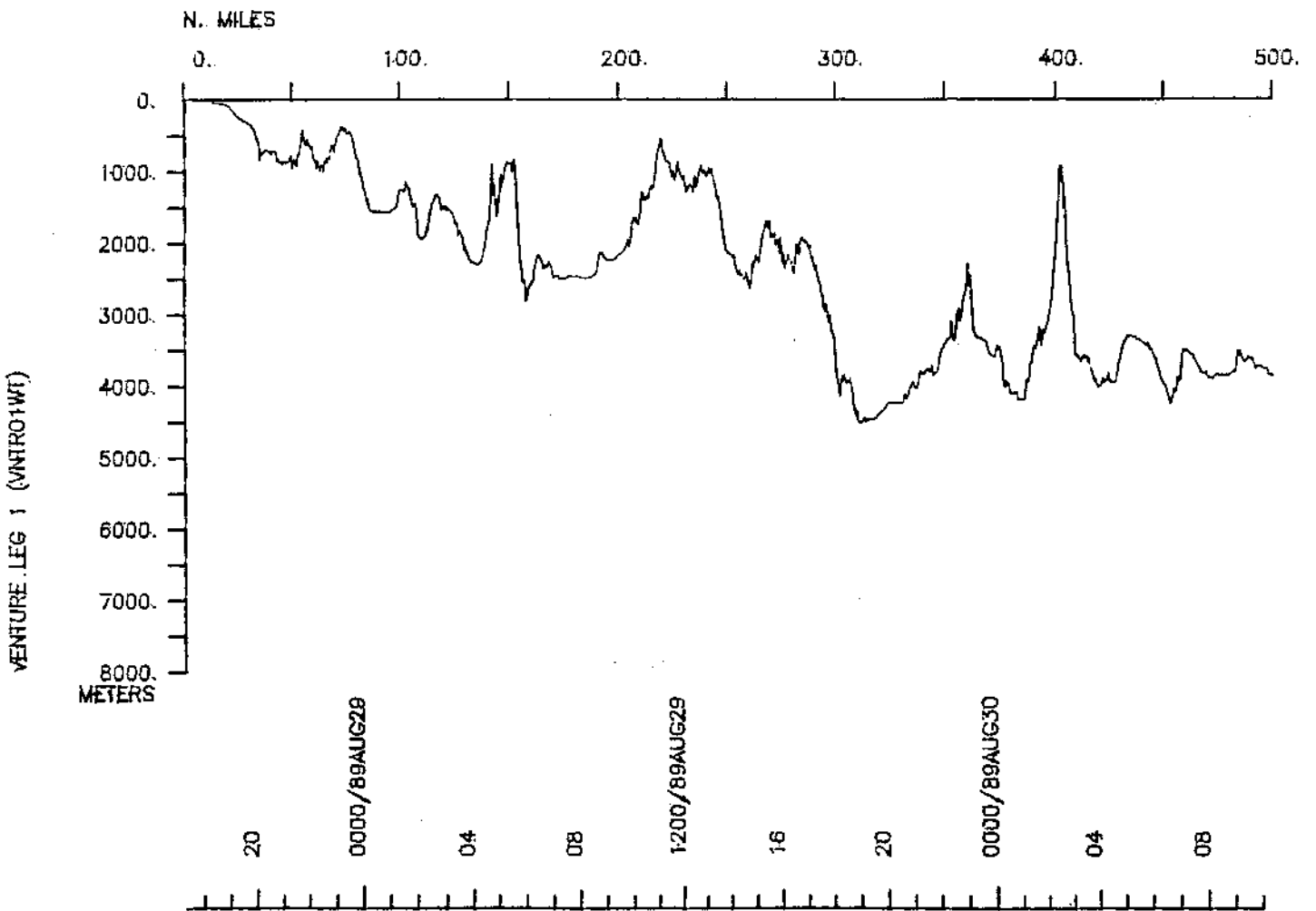
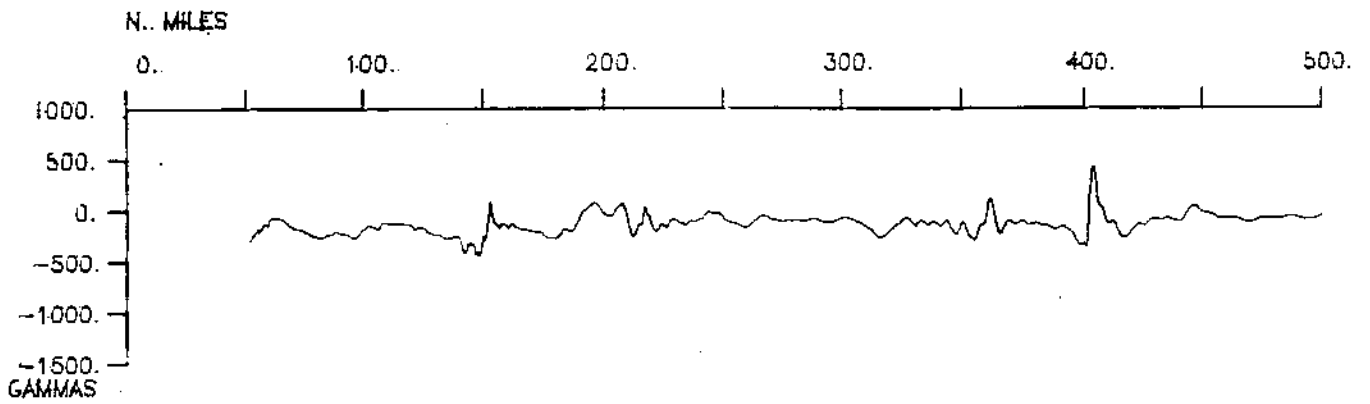
- 1) Cruise - 6779 miles
- 2) Bathymetry - 6075 miles
- 3) Magnetics - 5415 miles
- 4) Seismic Reflection - 4710 miles
- 5) Gravity - collected but not processed
- 6) Sea Beam - 6075 miles



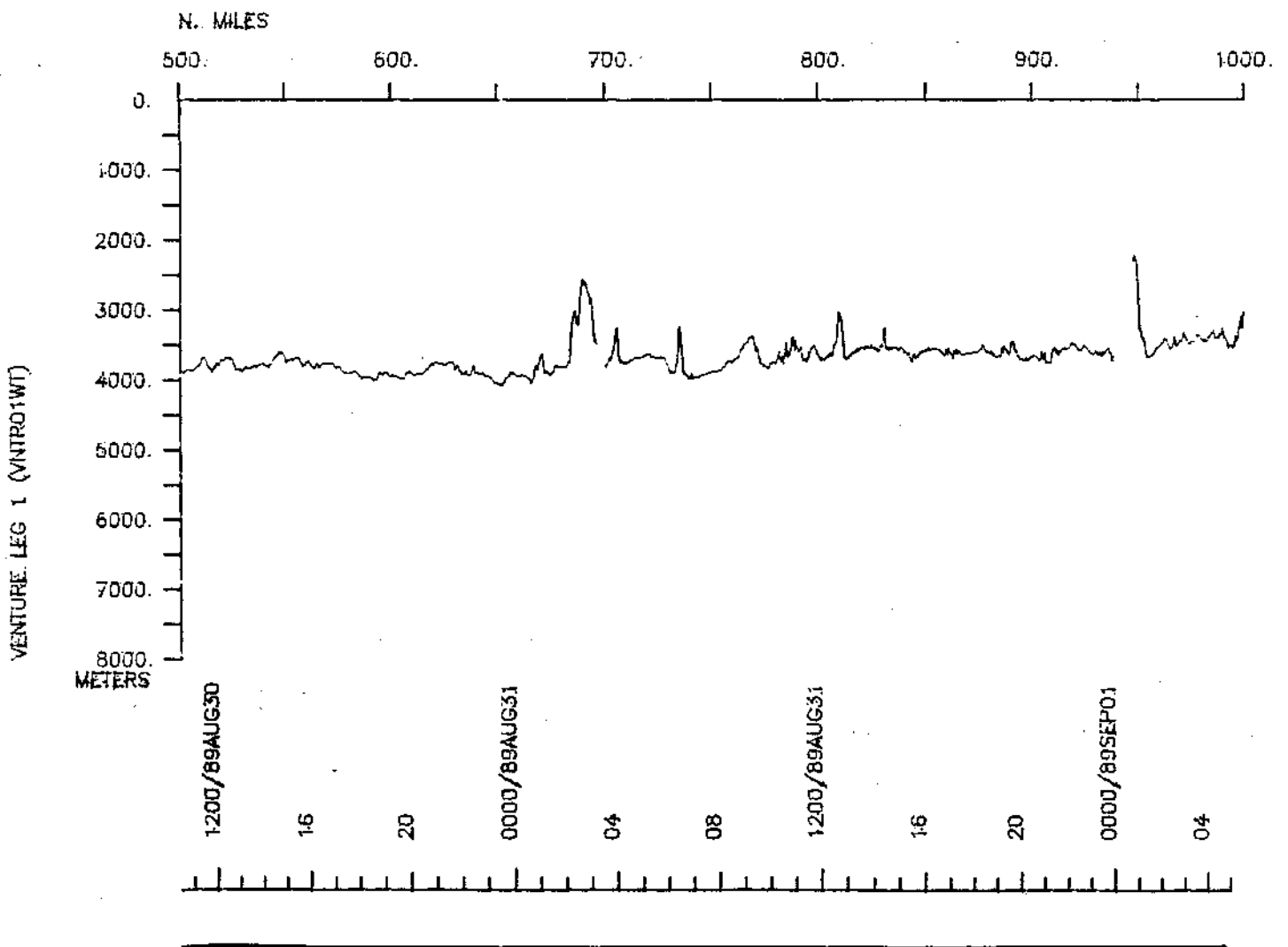
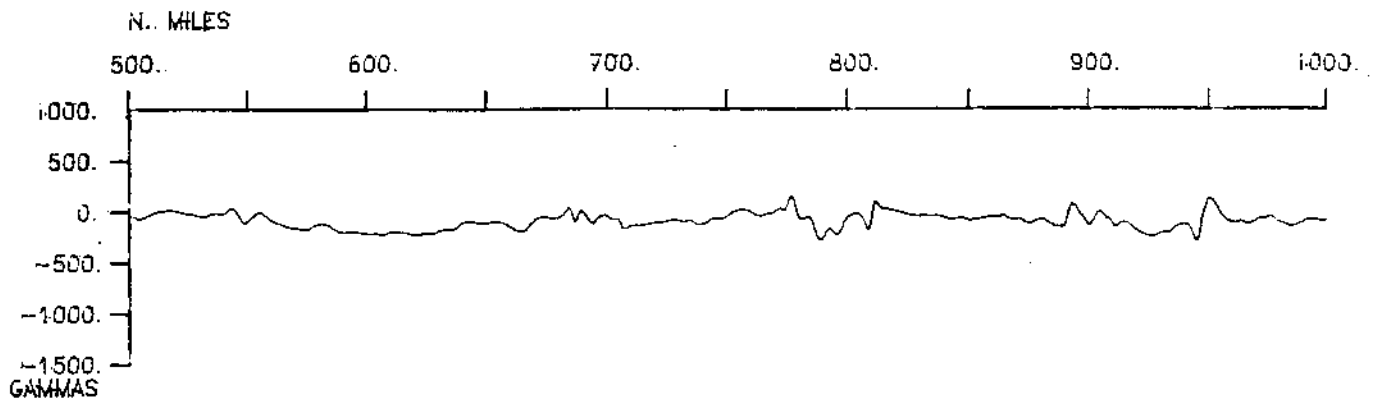
Venture leg 1 Plot 1 of 2
 Sca 0.312 "/deg longitude.

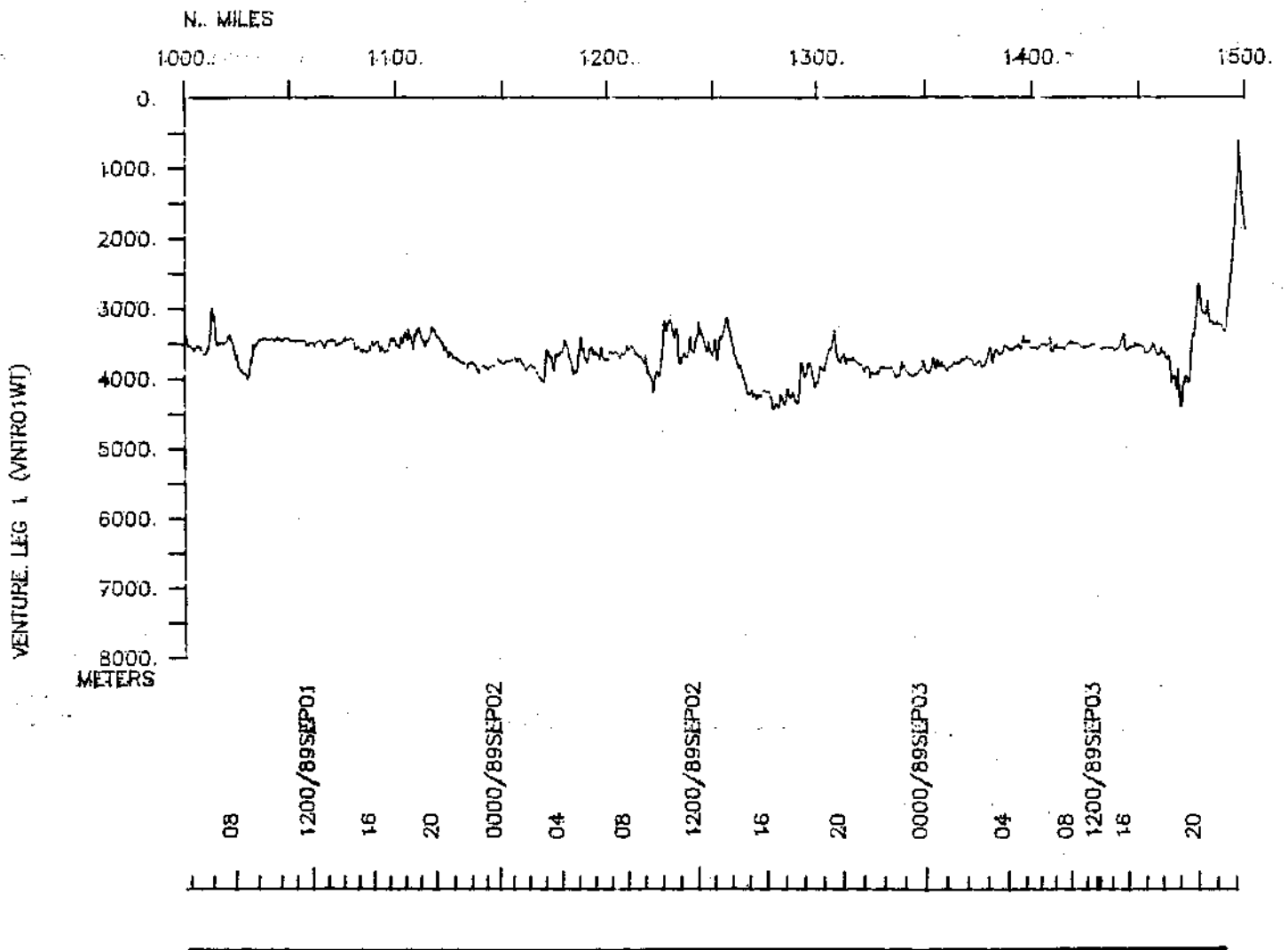
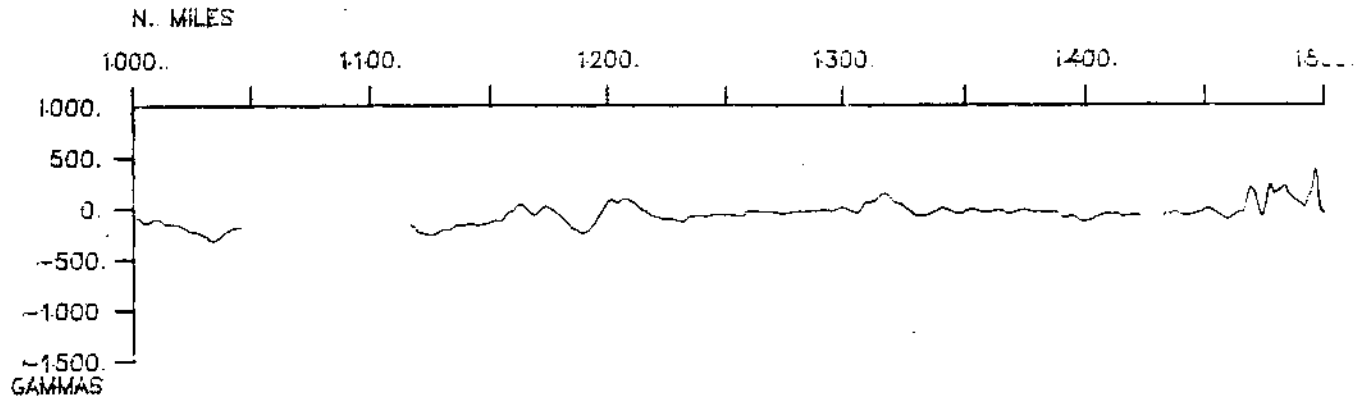


Venture. leg. 1 Plot 2. of 2.
 Scale: 0.312. "/deg longitude.

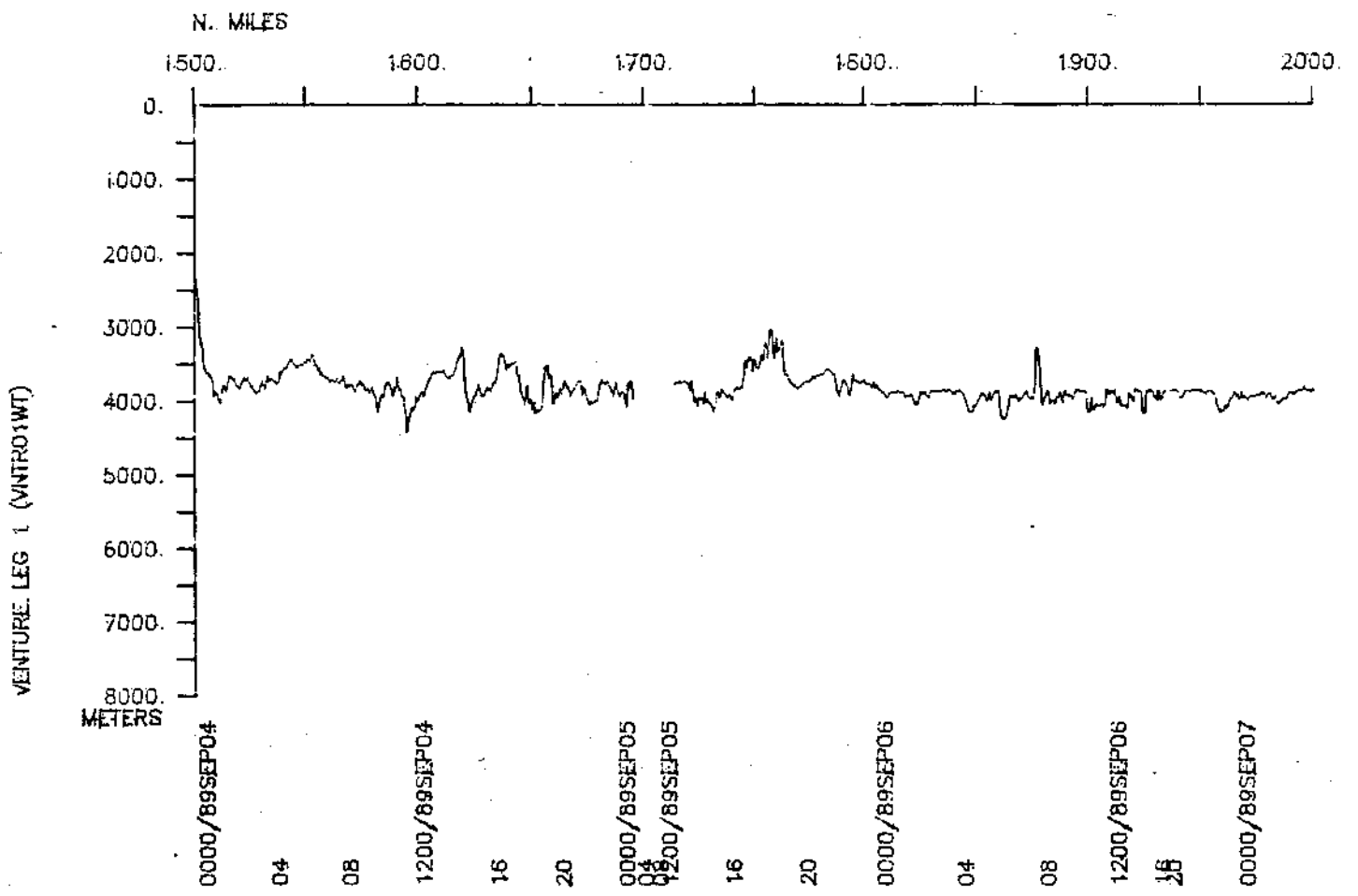
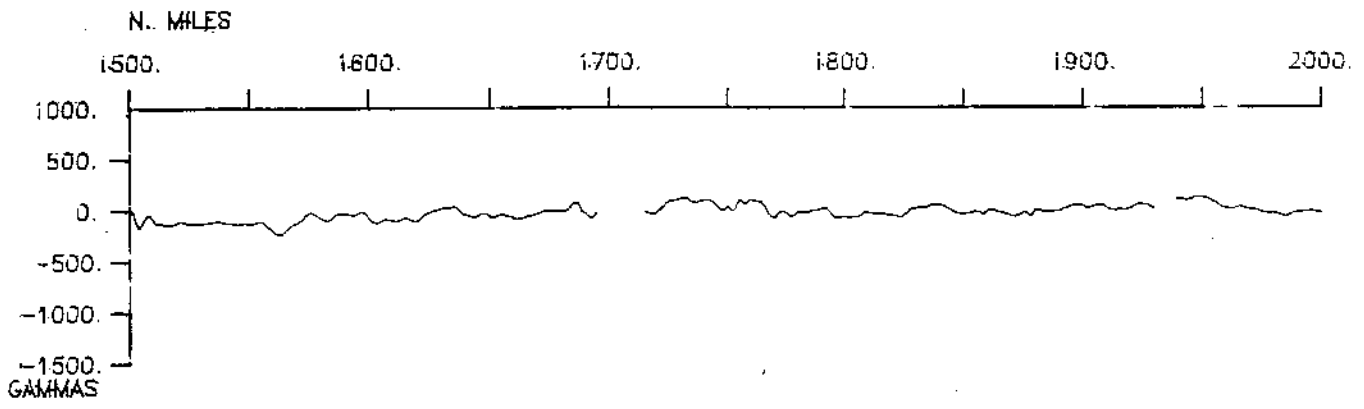


SEA BEAM



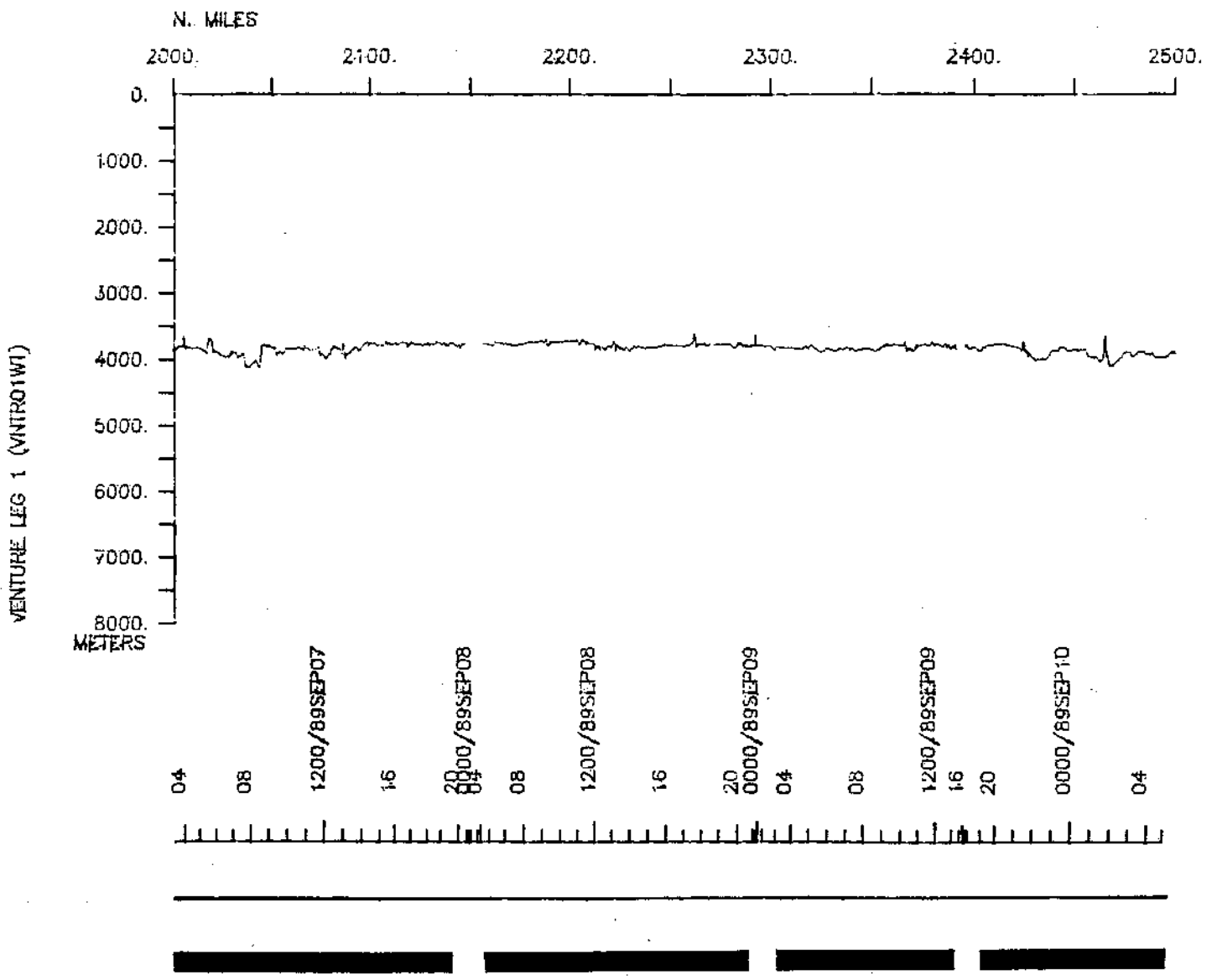
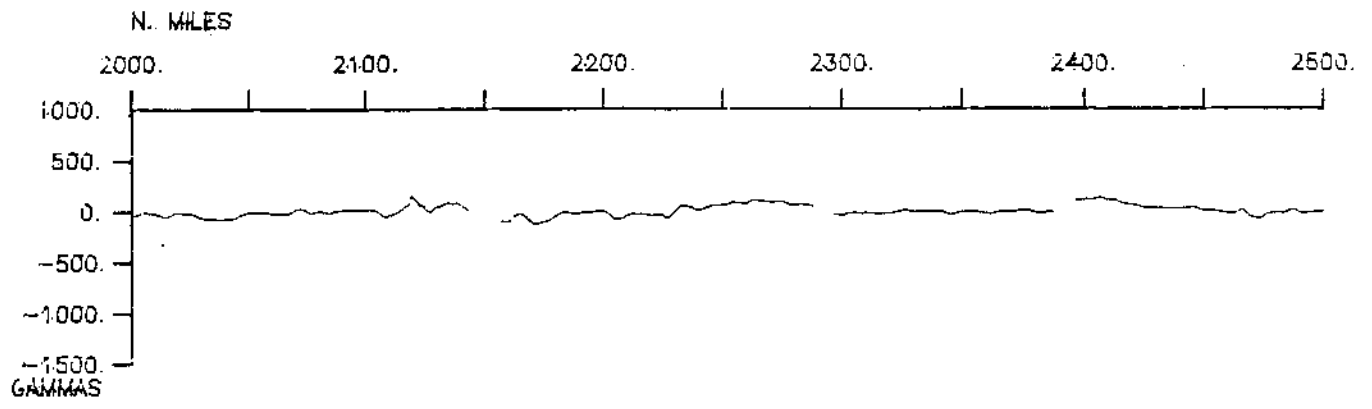


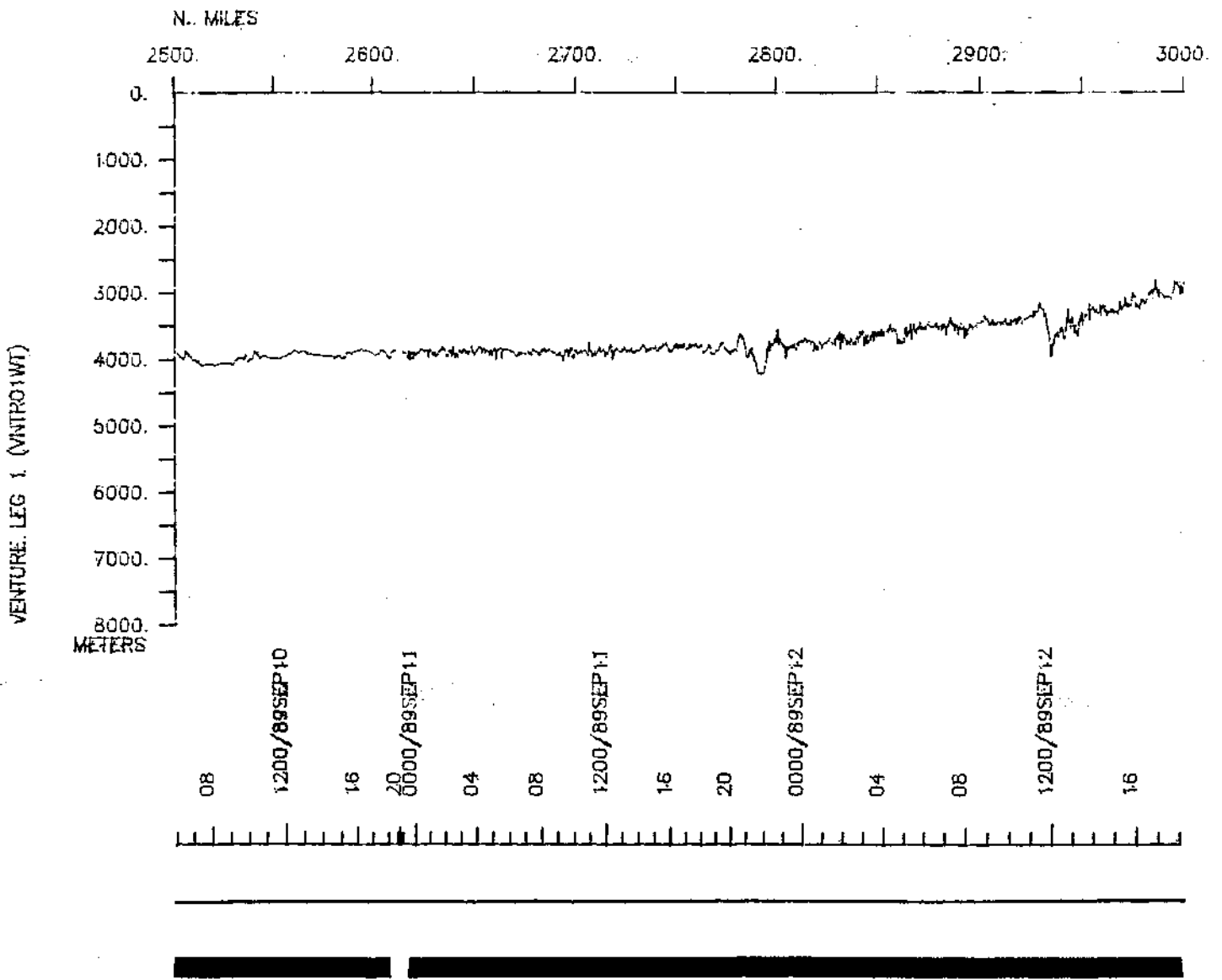
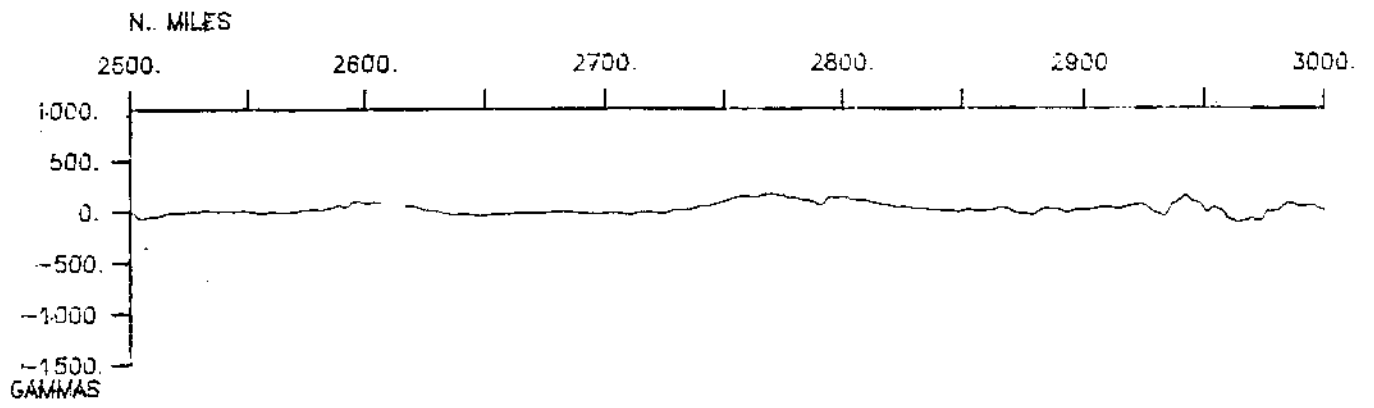
SEISMICS

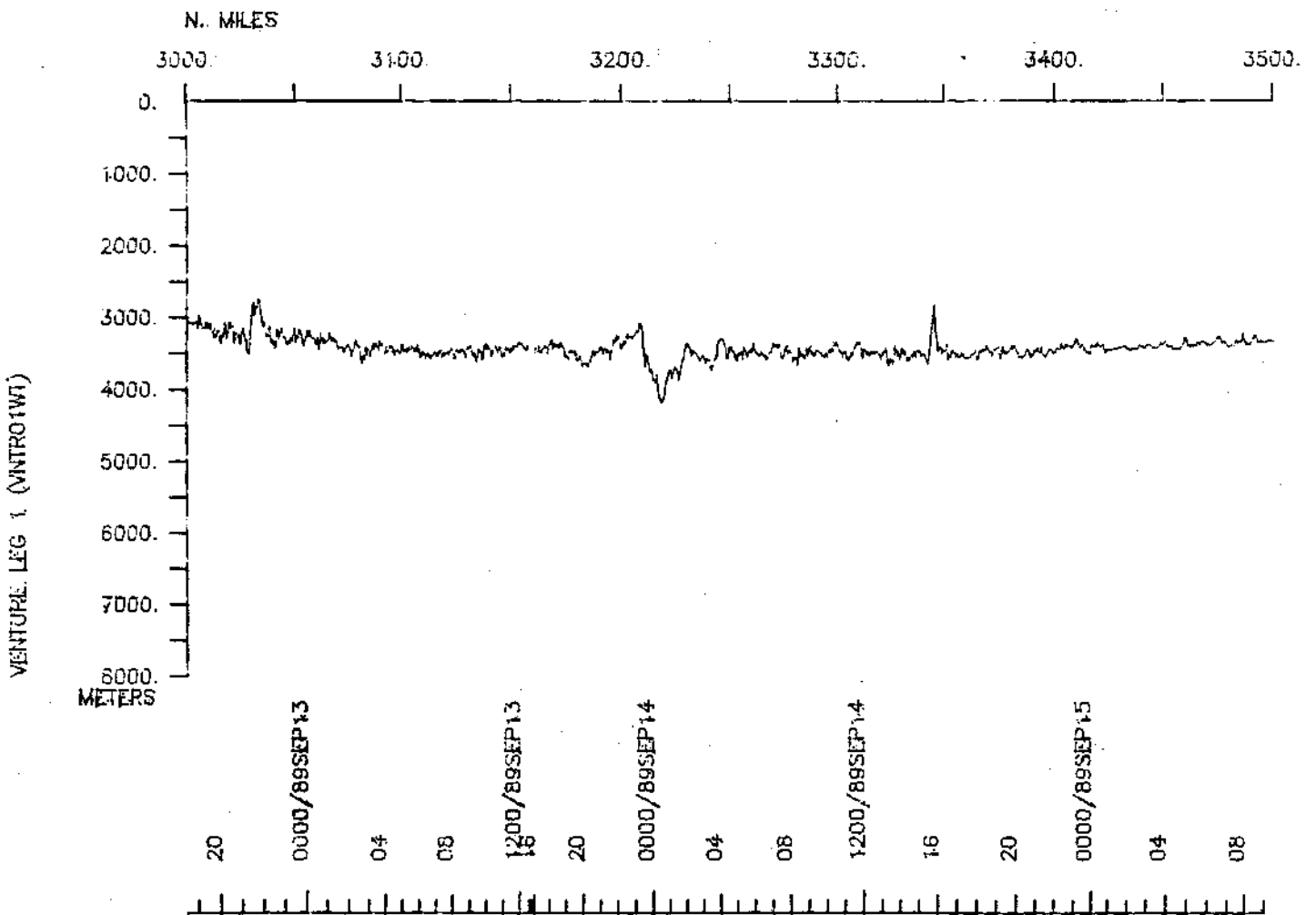
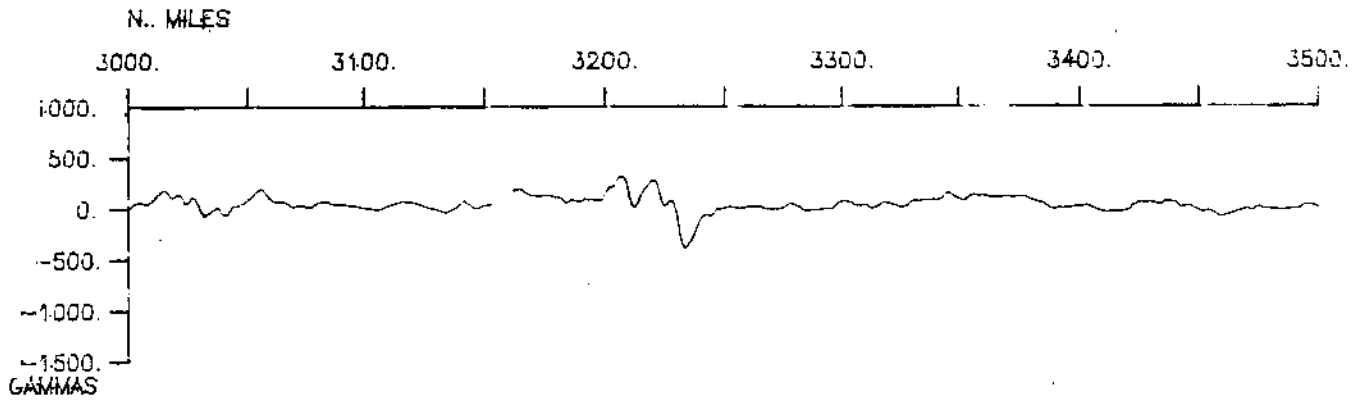


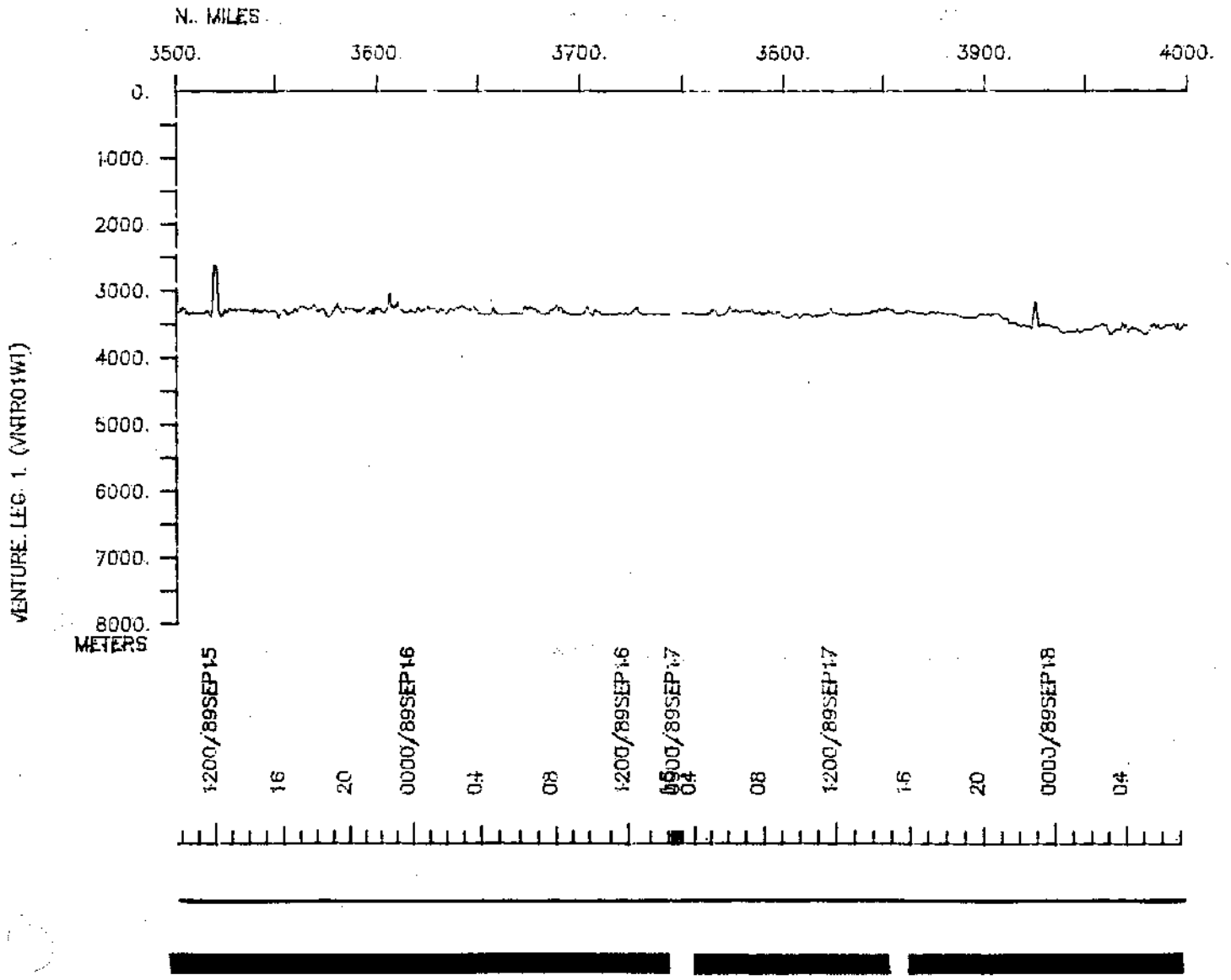
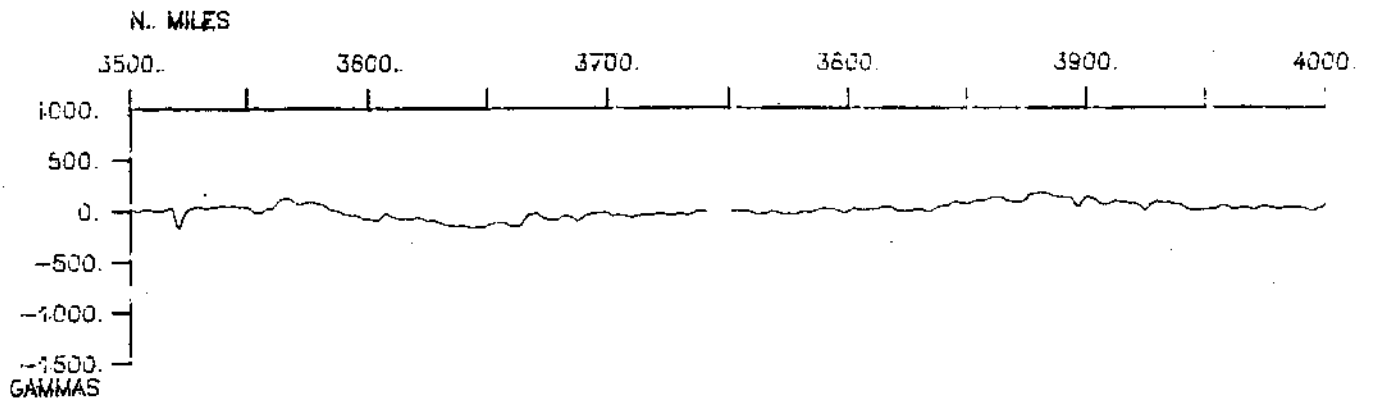
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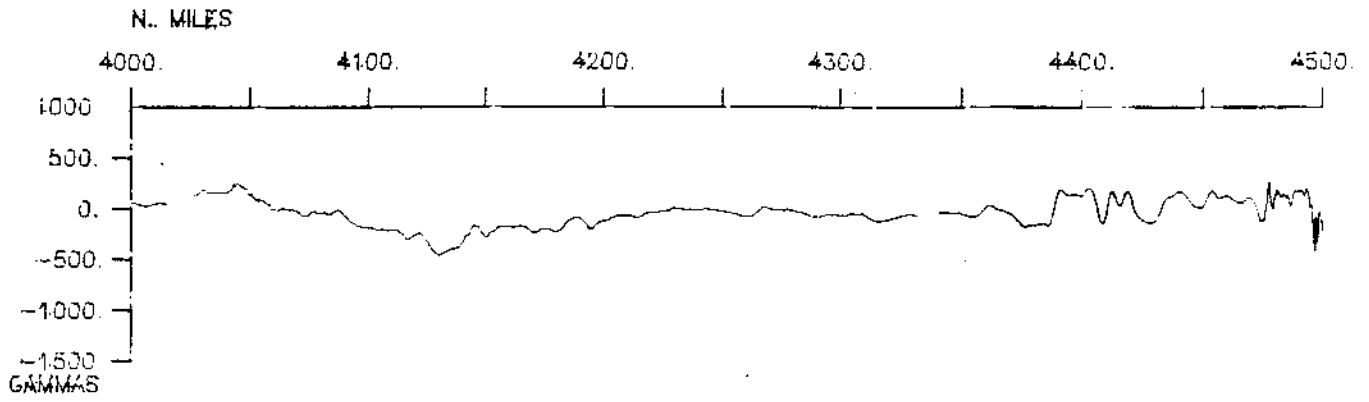




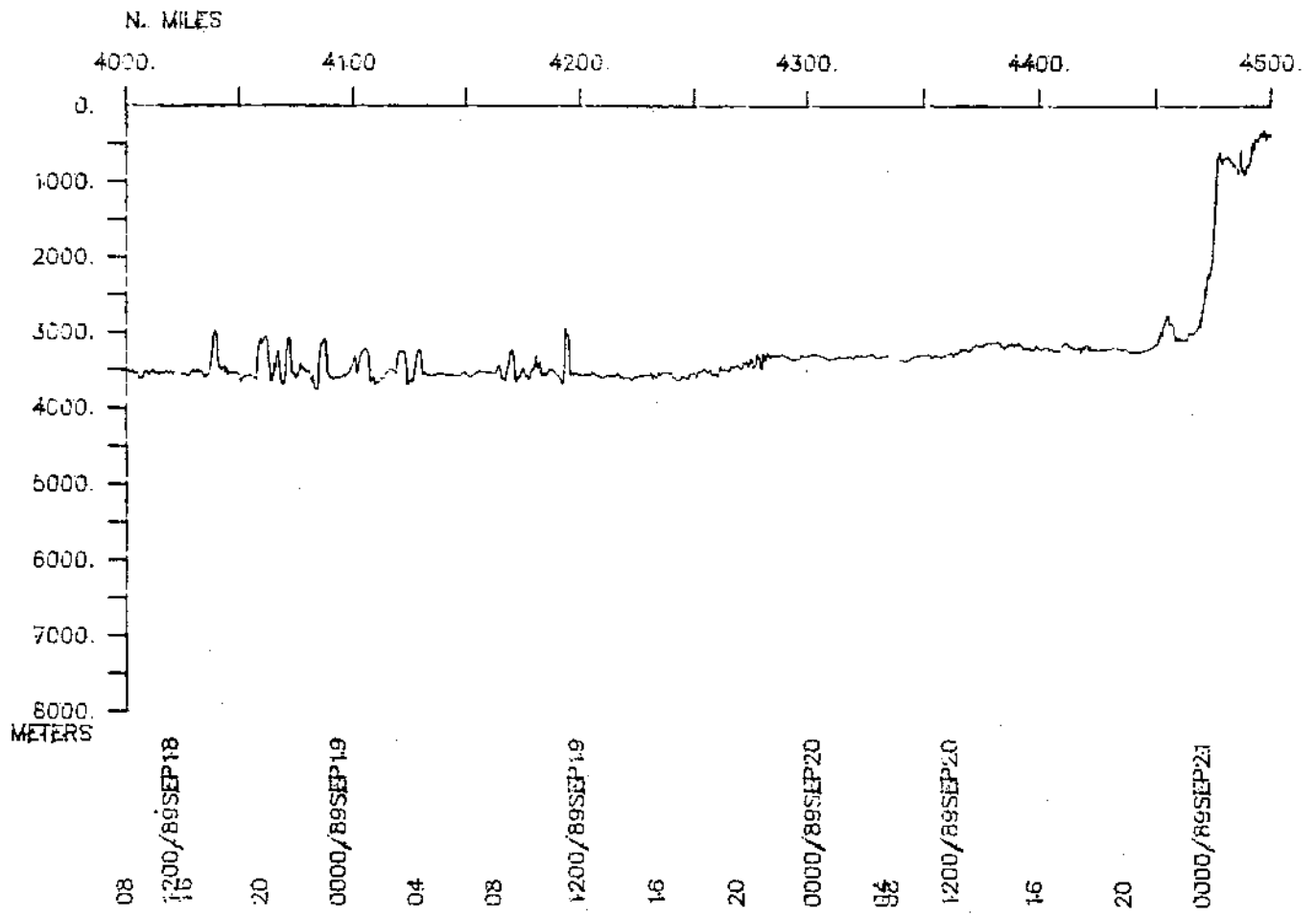




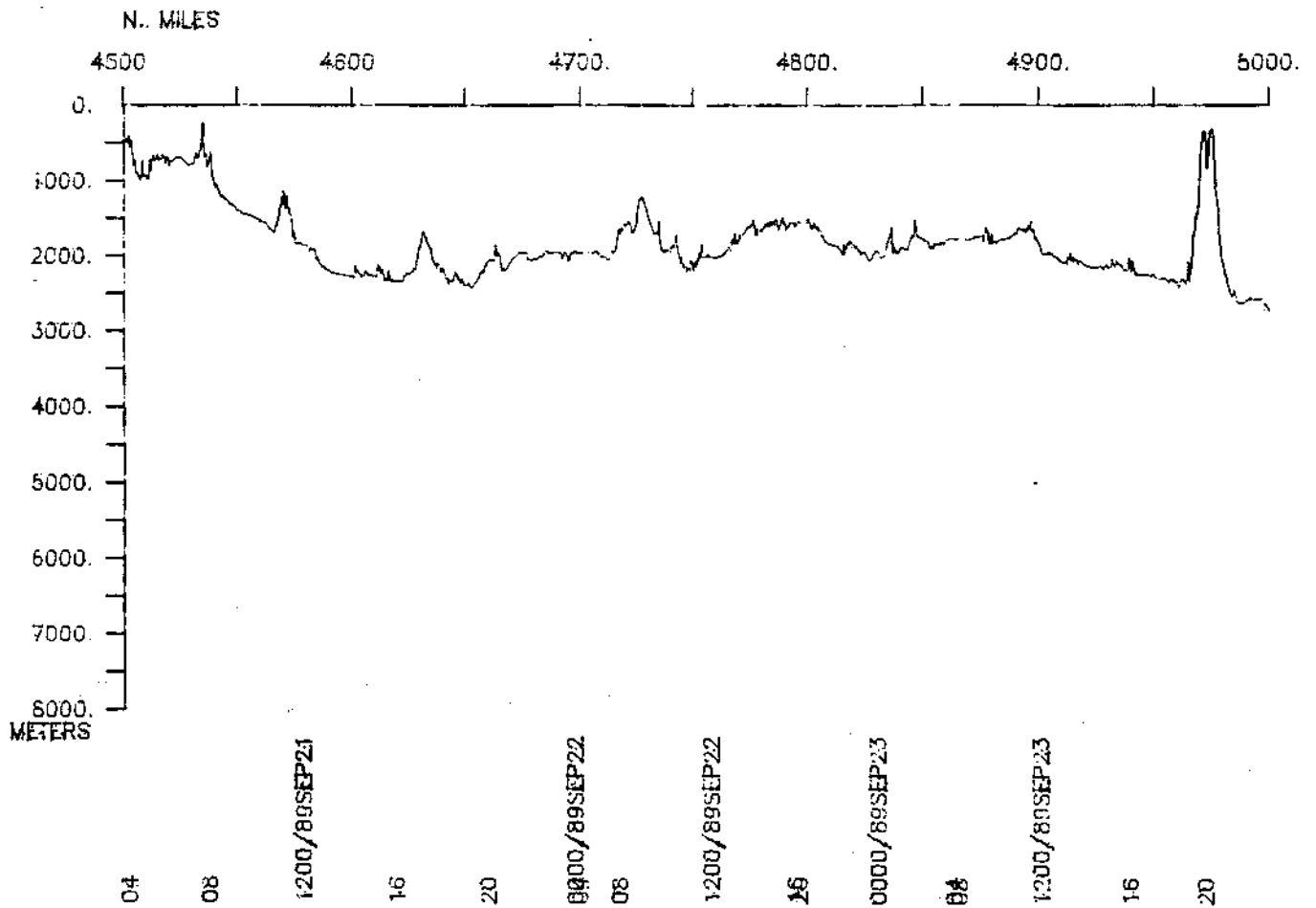
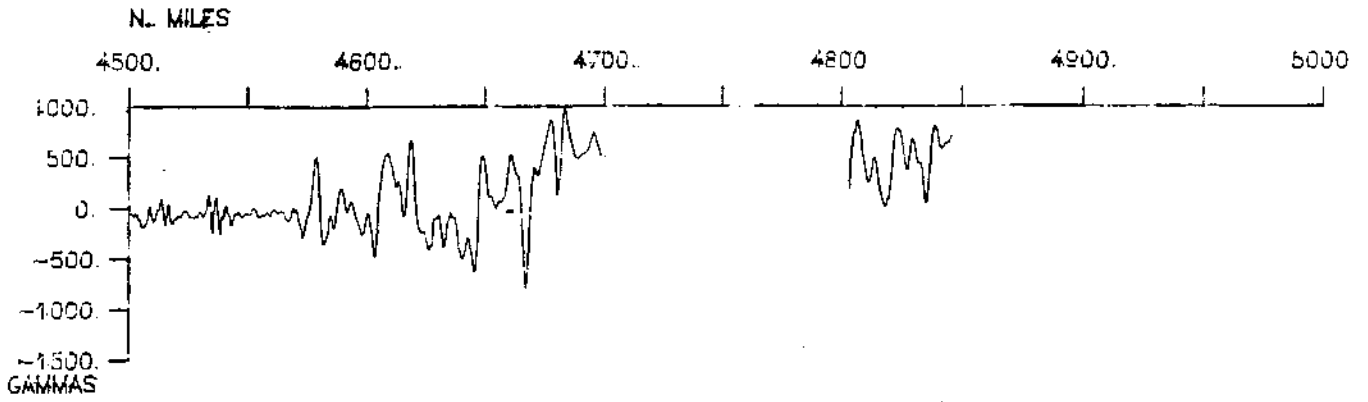




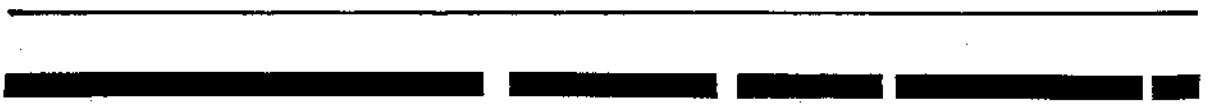
VENTURE LEG 1 (VINTRO1W1)

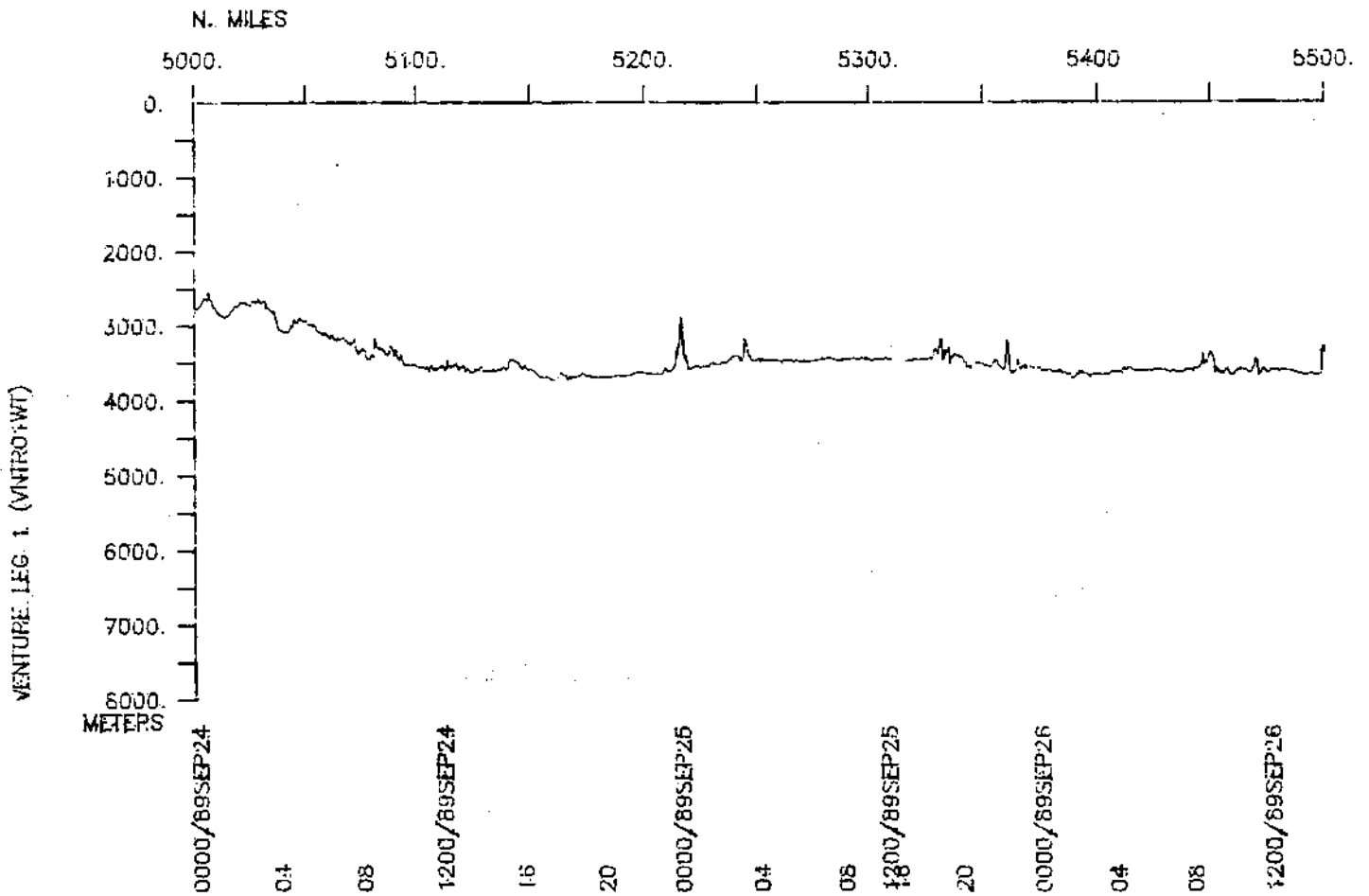
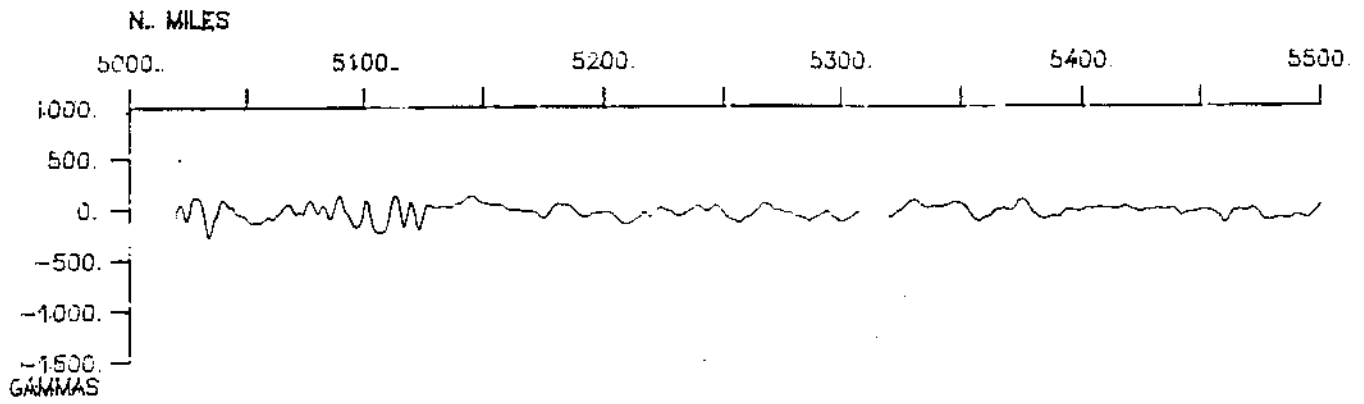


VENTURE LEG 1 (MNTRO1WT)

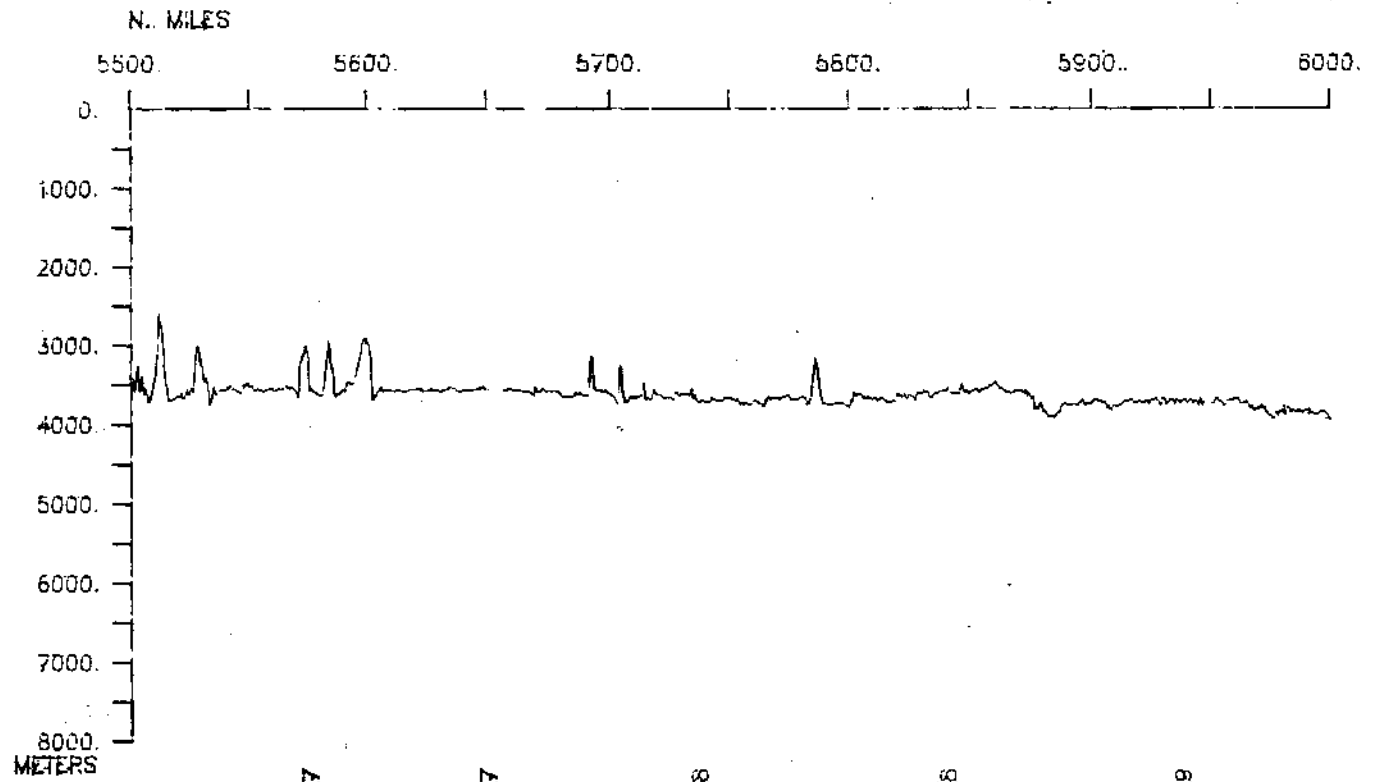
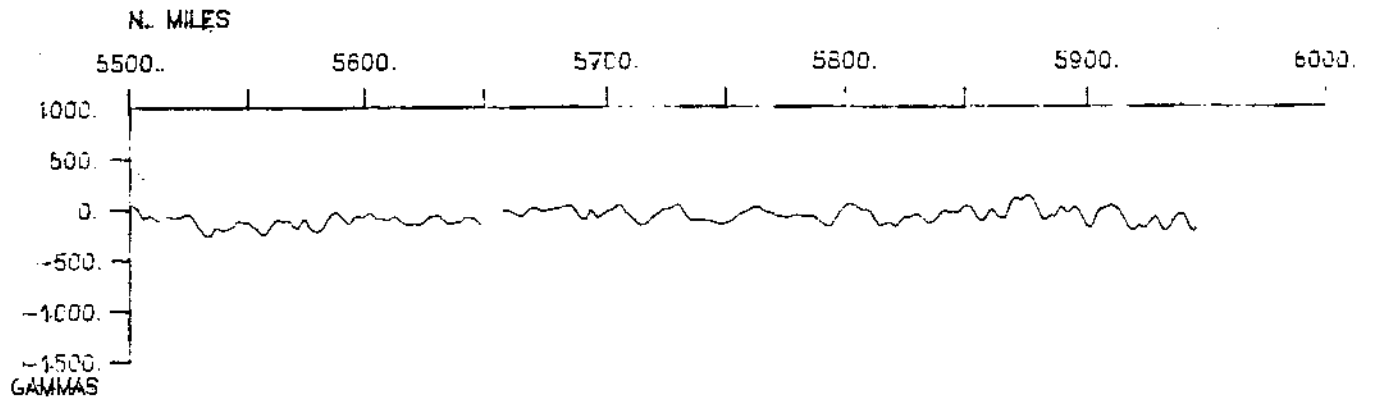


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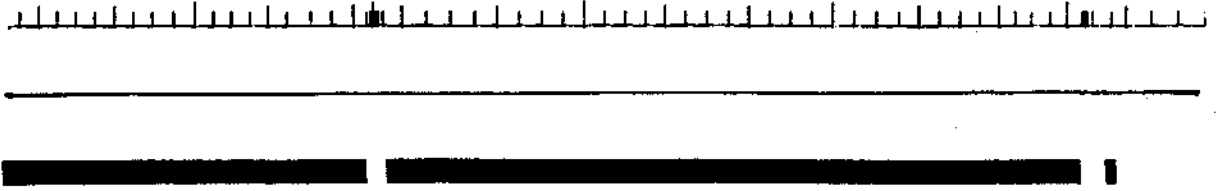


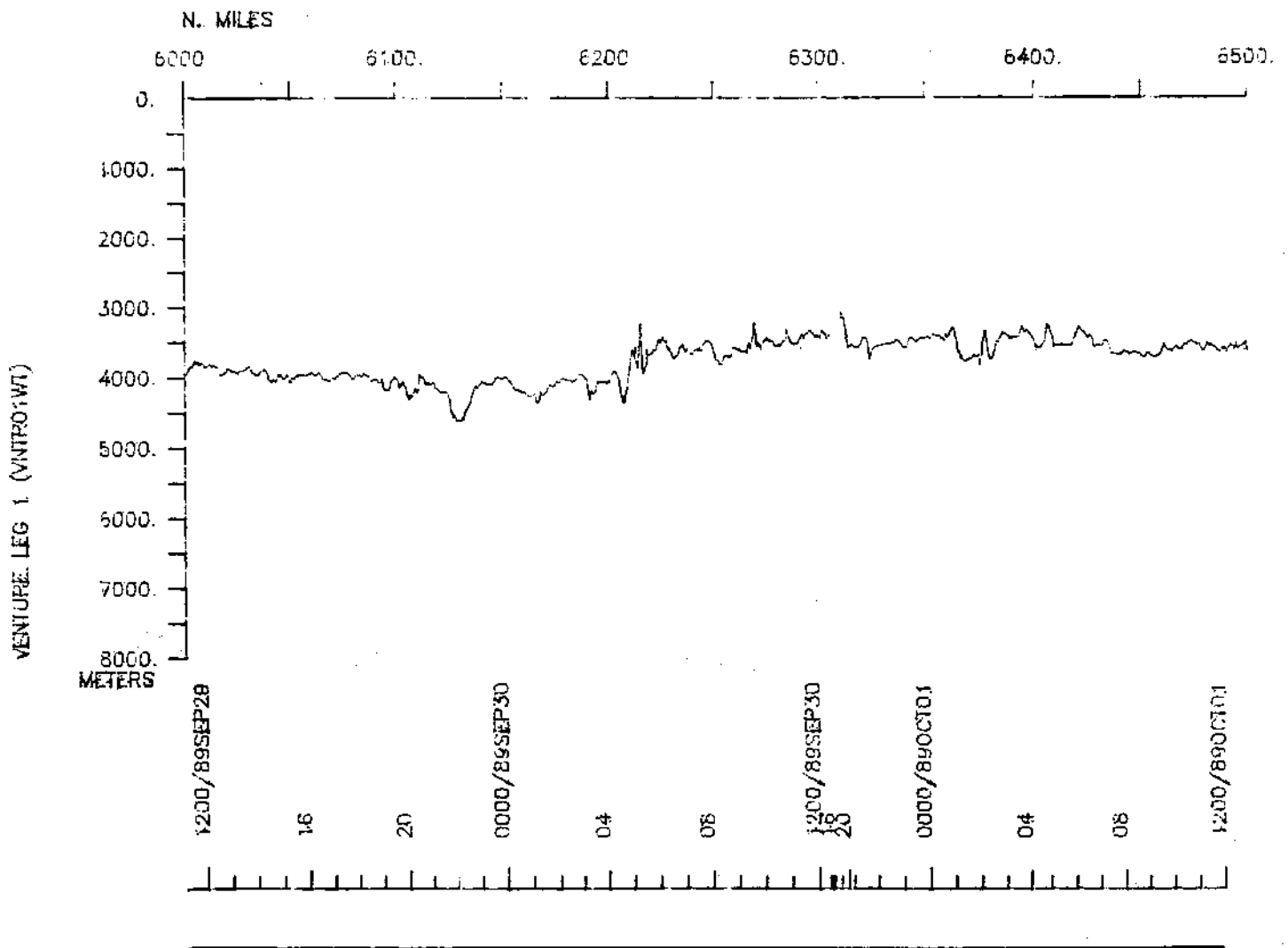
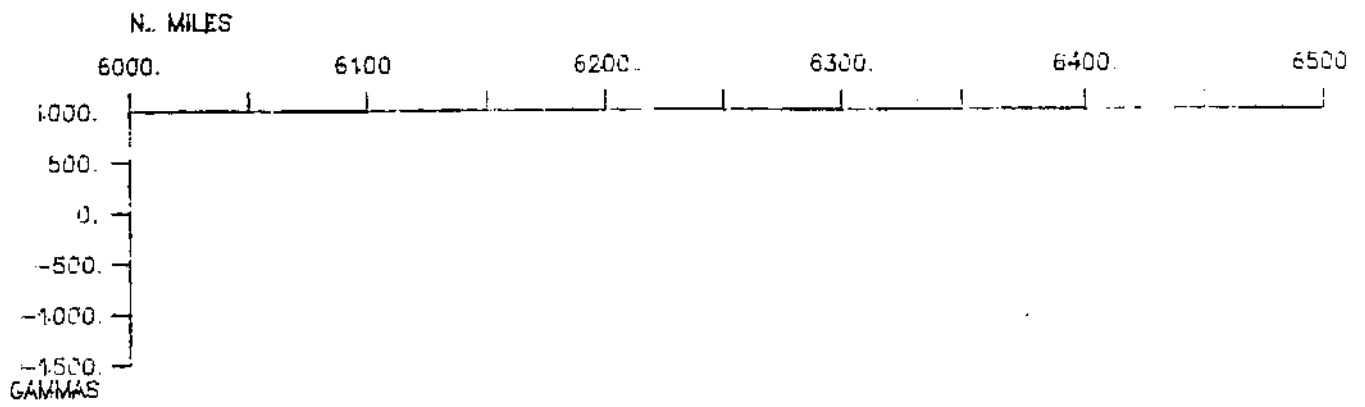
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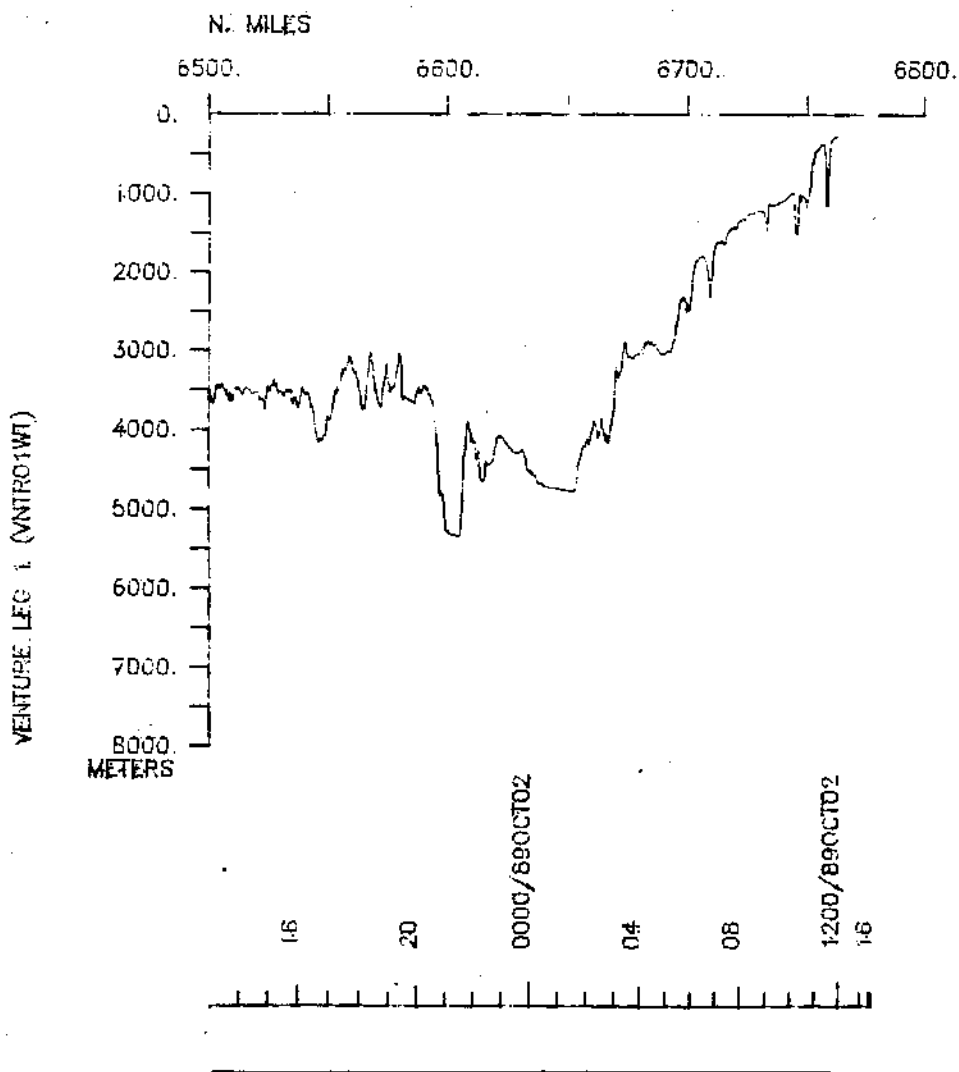
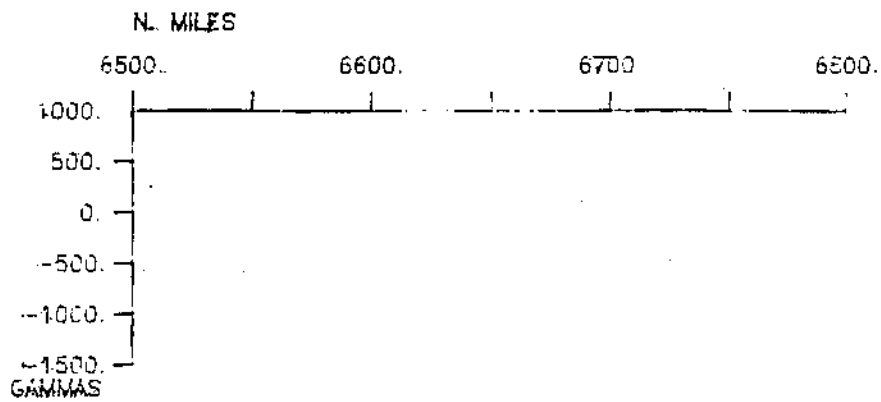


VENTURE LEG 1. (VIPTO1WT)

16 20 0000/89SEP27 04 08 1200/89SEP27 16 20 0000/89SEP28 04 08 1200/89SEP28 16 20 0000/89SEP29 04 08







S.I.O. SAMPLE INDEX

(Issued October 1989)

VENTURE EXPEDITION

Leg 1

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R/V T. Washington

San Diego, Calif. (28 August 1989)
to
Manzanillo, Mexico (2 October 1989)

Chief Scientist:

N. Piasias (Oregon State 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.# 245

**** PORTS ****

| | | | | |
|------|--------|---------------------------|------------------|-----------|
| 1650 | 280889 | LGPT B SAN DIEGO | 32-43 N 117-11 W | fvNTRO1WT |
| 1626 | 021089 | LGPT E MANZANILLO, MEXICO | 19-03 N 104-20 W | fvNTRO1WT |

**** PERSONNEL ****

| # | *** NAME *** | *** TITLE *** | *** AFFILIATION *** | ** CRID ** |
|----------|---------------|------------------|---------------------|------------|
| PECS OSU | PISIAS, N | CHIEF SCIENTIST | OREGON STATE UNIV. | VNTRO1WT |
| PERT STS | WILSON, R. | RESIDENT TECH | SCRIPPS INSTITUTION | VNTRO1WT |
| PECT STS | STUBER, D. | COMPUTER TECH | SCRIPPS INSTITUTION | VNTRO1WT |
| PEAT STS | CRAMPTON, P. | AIRGUN TECH | SCRIPPS INSTITUTION | VNTRO1WT |
| PEBO STS | ALBRIGHT, U. | SEABEAM OP | SCRIPPS INSTITUTION | VNTRO1WT |
| PEMB STS | HOWARD, A. | SEABEAM TECH | SCRIPPS INSTITUTION | VNTRO1WT |
| PEST OSU | ARASON, P. | STUDENT | OREGON STATE UNIV. | VNTRO1WT |
| PEST SIX | CLEMENS, S. | STUDENT | BROWN UNIVERSITY | VNTRO1WT |
| PEST SIX | HOVAN, S. | STUDENT | MICHIGAN UNIVERSITY | VNTRO1WT |
| PEMT OSU | KALK, P. | MARINE TECH | OREGON STATE UNIV. | VNTRO1WT |
| PESP LDO | LYLE, M. | SCIENTIST | LAMONT-DOEHRTY | VNTRO1WT |
| PESP SIX | MAYER, L. | SCIENTIST | DALHOUSIE UNIV. | VNTRO1WT |
| 3P OSU | MIX, A. | SCIENTIST | OREGON STATE UNIV. | VNTRO1WT |
| PEST SIX | MOSHER, D. | STUDENT | DALHOUSIE UNIV. | VNTRO1WT |
| PESP OSU | MOORE, S. | LAB TECH | OREGON STATE UNIV. | VNTRO1WT |
| PESP SIX | MURRAY, D. | SCIENTIST | BROWN UNIVERSITY | VNTRO1WT |
| PESP OSU | PATTERSON, C. | SCIENTIST | OREGON STATE UNIV. | VNTRO1WT |
| PESP SIX | REA, D. | PROFESSOR | MICHIGAN UNIVERSITY | VNTRO1WT |
| PEET OSU | RUGH, W. | ELECTRONICS TECH | OREGON STATE UNIV. | VNTRO1WT |

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

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

LOG BOOKS

| | | | | | | | | | |
|------|--------|--|--|------|----------------------|-----|---------|----------|-----------|
| 1618 | 280889 | | | LBUW | B UNDERWAY WATCH LOG | GDC | 32-389N | 117-176W | sVNTR01WT |
| 0600 | 021089 | | | LBUW | E UNDERWAY WATCH LOG | GDC | 18-076N | 103-376W | sVNTR01WT |
| 1845 | 280889 | | | LBSC | B OSU CHIEF SCI LOG | OSU | 32-171N | 117-064W | sVNTR01WT |
| 1400 | 021089 | | | LBSC | E OSU CHIEF SCI LOG | OSU | 19-039N | 104-192W | sVNTR01WT |

*** SEA BEAM MONITOR RECORDS ***

| | | | | | | | | | |
|------|--------|--|--|------|-------------------|-----|---------|----------|-----------|
| 1818 | 280889 | | | MBRM | B SB MONITOR R-01 | GDC | 32-223N | 117-084W | sVNTR01WT |
| 0104 | 010989 | | | MBRM | E SB MONITOR R-01 | GDC | 17-182N | 112-571W | sVNTR01WT |
| 0107 | 010989 | | | MBRM | B SB MONITOR R-02 | GDC | 17-176N | 112-570W | sVNTR01W |
| 1824 | 060989 | | | MBRM | E SB MONITOR R-02 | GDC | 5-196N | 110-047W | sVNTR01WT |
| 1830 | 060989 | | | MBRM | B SB MONITOR R-03 | GDC | 5-195N | 110-047W | sVNTR01WT |
| 2054 | 100989 | | | MBRM | E SB MONITOR R-03 | GDC | 3-003S | 110-294W | sVNTR01WT |
| 2304 | 100989 | | | MBRM | B SB MONITOR R-04 | GDC | 3-011S | 110-296W | sVNTR01WT |
| 0036 | 170989 | | | MBRM | E SB MONITOR R-04 | GDC | 0-079N | 95-204W | sVNTR01WT |
| 0042 | 170989 | | | MBRM | B SB MONITOR R-05 | GDC | 0-079N | 95-204W | sVNTR01WT |
| 1510 | 210989 | | | MBRM | B SB MONITOR R-05 | GDC | 0-321N | 89-316W | sVNTR01WT |
| 1514 | 210989 | | | MBRM | B SB MONITOR R-06 | GDC | 0-327N | 89-317W | sVNTR01WT |
| 1043 | 250989 | | | MBRM | E SB MONITOR R-06 | GDC | 7-547N | 90-275W | sVNTR01WT |
| 1550 | 250989 | | | MBRM | B SB MONITOR R-07 | GDC | 7-553N | 90-239W | sVNTR01WT |
| 0449 | 300989 | | | MBRM | E SB MONITOR R-07 | GDC | 11-577N | 98-074W | sVNTR01WT |
| 0451 | 300989 | | | MBRM | B SB MONITOR R-08 | GDC | 11-580N | 98-077W | sVNTR01WT |
| 1200 | 021089 | | | MBRM | E SB MONITOR R-08 | GDC | 18-556N | 104-196W | sVNTR01WT |

| #GMT #TIME #----- | DDMMYY DATE ----- | LOC T TIME Z ----- | SAMP CODE | SAMPLE IDENTIFIER | DISP CODE | LAT. | LONG. | CRUISE LEG-SHIP |
|--------------------------------|-------------------------|--------------------------|------------------|----------------------|----------------------------|----------------------------|----------------------|------------------------|
| **** SEA BEAM SWATH BOOKS **** | | | | | | | | |
| 1845 0927 | 280889 300889 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 01 SWATH BK 01 | GDC 32-171N GDC 24-457N | 117-064W 114-447W | sVNTR01WT sVNTR01WT |
| 0927 0252 | 300889 010989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 02 SWATH BK 02 | GDC 24-457N GDC 16-589N | 114-447W 112-526W | sVNTR01WT sVNTR01WT |
| 0252 1738 | 010989 030989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 03 SWATH BK 03 | GDC 16-589N GDC 10-557N | 112-526W 109-369W | sVNTR01WT sVNTR01WT |
| 1738 1450 | 030989 060989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 04 SWATH BK 04 | GDC 10-557N GDC 5-205N | 109-369W 110-042W | sVNTR01WT sVNTR01WT |
| 2023 1338 | 060989 090989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 05 SWATH BK 05 | OSU 5-230N GDC 0-028N | 110-037W 110-287W | sVNTR01WT sVNTR01WT |
| 1000 0344 | 090989 120989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 06 SWATH BK 06 | OSU 0-018N GDC 3-394S | 110-263W 106-470W | sVNTR01WT sVNTR01WT |
| 0344 1249 | 120989 140989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 07 SWATH BK 07 | GDC 3-394S GDC 3-061S | 106-470W 99-507W | sVNTR01WT sVNTR01WT |
| 1249 1116 | 140989 170989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 08 SWATH BK 08 | GDC 3-061S GDC 0-444S | 99-507W 95-123W | sVNTR01WT sVNTR01WT |
| 1116 1834 | 170989 190989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 09 SWATH BK 09 | GDC 0-444S GDC 3-068S | 95-123W 91-158W | sVNTR01WT sVNTR01WT |
| 1834 0023 | 190989 220989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 10 SWATH BK 10 | GDC 3-068S GDC 1-295N | 91-158W 89-515W | sVNTR01WT sVNTR01WT |
| 0606 1531 | 220989 240989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 11 SWATH BK 11 | GDC 1-284N GDC 6-113N | 89-539W 90-344W | sVNTR01WT sVNTR01WT |
| 1531 0520 | 240989 270989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 12 SWATH BK 12 | GDC 6-113N GDC 5-352N | 90-344W 94-168W | sVNTR01WT sVNTR01WT |
| 0520 1545 | 270989 290989 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 13 SWATH BK 13 | GDC 5-352N GDC 10-249N | 94-168W 96-037W | sVNTR01WT sVNTR01WT |
| 1745 1113 | 290989 011089 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 14 SWATH BK 14 | GDC 10-249N GDC 16-018N | 96-037W 101-539W | sVNTR01WT sVNTR01WT |
| 1613 1200 | 011089 021089 | | MBSB B MBSB E | SB ARC SB ARC | SWATH BK 15 SWATH BK 15 | GDC 16-018N GDC 18-556N | 101-539W 104-196W | sVNTR01WT sVNTR01WT |

| #GMT #TIME # | DDMMYY DATE | LOC TIME | T Z | SAMP CODE | SAMPLE IDENTIFIER | DISP CODE | LAT. | LONG. | CRUISE LEG-SHIP |
|------------------------------|------------------|-------------|--------|--------------|--|--------------|--------------------|----------------------|------------------------|
| *** ECHO SOUNDER RECORDS *** | | | | | | | | | |
| 2130 1150 | 280889 290889 | | | DPR3 DPR3 | B EPC 3.5KHZ R-01 E EPC 3.5KHZ R-01 | GDC GDC | 31-444N 28-550N | 116-549W 116-038W | sVNTR01WT sVNTR01WT |
| 1155 1800 | 290889 300889 | | | DPR3 DPR3 | B EPC 3.5KHZ R-02 E EPC 3.5KHZ R-02 | GDC GDC | 28-541N 23-106N | 116-034W 114-180W | sVNTR01WT sVNTR01WT |
| 1803 0744 | 300889 020989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-03 E EPC 3.5KHZ R-03 | GDC GDC | 23-100N 13-475N | 114-178W 111-159W | sVNTR01WT sVNTR01WT |
| 0746 1612 | 020989 040989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-04 E EPC 3.5KHZ R-04 | GDC GDC | 13-473N 7-542N | 111-157W 109-441W | sVNTR01WT sVNTR01WT |
| 1614 1009 | 040989 070989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-05 E EPC 3.5KHZ R-05 | GDC GDC | 7-540N 3-304N | 109-441W 110-245W | sVNTR01WT sVNTR01WT |
| 1011 2310 | 070989 090989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-06 E EPC 3.5KHZ R-06 | GDC GDC | 3-301N 0-321S | 110-245W 110-315W | sVNTR01WT sVNTR01WT |
| 2320 0343 | 090989 120989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-07 E EPC 3.5KHZ R-07 | GDC GDC | 0-337S 3-394S | 110-315W 106-472W | sVNTR01WT sVNTR01WT |
| 0345 1052 | 120989 140989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-08 E EPC 3.5KHZ R-08 | GDC GDC | 3-394S 3-160S | 106-468W 100-040W | sVNTR01WT sVNTR01WT |
| 1055 1837 | 140989 160989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-09 E EPC 3.5KHZ R-09 | GDC GDC | 3-158S 0-0**N | 100-037W 95-204W | sVNTR01WT sVNTR01WT |
| 1840 0018 | 160989 190989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-10 E EPC 3.5KHZ R-10 | GDC GDC | 0-099N 3-032S | 95-204W 93-554W | sVNTR01WT sVNTR01WT |
| 0021 0512 | 190989 210989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-11 E EPC 3.5KHZ R-11 | GDC GDC | 3-033S 1-007S | 93-550W 89-157W | sVNTR01WT sVNTR01WT |
| 0516 0842 | 210989 230989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-12 E EPC 3.5KHZ R-12 | GDC GDC | 1-003S 2-258N | 89-154W 89-229W | sVNTR01WT sVNTR01WT |
| 0846 1212 | 230989 250989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-13 E EPC 3.5KHZ R-13 | GDC GDC | 2-261N 7-556N | 89-235W 90-270W | sVNTR01WT sVNTR01WT |
| 1216 1500 | 250989 270989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-14 E EPC 3.5KHZ R-14 | GDC GDC | 7-556N 5-348N | 90-269W 94-085W | sVNTR01WT sVNTR01WT |
| 1504 1626 | 270989 290989 | | | DPR3 DPR3 | B EPC 3.5KHZ R-15 E EPC 3.5KHZ R-15 | GDC GDC | 5-350N 10-286N | 94-089W 96-110W | sVNTR01WT sVNTR01WT |

| #GMT #TIME # | DDMMYY DATE | LOC T TIME Z | SAMP CODE | SAMPLE IDENTIFIER | DISP CODE | LAT. | LONG. | CRUISE LEG-SHIP |
|--------------------|----------------|-----------------|--------------|----------------------|--------------|---------|----------|--------------------|
| 1626 | 290989 | | DPR3 B | EPC 3.5KHZ R-16 | GDC | 10-286N | 96-110W | sVNTR01WT |
| 1135 | 011089 | | DPR3 E | EPC 3.5KHZ R-16 | GDC | 15-196N | 101-143W | sVNTR01WT |
| 1145 | 011089 | | DPR3 B | EPC 3.5KHZ R-17 | GDC | 15-211N | 101-157W | sVNTR01WT |
| 1130 | 021089 | | DPR3 E | EPC 3.5KHZ R-17 | GDC | 18-515N | 104-160W | sVNTR01WT |

*** SEISMIC REFLECTION RECORDS ***

| | | | | | | | | |
|------|--------|--|--------|------------------|-----|---------|----------|-----------|
| 1040 | 010989 | | SPRS B | AIRGUN-SLOW R-01 | OSU | 15-403N | 112-322W | sVNTR01WT |
| 0504 | 070989 | | SPRS E | AIRGUN-SLOW R-01 | OSU | 4-149N | 110-153W | sVNTR01WT |
| 0508 | 070989 | | SPRS B | AIRGUN-SLOW R-02 | GDC | 4-144N | 110-154W | sVNTR01WT |
| 2251 | 120989 | | SPRS E | AIRGUN-SLOW R-02 | GDC | 4-139S | 103-348W | sVNTR01WT |
| 2254 | 120989 | | SPRS B | AIRGUN-SLOW R-03 | OSU | 4-140S | 103-343W | sVNTR01WT |
| 00 | 180989 | | SPRS E | AIRGUN-SLOW R-03 | OSU | 3-014S | 94-598W | sVNTR01WT |
| 1548 | 180989 | | SPRS B | AIRGUN-SLOW R-04 | GDC | 3-009S | 95-061W | sVNTR01WT |
| 1910 | 230989 | | SPRS E | AIRGUN-SLOW R-04 | GDC | 3-211N | 90-474W | sVNTR01WT |
| 2058 | 230989 | | SPRS B | AIRGUN-SLOW R-05 | OSU | 3-220N | 90-474W | sVNTR01WT |
| 0708 | 290989 | | SPRS E | AIRGUN-SLOW R-05 | OSU | 9-402N | 94-386W | sVNTR01WT |
| 1040 | 010989 | | SPRF B | AIRGUN-FAST R-01 | GDC | 15-403N | 112-322W | sVNTR01WT |
| 0455 | 070989 | | SPRF E | AIRGUN-FAST R-01 | GDC | 4-161N | 110-152W | sVNTR01WT |
| 0458 | 070989 | | SPRF B | AIRGUN-FAST R-02 | OSU | 4-157N | 110-152W | sVNTR01WT |
| 2256 | 120989 | | SPRF E | AIRGUN-FAST R-02 | OSU | 4-140S | 103-340W | sVNTR01WT |
| 2300 | 120989 | | SPRF B | AIRGUN-FAST R-03 | GDC | 4-141S | 103-333W | sVNTR01WT |
| 0930 | 180989 | | SPRF E | AIRGUN-FAST R-03 | GDC | 3-014S | 94-598W | sVNTR01WT |
| 1548 | 180989 | | SPRF B | AIRGUN-FAST R-04 | OSU | 3-009S | 95-061W | sVNTR01WT |
| 1910 | 230989 | | SPRF E | AIRGUN-FAST R-04 | OSU | 3-211N | 90-474W | sVNTR01WT |
| 2058 | 230989 | | SPRF B | AIRGUN-FAST R-05 | GDC | 3-220N | 90-474W | sVNTR01WT |
| 0708 | 290989 | | SPRF E | AIRGUN-FAST R-05 | GDC | 9-402N | 94-386W | sVNTR01WT |

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

*** MAGNETIC (EARTH TOTAL FIELD) RECORDS)

| | | | | | | | | | |
|------|--------|--|--|--------|----------------|-----|---------|----------|-----------|
| 2128 | 280889 | | | MGRA B | MAGNETICS R-01 | GDC | 31-448N | 116-551W | sVNTR01WT |
| 1913 | 090989 | | | MGRA E | MAGNETICS R-01 | GDC | 0-027N | 110-300W | sVNTR01WT |
| 1920 | 090989 | | | MGRA B | MAGNETICS R-02 | GDC | 0-020N | 110-305W | sVNTR01WT |
| 0024 | 250989 | | | MGRA E | MAGNETICS R-02 | GDC | 7-278N | 90-317W | sVNTR01WT |
| 0030 | 250989 | | | MGRA B | MAGNETICS R-03 | GDC | 7-287N | 90-317W | sVNTR01WT |
| 0035 | 290989 | | | MGRA E | MAGNETICS R-03 | GDC | 9-361N | 94-348W | sVNTR01WT |

*** CORES ***

| | | | | | | | | | | |
|------|--------|--|--|------|----------|-------|-----|---------|----------|-----------|
| 1152 | 030989 | | | COPS | VNTR01 | 3522M | OSU | 11-154N | 109-363W | sVNTR01WT |
| 1152 | 030989 | | | COGV | VNTR01PG | 3522M | OSU | 11-154N | 109-363W | sVNTR01WT |
| 0352 | 050989 | | | COPS | VNTR02 | 3750M | OSU | 7-119N | 109-445W | sVNTR01WT |
| 0352 | 050989 | | | COGV | VNTR02PG | 3750M | OSU | 7-119N | 109-445W | sVNTR01WT |
| 0921 | 050989 | | | COPS | VNTR03 | 3728M | OSU | 7-099N | 109-444W | sVNTR01WT |
| 0921 | 050989 | | | COGV | VNTR03PG | 3728M | OSU | 7-099N | 109-444W | sVNTR01WT |
| 1642 | 060989 | | | COPS | VNTR04 | 3855M | OSU | 5-209N | 110-048W | sVNTR01WT |
| 1642 | 060989 | | | COGV | VNTR04PG | 3855M | OSU | 5-209N | 110-048W | sVNTR01WT |
| 2223 | 070989 | | | COPS | VNTR05 | 3755M | OSU | 2-454N | 110-350W | sVNTR01WT |
| 2223 | 070989 | | | COGV | VNTR05PG | 3755M | OSU | 2-454N | 110-350W | sVNTR01WT |
| 0320 | 080989 | | | COPS | VNTR06 | 3765M | OSU | 2-461N | 110-340W | sVNTR01WT |
| 0320 | 080989 | | | COGV | VNTR06PG | 3765M | OSU | 2-461N | 110-340W | sVNTR01WT |
| 2314 | 080989 | | | COPS | VNTR07 | 3775M | OSU | 1-011N | 110-341W | sVNTR01WT |
| 2314 | 080989 | | | COGV | VNTR07PG | 3775M | OSU | 1-011N | 110-341W | sVNTR01WT |
| 1539 | 090989 | | | COPS | VNTR08 | 3800M | OSU | 0-023N | 110-286W | sVNTR01WT |
| 1539 | 090989 | | | COGV | VNTR08PG | 3800M | OSU | 0-023N | 110-286W | sVNTR01WT |

| # | GMT #TIME | DDMMYY DATE | LOC TIME | T Z | SAMP CODE | SAMPLE IDENTIFIER | DISP CODE | LAT. | LONG. | CRUISE LEG-SHIP | |
|------|--------------|----------------|-------------|--------|--------------|----------------------|--------------|------|---------|--------------------|-----------|
| 2049 | 100989 | | | | COPS | VNTR09 | 3906M | OSU | 3-003S | 110-295W | sVNTR01WT |
| 2049 | 100989 | | | | COGV | VNTR09PG | 3906M | OSU | 3-003S | 110-295W | sVNTR01WT |
| 1440 | 130989 | | | | COPS | VNTR10 | 3405M | OSU | 4-305S | 102-012W | sVNTR01WT |
| 1440 | 130989 | | | | COGV | VNTR10PG | 3405M | OSU | 4-305S | 102-012W | sVNTR01WT |
| 0033 | 170989 | | | | COPS | VNTR11 | 3345M | OSU | 0-079N | 95-204W | sVNTR01WT |
| 0033 | 170989 | | | | COGV | VNTR11PG | 3345M | OSU | 0-079N | 95-204W | sVNTR01WT |
| 1253 | 180989 | | | | COPS | VNTR12 | 3535M | OSU | 3-009S | 95-049W | sVNTR01WT |
| 1253 | 180989 | | | | COGV | VNTR12PG | 3535M | OSU | 3-009S | 95-049W | sVNTR01WT |
| 0602 | 200989 | | | | COPS | VNTR13 | 3304M | OSU | 3-053S | 90-495W | sVNTR01WT |
| 0602 | 200989 | | | | COGV | VNTR13PG | 3304M | OSU | 3-053S | 90-495W | sVNTR01WT |
| 0029 | 220989 | | | | COPS | VNTR14 | 1944M | OSU | 1-291N | 89-517W | sVNTR01WT |
| 0029 | 220989 | | | | COGV | VNTR14PG | 1944M | OSU | 1-291N | 89-517W | sVNTR01WT |
| 0515 | 220989 | | | | COGV | VNTR15G | 1901M | OSU | 1-287N | 89-529W | sVNTR01WT |
| 1708 | 230989 | | | | COPS | VNTR16 | 1546M | OSU | 3-107N | 90-311W | sVNTR01WT |
| 1708 | 230989 | | | | COGV | VNTR16PG | 1546M | OSU | 3-107N | 90-311W | sVNTR01WT |
| 0512 | 230989 | | | | COPS | VNTR17 | 1758M | OSU | 2-268N | 89-198W | sVNTR01WT |
| 0512 | 230989 | | | | COGV | VNTR17PG | 1758M | OSU | 2-268N | 89-198W | sVNTR01WT |
| 2012 | 230989 | | | | COGV | VNTR18G | 326M | OSU | 3-208N | 90-474W | sVNTR01WT |
| 1336 | 250989 | | | | COPS | VNTR19 | 3465M | OSU | 7-550N | 90-262W | sVNTR01WT |
| 1336 | 250989 | | | | COGV | VNTR19PG | 3465M | OSU | 7-550N | 90-262W | sVNTR01WT |
| 1105 | 270989 | | | | COPS | VNTR20 | 3585M | OSU | 5-364N | 94-112W | sVNTR01WT |
| 1105 | 270989 | | | | COGV | VNTR20PG | 3585M | OSU | 5-364N | 94-112W | sVNTR01WT |
| 0321 | 290989 | | | | COPS | VNTR21 | 3717M | OSU | 9-353N | 94-370W | sVNTR01WT |
| 0321 | 290989 | | | | COGV | VNTR21PG | 3717M | OSU | 9-353N | 94-370W | sVNTR01WT |
| 1629 | 300989 | | | | COPS | VNTR22 | 3500M | OSU | 13-002N | 99-225W | sVNTR01WT |

| #GMT #TIME # | DDMMYY DATE | LOC T TIME Z | SAMP CODE | SAMPLE IDENTIFIER | | DISP CODE | LAT. | LONG. | CRUISE LEG-SHIP |
|--------------------|----------------|-----------------|--------------|----------------------|------|--------------|---------|----------|--------------------|
| #*** OPEN NETS *** | | | | | | | | | |
| 0646 | 030989 | | ON50 B | V | 150M | OM OSU | 11-180N | 109-399W | sVNTR01WT |
| 0700 | 030989 | | ON50 E | V | 150M | OM OSU | 11-183N | 109-415W | sVNTR01WT |
| 1125 | 050989 | | ON50 B | V | 150M | OM OSU | 7-081N | 109-440W | sVNTR01WT |
| 1145 | 050989 | | ON50 E | V | 150M | OM OSU | 7-079N | 109-441W | sVNTR01WT |
| 1905 | 060989 | | ON50 B | V | 150M | OM OSU | 5-191N | 110-047W | sVNTR01WT |
| 1926 | 060989 | | ON50 E | V | 150M | OM OSU | 5-192N | 110-046W | sVNTR01WT |
| 0045 | 080989 | | ON50 B | V | 150M | OM OSU | 2-445N | 110-354W | sVNTR01WT |
| 0100 | 080989 | | ON50 E | V | 150M | OM OSU | 2-445N | 110-354W | sVNTR01WT |
| 0114 | 090989 | | ON50 B | V | 150M | OM OSU | 1-006N | 110-335W | sVNTR01WT |
| 0135 | 090989 | | ON50 E | V | 150M | OM OSU | 1-005N | 110-335W | sVNTR01WT |
| 1745 | 090989 | | ON50 B | V | 150M | OM OSU | 0-018N | 110-263W | sVNTR01WT |
| 1800 | 090989 | | ON50 E | V | 150M | OM OSU | 0-018N | 110-263W | sVNTR01WT |
| 2245 | 100989 | | ON50 B | V | 150M | OM OSU | 3-010S | 110-294W | sVNTR01WT |
| 2300 | 100989 | | ON50 E | V | 150M | OM OSU | 3-011S | 110-296W | sVNTR01WT |
| 1640 | 130989 | | ON50 B | V | 150M | OM OSU | 4-319S | 102-011W | sVNTR01WT |
| 1655 | 130989 | | ON50 E | V | 150M | OM OSU | 4-320S | 102-012W | sVNTR01WT |
| 1626 | 160989 | | ON50 B | V | 150M | OM OSU | 0-103N | 95-204W | sVNTR01WT |
| 1640 | 160989 | | ON50 E | V | 150M | OM OSU | 0-104N | 95-204W | sVNTR01WT |
| 1506 | 180989 | | ON50 B | V | 150M | OM OSU | 3-026S | 95-053W | sVNTR01WT |
| 1526 | 180989 | | ON50 E | V | 150M | OM OSU | 3-026S | 95-057W | sVNTR01WT |
| 0832 | 200989 | | ON50 B | V | 150M | OM OSU | 3-074S | 90-496W | sVNTR01WT |
| 0848 | 200989 | | ON50 E | V | 150M | OM OSU | 3-076S | 90-497W | sVNTR01WT |
| 0253 | 220989 | | ON50 B | V | 150M | OM OSU | 1-290N | 89-518W | sVNTR01WT |
| 0307 | 220989 | | ON50 E | V | 150M | OM OSU | 1-290N | 89-517W | sVNTR01WT |
| 1830 | 220989 | | ON50 B | V | 150M | OM OSU | 2-360N | 89-445W | sVNTR01WT |
| 1843 | 220989 | | ON50 E | V | 150M | OM OSU | 2-361N | 89-444W | sVNTR01WT |
| 0745 | 230989 | | ON50 B | V | 150M | OM OSU | 2-258N | 89-205W | sVNTR01W |
| 0845 | 230989 | | ON50 E | V | 150M | OM OSU | 2-260N | 89-234W | sVNTR01W |

| #GMT | DDMMYY | LOC T | SAMP | SAMPLE | DISP | | | | CRUISE | |
|-------|--------|--------|--------|------------|------|------|-------|----------|---------|-----------|
| #TIME | DATE | TIME Z | CODE | IDENTIFIER | CODE | LAT. | LONG. | LEG-SHIP | | |
| 1943 | 230989 | | ON50 B | V | 150M | OM | OSU | 3-207N | 90-473W | sVNTR01WT |
| 2000 | 230989 | | ON50 E | V | 150M | OM | OSU | 3-208N | 90-473W | sVNTR01WT |
| 1542 | 250989 | | ON50 B | V | 150M | OM | OSU | 7-553N | 90-240W | sVNTR01WT |
| 1554 | 250989 | | ON50 E | V | 150M | OM | OSU | 7-554N | 90-239W | sVNTR01WT |
| 1314 | 270989 | | ON50 B | V | 150M | OM | OSU | 5-360N | 94-097W | sVNTR01WT |
| 1330 | 270989 | | ON50 E | V | 150M | OM | OSU | 5-360N | 94-094W | sVNTR01WT |
| 0518 | 290989 | | ON50 B | V | 150M | OM | OSU | 9-350N | 94-376W | sVNTR01WT |
| 0532 | 290989 | | ON50 E | V | 150M | OM | OSU | 9-348N | 94-375W | sVNTR01WT |

*** CONTINUOUS SURFACE WATER SAMPLES ***

| | | | | | | | | |
|------|--------|--|--------|----------------------|-----|---------|----------|-----------|
| 0000 | 030989 | | CSXX B | CONTIN. FLUORESCENCE | OSU | 11-462N | 110-097W | sVNTR01WT |
| 2000 | 160989 | | CSXX E | FLOWING SEAWATER | OSU | 0-096N | 95-203W | sVNTR01WT |

*** SURFACE SAMPLES ***

| | | | | | | | | |
|------|--------|--|--------|-----------------------|-----|---------|----------|-----------|
| 2001 | 160989 | | SSXX B | FLUORESCENCE SAMPLING | OSU | 0-096N | 95-203W | sVNTR01WT |
| 1400 | 021089 | | SSXX E | EVERY 4 HOURS | OSU | 19-039N | 104-192W | sVNTR01WT |

*** EXPENDABLE BATHY THERMOGRAPHS ***

| | | | | | | | | |
|------|--------|--|--------|--------------|-----|---------|----------|-----------|
| 1618 | 280889 | | BTXP B | RECORDS 1-34 | NOA | 32-389N | 117-176W | sVNTR01WT |
| 1400 | 021089 | | BTXP E | RECORDS 1-34 | NOA | 19-039N | 104-192W | sVNTR01WT |

*** THERMOGRAPHS RECORDS ***

| | | | | | | | | |
|------|--------|--|--------|-----------------|-----|---------|----------|-----------|
| 1618 | 280889 | | TGRC B | RECORDINGS 1-34 | GDC | 32-389N | 117-176W | sVNTR01WT |
| 1400 | 021089 | | TGRC E | RECORDINGS 1-34 | GDC | 19-039N | 104-192W | sVNTR01WT |

*** GRAVIMETER - CONTINUOUS COMPUTER LOG ***

| | | | | | | | | |
|------|--------|--|---------|------------|-----|---------|----------|-----------|
| 1618 | 280889 | | GVCRC B | GRAVIMETER | GDC | 32-389N | 117-176W | sVNTR01WT |
| 0600 | 021089 | | GVCRC E | GRAVIMETER | GDC | 18-076N | 103-376W | sVNTR01WT |

END SAMPLE INDEX