INFORMAL REPORT AND INDEX OF

NAVIGATION, DEPTH AND MAGNETIC DATA

(Issued May 8, 1978)

INDOMED EXPEDITION

LEG 5

Pt. Louis, Mauritius (28 January 1978)
to
Fremantle, Australia (25 February 1978)

R/V Melville

Chief Scientist - R. Weiss (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 OCE76-03936
Data Processing Funded by SIA, NSF and ONR

GDC Cruise I.D.# 169

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 gamm/inch; anomaly scale north of 15°N and south of 15°S = 1000 gamm/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

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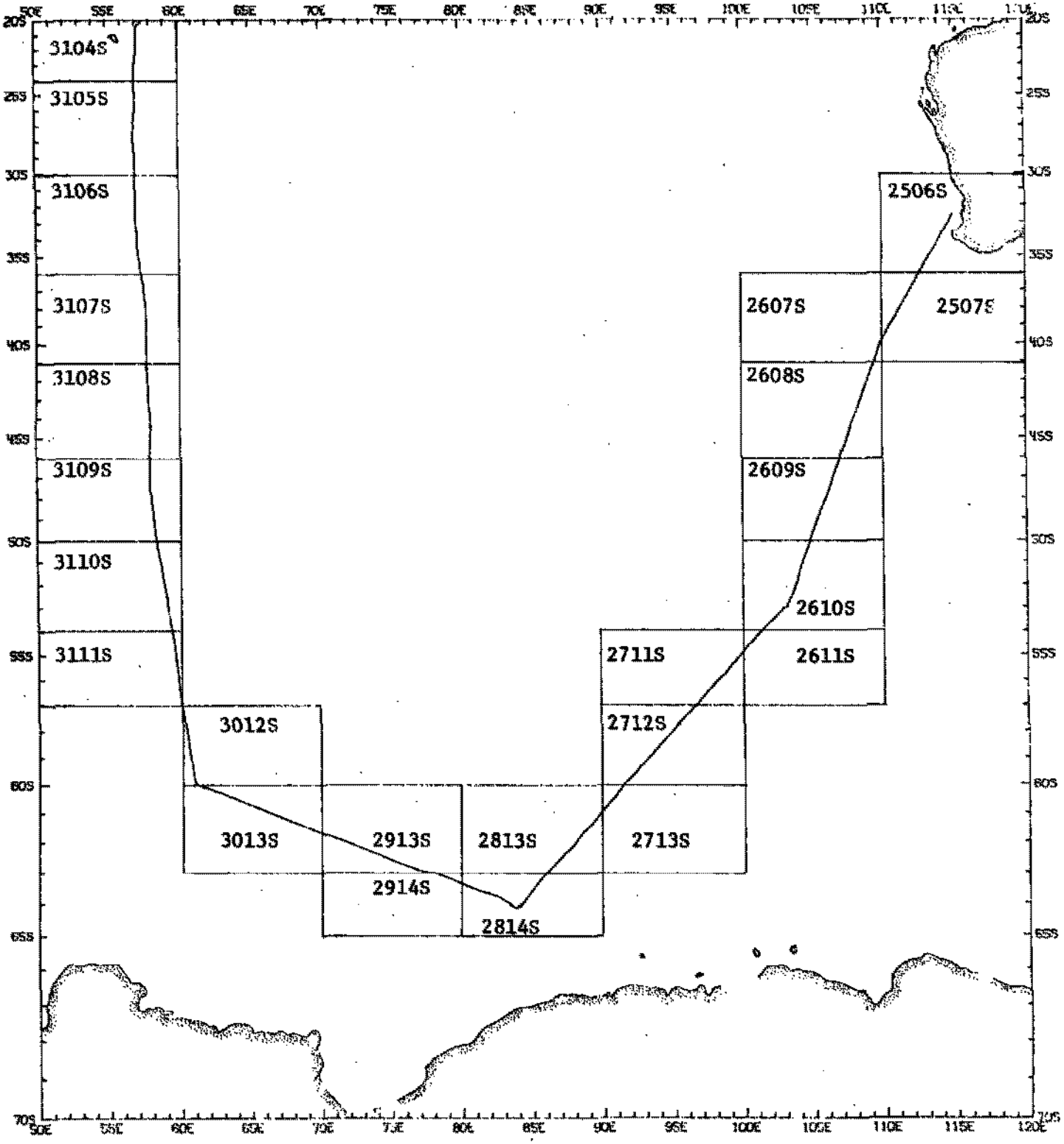
* NO SUBBOTTOM PROFILER DATA COLLECTED



INDOMED EXPEDITION

LEG 5

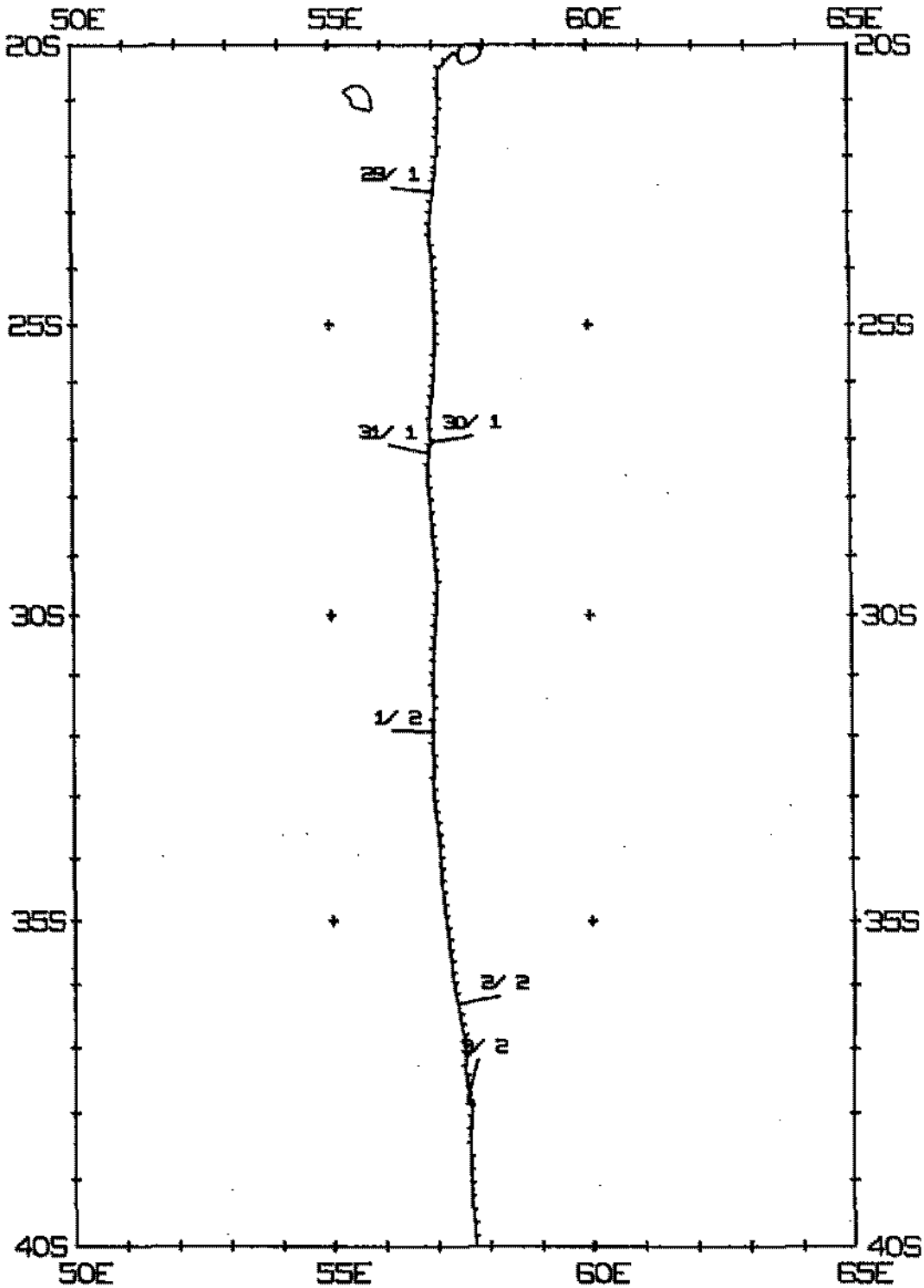
Chief Scientist - R. Weiss (SIO)
Ports: Mauritius to Fremantle, Australia
Dates: 28 January to 25 February 1978
Ship: R/V Melville

TOTAL MILEAGE

1) Cruise - 5452 miles
2) Bathymetry - 5101 miles
3) Magnetics - 4798 miles
4) Seismic Reflection - none collected
5) Gravity - none collected

INMOOSMV TRACK PLOT (1 OF 7)

MERCATOR PROJECTION, SCALE= 0.312 IN/DEG LONGITUDE



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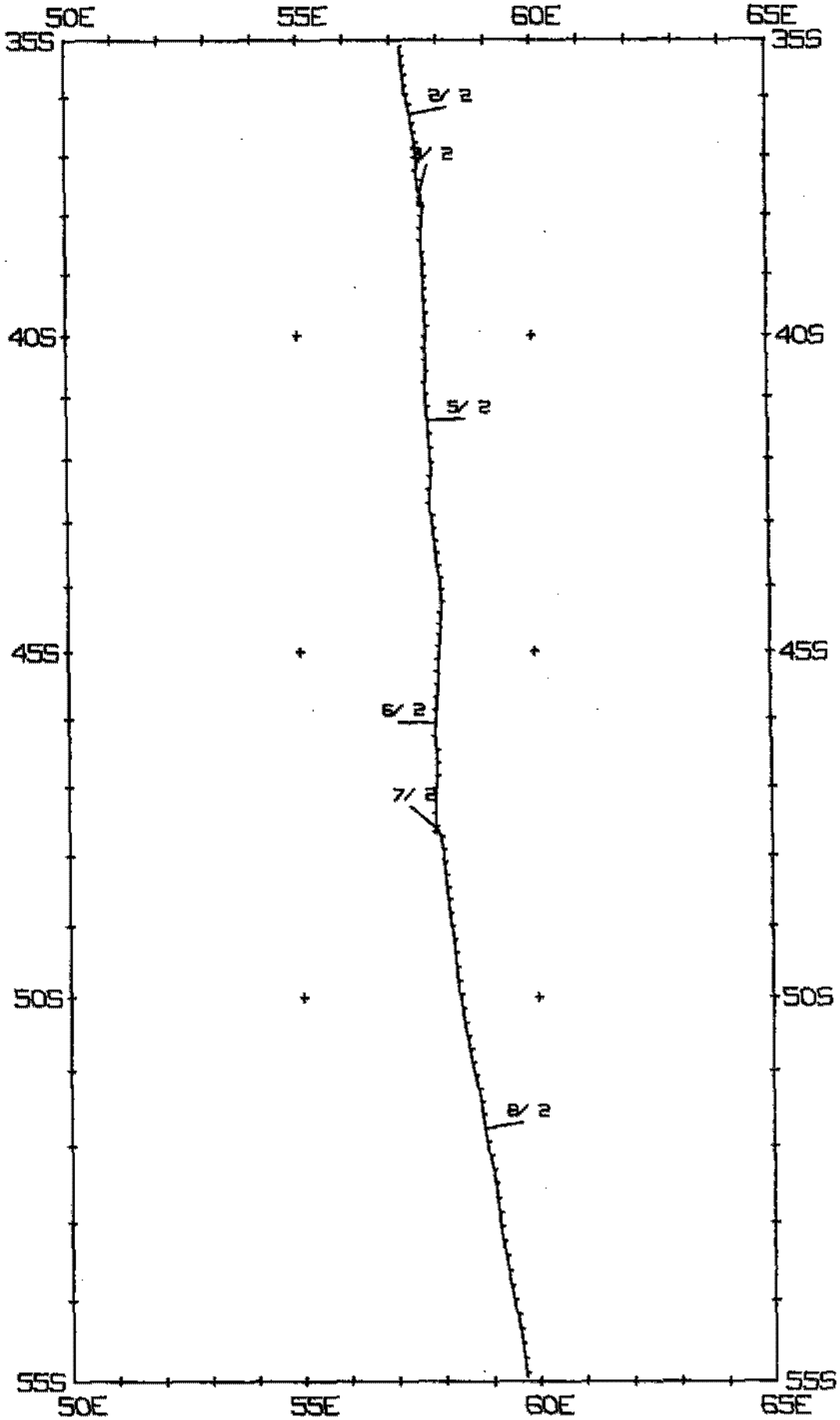

INMOOSMV TRACK PLOT (3 OF 7)

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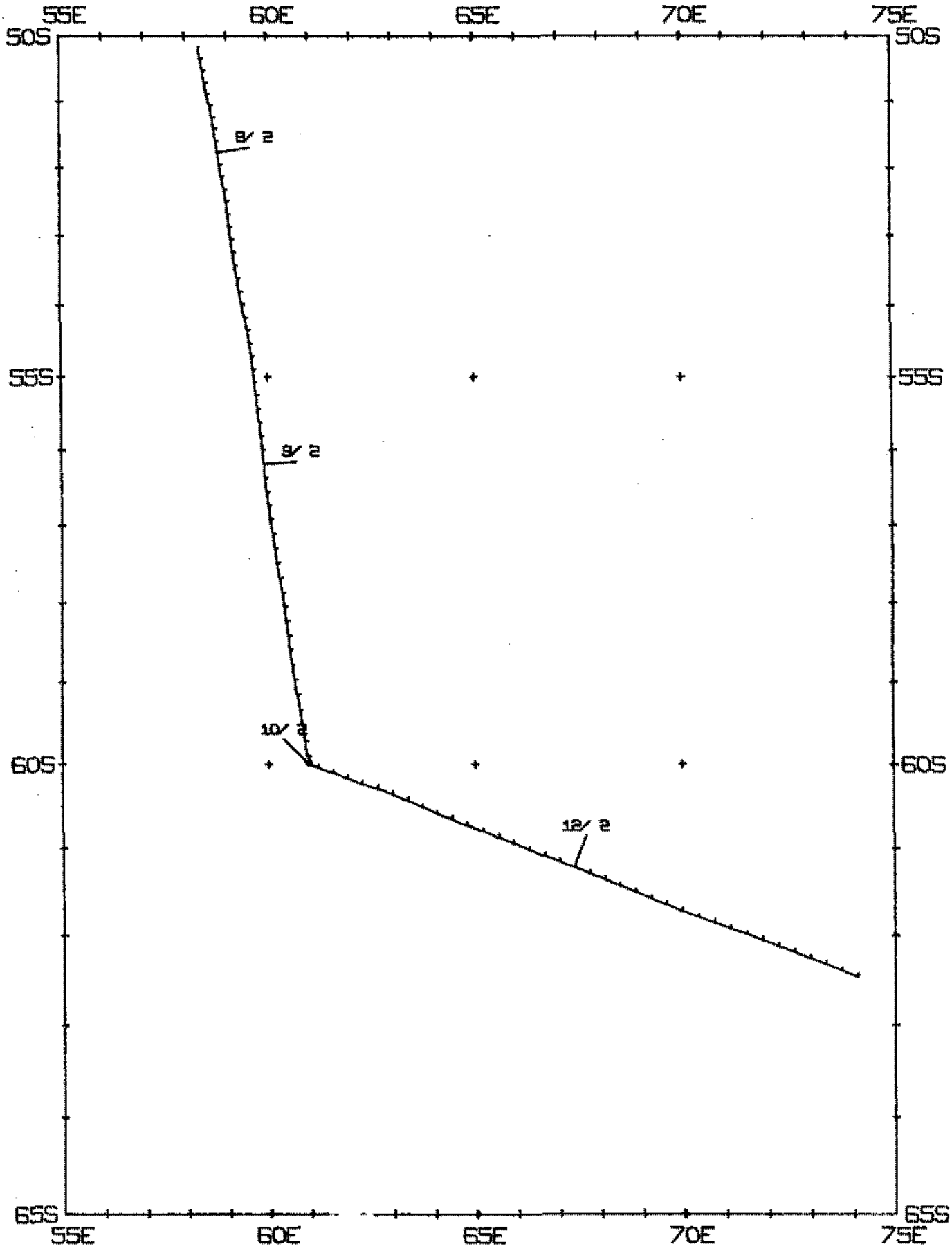

INMOOSMV TRACK PLOT (4 OF 7)

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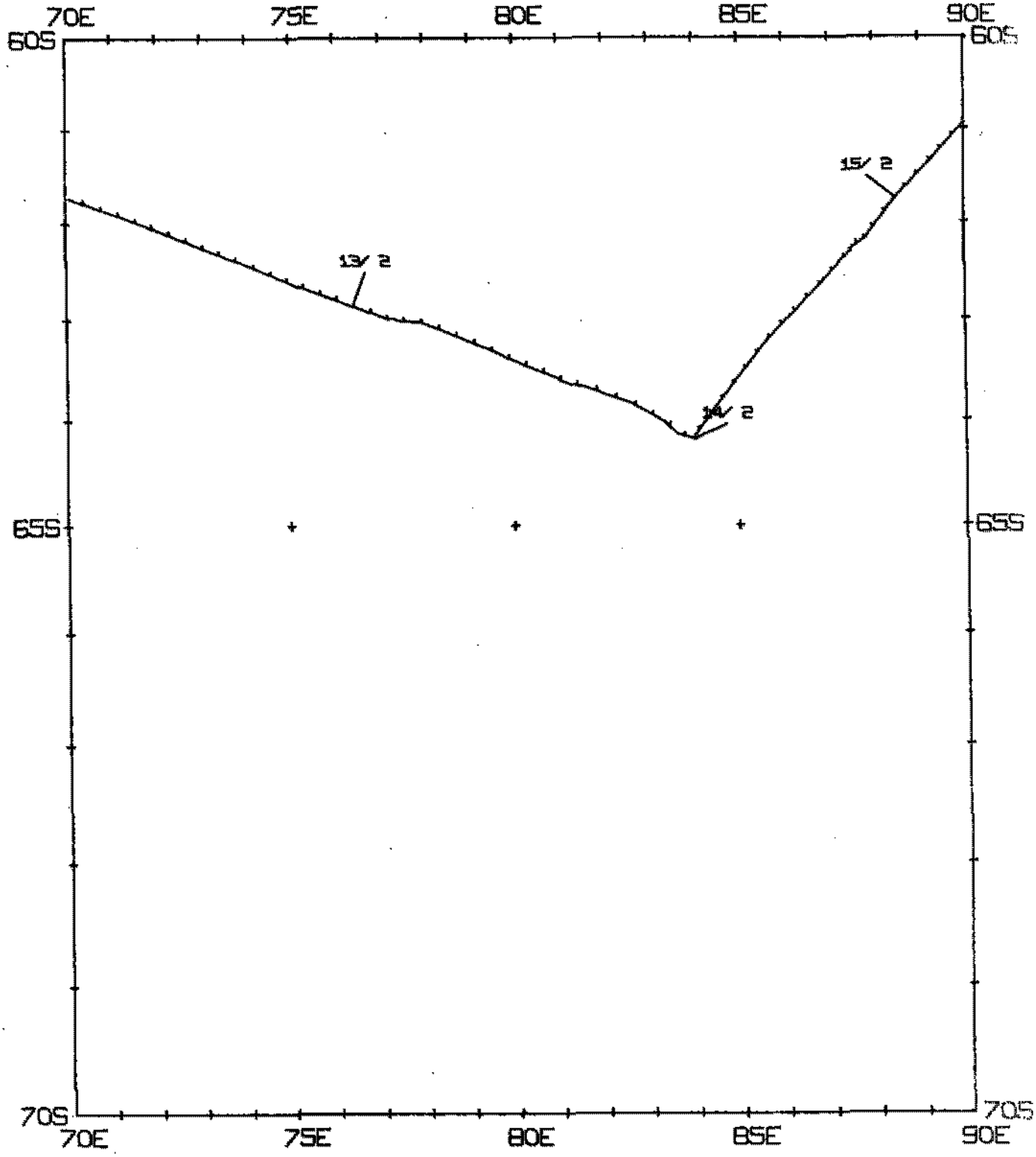

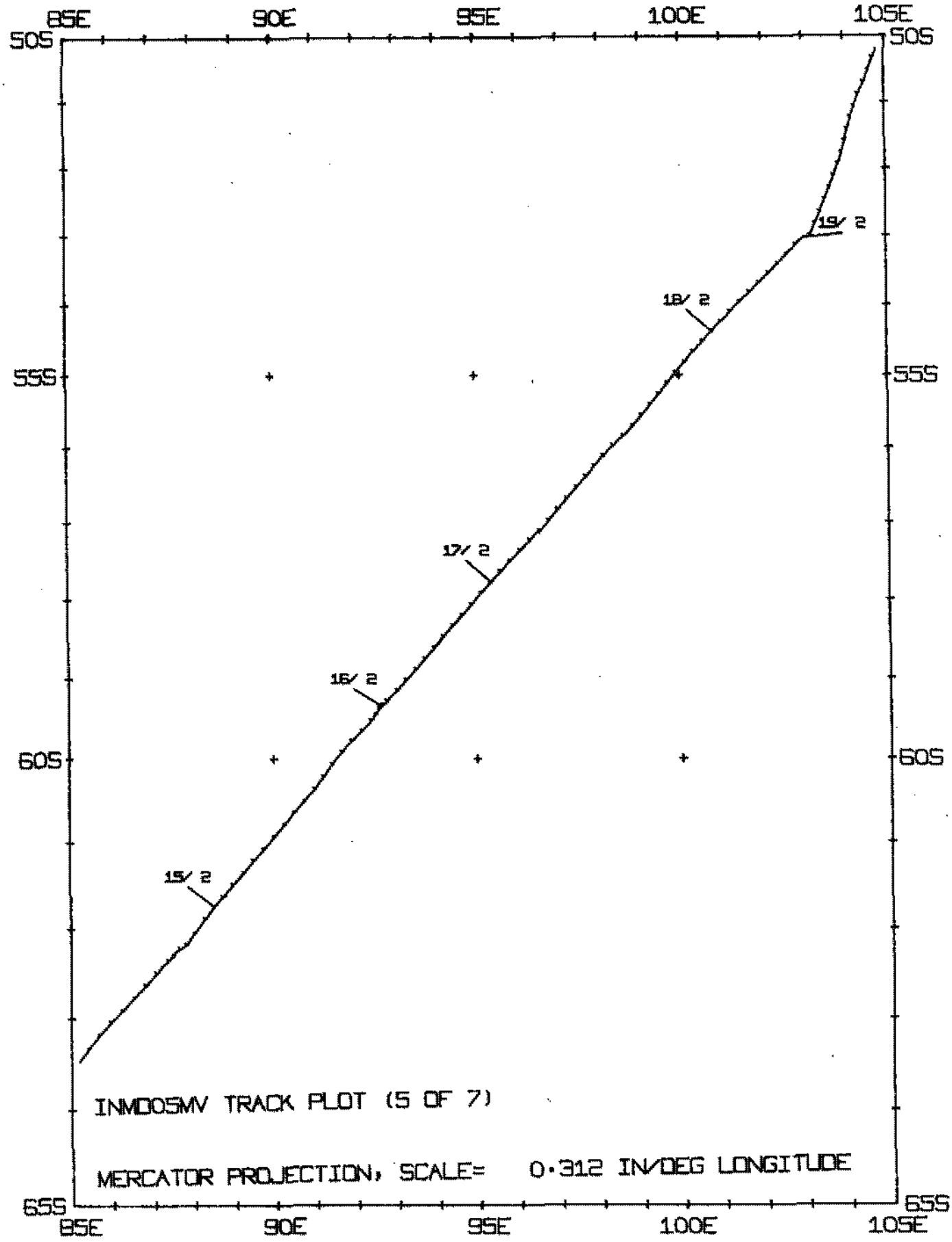
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95E
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105E
50S
55S
60S
65S
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16/ 2
17/ 2
18/ 2
19/ 2
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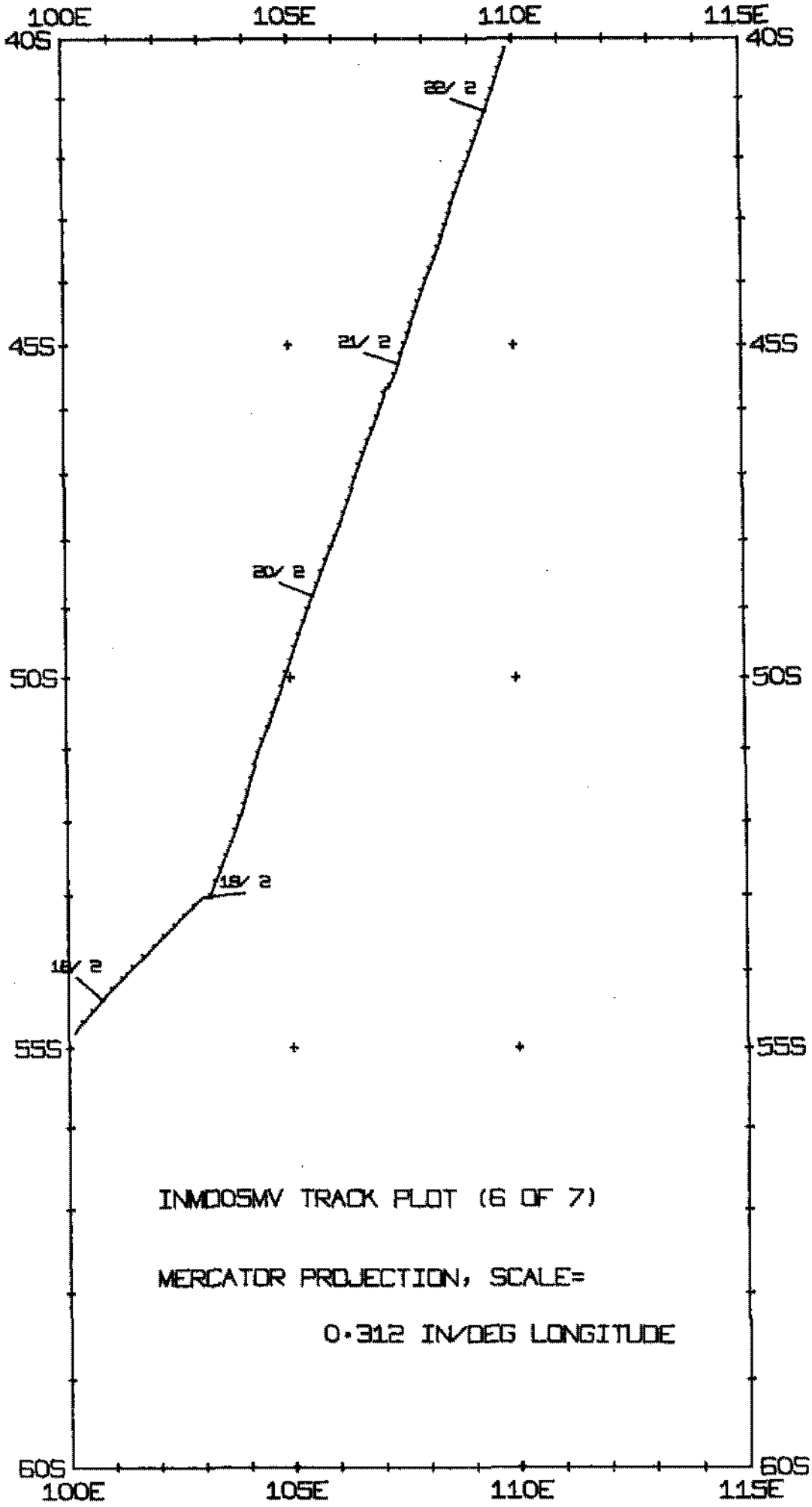
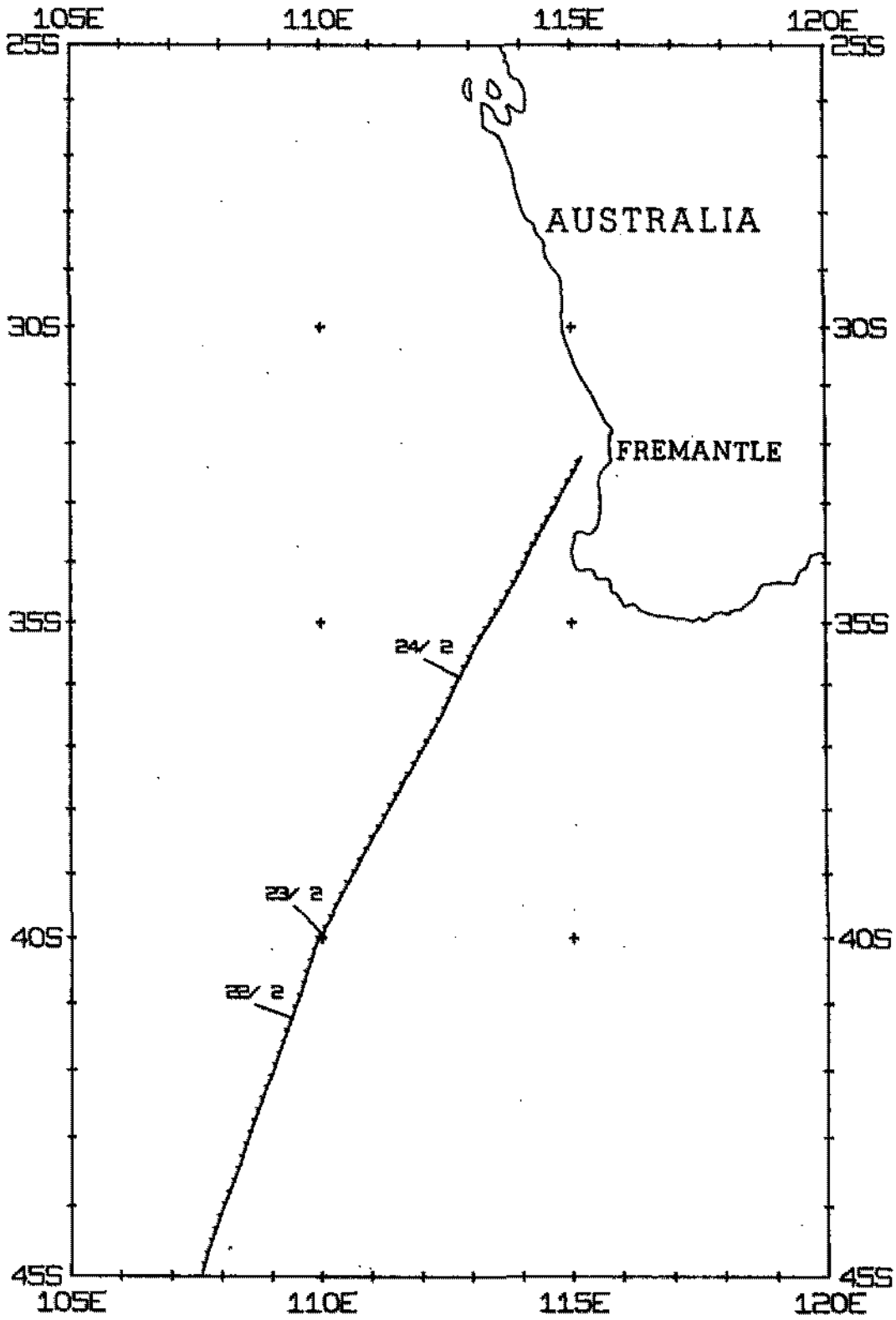
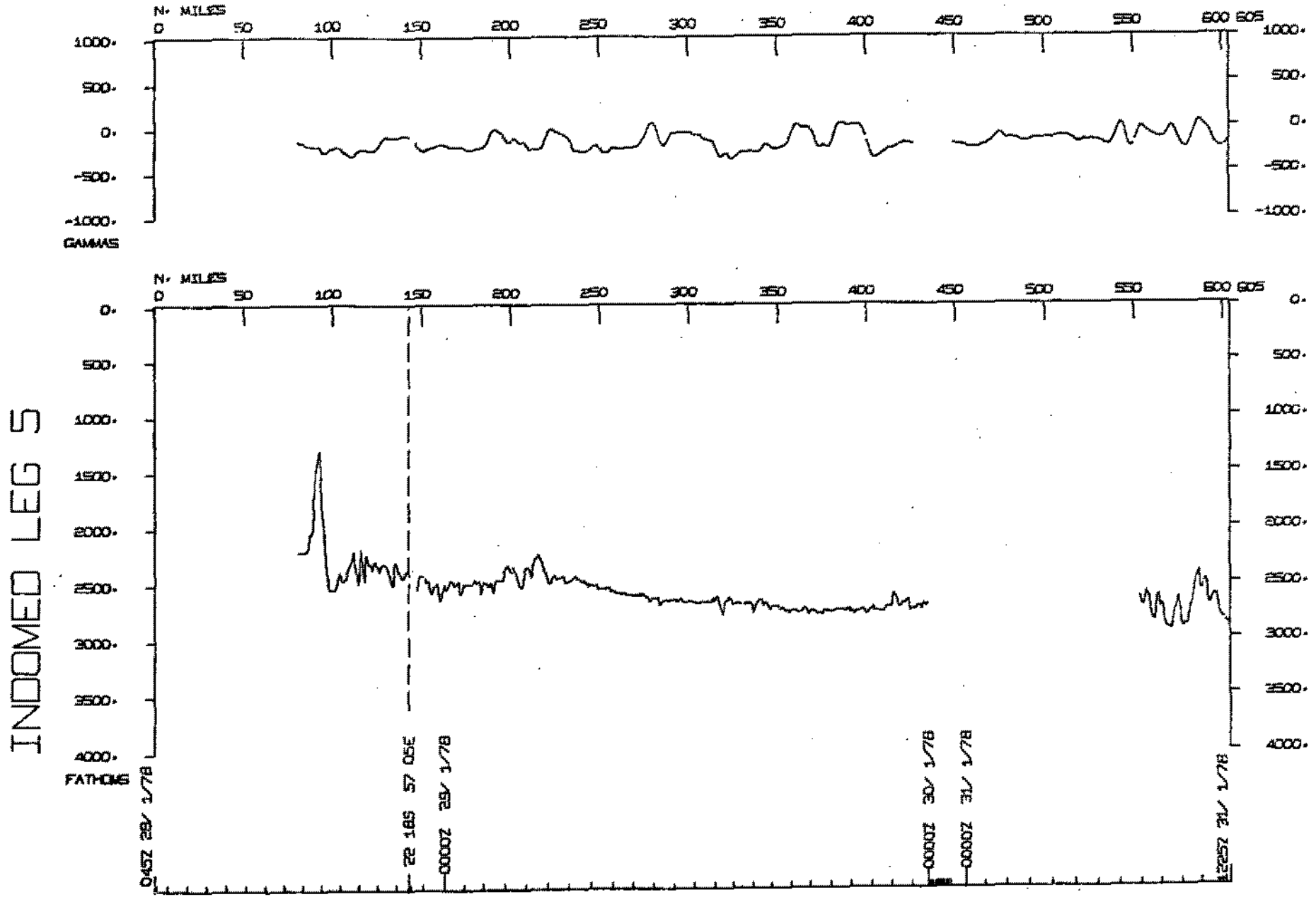
MERCATOR PROJECTION, SCALE= 0·312 IN/DEG LONGITUDE


100E
105E
110E
115E
40S
45S
50S
55S
60S
22/ 2
21/ 2
20/ 2
19/ 2
18/ 2
INMOOSMV TRACK PLOT (6 OF 7)
MERCATOR PROJECTION, SCALE=
0.312 IN/DEG LONGITUDE

INMDOSMV TRACK PLOT (7 OF 7)

MERCATOR PROJECTION; SCALE= 0·312 IN/DEG LONGITUDE

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250
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550
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605
1000
500
0
-500
-1000
GAMMAS
0
500
1000
1500
2000
2500
3000
3500
4000
FATHOMS
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22 185 57 05E
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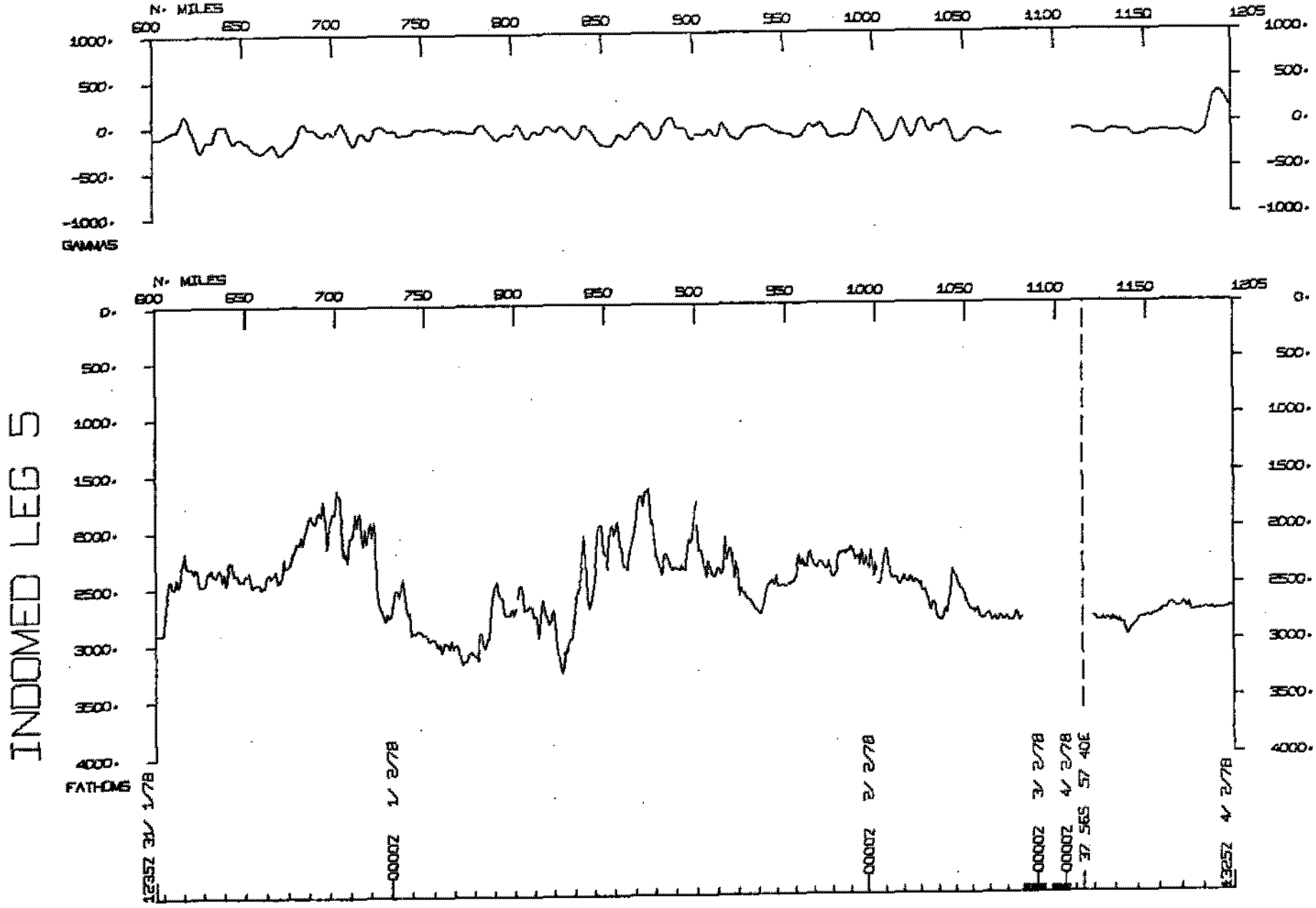
00002 30/ 1/78
00002 31/ 1/78
12252 31/ 1/78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950
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1150
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500
0
-500
-1000
GAMMAS
FATHOMS
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3500
4000
12357
20000
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87/2 3
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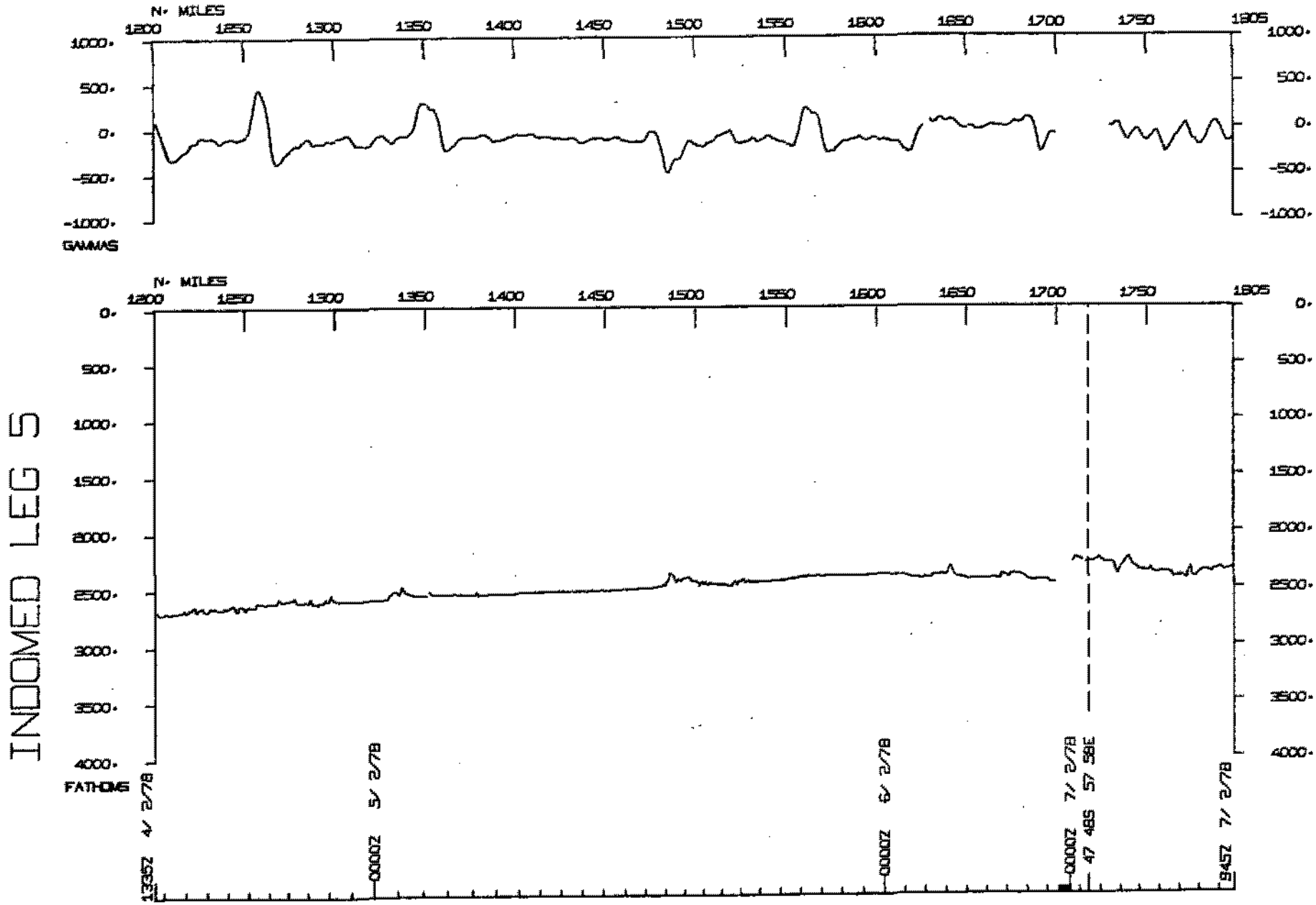
87/2 5
555
405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1350
1400
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1650
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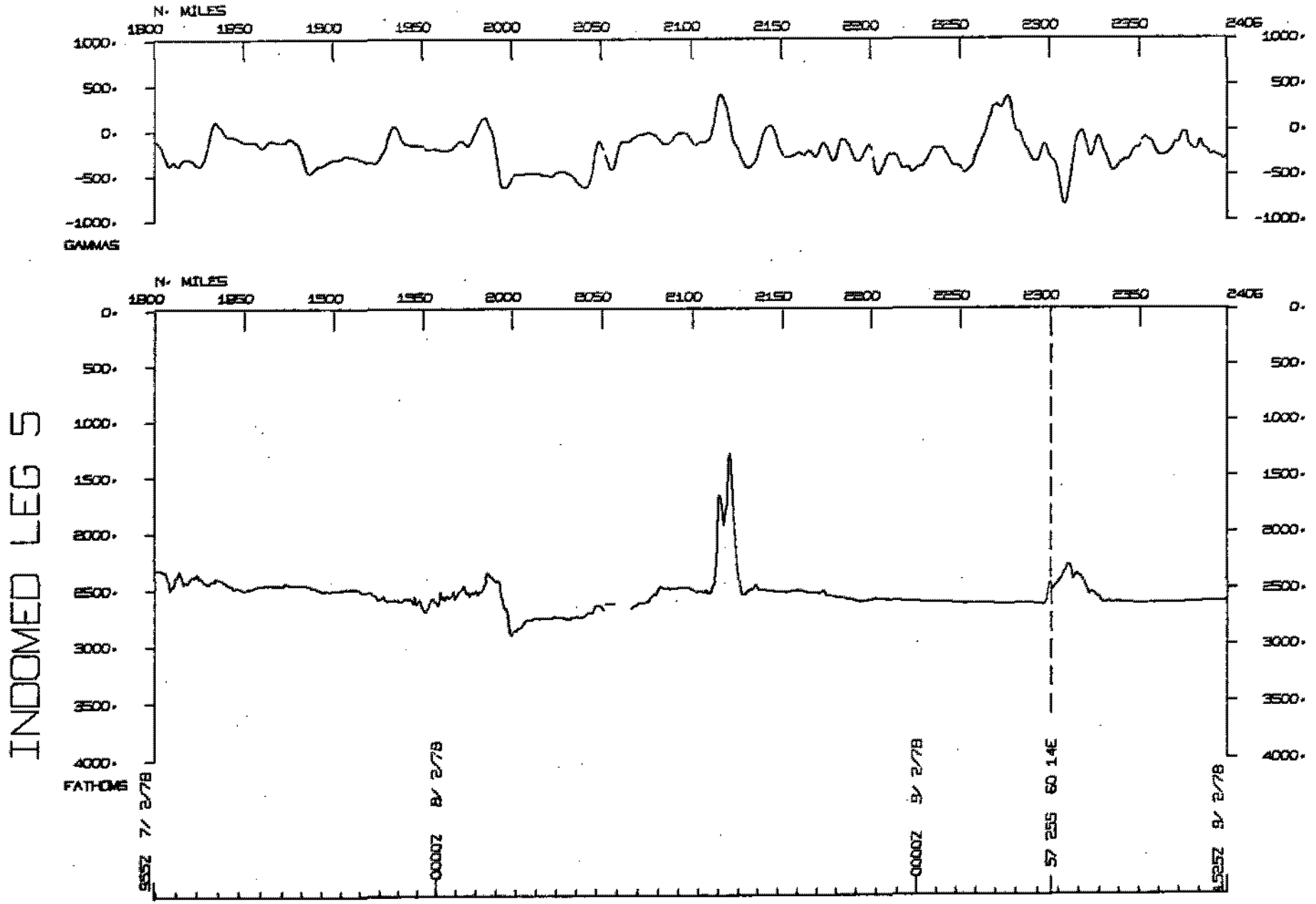
500.
0.
-500.
-1000.
GAMMAS
N. MILES
0.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
FATHOMS
4/ 2/78
13352
5/ 2/78
00002
6/ 2/78
00002
7/ 2/78
00002
47 48S 57 58E
7/ 2/78
8452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0
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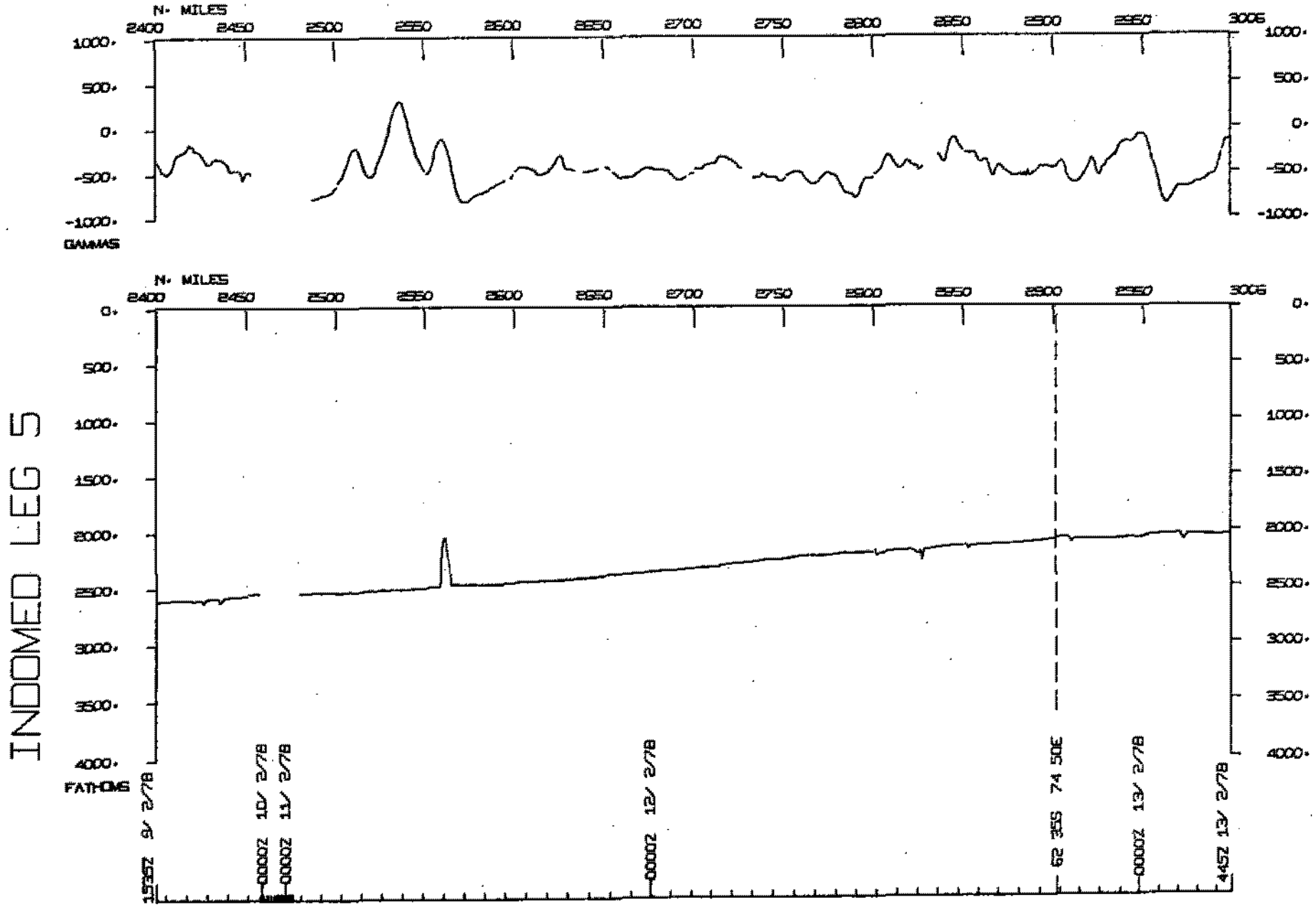
4000
FATHOMS
7/ 2/78
8/ 2/78
9/ 2/78
57 255 60 14E
9/ 2/78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GAMMAS
FATHOMS
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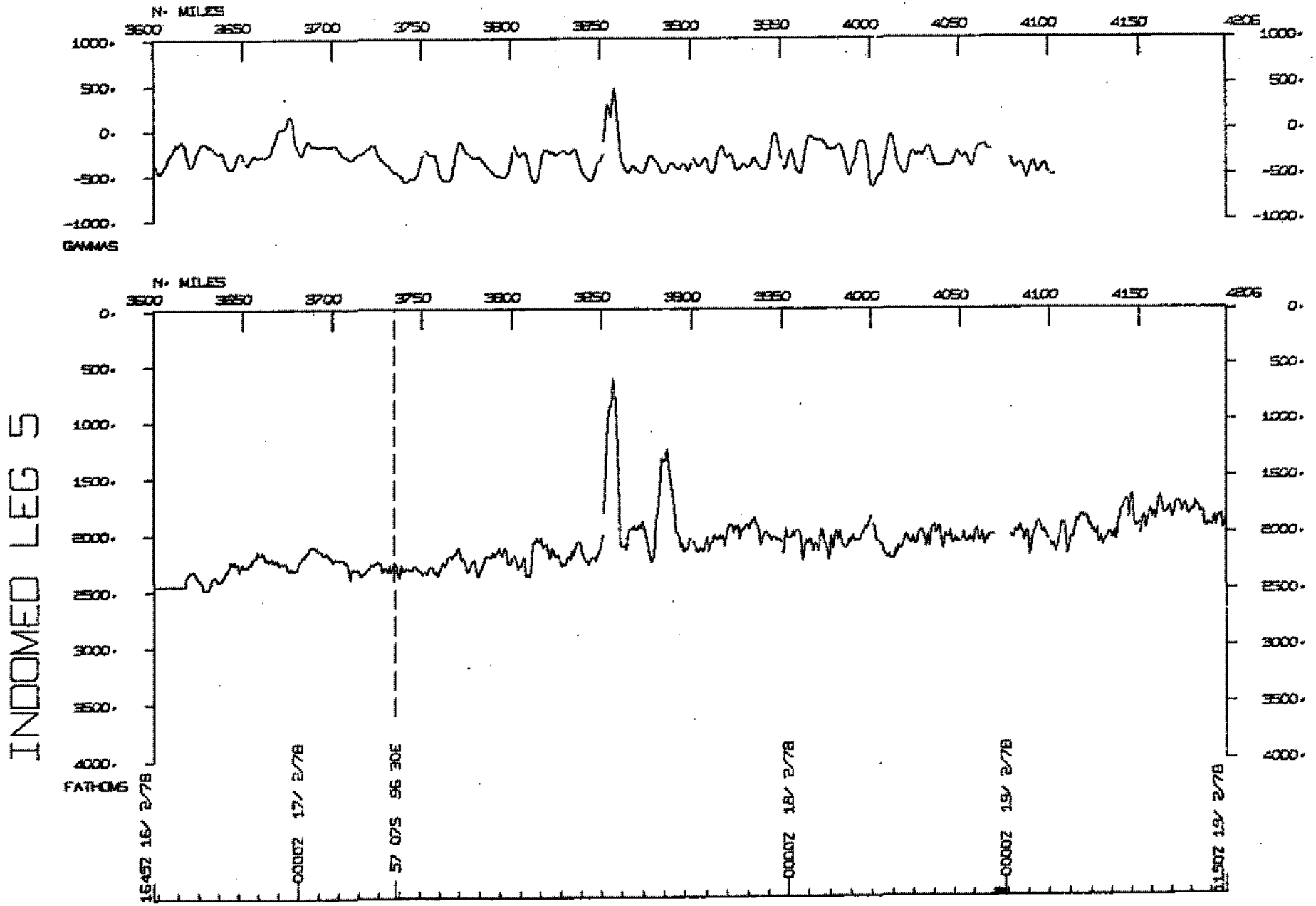
INDOMED LEG 5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-1000
GAMMAS
N. MILES
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1000
1500
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2500
3000
3500
4000
FATHOMS
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00002 17/ 2/78
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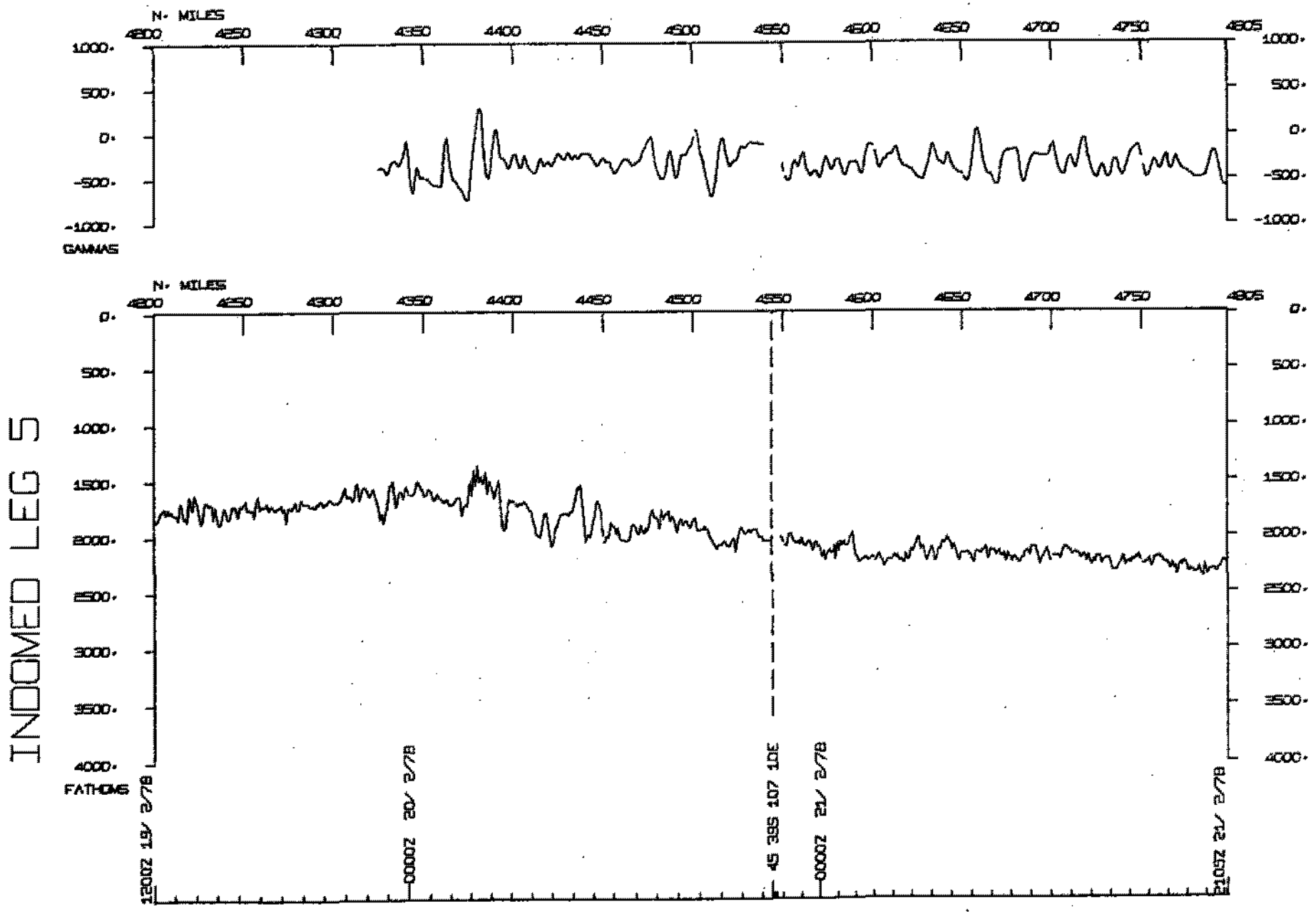
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1000
500
0
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GAMMAS
FATHOMS
1500
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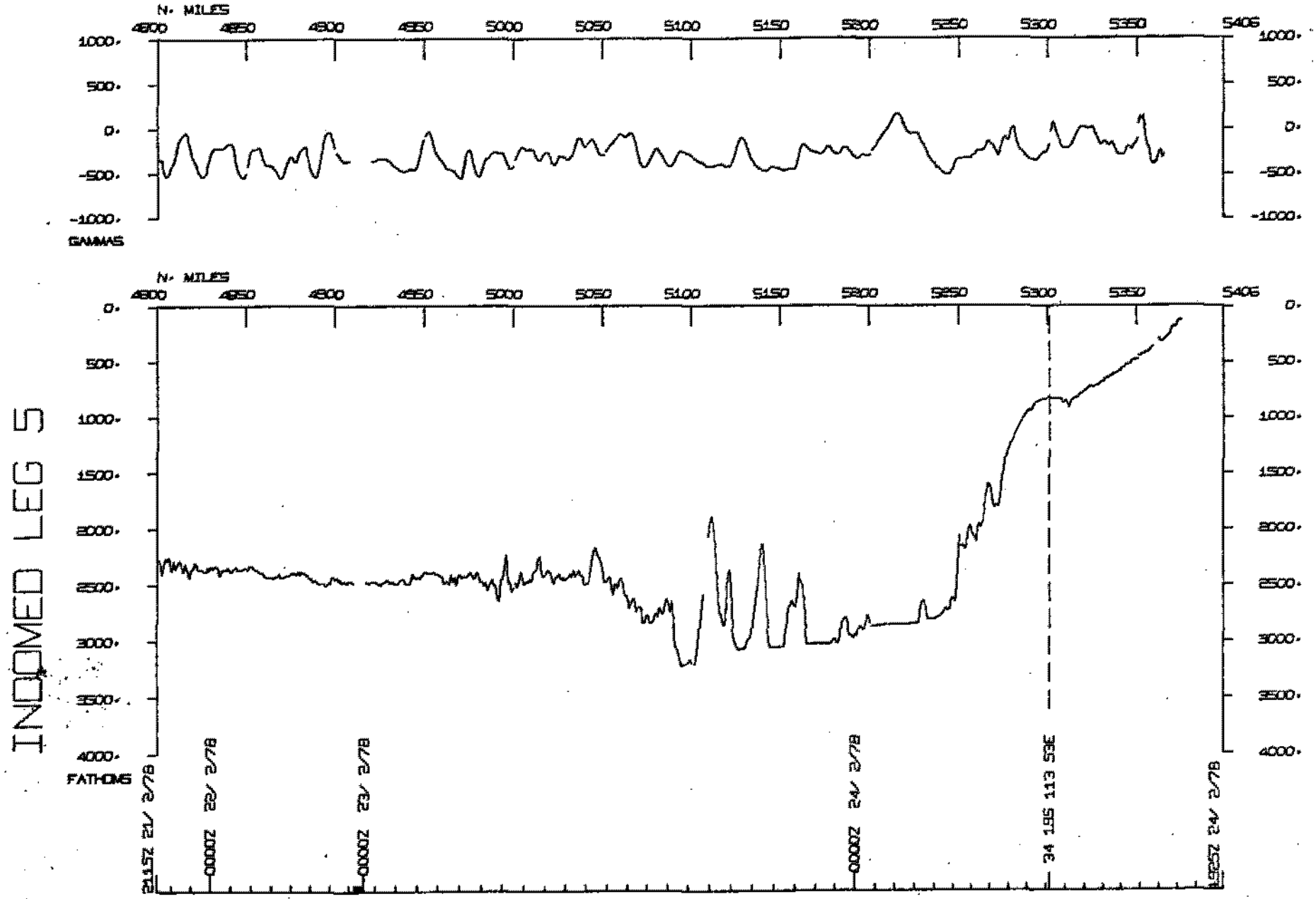
21052 21/ 2/78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GAMMAS
0
500
1000
1500
2000
2500
3000
3500
4000
FATHOMS
21:57 21/ 2/78
00:02 22/ 2/78
00:02 23/ 2/78
00:02 24/ 2/78
34 19S 113 53E
15:57 24/ 2/78

S.I.O. SAMPLE INDEX

(Issued May 8, 1978)

INDOMED EXPEDITION

LEG 5

Pt. Louis, Mauritius (28 January 1978)
to
Fremantle, Australia (25 February 1978)

R/V Melville

Chief Scientist - R. Weiss (SIO)

Resident Marine Tech - S. Witherow

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.)

S.I.O. SAMPLE INDEX GENERATED 02MAY78

*** INDOMED LEG 5 SAMPLE INDEX (INMD05MV) ***

28JAN78 - PT. LOUIS, MAURITIUS
TO
25FEB78 - FREMANTLE, AUSTRALIA

CHIEF SCIENTIST - WEISS, R. GRD

SHIP - R/V MELVILLE (SIO)

PRODUCED BY GEOLOGICAL DATA CENTER, SCRIPPS INSTITUTION
OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA 92093

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

DISP	TYPE					TOTAL
	DP	GC	LB	MG	PE	
GDC	7		1	4		12
GRD					2	2
GSX		9			15	24
LDO					2	2
MTG					2	2
ORD					1	1
SIO					1	1
SIX					4	4
TOTAL	7	9	1	4	27	48

SAMPLE 'TYPE' CODES USED ABOVE

DP = DEPTH
GC = GEOCHEMICAL SAMPLING
LB = LOG BOOKS
MG = MAGNETICS (TOWED VEHICLE, SURFACE, TOTAL FIELD)
PE = PERSONNEL IN SCIENTIFIC PARTY

SAMPLE 'DISP' CODES USED ABOVE

GDC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)
GRD = GEOLOGICAL RESEARCH DIVISION (EXT. 3360)
GSX = GEOCHEMICAL OCEAN SECTIONS STUDY (EXT. 4420)
LDO = LAMONT-DOHERTY GEOPHYSICAL OBSERVATORY, COLUMBIA UNIVERSITY
MTG = MARINE TECHNOLOGY GROUP (EXT 4194)
ORD = OCEAN RESEARCH DIVISION
SIO = SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA, CAL. 92093
SIX = SCRIPPS INSTITUTION NON-EMPLOYEE -(CONTACT DORCAS UTTER EXT. 2356)

INDOMED LEG 5 SAMPLE INDEX INMD05MV

*** PORTS ***

830 28 178	LGPT B	PT. LOUIS, MAURITIUS	20	10	S	57	30	E	F	INMD05MV
300 25 278	LGPT E	FREMANTLE, AUSTRALIA	32	03	S	115	45	E	F	INMD05MV

PERSONNEL

PECS	WEISS, R.	GRD	INMD05MV
PERT	WITHEROW, S.	MTG	INMD05MV
PECT	HENRY, A.	MTG	INMD05MV
PEXN	BOROLE, D.	SIX	INMD05MV
PE	BEAUPRE, M.	GSX	INMD05MV
PE	BOS, D.	GSX	INMD05MV
PE	CHRISTIANSON, M.	GSX	INMD05MV
PE	DIGRE, T.	GSX	INMD05MV
PEMT	FIELD, T.	GSX	INMD05MV
PE	FINKEL, B.	ORD	INMD05MV
PEXN	GOBAT, D.	GSX	INMD05MV
PE	HESTER, A.	GSX	INMD05MV
PE	JAEGER, E.	GSX	INMD05MV
PEXN	KIM, K.	SIO	INMD05MV
PE	LUPTON, J.	GRD	INMD05MV
PE	LUPTON, K.	SIX	INMD05MV
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PEMT	RAGAN, P.	GSX	INMD05MV
PE	RICHTER, W.	GSX	INMD05MV
PE	SAIGH, D.	LDO	INMD05MV
PE	SANBORN, K.	GSX	INMD05MV
PEXN	SARIN, M.	SIX	INMD05MV
PE	SCHECHTMAN, N.	LDO	INMD05MV
PEXN	SLATER, E.	GSX	INMD05MV
PE	WEISS, P.	SIX	INMD05MV
PEMT	WELLS, J.	GSX	INMD05MV
PE	WILLIAMS, B.	GSX	INMD05MV

*** NOTE *** TIME ZONES AND MINUTES OF LATITUDE AND LONGITUDE ARE LISTED IN TENTHS (E.G. 10.6 IS LISTED AS 106)

*** NOTE *** AN 'X' IN THE (B)EGIN/(E)ND COLUMN FOLLOWING THE SAMPLE CODE INDICATES NO SAMPLE OR DATA RECOVERED

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

UNDERWAY DATA CURATOR - STUART M. SMITH (EXT.2752)

*** LOG BOOKS ***

1600	28	178		LBUW	B UNDERWAY WATCH LOG	GDC	21	188S	57 78E	S	INMD05MV
1715	24	278		LBUW	E UNDERWAY WATCH LOG	GDC	33	128S	114 349E	S	INMD05MV

*** FATHOGRAMS ***

1600	28	178		DPR3	B EDR 3.5 KHZ R-01	GDC	21	188S	57 78E	S	INMD05MV
2324	29	178		DPR3	E EDR 3.5 KHZ R-01	GDC	27	57S	56 574E	S	INMD05MV
2324	31	178		DPR3	B EDR 3.5 KHZ R-02	GDC	31	480S	56 582E	S	INMD05MV
830	2	278		DPR3	E EDR 3.5 KHZ R-02	GDC	37	393S	57 383E	S	INMD05MV
614	4	278		DPR3	B EDR 3.5 KHZ R-03	GDC	37	539S	57 406E	S	INMD05MV
830	6	278		DPR3	E EDR 3.5 KHZ R-03	GDC	47	400S	57 517E	S	INMD05MV
137	7	278		DPR3	B EDR 3.5 KHZ R-04	GDC	47	399S	57 554E	S	INMD05MV
1950	9	278		DPR3	E EDR 3.5 KHZ R-04	GDC	59	526S	60 586E	S	INMD05MV
700	11	278		DPR3	B EDR 3.5 KHZ R-05	GDC	60	24S	61 143E	S	INMD05MV
1730	15	278		DPR3	E EDR 3.5 KHZ R-05	GDC	59	247S	92 336E	S	INMD05MV
1256	16	278		DPR3	B EDR 3.5 KHZ R-06	GDC	59	177S	92 465E	S	INMD05MV
450	18	278		DPR3	E EDR 3.5 KHZ R-06	GDC	53	424S	101 531E	S	INMD05MV
454	18	278		DPR3	B EDR 3.5 KHZ R-07	GDC	53	418S	101 540E	S	INMD05MV
1715	24	278		DPR3	E EDR 3.5 KHZ R-07	GDC	33	128S	114 349E	S	INMD05MV

*** MAGNETOMETER ***

1600	28	178		MGR	B MAGNETICS R-01	GDC	21	188S	57 78E	S	INMD05MV
1030	31	178		MGR	E MAGNETICS R-01	GDC	29	208S	57 27E	S	INMD05MV
1032	31	178		MGR	B MAGNETICS R-02	GDC	29	212S	57 27E	S	INMD05MV
1530	9	278		MGR	E MAGNETICS R-02	GDC	59	37S	60 421E	S	INMD05MV
1540	9	278		MGR	B MAGNETICS R-03	GDC	59	55S	60 428E	S	INMD05MV
1412	15	278		MGR	E MAGNETICS R-03	GDC	59	453S	91 582E	S	INMD05MV
1418	15	278		MGR	B MAGNETICS R-04	GDC	59	445S	91 597E	S	INMD05MV
1600	15	278		MGR	E MAGNETICS R-04	GDC	59	316S	92 241E	S	INMD05MV

TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.		CRUISE LEG-SHIP
GEOCHEMICAL STATION - LARGE VOLUME										
2355	29	178		GCLV B	GEOSECS STA 427	GSX 27	28S	56 584E	S	INMD05MV
2317	30	178		GCLV E	GEOSECS STA 427	GSX 27	78S	56 556E	S	INMD05MV
857	2	278		GCLV B	GEOSECS STA 428	GSX 37	429S	57 395E	S	INMD05MV
535	4	278		GCLV E	GEOSECS STA 428	GSX 37	480S	57 407E	S	INMD05MV
830	6	278		GCLV B	GEOSECS STA 429	GSX 47	400S	57 517E	S	INMD05MV
113	7	278		GCLV E	GEOSECS STA 429	GSX 47	387S	57 548E	S	INMD05MV
2026	9	278		GCLV B	GEOSECS STA 430	GSX 59	591S	61 7E	S	INMD05MV
635	11	278		GCLV E	GEOSECS STA 430	GSX 60	10S	61 68E	S	INMD05MV
1932	13	278		GCLV B	GEOSECS STA 431	GSX 64	107S	84 7E	S	INMD05MV
550	14	278		GCLV E	GEOSECS STA 431	GSX 64	67S	84 54E	S	INMD05MV
1810	15	278		GCLV B	GEOSECS STA 432	GSX 59	213S	92 380E	S	INMD05MV
1250	16	278		GCLV E	GEOSECS STA 432	GSX 59	182S	92 456E	S	INMD05MV
1650	18	278		GCLV B	GEOSECS STA 433	GSX 53	14S	103 34E	S	INMD05MV
100	19	278		GCLV E	GEOSECS STA 433	GSX 52	598S	103 109E	S	INMD05MV
1725	20	278		GCLV B	GEOSECS STA 434	GSX 45	401S	107 105E	S	INMD05MV
2130	20	278		GCLV E	GEOSECS STA 434	GSX 45	397S	107 149E	S	INMD05MV
710	22	278		GCLV B	GEOSECS STA 435	GSX 39	579S	109 577E	S	INMD05MV
20	23	278		GCLV E	GEOSECS STA 435	GSX 39	562S	110 13E	S	INMD05MV
9900					END SAMPLE INDEX					INMD05MV