

INFORMAL REPORT AND INDEX OF
NAVIGATION, DEPTH AND MAGNETIC DATA

(Issued March 1979)

INDOMED EXPEDITION

LEG 13

Montevideo, Uruguay (9 November 1978)
to
Montevideo, Uruguay (22 December 1978)
R/V Melville

Chief Scientist - J. Reid (SIO)

Resident Marine Tech - S. Witherow

Post-Cruise Processing and Report Preparation
by S.I.O. Geological Data Center

Data Collection Funded by NSF Grant Number OCE77-26179
and ONR Grant Number N0014-75-C-0152
Data Processing Funded by SIA, NSF, ONR

NOTE: This is an index of underway geophysical data edited and processed shortly 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 Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093.

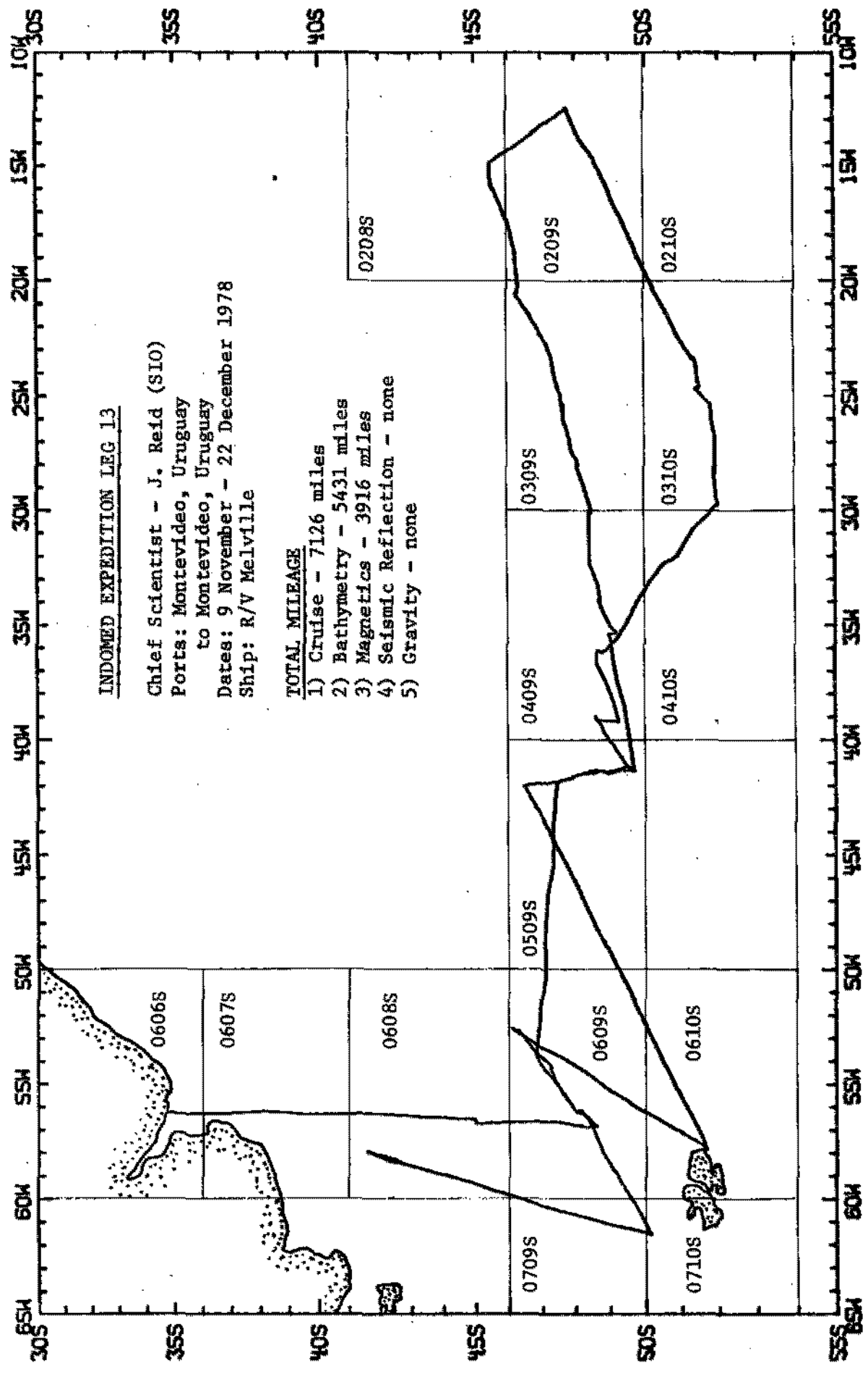
Informal Report and Index of Navigation, Depth, Magnetic and Subbottom Profiler Data

Contents:

- Index Chart - gives track of cruise leg and boundaries of depth compilation plots (see below).
- Track Charts - annotated with dates (day/month) and hour ticks. The scale is .3"/deg. long.
- Profiles - Depth and magnetic anomaly vs. distance. Dates (day/month) and positions of major course changes (greater than 30 degrees) are annotated. Sections of track having subbottom profiler (airgun) records have a solid black line along the bottom of the profile.

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, California 92093. Phone: (714) 452-2752.

1. Navigation listing of times and positions of course and speed changes, fixes and drift velocity.
2. Depth compilation plots - in fathoms (assumed sound velocity of 800 fm./sec.) at approximately 1 mile spacing, plotted at 4"/degree with standard U. S. Navy Oceanographic Office BC series boundaries (see index chart).
3. Plots of magnetic anomaly profiles along track - map scale = 1.2"/degree; anomaly scale between 15°N and 15°S latitude = 500 gammas/inch; anomaly scale north of 15°N and south of 15°S = 1000 gammas/inch; from values retrieved at approximately 1 mile spacing and regional field removed using the 1975 IGRF.
4. Card decks of navigation, depth and magnetics (for specific formats, contact S. M. Smith, Geological Data Center).
5. S. I. O. Sample Index - list of beginning and end times and positions of all underway records as well as all other samples (geology, biology, physical oceanography, etc.) collected on the cruise leg.
6. Microfilm or Xerox copies of:
 - a. Echosounder records - 12 and 3.5 kHz frequency
 - b. Subbottom profiler records (airgun)
 - c. Magnetometer records
 - d. Underway Data Log



INDOMED EXPEDITION LEG 13

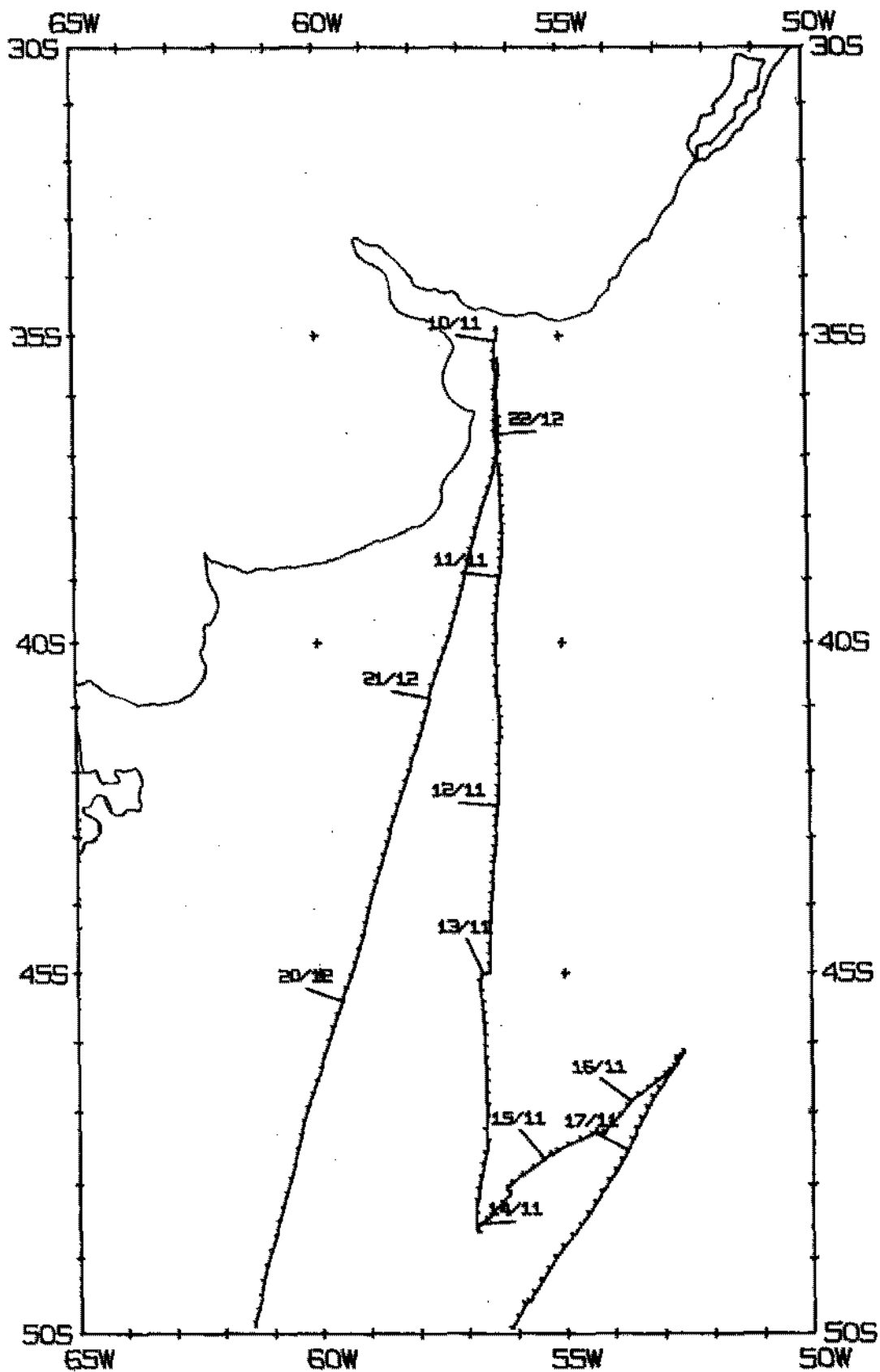
Chief Scientist - J. Reid (SIO)
 Ports: Montevideo, Uruguay
 to Montevideo, Uruguay
 Dates: 9 November - 22 December 1978
 Ship: R/V Melville

TOTAL MILEAGE

- 1) Cruise - 7126 miles
- 2) Bathymetry - 5431 miles
- 3) Magnetics - 3916 miles
- 4) Seismic Reflection - none
- 5) Gravity - none

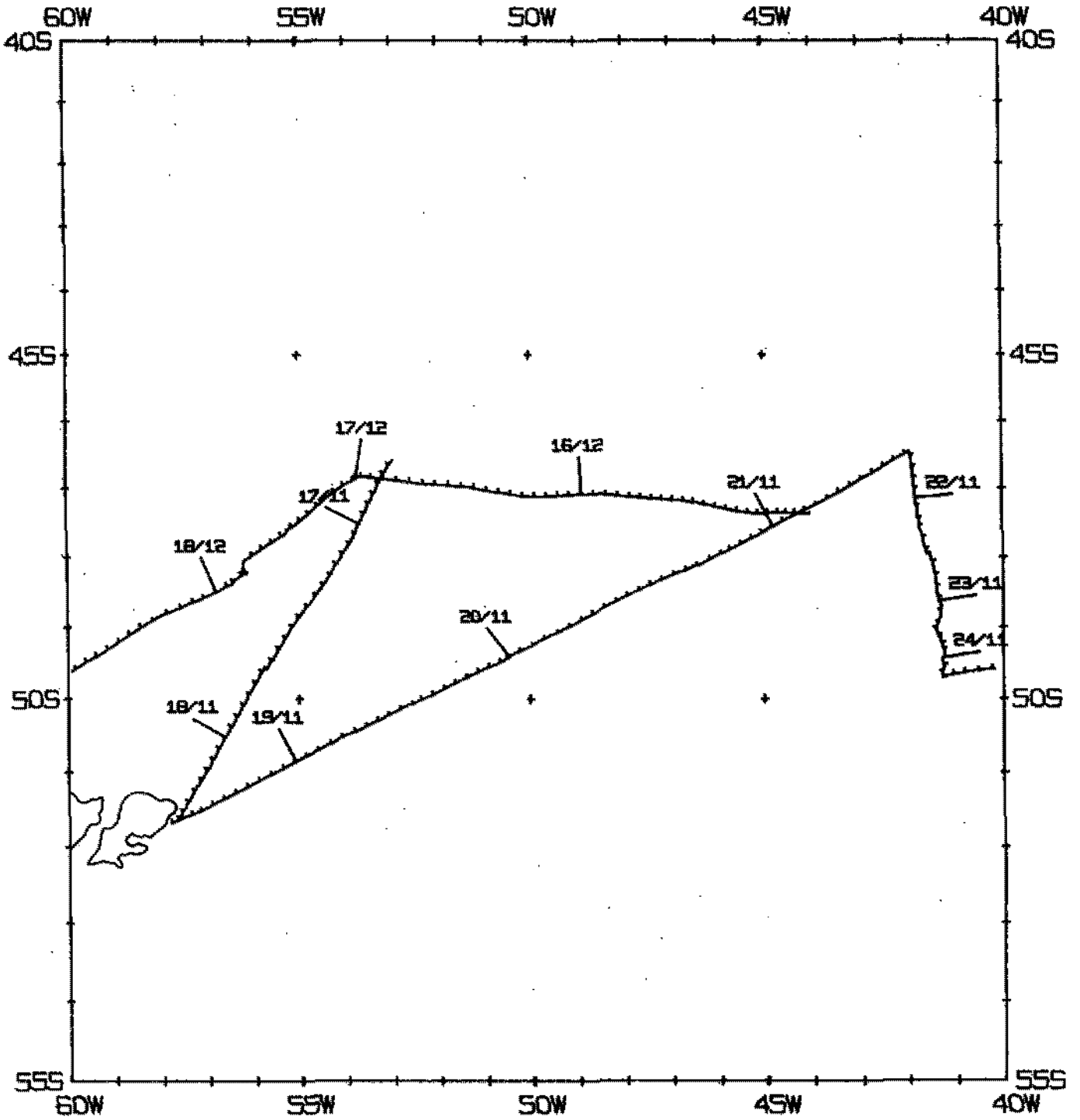
INMD13MV TRACK PLOT (1 OF 4)

MERCATOR PROJECTION, SCALE= 0.312 IN/DEG LONGITUDE



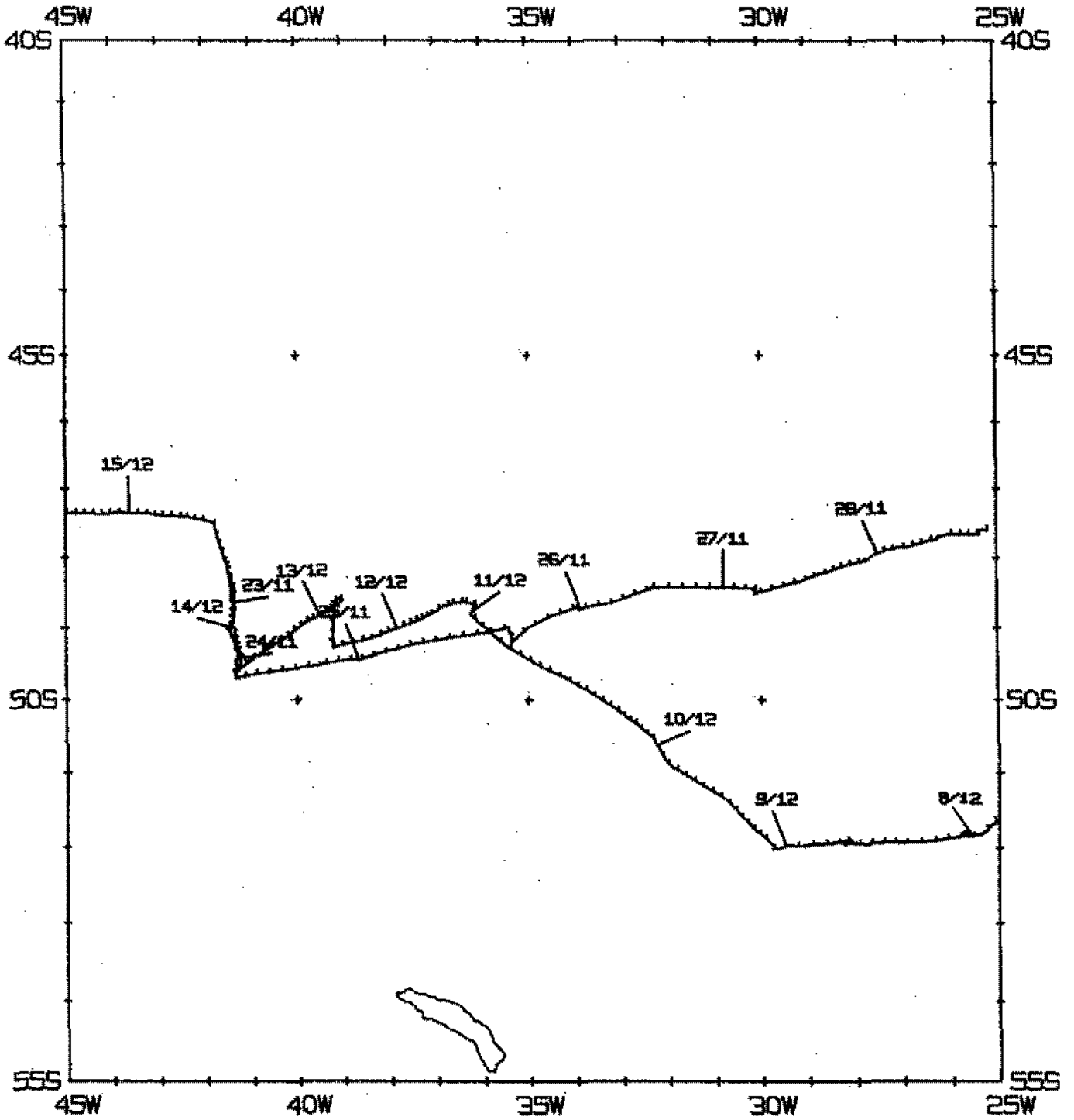
INM013MV TRACK PLOT (2 OF 4)

MERCATOR PROJECTION, SCALE= 0.312 IN/DEG LONGITUDE



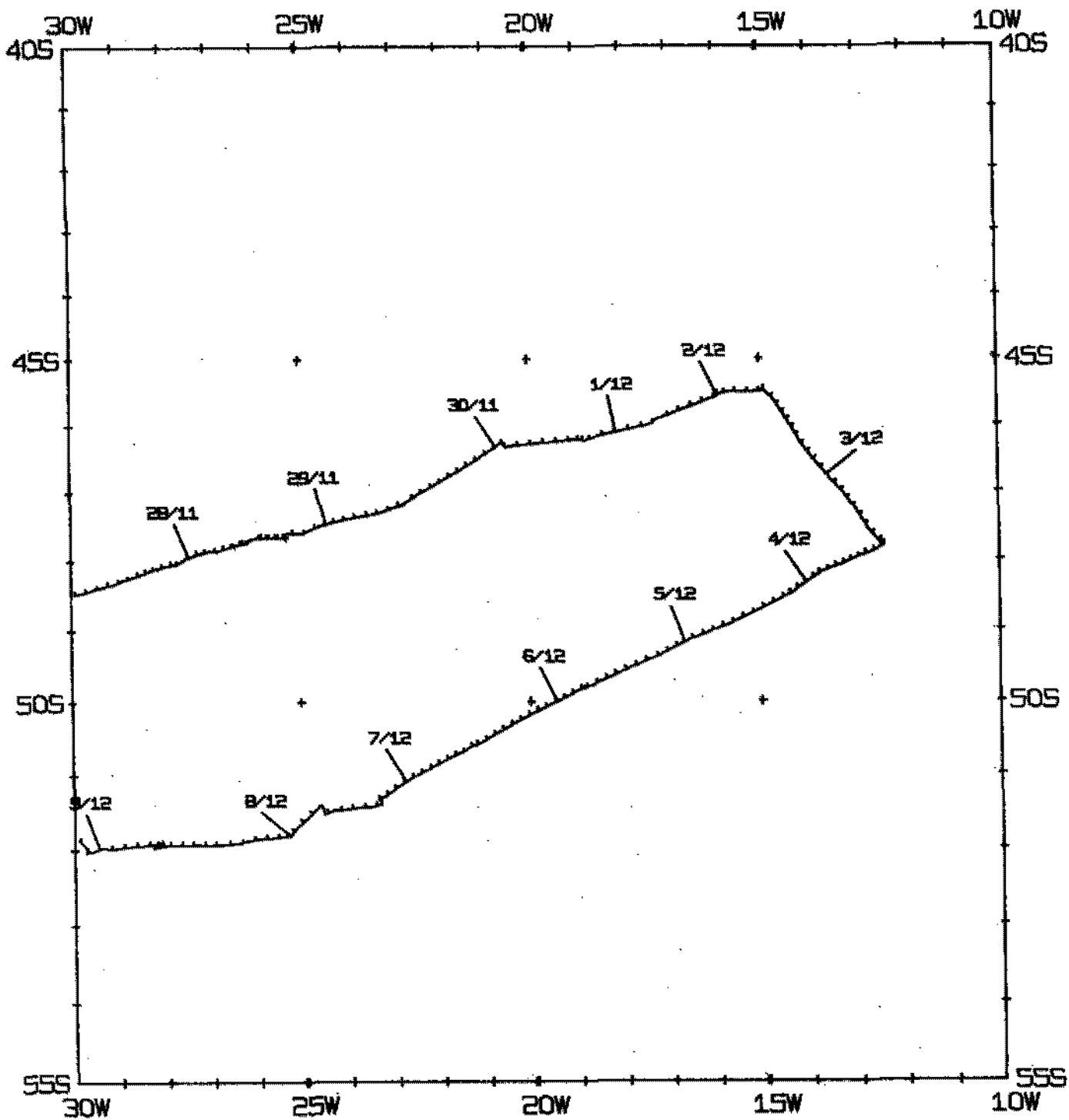
INMD13MV TRACK PLOT (3 OF 4)

MERCATOR PROJECTION, SCALE= 0.312 IN/DEG LONGITUDE

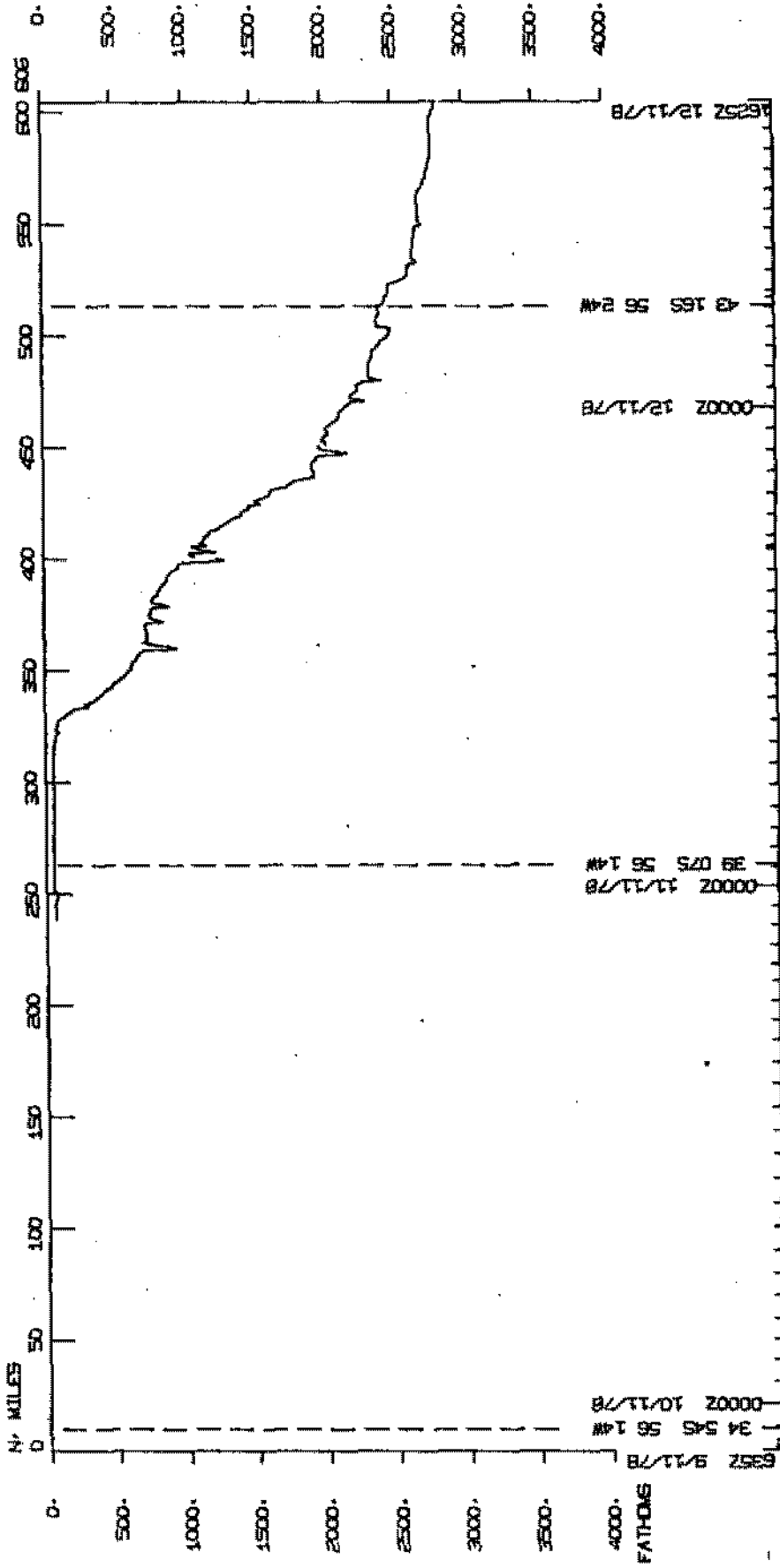
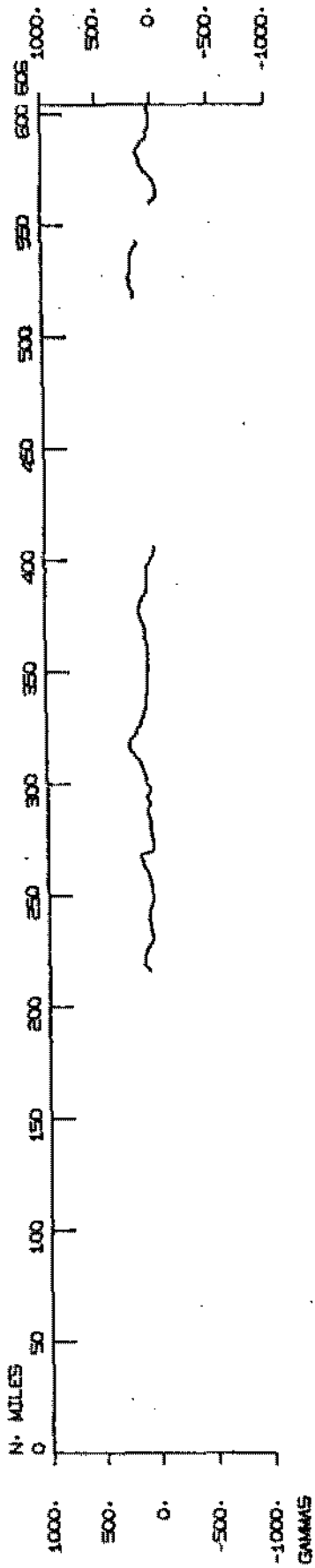


INMD13MV TRACK PLOT (4 OF 4)

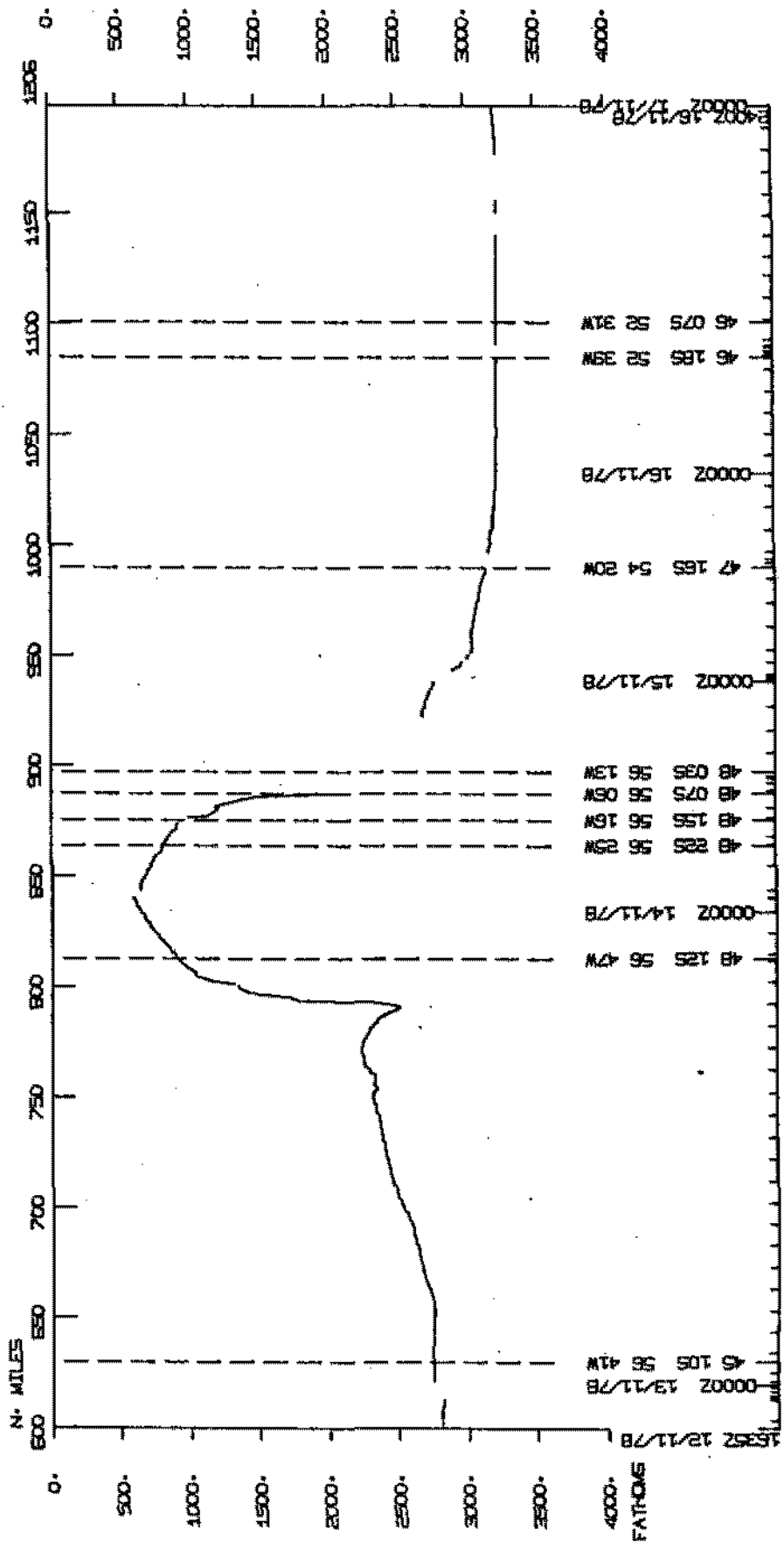
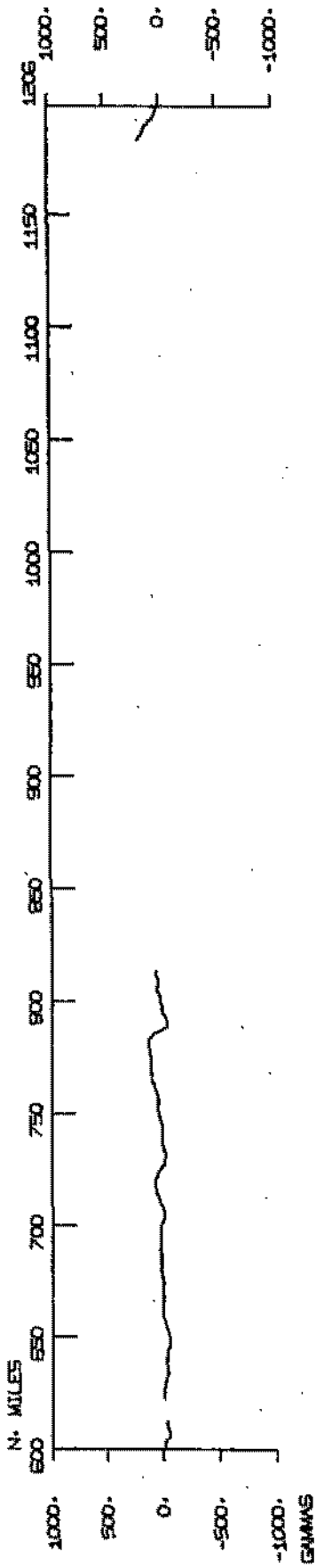
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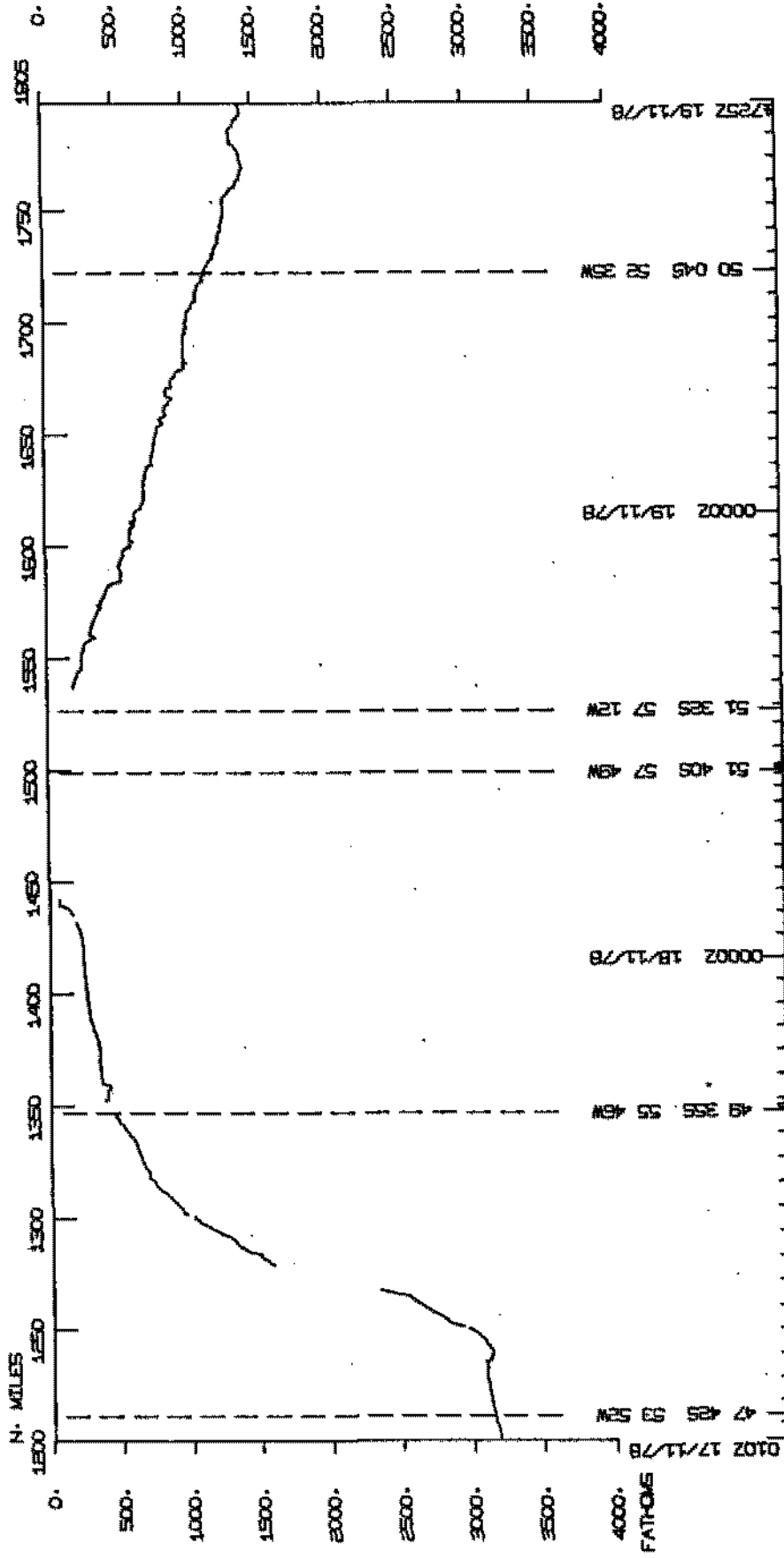
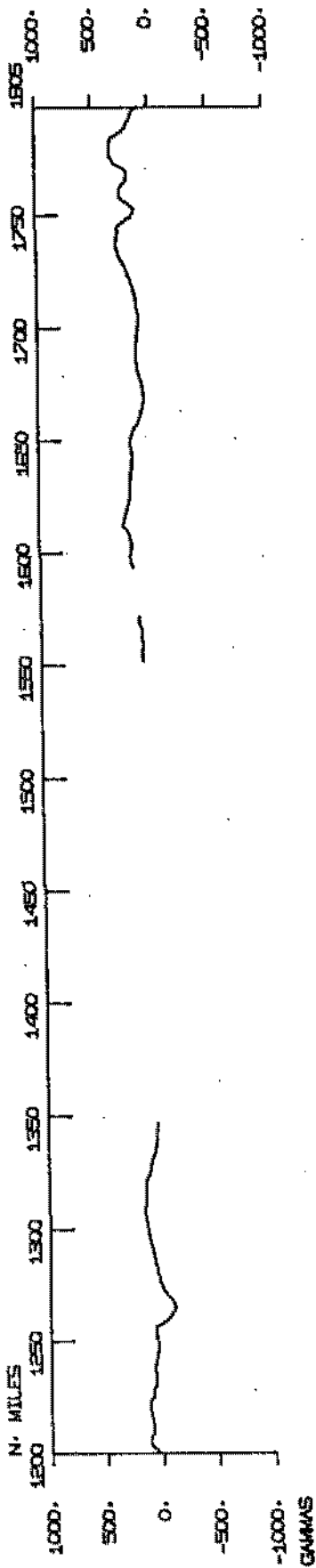
INDOMED LEG 13



INDOMED LEG 13

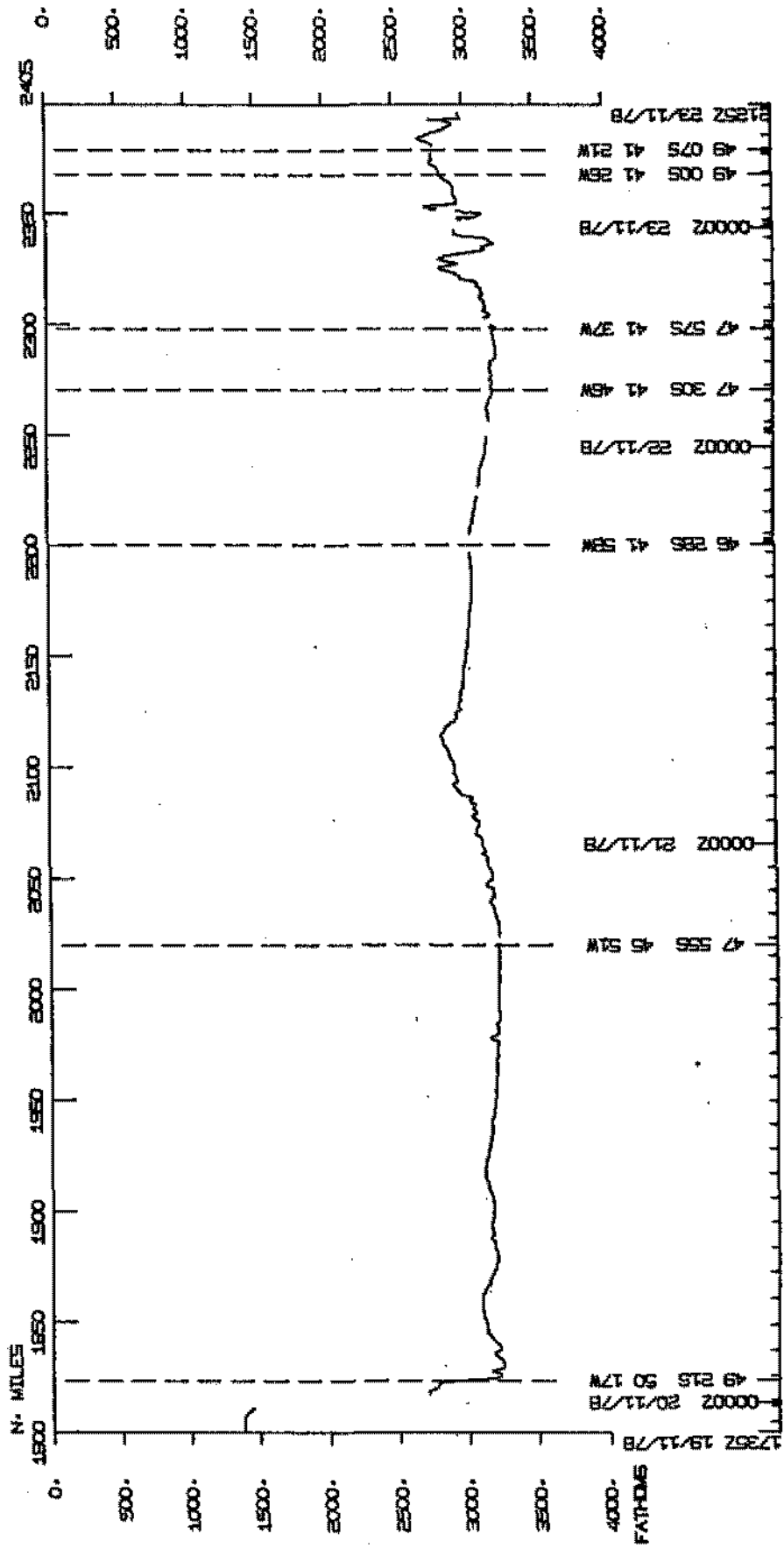
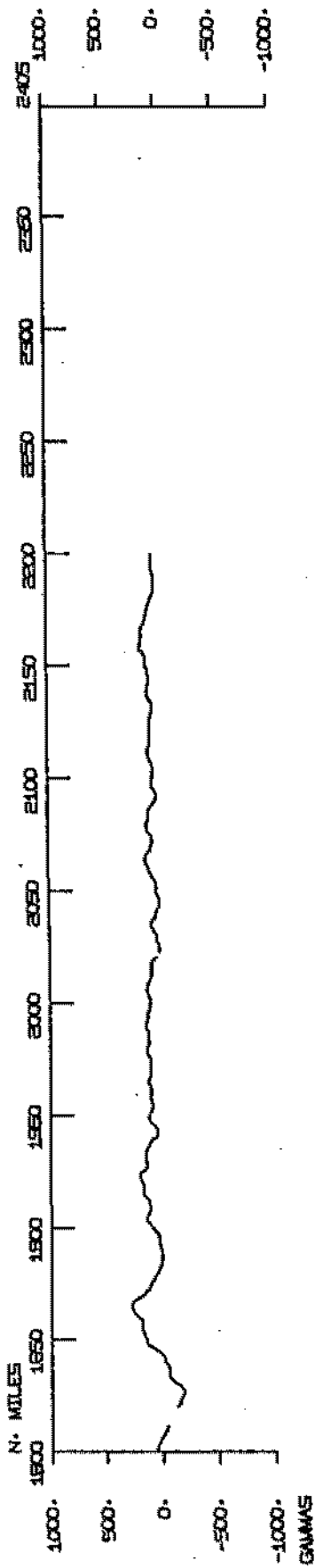


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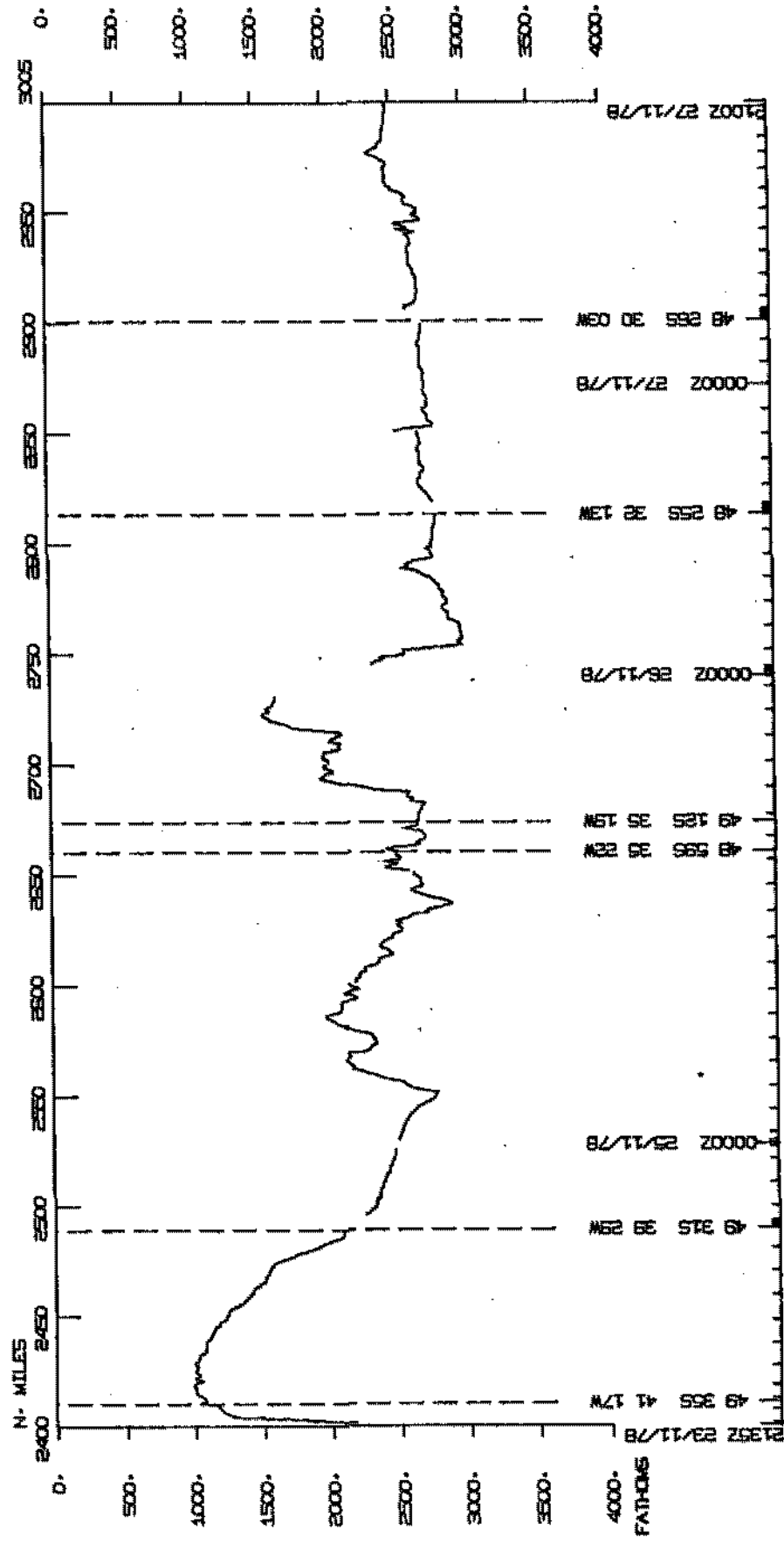
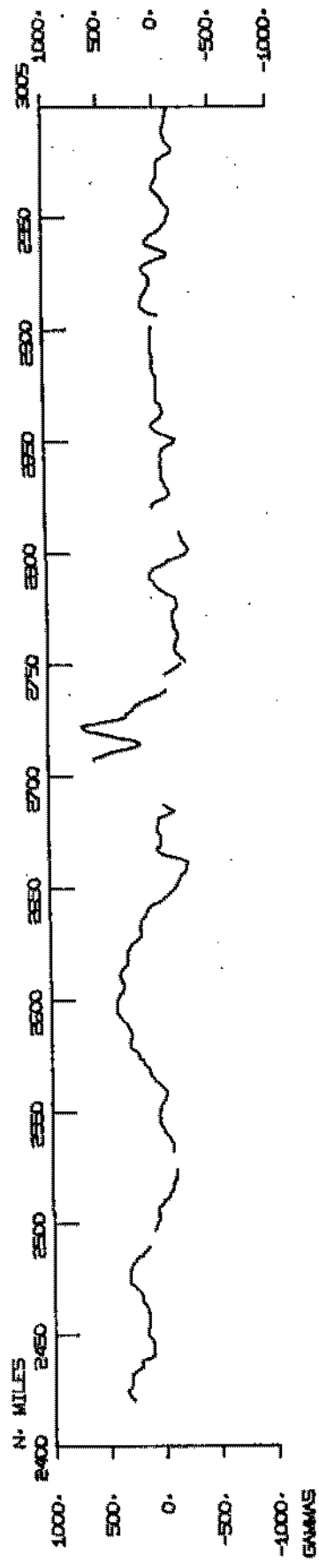


0102 17/11/78 4 45 53 52
 0002 18/11/78 15 35 55 42
 51 45 57 49
 51 35 52 12W
 0002 19/11/78
 50 05 52 52
 1725Z 19/11/78

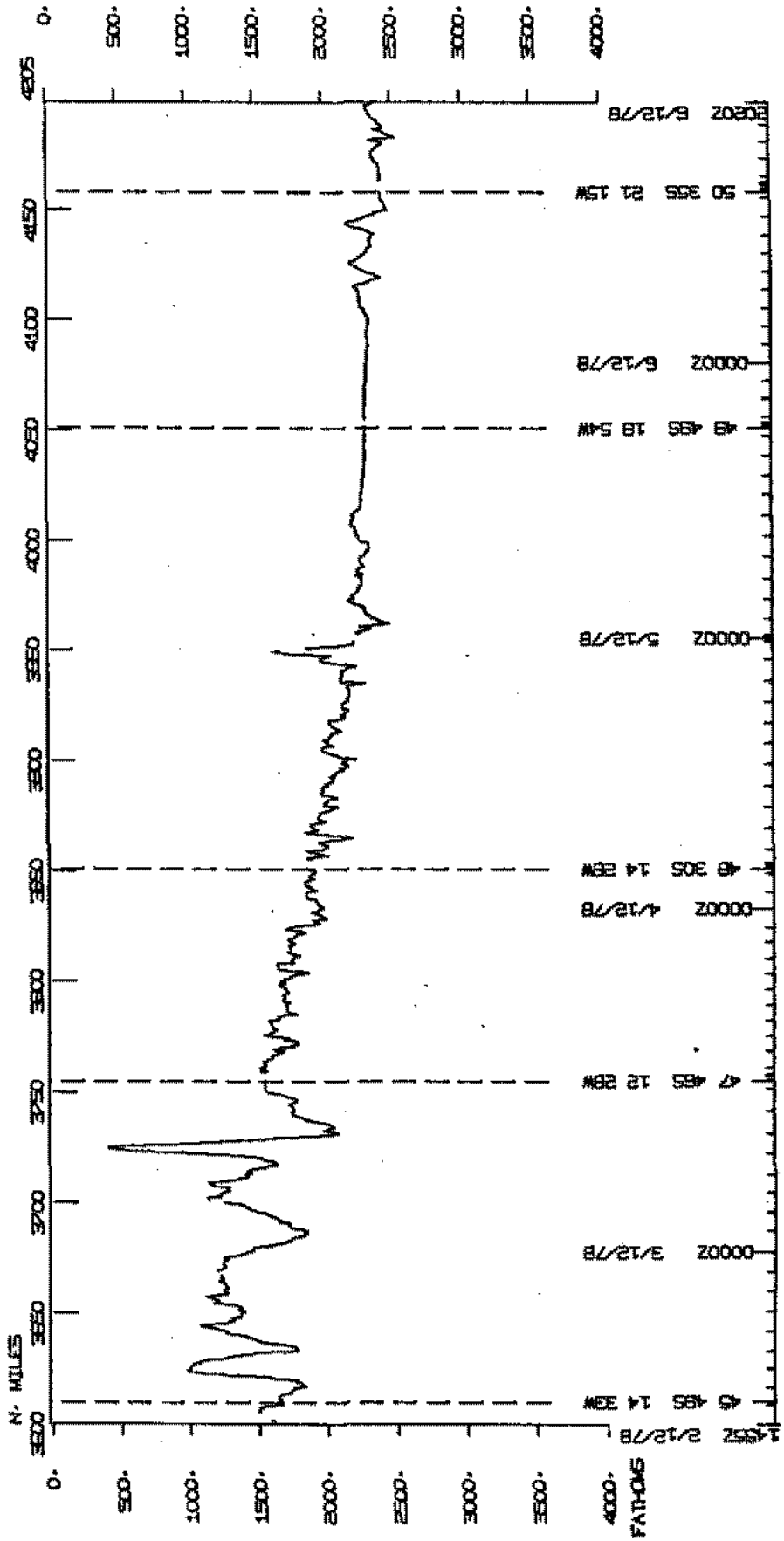
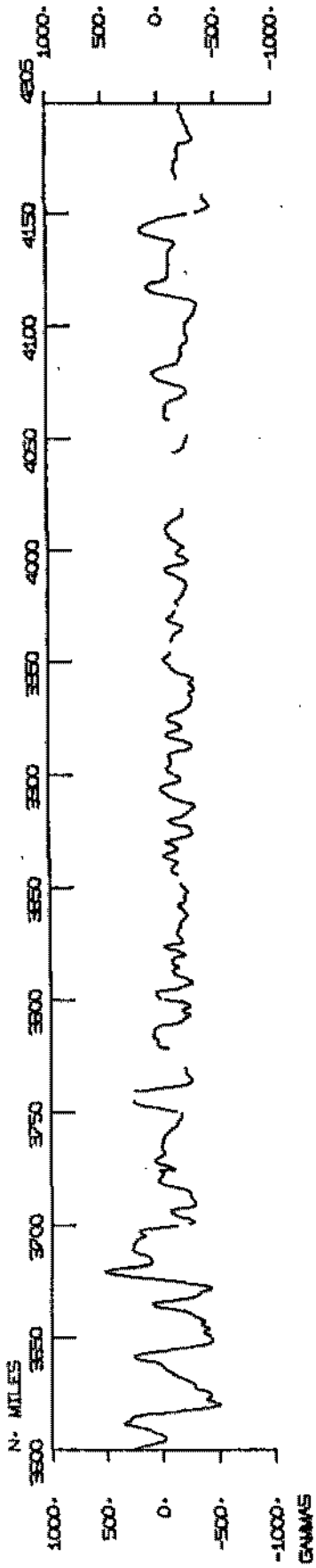
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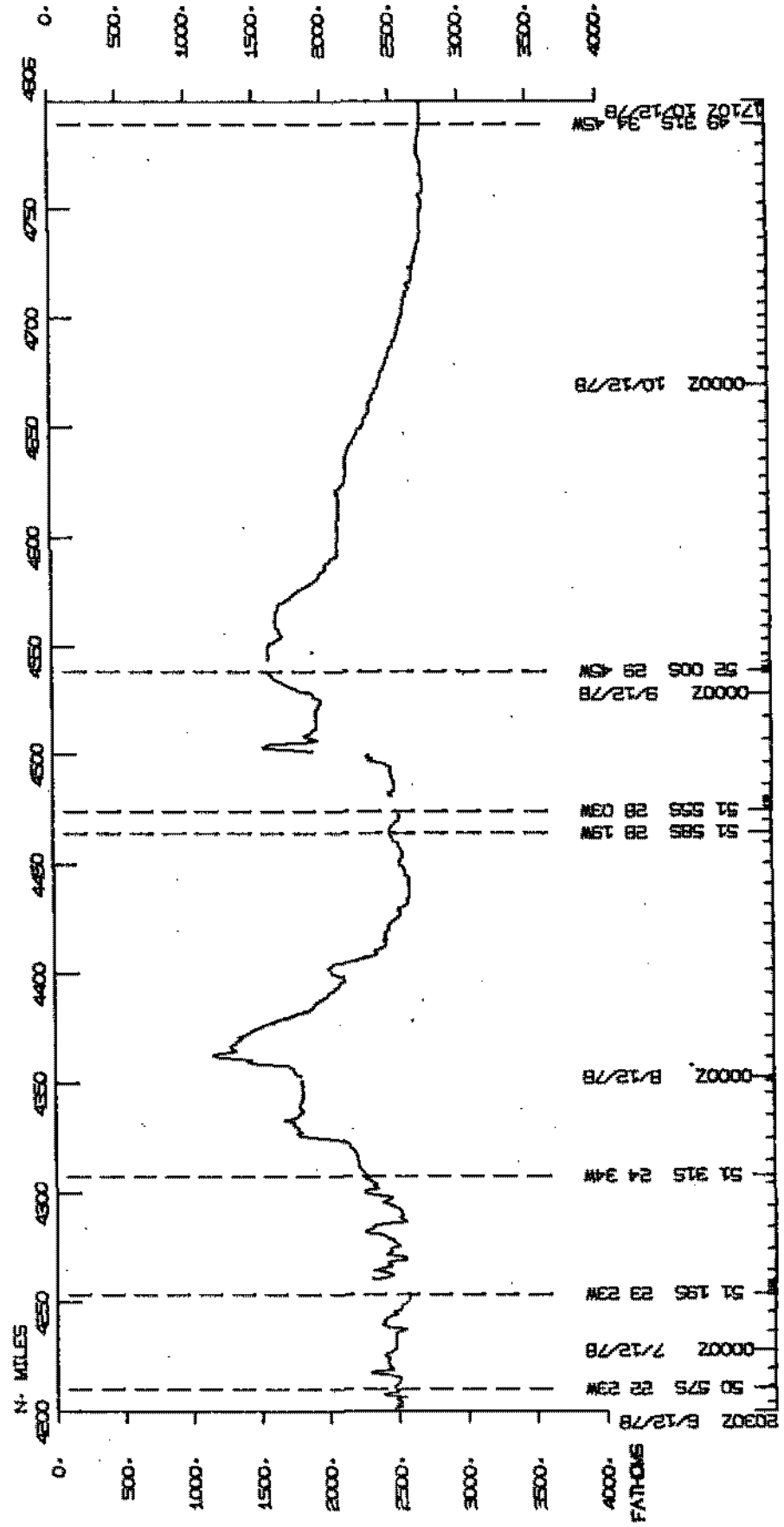
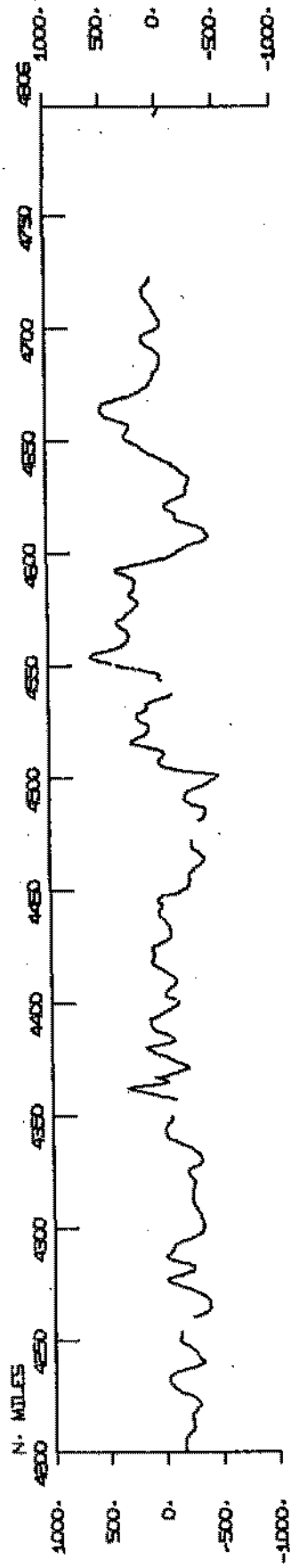
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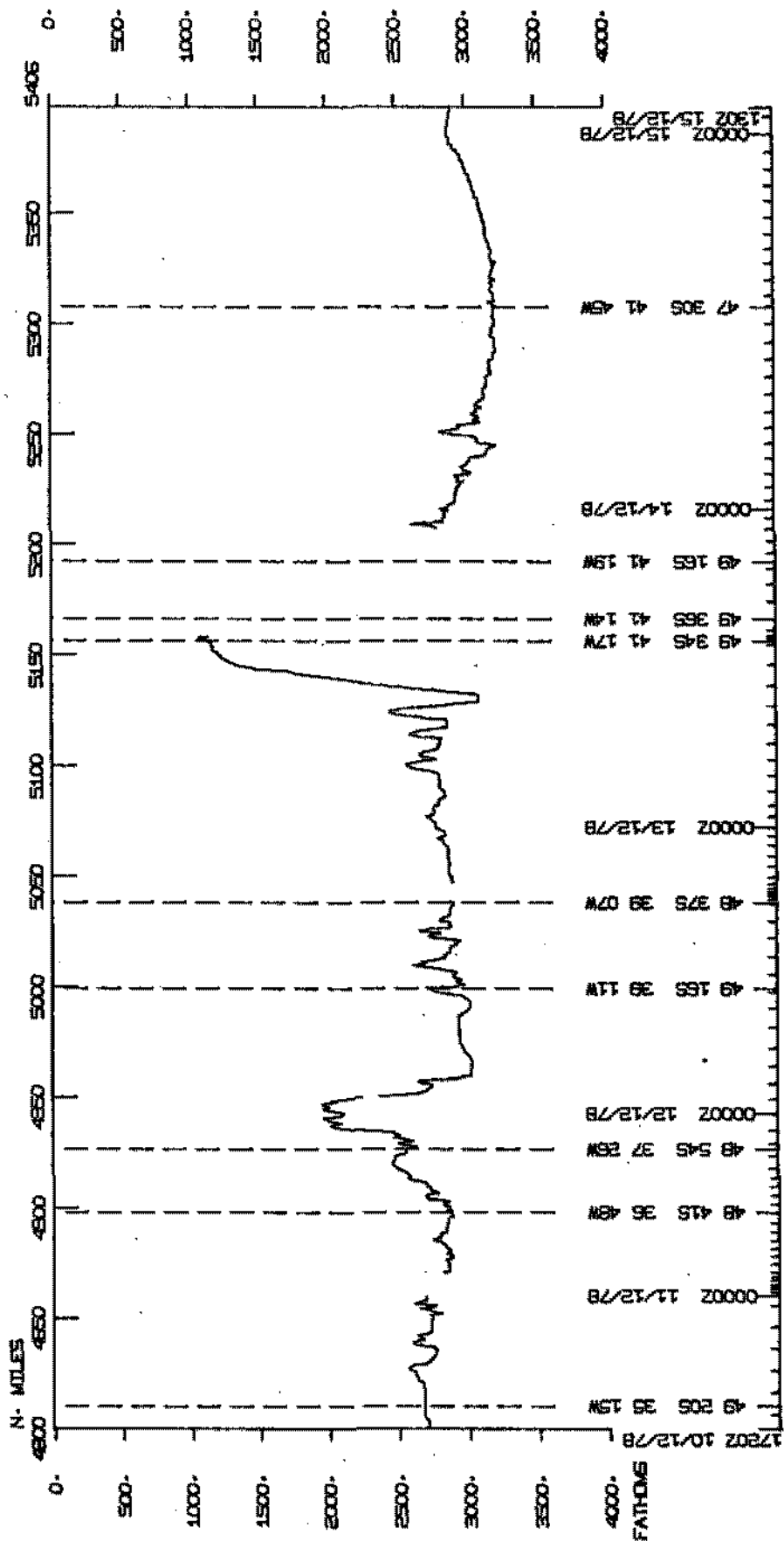
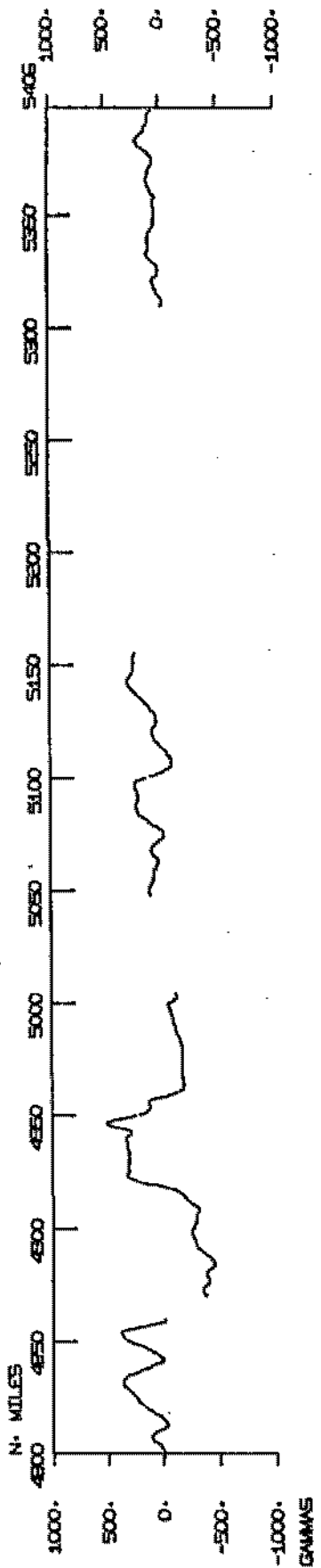
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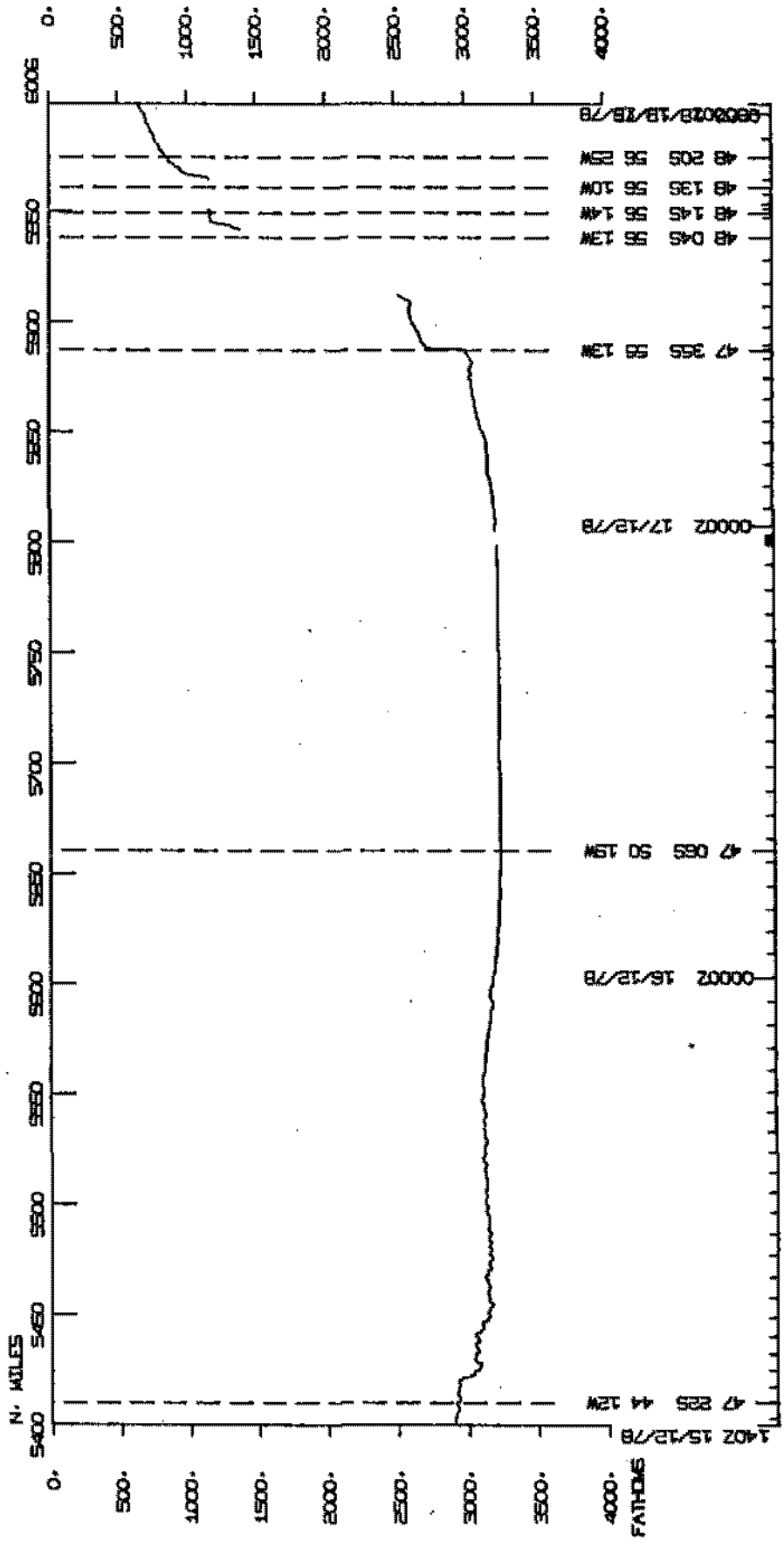
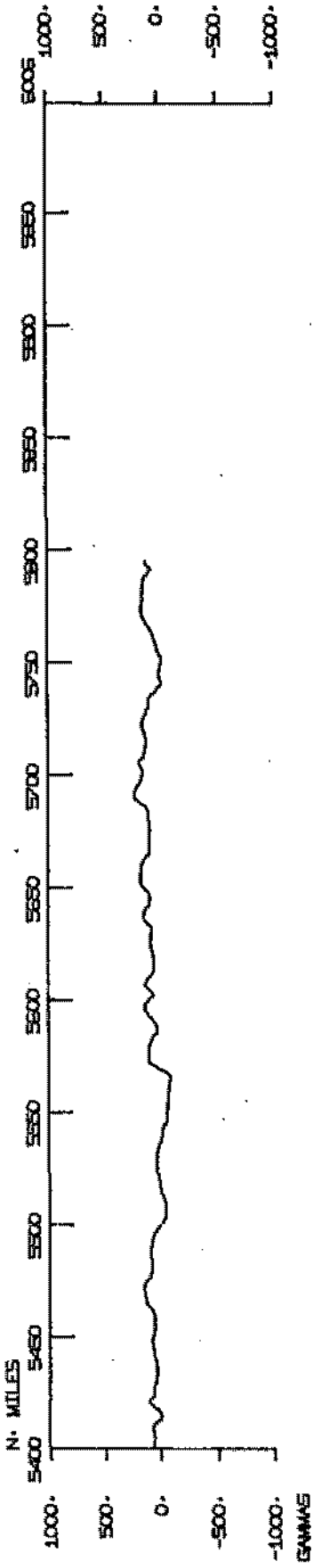
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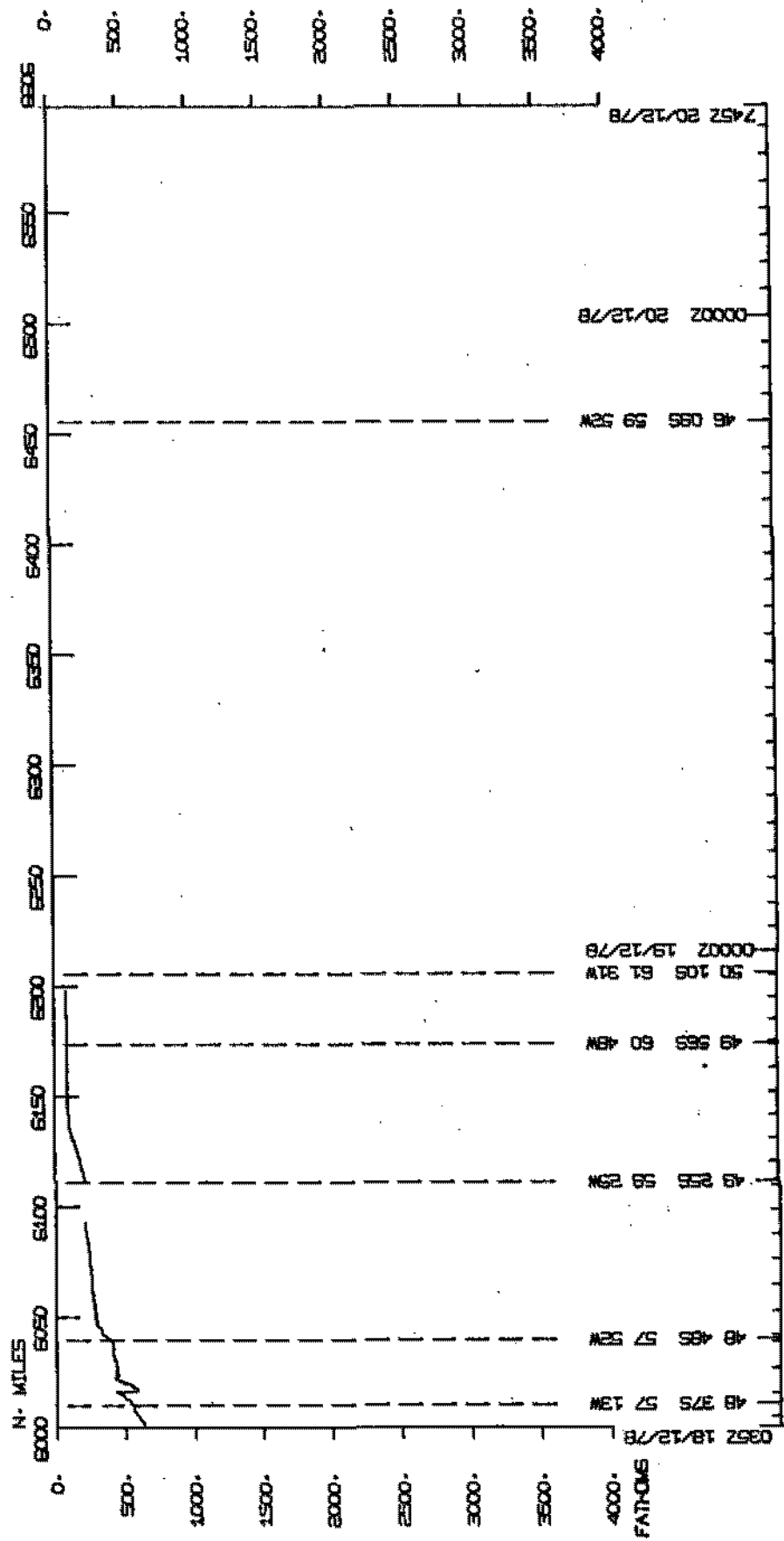
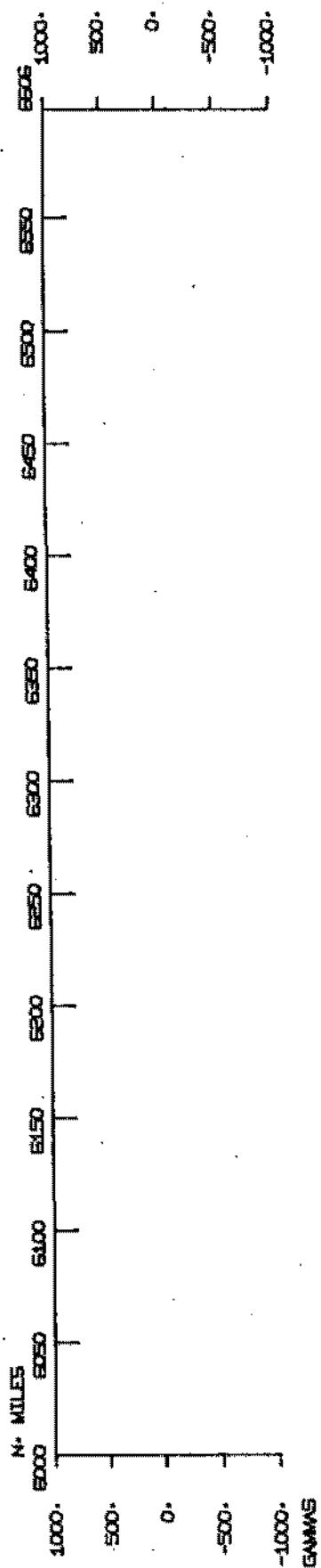
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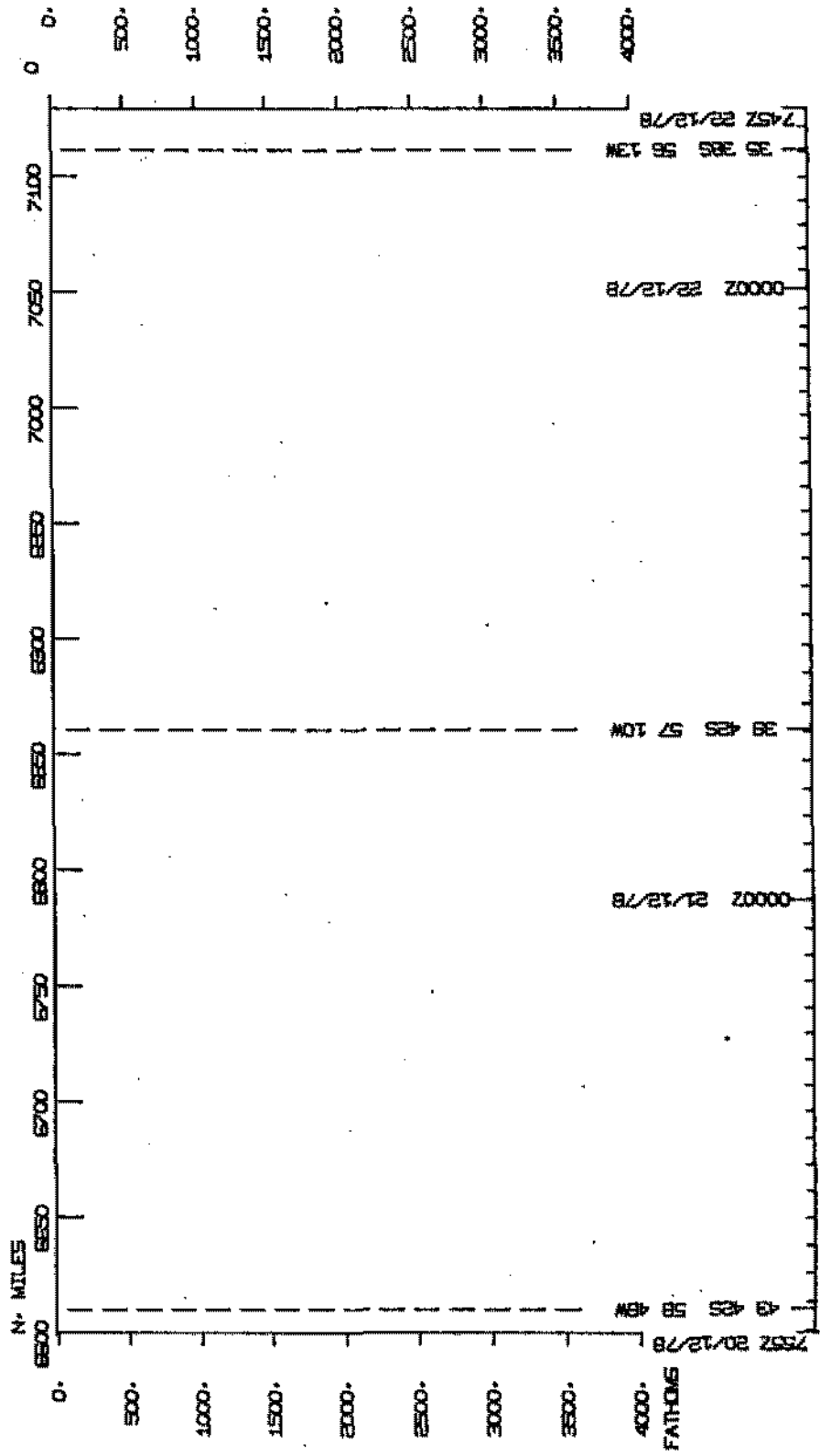
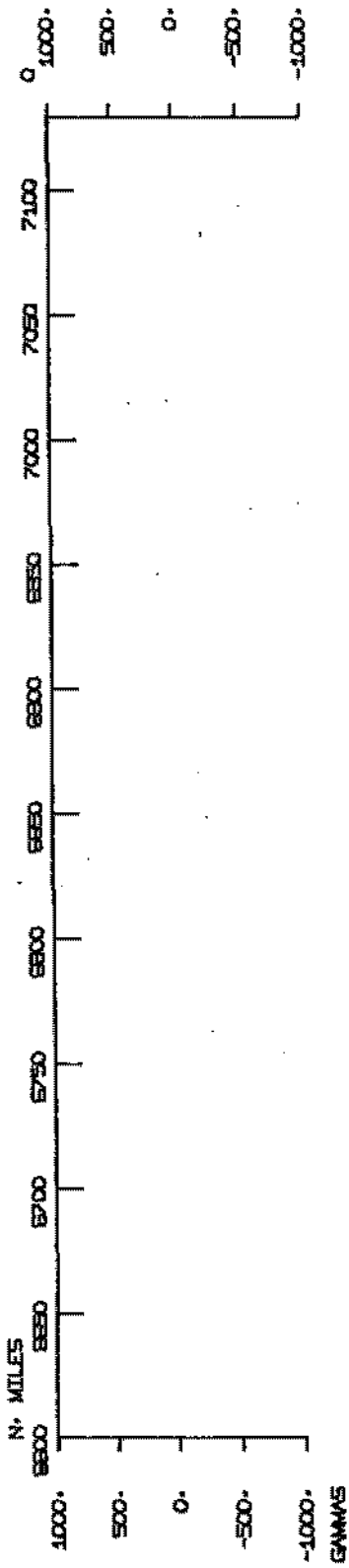
INCOMED LEG 13



INDOMED LEG 13



INDOMED LEG 13



755Z 20/12/78
 38 45 38 48
 0000Z 21/12/78
 38 45 57 10W
 0000Z 22/12/78
 38 265 58 13W
 745Z 22/12/78

S.I.O. SAMPLE INDEX

(Issued March 1979)

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Post-Cruise Processing and Report Preparation
by S.I.O. Geological Data Center

Index Encoding Funded by NSF
Grant Number OCE76-80618
Index Processing and Report Preparation
Funded in part by SIA

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 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 cards. Disposition and sample type are represented by three and four character codes to permit future computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

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NUMBER OF SAMPLES OF CLASS 'TYPE' GOING TO DESTINATION 'DISP'

DISP	TYPE									TOTAL
	CM	DP	HC	LH	MG	ON	PE	TD		
CHL	I					27				I 27
DCP	I		79						52	I 131
GUC	I		4		1	2				I 9
MLK	I						9			I 9
MTG	I						2			I 2
OKU	I						1			I 1
SIX	I						2			I 2
SVA	I	9								I 9
VUL	I							1		I 1
TOTAL	I	9	4	79	1	2	27	15	52	I 189

SAMPLE 'TYPE' CODES USED ABOVE

CM = CURRENT MEASUREMENT
 DP = DEPTH
 HC = HYDROGRAPHIC CAST
 LH = LOG HOURS
 MG = MAGNETICS (TOWED VEHICLE, SURFACE, TOTAL FIELD)
 ON = OPEN NET
 PE = PERSONNEL IN SCIENTIFIC PARTY
 TD = SALINITY/TEMPERATURE/DEPTH (STD)

SAMPLE 'DISP' CODES USED ABOVE

CHL = CHILE
 DCP = DATA COLLECTION, PROCESSING GROUP -- F. WILKES (EXT. 3668)
 GUC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)
 MLK = MARINE LIFE RESEARCH GROUP (EXT. 2866)
 MTG = MARINE TECHNOLOGY GROUP (EXT. 4194)
 OKU = OCEAN RESEARCH DIVISION (EXT. 2857)
 SIX = SCRIPPS INSTITUTION NON-EMPLOYEE -- (CONTACT DORCAS UTTER EXT. 2356)
 SVA = SARILEE ANDERSON, CURRENT METER, XBT SURF/SALTS (EXT. 2055)
 VUL = VOLUNTEER

12MAR79 PAGE 1

GMT D /M /Y	LOC LUC	CODE	SAMPLE IDENT.	CODE	LAT.	LONG.	LEG-SHIP
TIME DATE	TIME TZ	SAMP		DISP			CRUISE

INDUCED LFG 13 SAMPLE INDEX

INMU13MV

*** PORTS ***

2130	9/11/78		LGHT R MONTEVIDEO, URUGUAY	GDC 34	54.0S	56 13.0W	F INMU13MV
1200	22/12/78		LGHT F MONTEVIDEO, URUGUAY	GDC 35	54.0S	56 13.0W	F INMU13MV

0930	18/11/78		LGUS H FALKLAND IS. MALDIVE	GDC 51	42.0S	57 50.0W	F INMU13MV
1300	18/11/78		LGUS F FALKLAND IS. MALDIVE	GDC 51	42.0S	57 50.0W	F INMU13MV

PERSONNEL

*** NAME ***	*** TITLE ***	*** AFFILIATION ***
1 REID, J.	PROF.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
2 WITHEROW, S.	RESIDENT TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
3 CHARTERS, J.	COMPUTER TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
4 ANTEZANA, T.	ASST. PROF.	CHILE
5 COSTELLO, J.	STAFF RES. ASSOC.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
6 GRAHAM, J.	SR. Elec. TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
7 JOHNSON, F.	MARINE TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
8 JOHNSON, T.	MARINE TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
9 MANTYLA, A.	SPEC. OCEANO.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
10 MUUS, D.	STAFF RES. ASSOC.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
11 OLIVERA, M.	GRAD. STUDENT	SCRIPPS INSTITUTION NON-EMPLOYEE -(CONTACT DORCAS UTTER EXT. 23
12 SACHS, N.	VOLUNTEER	SCRIPPS INSTITUTION NON-EMPLOYEE -(CONTACT DORCAS UTTER EXT. 23
13 SCHWITT, J.	SR. Elec. TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
14 STALLARD, M. DR.	STAFF RES. ASSOC.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
15 SWEET, P.	MARINE TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093

NOTES A: '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 THIS LEG. (HOOKED 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.

GMT D / M / Y TIME DATE	LOC LOC TIME TZ	CODE SAMP	SAMPLE IDENT.	CODE UNSP	LAT.	LONG.	LEG-SHIP CRUISE
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UNDERWAY DATA CURATOR - STUART M. SMITH (EXT. 2752)

*** LOG BOOKS ***

2230 10/11/78		LBOW F	LOG BOOK	GDC 38	43.9S	56 12.0W	S INND13MV
1630 20/12/78		LBOW E	LOG BOOK	GDC 41	53.3S	58 03.6W	S INND13MV

*** FATHOGRAMS ***

2130 10/11/78		DPK3 F	EDK 3.5KHZ R-01	GDC 38	35.0S	56 11.5W	S INND13MV
2045 17/11/78		DPK3 F	EDK 3.5KHZ R-01	GDC 50	02.5S	56 14.0W	S INND13MV
2107 17/11/78		DPK3 F	EDK 3.5KHZ R-02	GDC 50	05.8S	56 16.9W	S INND13MV
1340 24/11/78		DPK3 F	EDK 3.5KHZ R-02	GDC 49	30.5S	39 28.8W	S INND13MV
1350 24/11/78		DPK3 F	EDK 3.5KHZ R-03	GDC 49	30.5S	39 28.8W	S INND13MV
0030 4/12/78		DPK3 F	EDK 3.5KHZ R-03	GDC 48	22.1S	14 11.3W	S INND13MV
0060 4/12/78		DPK3 F	EDK 3.5KHZ R-04	GDC 48	22.8S	14 12.8W	S INND13MV
1630 20/12/78		DPK3 F	EDK 3.5KHZ R-04	GDC 41	53.3S	58 03.6W	S INND13MV

*** MAGNETIC DATA ***

2230 10/11/78		MGR F	MAGNETICS R-01	GDC 38	43.9S	56 12.0W	S INND13MV
1228 28/11/78		MGR F	MAGNETICS R-01	GDC 47	39.5S	25 19.3W	S INND13MV
2008 28/11/78		MGR F	MAGNETICS R-02	GDC 47	36.6S	25 22.8W	S INND13MV
1730 16/12/78		MGR F	MAGNETICS R-02	GDC 46	50.3S	53 35.8W	S INND13MV

*** HYDROGRAPHIC CAST ***

0146 14/11/78	HCNA	TSUN	01	20	DGP 48	38.3S	56 49.7W	S INND13MV
0755 14/11/78	HCNA	TSUN	03	27	DGP 48	15.4S	56 16.9W	S INND13MV
1443 14/11/78	HCNA	TSUN	05	16	DGP 48	04.9S	56 07.3W	S INND13MV
1726 14/11/78	HCNA	TSUN	05	18	DGP 48	05.1S	56 10.2W	S INND13MV
0100 15/11/78	HCNA	TSUN	06	04	DGP 47	39.2S	55 25.6W	S INND13MV
0500 15/11/78	HCNA	TSUN	06	20	DGP 47	38.7S	55 24.8W	S INND13MV
0741 15/11/78	HCNA	TSUN	06	16	DGP 47	38.2S	55 24.1W	S INND13MV
1604 15/11/78	HCNA	TSUN	08	24	DGP 47	17.3S	54 17.0W	S INND13MV
1917 15/11/78	HCNA	TSUN	08	18	DGP 47	17.9S	54 14.6W	S INND13MV
0725 16/11/78	HCNA	TSUN	10	U 25	DGP 46	16.0S	52 40.9W	S INND13MV
1145 16/11/78	HCNA	TSUN	10	U 21	DGP 46	14.8S	52 42.9W	S INND13MV
1709 17/11/78	HCNA	TSUN	11	18	DGP 49	34.2S	55 49.1W	S INND13MV
2012 19/11/78	HCNA	TSUN	12	24	DGP 49	26.1S	50 32.3W	S INND13MV
0001 20/11/78	HCNA	TSUN	12	22	DGP 49	25.7S	50 30.8W	S INND13MV
1429 21/11/78	HCNA	TSUN	13	25	DGP 46	28.0S	41 58.8W	S INND13MV
1848 21/11/78	HCNA	TSUN	13	U 24	DGP 46	28.1S	41 57.2W	S INND13MV
0300 22/11/78	HCNA	TSUN	14	24	DGP 47	14.7S	41 50.3W	S INND13MV
0707 22/11/78	HCNA	TSUN	14	20	DGP 47	14.9S	41 48.8W	S INND13MV

GMT D / M / Y	LOC	LOC	CODE	SAMPLE	IDENT.	CODE	LAT.	LONG.	LEG-SHIP
TIME DATE	TIME	TZ	SAMP			DISP			CRUISE
1415	22/11/78		HCNA	TSUN	16	24	DCP 47 57.4 S	41 36.2W	S INND13MV
1741	22/11/78		HCNA	TSUN	16	20	DCP 47 58.0 S	41 32.9W	S INND13MV
0009	23/11/78		HCNA	TSUN	17	24	DCP 48 38.6 S	41 22.5W	S INND13MV
0419	23/11/78		HCNA	TSUN	17	22	DCP 48 40.2 S	41 20.7W	S INND13MV
1058	23/11/78		HCNA	TSUN	19	24	DCP 49 08.3 S	41 21.0W	S INND13MV
1446	23/11/78		HCNA	TSUN	19	20	DCP 49 07.3 S	41 21.2W	S INND13MV
1934	23/11/78		HCNA	TSUN	21	24	DCP 49 25.8 S	41 15.7W	S INND13MV
2322	23/11/78		HCNA	TSUN	21	22	DCP 49 26.1 S	41 18.3W	S INND13MV
0406	24/11/78		HCNA	TSUN	23	23	DCP 49 41.9 S	41 17.8W	S INND13MV
1331	24/11/78		HCNA	TSUN	24	24	DCP 49 30.6 S	39 28.8W	S INND13MV
1748	24/11/78		HCNA	TSUN	24	17	DCP 49 30.4 S	39 28.8W	S INND13MV
2326	24/11/78		HCNA	TSUN	25	24	DCP 49 26.2 S	38 38.3W	S INND13MV
0245	25/11/78		HCNA	TSUN	25	18	DCP 49 27.3 S	38 38.2W	S INND13MV
0047	26/11/78		HCNA	TSUN	26	U 23	DCP 48 41.8 S	33 52.6W	S INND13MV
0524	26/11/78		HCNA	TSUN	26	U 18	DCP 48 43.9 S	33 54.6W	S INND13MV
1424	26/11/78		HCNA	TSUN	27	23	DCP 48 25.5 S	32 13.8W	S INND13MV
1837	26/11/78		HCNA	TSUN	27	18	DCP 48 25.9 S	32 08.7W	S INND13MV
0509	27/11/78		HCNA	TSUN	28	23	DCP 48 27.6 S	30 05.2W	S INND13MV
0925	27/11/78		HCNA	TSUN	28	18	DCP 48 30.0 S	30 06.5W	S INND13MV
1517	27/11/78		HCNA	TSUN	29	22	DCP 48 17.6 S	28 57.4W	S INND13MV
1650	28/11/78		HCNA	TSUN	29	18	DCP 47 38.3 S	25 23.9W	S INND13MV
0921	29/11/78		HCNA	TSUN	30	23	DCP 47 11.7 S	22 46.2W	S INND13MV
1255	29/11/78		HCNA	TSUN	30	18	DCP 47 12.3 S	22 46.1W	S INND13MV
0550	30/11/78		HCNA	TSUN	31	20	DCP 46 18.3 S	20 32.2W	S INND13MV
0917	30/11/78		HCNA	TSUN	31	18	DCP 46 19.7 S	20 30.4W	S INND13MV
1634	30/11/78		HCNA	TSUN	32	22	DCP 46 13.3 S	18 54.6W	S INND13MV
2047	30/11/78		HCNA	TSUN	32	19	DCP 46 14.4 S	18 48.0W	S INND13MV
0511	1/12/78		HCNA	TSUN	33	10	DCP 45 59.2 S	17 18.2W	S INND13MV
1045	1/12/78		HCNA	TSUN	33	19	DCP 45 59.0 S	17 18.0W	S INND13MV
1406	1/12/78		HCNA	TSUN	33	10	DCP 45 58.4 S	17 19.0W	S INND13MV
2356	1/12/78		HCNA	TSUN	34	20	DCP 45 38.6 S	15 57.5W	S INND13MV
0344	2/12/78		HCNA	TSUN	34	19	DCP 45 32.6 S	15 55.6W	S INND13MV
0947	2/12/78		HCNA	TSUN	35	17	DCP 45 28.9 S	14 57.3W	S INND13MV
1156	2/12/78		HCNA	TSUN	35	16	DCP 45 28.7 S	14 55.9W	S INND13MV
0957	3/12/78		HCNA	TSUN	36	18	DCP 47 46.2 S	12 27.3W	S INND13MV
1236	3/12/78		HCNA	TSUN	36	18	DCP 47 47.4 S	12 26.4W	S INND13MV
0442	4/12/78		HCNA	TSUN	37	22	DCP 48 29.8 S	14 27.1W	S INND13MV
0803	4/12/78		HCNA	TSUN	37	16	DCP 48 29.3 S	14 26.0W	S INND13MV
2149	4/12/78		HCNA	TSUN	38	22	DCP 49 10.2 S	16 43.0W	S INND13MV
0123	5/12/78		HCNA	TSUN	38	18	DCP 49 10.6 S	16 42.1W	S INND13MV
1421	5/12/78		HCNA	TSUN	39	18	DCP 49 48.4 S	18 54.6W	S INND13MV
1722	5/12/78		HCNA	TSUN	39	04	DCP 49 47.9 S	18 54.1W	S INND13MV
1928	5/12/78		HCNA	TSUN	39	14	DCP 49 47.9 S	18 53.0W	S INND13MV
1113	6/12/78		HCNA	TSUN	40	22	DCP 50 35.7 S	21 13.3W	S INND13MV
1505	6/12/78		HCNA	TSUN	40	17	DCP 50 35.6 S	21 16.9W	S INND13MV
0507	7/12/78		HCNA	TSUN	41	22	DCP 51 20.8 S	23 21.0W	S INND13MV
0841	7/12/78		HCNA	TSUN	41	17	DCP 51 23.2 S	23 19.5W	S INND13MV
1952	7/12/78		HCNA	TSUN	42	20	DCP 51 48.6 S	25 19.8W	S INND13MV
2329	7/12/78		HCNA	TSUN	42	14	DCP 51 48.8 S	25 20.0W	S INND13MV
1421	8/12/78		HCNA	TSUN	43	U 25	DCP 51 54.9 S	28 05.9W	S INND13MV
1825	8/12/78		HCNA	TSUN	43	U 21	DCP 51 55.1 S	28 11.6W	S INND13MV
0234	9/12/78		HCNA	TSUN	44	16	DCP 52 01.2 S	29 45.6W	S INND13MV
0531	9/12/78		HCNA	TSUN	44	15	DCP 52 02.0 S	29 44.4W	S INND13MV

GMT D / M / Y	LOC LHC	CODE	SAMPLE IDENT.	CODE	LAT.	LONG.	LEG-SHIP
TIME DATE	TIME TZ	SAMP		DISP			CRUISE
0230 11/12/78		HCNA	TSON	45	23	DCP 48 45.2S	36 09.5W S INMD13MV
0649 11/12/78		HCNA	TSON	45	20	DCP 48 41.2S	36 07.1W S INMD13MV
1411 12/12/78		HCNA	TSON	46	23	DCP 48 36.0S	39 05.1W S INMD13MV
1750 12/12/78		HCNA	TSON	46	18	DCP 48 35.7S	38 58.8W S INMD13MV
2113 16/12/78		HCNA	TSON	47	24	DCP 46 50.0S	53 44.7W S INMD13MV
0450 18/12/78		HCNA	TSON	48	18	DCP 48 48.0S	57 52.8W S INMD13MV
1241 18/12/78		HCNA	TSON	49	14	DCP 49 24.9S	59 25.8W S INMD13MV
1921 18/12/78		HCNA	TSON	50	10	DCP 49 56.2S	60 48.0W S INMD13MV

OPEN NET

1854 14/11/78		UNIM R	3330	300	3	CHL 48 03.8S	56 12.7W S INMD13MV
1903 14/11/78		UNIM F			3	CHL 48 03.8S	56 13.1W S INMD13MV
1831 15/11/78		UNIM R	3330	300	8	CHL 47 17.6S	54 15.3W S INMD13MV
1844 15/11/78		UNIM F			8	CHL 47 17.6S	54 15.4W S INMD13MV
1005 16/11/78		UNIM R	3330	300	10	CHL 46 16.3S	52 42.2W S INMD13MV
1020 16/11/78		UNIM F			10	CHL 46 16.1S	52 42.6W S INMD13MV
1532 17/11/78		UNIM R	3330	300	11	CHL 49 34.5S	55 47.5W S INMD13MV
1546 17/11/78		UNIM F			11	CHL 49 34.1S	55 47.8W S INMD13MV
2216 19/11/78		UNIM R	3330	300	12	CHL 49 26.1S	50 31.9W S INMD13MV
2230 19/11/78		UNIM F			12	CHL 49 25.9S	50 31.4W S INMD13MV
1715 21/11/78		UNIM R	3330	300	13	CHL 46 27.9S	41 57.5W S INMD13MV
1729 21/11/78		UNIM F			13	CHL 46 27.9S	41 57.8W S INMD13MV
0541 22/11/78		UNIM R	3330	300	14	CHL 47 14.9S	41 49.5W S INMD13MV
0556 22/11/78		UNIM F			14	CHL 47 15.1S	41 49.5W S INMD13MV
0250 23/11/78		UNIM R	3330	300	17	CHL 48 39.6S	41 21.2W S INMD13MV
0305 23/11/78		UNIM F			17	CHL 48 39.8S	41 21.4W S INMD13MV
2208 23/11/78		UNIM R	3330	300	21	CHL 49 25.9S	41 17.6W S INMD13MV
2223 23/11/78		UNIM F			21	CHL 49 26.0S	41 17.9W S INMD13MV
1623 24/11/78		UNIM R	3330	300	24	CHL 49 30.2S	39 28.7W S INMD13MV
1638 24/11/78		UNIM F			24	CHL 49 30.2S	39 28.9W S INMD13MV
0401 26/11/78		UNIM R	3330	300	26	CHL 48 43.1S	33 54.3W S INMD13MV
0416 26/11/78		UNIM F			26	CHL 48 43.3S	33 54.7W S INMD13MV
0801 27/11/78		UNIM R	3330	300	28	CHL 48 28.7S	30 05.8W S INMD13MV
0816 27/11/78		UNIM F			28	CHL 48 28.9S	30 06.3W S INMD13MV
1154 29/11/78		UNIM R	3330	300	30	CHL 47 12.2S	22 46.0W S INMD13MV
1213 29/11/78		UNIM F			30	CHL 47 12.2S	22 46.1W S INMD13MV
1931 30/11/78		UNIM R	3330	300	32	CHL 46 14.1S	18 50.0W S INMD13MV
1946 30/11/78		UNIM F			32	CHL 46 14.1S	18 49.6W S INMD13MV

GMT D / M / Y		LUC LUC	CODE	SAMPLE IDENT.			CODE	LAT.	LUNG.		5	LEG-SHIP
TIME	DATE	TIME TZ	SAMP				DISP				CRUISE	
1139	3/12/78		UNIM R	3330	300	36	CHL 47	46.85	12	26.9W	S	INMD13MV
1153	3/12/78		UNIM F			36	CHL 47	47.15	12	26.8W	S	INMD13MV
0850	4/12/78		UNIM R	3330	300	37	CHL 48	29.35	14	26.3W	S	INMD13MV
0905	4/12/78		UNIM F			37	CHL 48	29.55	14	26.6W	S	INMD13MV
0015	5/12/78		UNIM R	3330	300	38	CHL 49	10.25	16	43.3W	S	INMD13MV
0030	5/12/78		UNIM F			38	CHL 49	10.55	16	43.1W	S	INMD13MV
2013	5/12/78		UNIM R	3330	300	39	CHL 49	47.95	18	52.6W	S	INMD13MV
2028	5/12/78		UNIM F			39	CHL 49	47.95	18	52.5W	S	INMD13MV
1350	6/12/78		UNIM R	3330	300	40	CHL 50	35.35	21	15.8W	S	INMD13MV
1405	6/12/78		UNIM F			40	CHL 50	35.45	21	16.1W	S	INMD13MV
0734	7/12/78		UNIM R	3330	300	41	CHL 51	22.55	23	19.5W	S	INMD13MV
0750	7/12/78		UNIM F			41	CHL 51	22.65	23	19.8W	S	INMD13MV
2220	7/12/78		UNIM R	3330	300	42	CHL 51	48.35	25	20.9W	S	INMD13MV
2236	7/12/78		UNIM F			42	CHL 51	48.55	25	20.5W	S	INMD13MV
1705	8/12/78		UNIM R	3330	300	43	CHL 51	54.65	28	08.8W	S	INMD13MV
1720	8/12/78		UNIM F			43	CHL 51	54.85	28	09.5W	S	INMD13MV
0626	9/12/78		UNIM R	3330	300	44	CHL 52	01.85	29	44.1W	S	INMD13MV
0641	9/12/78		UNIM F			44	CHL 52	01.25	29	44.0W	S	INMD13MV
1125	13/12/78		UNIM R	3330	300	47	CHL 49	34.35	41	17.4W	S	INMD13MV
1140	13/12/78		UNIM F			47	CHL 49	34.85	41	17.6W	S	INMD13MV
2312	16/12/78		UNIM R	3330	300	48	CHL 46	49.65	53	47.5W	S	INMD13MV
2327	16/12/78		UNIM F			48	CHL 46	49.65	53	48.2W	S	INMD13MV
0921	17/12/78		UNIM R	3330	300	48A	CHL 47	35.65	55	13.7W	S	INMD13MV
0935	17/12/78		UNIM F			48A	CHL 47	35.65	55	14.0W	S	INMD13MV
0545	18/12/78		UNIM R	3330	300	49	CHL 48	48.25	57	53.7W	S	INMD13MV
0600	18/12/78		UNIM F			49	CHL 48	48.35	57	54.8W	S	INMD13MV

CURRENT MEASUREMENT

0535	14/11/78		CMAR R	INMD01	1020	DRUP	SVA 48	22.05	56	27.0W	S	INMD13MV
1002	14/11/78		CMAR F		1020P	KCVK	SVA 48	11.85	56	13.2W	S	INMD13MV
1002	14/11/78		CMAR R	INMD02	1041	DRUP	SVA 48	11.85	56	13.2W	S	INMD13MV
1830	20/12/78		CMAR X		1041	NO KCV	SVA 41	53.35	58	03.6W	S	INMD13MV
1819	14/11/78		CMAR R	INMD03	1030	DRUP	SVA 48	04.55	56	11.6W	S	INMD13MV
1520	17/12/78		CMAR F		1030P	KCVK	SVA 47	60.05	56	06.6W	S	INMD13MV
0927	15/11/78		CMAR R	INMD04	1017	DRUP	SVA 47	35.05	55	15.9W	S	INMD13MV
1047	17/12/78		CMAR F		1017P	KCVK	SVA 47	35.45	55	15.2W	S	INMD13MV

GMT U / M / Y		LUG LUG	CODE	SAMPLE IDENT.		CODE	12MAR79 PAGE		6	LEG-SHIP
TIME	DATE	TIME Tz	SAMP			HTSP	LAT.	LONG.		CRUISE
2354	15/11/78		CMAB F	INND05	1009	DRUP	SVA 46 50.8S	53 38.9W	S	INND13MV
2345	16/12/78		CMAB F		1009B	KCVK	SVA 46 49.7S	53 48.2W	S	INND13MV
0942	22/11/78		CMAB R	INND06	1045	DRUP	SVA 47 30.5S	41 46.5W	S	INND13MV
1310	14/12/78		CMAB F		1045L	KCVK	SVA 47 30.4S	41 44.6W	S	INND13MV
0751	23/11/78		CMAB R	INND07	1021	DRUP	SVA 49 00.7S	41 26.5W	S	INND13MV
0005	14/12/78		CMAB F		1021G	KCVK	SVA 48 60.0S	41 21.8W	S	INND13MV
1658	23/11/78		CMAB R	INND08	1024	DRUP	SVA 49 19.6S	41 16.2W	S	INND13MV
2005	13/12/78		CMAB F		1024G	KCVK	SVA 49 17.6S	41 15.7W	S	INND13MV
0128	24/11/78		CMAB R	INND09	1005	DRUP	SVA 49 33.8S	41 17.2W	S	INND13MV
1830	20/12/78		CMAB X		1005	NO KCV	SVA 41 53.3S	58 03.6W	S	INND13MV

SALINITY, TEMPERATURE, DEPTH

0057	14/11/78		TDCT R	INND01	1077M	S20	DCP 48 38.7S	56 48.9W	S	INND13MV
0246	14/11/78		TDCT F	INND01			DCP 48 37.4S	56 50.0W	S	INND13MV
1058	16/11/78		TDCT R	INND10	6060M	S21	DCP 46 14.5S	52 43.1W	S	INND13MV
1220	16/11/78		TDCT F	INND10			DCP 46 14.3S	52 42.6W	S	INND13MV
1633	17/11/78		TDCT R	INND11	736M	S18	DCP 49 33.9S	55 48.8W	S	INND13MV
1729	17/11/78		TDCT F	INND11			DCP 49 34.3S	55 49.1W	S	INND13MV
1855	19/11/78		TDCT R	INND12	3950M	S24	DCP 49 26.2S	50 32.0W	S	INND13MV
2156	19/11/78		TDCT F	INND12			DCP 49 26.2S	50 32.3W	S	INND13MV
2300	19/11/78		TDCT F	INND12	1655M	S22	DCP 49 25.7S	50 30.8W	S	INND13MV
0055	20/11/78		TDCT F	INND12			DCP 49 25.6S	50 31.1W	S	INND13MV
2052	21/11/78		TDCT R	INND13	1306M	S24	DCP 46 39.3S	41 54.6W	S	INND13MV
2212	21/11/78		TDCT F	INND13			DCP 46 52.0S	41 52.7W	S	INND13MV
1233	21/11/78		TDCT F	INND13	5400M	S24	DCP 46 28.9S	41 59.5W	S	INND13MV
1656	21/11/78		TDCT F	INND13			DCP 46 27.8S	41 57.4W	S	INND13MV
0522	22/11/78		TDCT R	INND14	5400M	S45	DCP 47 14.7S	41 50.1W	S	INND13MV
0707	22/11/78		TDCT F	INND14			DCP 47 14.9S	41 48.8W	S	INND13MV
1651	22/11/78		TDCT R	INND16	5782M	S20	DCP 47 57.7S	41 33.7W	S	INND13MV
1825	22/11/78		TDCT F	INND16			DCP 47 58.4S	41 32.2W	S	INND13MV
2240	22/11/78		TDCT R	INND17	5618M	S24	DCP 48 38.0S	41 23.3W	S	INND13MV
0220	23/11/78		TDCT F	INND17			DCP 48 39.4S	41 21.5W	S	INND13MV
0315	23/11/78		TDCT R	INND17	5610M	S27	DCP 48 40.0S	41 21.5W	S	INND13MV
0501	23/11/78		TDCT F	INND17			DCP 48 40.7S	41 19.7W	S	INND13MV
0917	23/11/78		TDCT R	INND19	5130M	S24	DCP 49 08.6S	41 21.0W	S	INND13MV
1343	23/11/78		TDCT F	INND19			DCP 49 07.7S	41 21.3W	S	INND13MV

GMT TIME	D ZM ZY DATE	LGC LGC TIME TZ	CODE CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP	CRUISE
1708	23/11/78		TDCT B	INND19	1005M S20	DCP 49	19.9S	41 16.3W	S INND13MV
1815	23/11/78		TDCT F	INND19		DCP 49	25.5S	41 15.2W	S INND13MV
2235	23/11/78		TDCT B	INND21	4176M S22	DCP 49	26.1S	41 18.1W	S INND13MV
0006	24/11/78		TDCT F	INND21		DCP 49	26.3S	41 18.5W	S INND13MV
1817	23/11/78		TDCT B	INND21	3660M S24	DCP 49	25.5S	41 15.2W	S INND13MV
2140	23/11/78		TDCT F	INND21		DCP 49	25.7S	41 17.1W	S INND13MV
0251	24/11/78		TDCT B	INND23	1841M S23	DCP 49	42.3S	41 17.5W	S INND13MV
0456	24/11/78		TDCT F	INND23		DCP 49	41.7S	41 17.8W	S INND13MV
1207	24/11/78		TDCT B	INND24	4077M S24	DCP 49	31.2S	39 29.0W	S INND13MV
1614	24/11/78		TDCT F	INND24		DCP 49	30.1S	39 28.6W	S INND13MV
1708	24/11/78		TDCT B	INND24	1032M S17	DCP 49	30.3S	39 29.4W	S INND13MV
1817	24/11/78		TDCT F	INND24		DCP 49	30.6S	39 28.5W	S INND13MV
2145	24/11/78		TDCT B	INND25	4652M S24	DCP 49	26.2S	38 39.3W	S INND13MV
0136	25/11/78		TDCT F	INND25		DCP 49	27.2S	38 39.5W	S INND13MV
0200	25/11/78		TDCT B	INND25	4656M S18	DCP 49	27.2S	38 39.1W	S INND13MV
0315	25/11/78		TDCT F	INND25		DCP 49	27.4S	38 37.7W	S INND13MV
0632	26/11/78		TDCT B	INND26	1007M S18	DCP 48	43.4S	33 54.9W	S INND13MV
0758	26/11/78		TDCT F	INND26		DCP 48	44.2S	33 54.3W	S INND13MV
1252	26/11/78		TDCT B	INND27	5120M S23	DCP 48	25.5S	32 14.2W	S INND13MV
1340	26/11/78		TDCT F	INND27		DCP 48	25.9S	32 10.2W	S INND13MV
1757	26/11/78		TDCT B	INND27	5225M S18	DCP 48	25.9S	32 09.7W	S INND13MV
1904	26/11/78		TDCT F	INND27		DCP 48	25.9S	32 08.0W	S INND13MV
0837	27/11/78		TDCT B	INND28	1050M S18	DCP 48	29.3S	30 06.5W	S INND13MV
1005	27/11/78		TDCT F	INND28		DCP 48	30.6S	30 06.4W	S INND13MV
1258	1/12/78		TDCT B	INND33	3414M S10	DCP 45	58.4S	17 18.9W	S INND13MV
1630	1/12/78		TDCT F	INND33		DCP 45	57.6S	17 18.8W	S INND13MV
0250	2/12/78		TDCT B	INND34	3513M S19	DCP 45	32.9S	15 56.3W	S INND13MV
0420	2/12/78		TDCT F	INND34		DCP 45	32.3S	15 55.0W	S INND13MV
0030	2/12/78		TDCT B	INND34	3695M S20	DCP 45	34.2S	15 57.2W	S INND13MV
0205	2/12/78		TDCT F	INND34		DCP 45	33.5S	15 56.6W	S INND13MV
1033	4/12/78		TDCT B	INND37	610M S16	DCP 48	34.8S	14 41.4W	S INND13MV
1128	4/12/78		TDCT F	INND37		DCP 48	38.8S	14 53.4W	S INND13MV
0546	4/12/78		TDCT B	INND37	3400M S22	DCP 48	29.6S	14 26.5W	S INND13MV
1010	4/12/78		TDCT F	INND37		DCP 48	33.0S	14 36.6W	S INND13MV
0047	5/12/78		TDCT B	INND38	805M S18	DCP 49	10.6S	16 42.8W	S INND13MV
0152	5/12/78		TDCT F	INND38		DCP 49	10.5S	16 41.7W	S INND13MV

GHT TIME	D / M / Y DATE	LOC TIME	LOC T2	CODE SAMP	SAMPLE IDENT.	CODE DISP	12MAY 79		PAGE	K	LEG-SHIP CRUISE	
							LAT.	LONG.				
2005	4/12/78			TDCT R	INND38	4092M S22	DCP 49	10.7S	16	43.8W	S	INND13MV
2350	4/12/78			TDCT F	INND38		DCP 49	09.9S	16	43.3W	S	INND13MV
1550	5/12/78			TDCT R	INND39	4269M S20	DCP 49	48.2S	18	54.4W	S	INND13MV
1850	5/12/78			TDCT F	INND39		DCP 49	47.9S	18	53.4W	S	INND13MV
1638	5/12/78			TDCT R	INND39	4269M S04	DCP 49	48.0S	18	54.2W	S	INND13MV
1843	5/12/78			TDCT F	INND39		DCP 49	47.9S	18	53.4W	S	INND13MV
1856	5/12/78			TDCT R	INND39	4267M S16	DCP 49	47.9S	18	53.5W	S	INND13MV
1952	5/12/78			TDCT F	INND39		DCP 49	47.9S	18	52.8W	S	INND13MV
0938	6/12/78			TDCT R	INND40	4513M S22	DCP 50	35.7S	21	15.7W	S	INND13MV
1434	6/12/78			TDCT F	INND40		DCP 50	35.3S	21	15.5W	S	INND13MV
1640	6/12/78			TDCT R	INND40	4532M S17	DCP 50	35.5S	21	16.6W	S	INND13MV
1835	6/12/78			TDCT F	INND40		DCP 50	35.6S	21	17.2W	S	INND13MV
0318	7/12/78			TDCT R	INND41	4797M S22	DCP 51	19.4S	23	23.4W	S	INND13MV
0713	7/12/78			TDCT F	INND41		DCP 51	22.4S	23	19.2W	S	INND13MV
0804	7/12/78			TDCT R	INND41	4410M S18	DCP 51	22.8S	23	19.9W	S	INND13MV
0913	7/12/78			TDCT F	INND41		DCP 51	23.6S	23	19.1W	S	INND13MV
1640	7/12/78			TDCT R	INND42	3277M S20	DCP 51	48.5S	25	19.4W	S	INND13MV
2156	7/12/78			TDCT F	INND42		DCP 51	48.2S	25	21.1W	S	INND13MV
2324	7/12/78			TDCT R	INND42	3357M S14	DCP 51	48.8S	25	20.0W	S	INND13MV
2351	7/12/78			TDCT F	INND42		DCP 51	48.8S	25	20.1W	S	INND13MV
1246	8/12/78			TDCT R	INND43	4754M S25	DCP 51	55.3S	28	04.1W	S	INND13MV
1625	8/12/78			TDCT F	INND43		DCP 51	54.4S	28	07.1W	S	INND13MV
1748	8/12/78			TDCT R	INND43	4641M S21	DCP 51	55.1S	28	10.9W	S	INND13MV
1904	8/12/78			TDCT F	INND43		DCP 51	55.0S	28	12.2W	S	INND13MV
0125	9/12/78			TDCT R	INND44	2844M S16	DCP 52	00.9S	29	45.2W	S	INND13MV
0415	9/12/78			TDCT F	INND44		DCP 52	01.9S	29	45.1W	S	INND13MV
0649	9/12/78			TDCT R	INND44	2832M S15	DCP 52	01.9S	29	45.0W	S	INND13MV
0906	9/12/78			TDCT F	INND44		DCP 52	02.1S	29	44.3W	S	INND13MV
0809	11/12/78			TDCT R	INND45	5346M S20	DCP 48	42.2S	36	08.0W	S	INND13MV
0730	11/12/78			TDCT F	INND45		DCP 48	40.4S	36	06.3W	S	INND13MV
0020	11/12/78			TDCT R	INND45	5374M S23	DCP 48	47.6S	36	12.4W	S	INND13MV
0540	11/12/78			TDCT F	INND45		DCP 48	42.8S	36	08.6W	S	INND13MV
1657	12/12/78			TDCT R	INND46	5381M S23	DCP 48	35.9S	39	01.0W	S	INND13MV
1815	12/12/78			TDCT F	INND46		DCP 48	35.9S	38	57.8W	S	INND13MV
1721	12/12/78			TDCT R	INND46	5428M S18	DCP 48	37.6S	39	07.1W	S	INND13MV
1845	12/12/78			TDCT F	INND46		DCP 48	36.0S	39	01.4W	S	INND13MV

GAT TIME	D / M / Y DATE	LOC TIME	LOC TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	12MAR79		PAGE LUNG.	9	LEG-SHIP CRUISE	
							LAT.	LONG.				
1956	16/12/78			TDCT R	INND47	6013M S24	DCP 46	50.2S	53	42.8W	S INND13RV	
2255	16/12/78			TDCT F	INND47		DCP 46	49.5S	53	46.8W	S INND13RV	
0413	18/12/78			TDCT R	INND48	735M S18	DCP 48	47.9S	57	52.5W	S INND13RV	
0525	18/12/78			TDCT F	INND48		DCP 48	48.0S	57	52.5W	S INND13RV	
1518	18/12/78			TDCT R	INND49	384M S14	DCP 49	36.3S	59	55.3W	S INND13RV	
1558	18/12/78			TDCT F	INND49		DCP 49	39.9S	60	04.5W	S INND13RV	
1907	18/12/78			TDCT R	INND50	161M S10	DCP 49	56.4S	60	48.0W	S INND13RV	
1929	18/12/78			TDCT F	INND50		DCP 49	56.2S	60	48.0W	S INND13RV	
9900				END SAMPLE INDEX								INND13RV