INFORMAL REPORT AND INDEX OF

NAVIGATION, DEPTH AND MAGNETIC DATA

(Issued June 5, 1978)

INDOMED EXPEDITION

LEG 6

Fremantle, Australia (7 March 1978)
to
Sri Lanka, Colombo (31 March 1978)

R/V Melville

Chief Scientist - W. Broecker (Lamont-Doherty)

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

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.

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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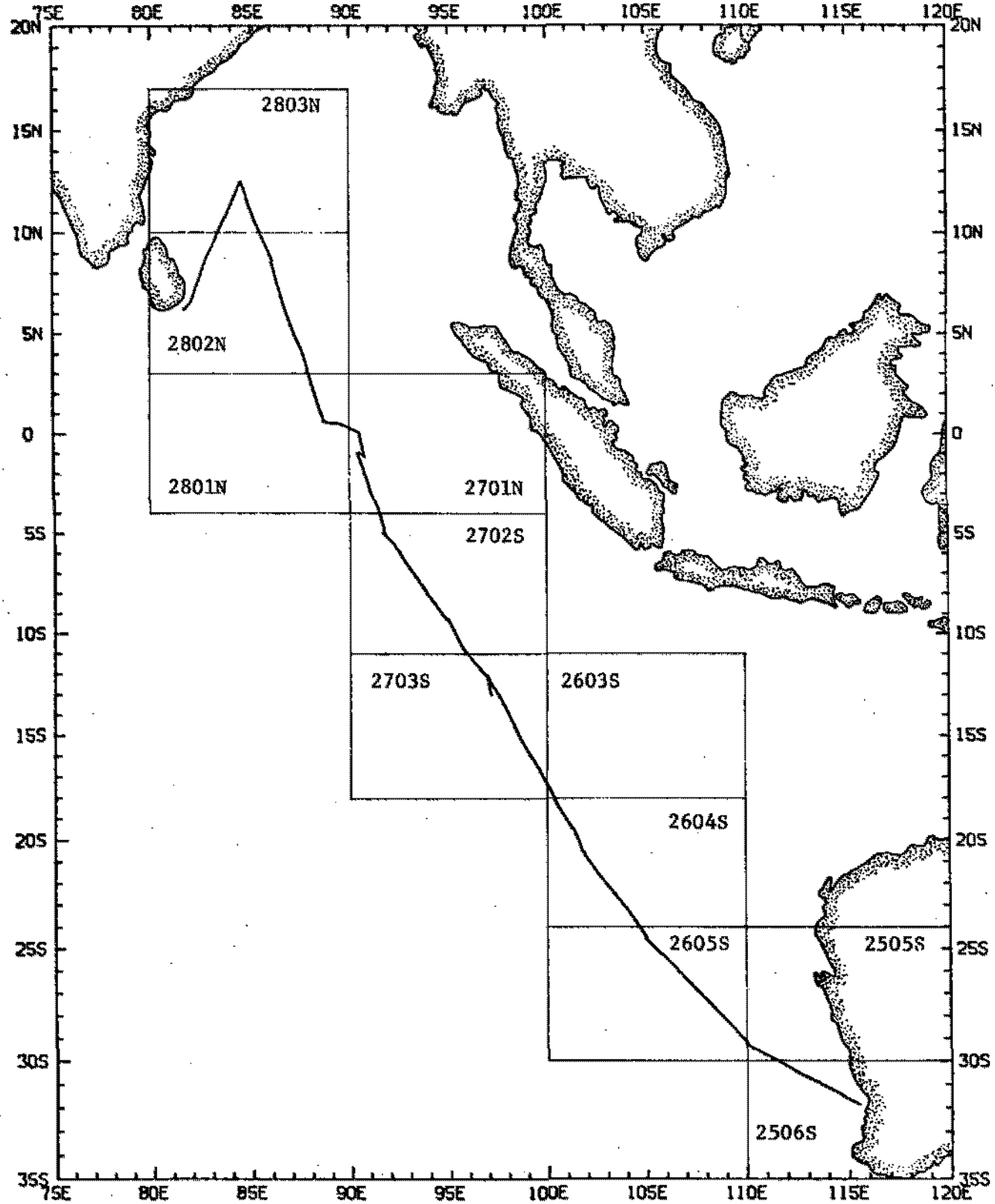
* NO SUBBOTTOM PROFILER DATA COLLECTED



INDOMED EXPEDITION LEG 6

Chief Scientist - W. Broecker (Lamont-Doherty Geological Observatory)

Ports: Fremantle, Australia to Sri Lanka, Colombo

Dates: 7 March 1978 to 31 March 1978

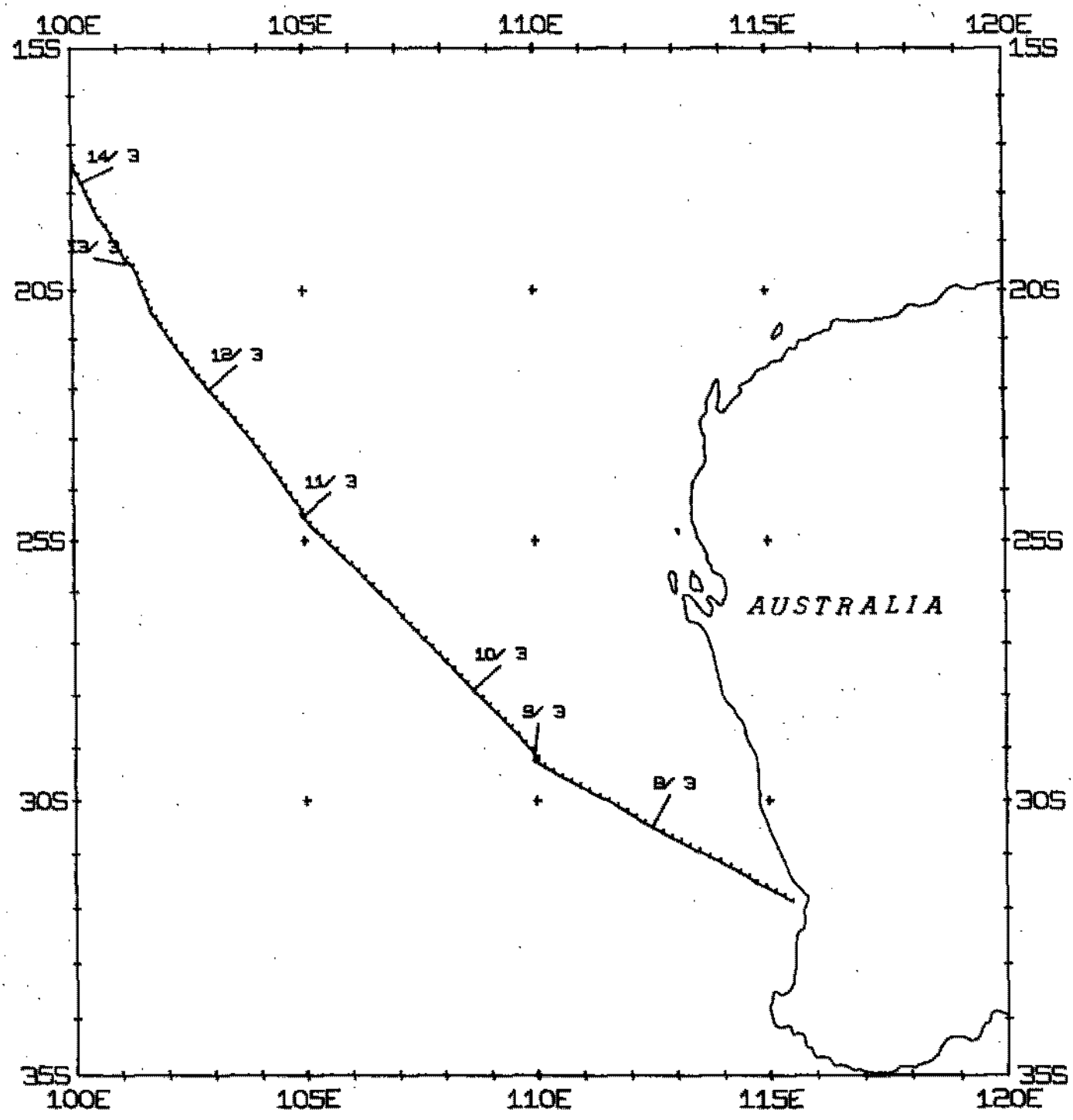
Ship: R/V Melville

TOTAL MILEAGE

1) Cruise - 4117 miles
2) Bathymetry - 3714 miles
3) Magnetics - 3513 miles
4) Seismic Reflection - none collected
5) Gravity - none collected

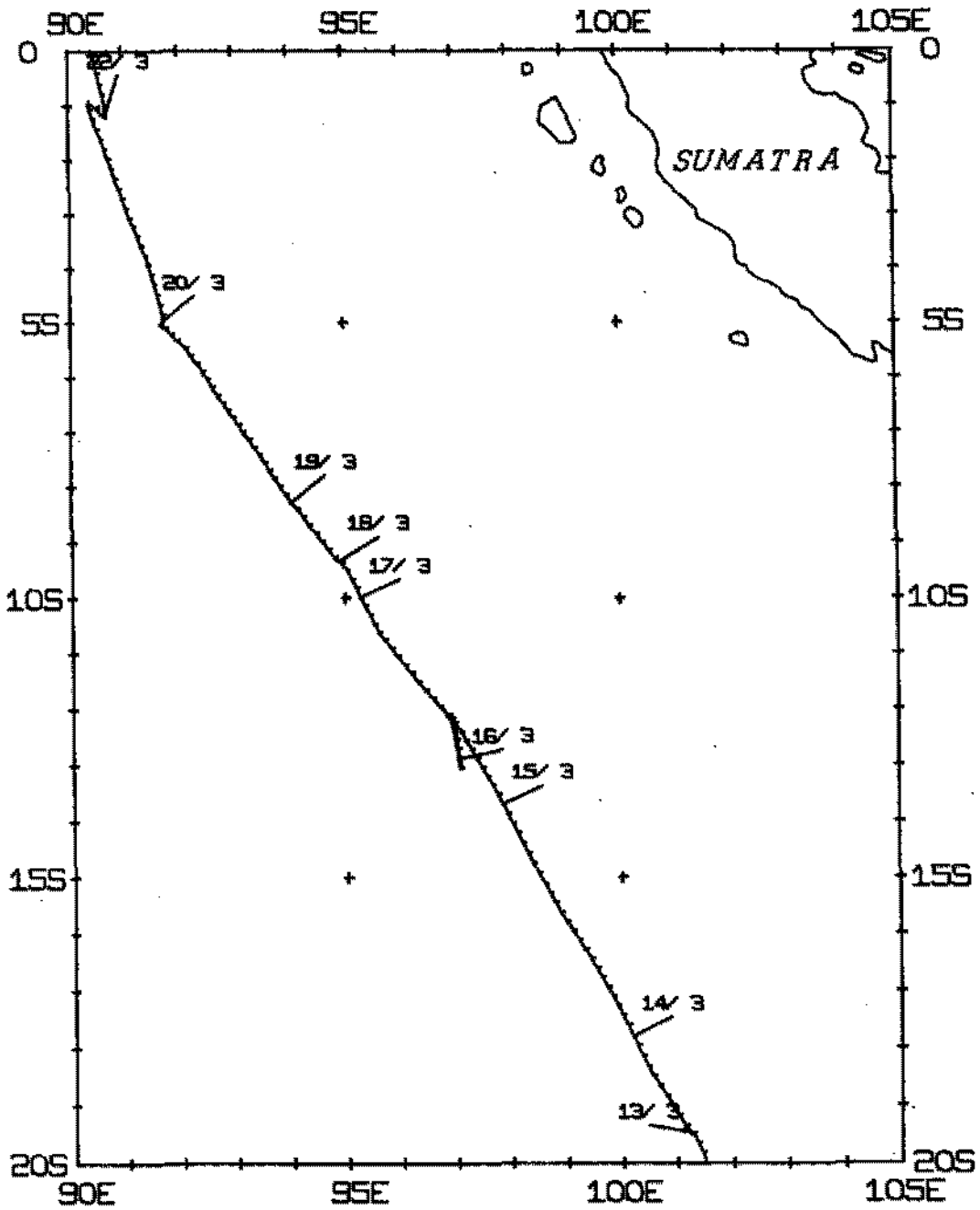
TNMC06MV TRACK PLOT (1 OF 3)

MERCATOR PROJECTION, SCALE= 0.312 IN/DEG LONGITUDE



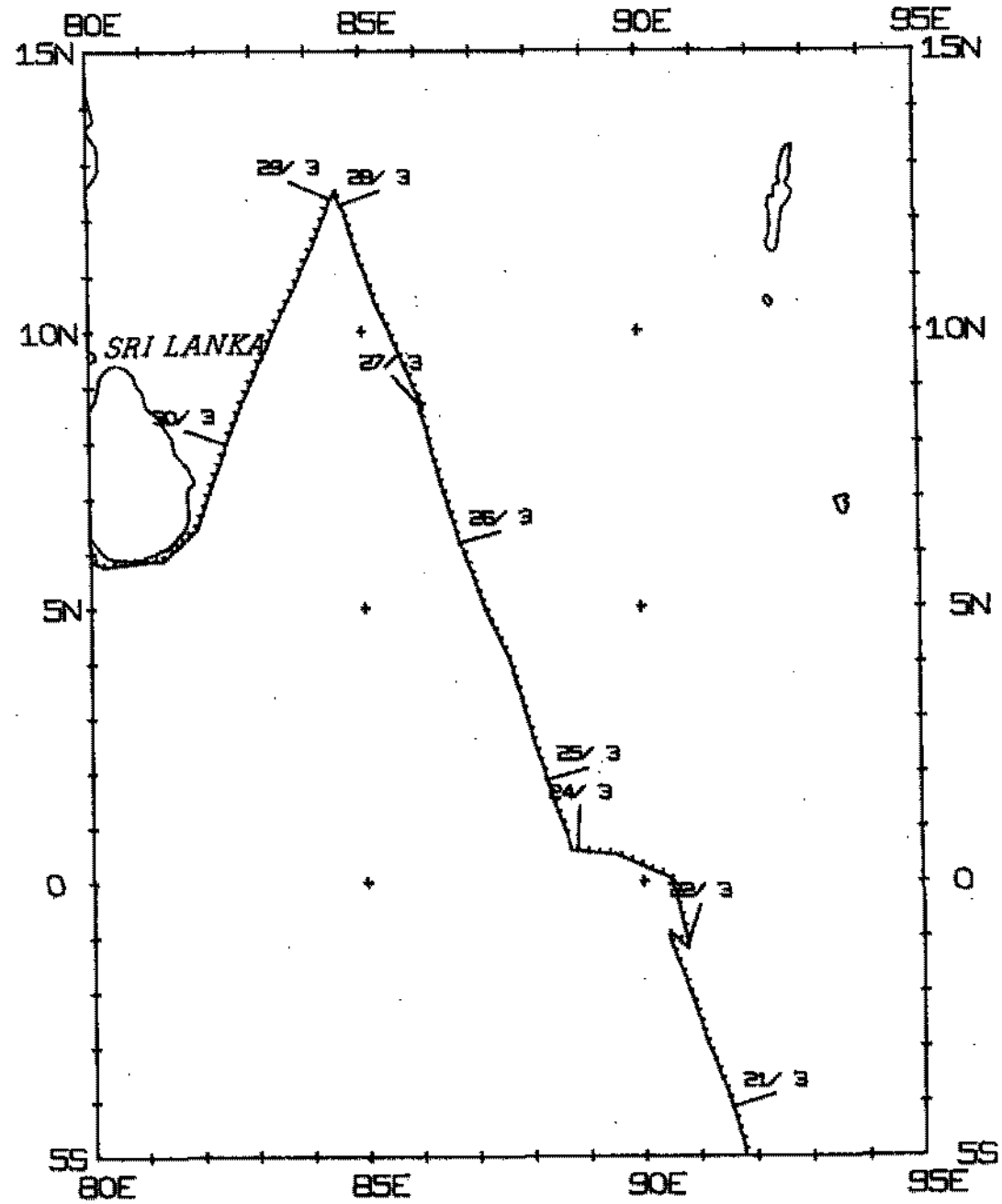
INMOO6MV TRACK PLOT (2 OF 3)

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



INMD06MV TRACK PLOT (3 OF 3)

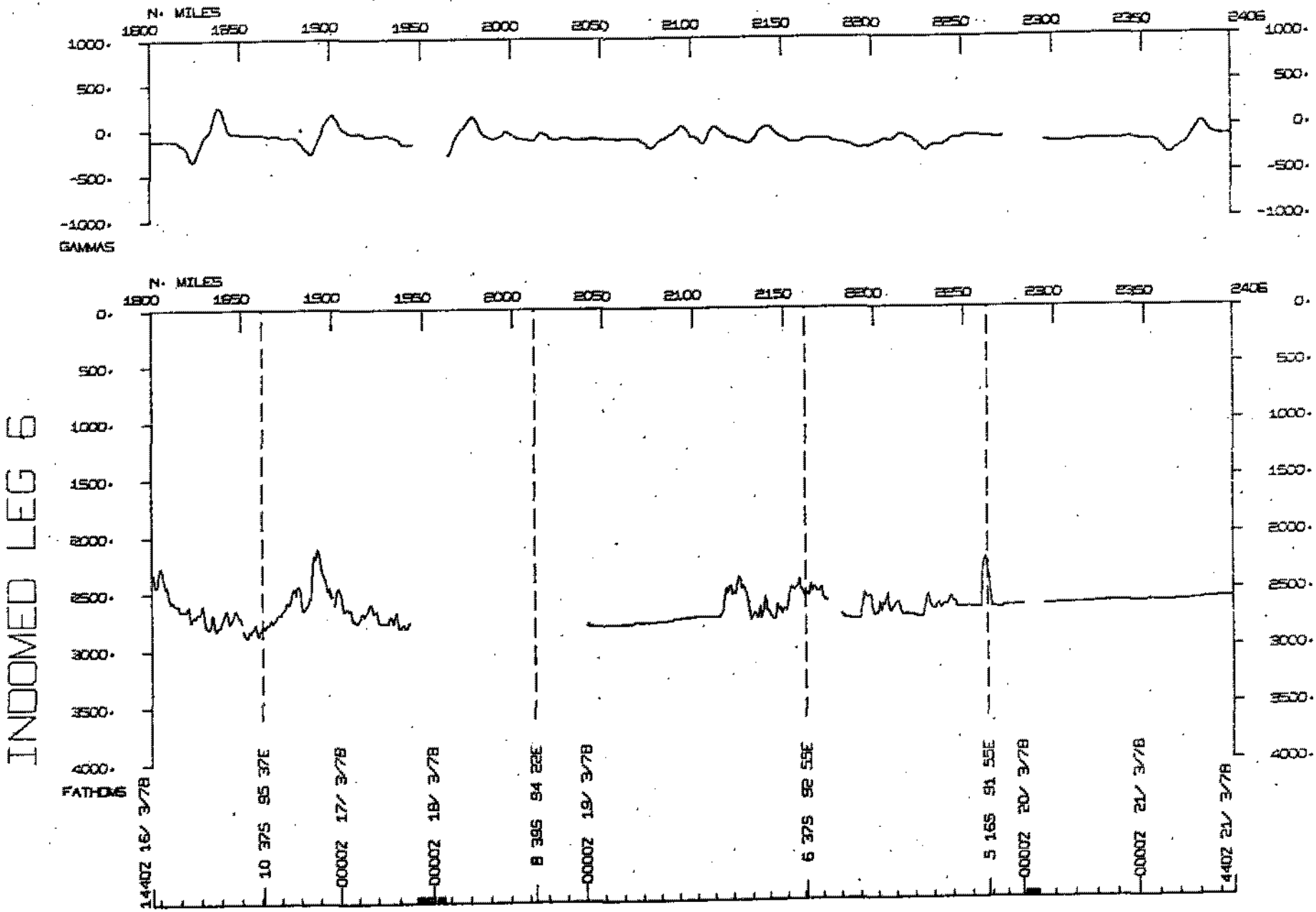
MERCATOR PROJECTION, SCALE= 0.312 IN/DEG LONGITUDE



INDOMED LEG 6

INDOMED LEG 6

INDOMED LEG 6


INDOMED LEG 6
N. MILES
1800 1850 1900 1950 2000 2050 2100 2150 2200 2250 2300 2350 2406
1000 500 0 -500 -1000
GAMMAS
N. MILES
1800 1850 1900 1950 2000 2050 2100 2150 2200 2250 2300 2350 2406
0 500 1000 1500 2000 2500 3000 3500 4000
FATHOMS
14402 16/ 3/78
10 375 85 37E
00002 17/ 3/78
00002 18/ 3/78
8 395 54 22E
00002 19/ 3/78
6 375 52 55E
5 165 51 55E
00002 20/ 3/78
00002 21/ 3/78
4402 21/ 3/78

INDOMED LEG 6
FATHOMS
GAMMAS
N. MILES
0 500 1000 1500 2000 2500 3000 3500 4000
2400 2450 2500 2550 2600 2650 2700 2750 2800 2850 2900 2950 3000
1000 500 0 -500 -1000
0400 0450 0500 0550 0600 0650 0700 0750 0800 0850 0900 0950 1000
0 SB 90 23E 00002 22/ 3/78
00002 23/ 3/78
0 00 90 28E 00002 24/ 3/78
0 29 89 28E
0 35 88 38E
2 38N 87 53E
1502 25/ 3/78
1502 21/ 3/78

INDOMED LEG 6
N. MILES
FATHOMS
GAMMAS
12002 25/ 3/78
6 25N 86 38E
00002 26/ 3/78
8 45N 86 00E
00002 27/ 3/78
11 03N 85 00E
00002 28/ 3/78
00002 29/ 3/78
3452 29/ 3/78

INDOMED LEG 6
FATHOMS
N. MILES
GAMMAS
9 2GN 83 03E
7 0GN 82 08E
6 2GN 81 55E
5 5GN 81 17E
5 4GN 80 11E
5 5LN 79 59E
0000Z 30/ 3/78
2340Z 30/ 3/78
3552 29/ 3/78

S.I.O. SAMPLE INDEX

(Issued May 30, 1978)

INDOMED EXPEDITION

LEG 6

Fremantle, Australia (7 March, 1978)
to
Sri Lanka, Colombo (31 March, 1978)

R/V Melville

Chief Scientist - W. Broecker (Lamont-Doherty)

Resident Marine Tech - S. Witherow

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

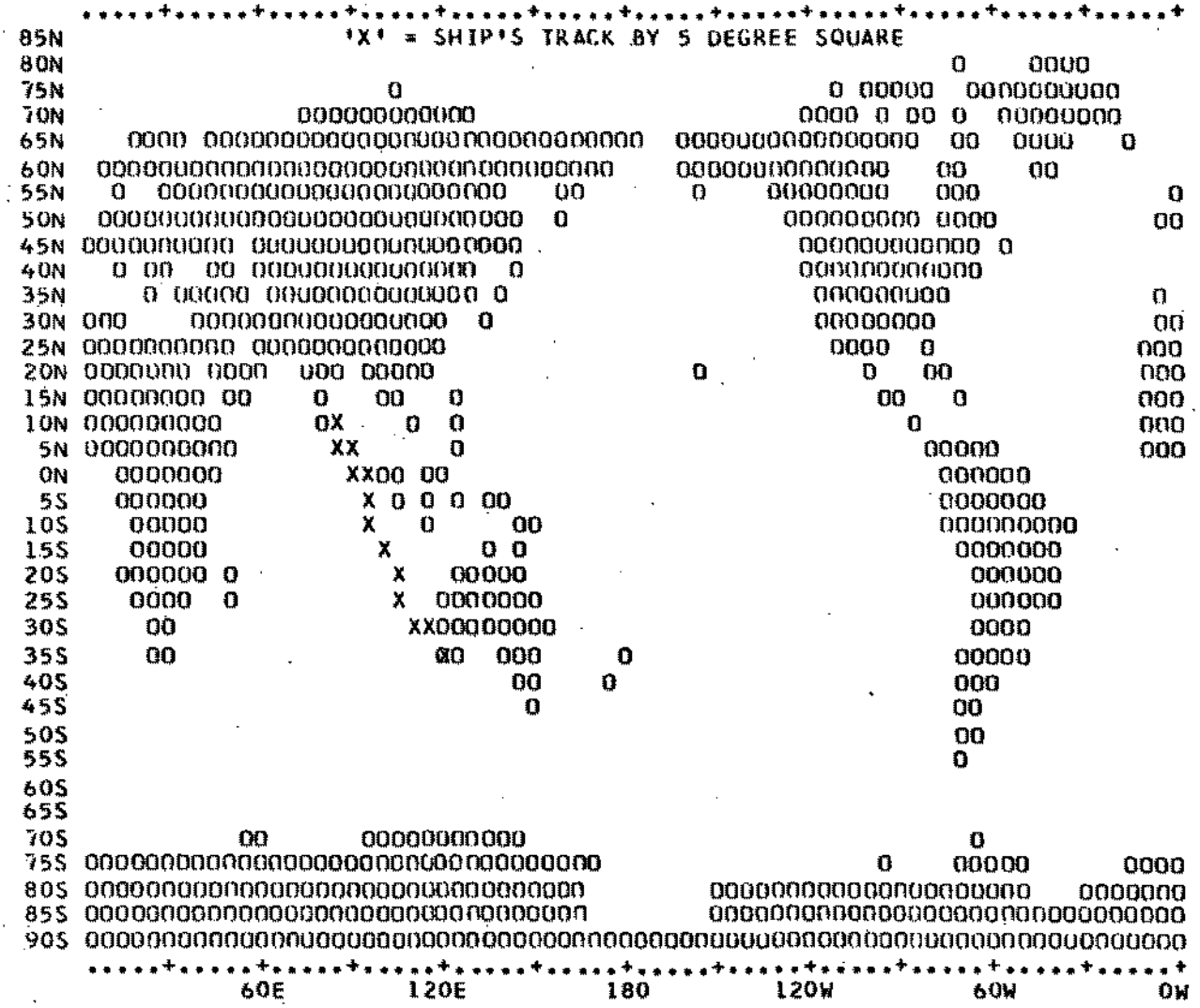
Index Encoding Funded by NSF
Grant Number OCE76-80618
Index Processing and Report Preparation
Funded in part by SIA

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 Geolgoical Data Center.)

S.I.O. SAMPLE INDEX GENERATED 26MAY78

*** INDOMED LEG 6 SAMPLE INDEX (INMD06MV) ***



07MAR78 - FREMANTLE, AUSTRALIA
TO
31MAR78 - COLOMBO, SRI LANKA

CHIEF SCIENTIST - BROECKER, W. LDO

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	6		1	2		11
GRD					1	1
GSX		10			15	25
LDO					5	5
MTG					1	1
SIO					1	1
SIX					2	2
TOTAL	6	10	1	2	25	44

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)
SIO = SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA, CAL. 92093
SIX = SCRIPPS INSTITUTION NON-EMPLOYEE -(CONTACT DORCAS UTTER EXT. 2356)

INDOMED LEG 6 SAMPLE INDEX INMD06MV

*** PORTS ***

725	7	378	LGPT	B	FREMANTLE, AUSTRALIA		32	03	S	115	45	E	F INMD06MV
430	31	378	LGPT	E	COLOMBO, SRI LANKA		6	57	N	79	51	E	F INMD06MV
1208	15	378	LGUS	B	COCOS KEELING ISLAND	GDC	12	07	S	96	54	E	F INMD06MV
1302	15	378	LGUS	E	COCOS KEELING ISLAND	GDC	12	07	S	96	54	E	F INMD06MV
545	16	378	LGUS	B	COCOS KEELING ISLAND	GDC	12	07	S	96	54	E	F INMD06MV
1004	16	378	LGUS	E	COCOS KEELING ISLAND	GDC	12	07	S	96	54	E	F INMD06MV

PERSONNEL

PECS	BROECKER, W.	LDO	INMD06MV
PERT	WITHEROW, S.	GRD	INMD06MV
PECT	HENRY, A.	MTG	INMD06MV
PE	BEAUPRE, M.	GSX	INMD06MV
PEXN	BOROLE, D.	SIX	INMD06MV
PE	BOS, D.	GSX	INMD06MV
PE	CHRISTIANSON, M.	GSX	INMD06MV
PE	COCHRAN, K.	SIX	INMD06MV
PEMT	COLBERT, J.	GSX	INMD06MV
PEMT	FIELD, T.	GSX	INMD06MV
PEXN	GOBAT, D.	GSX	INMD06MV
PE	HESTER, A.	GSX	INMD06MV
PEET	JAEGER, E.	GSX	INMD06MV
PE	MORRIONE, M.	GSX	INMD06MV
PEMT	RAGAN, P.	GSX	INMD06MV
PEET	RICHTER, W.	GSX	INMD06MV
PE	SAIGH, D.	LDO	INMD06MV
PE	SANBORN, K.	GSX	INMD06MV
PE	SCHECHTMAN, N.	LDO	INMD06MV
PEXN	SHARMA, P.	SIO	INMD06MV
PEXN	SLATER, E.	GSX	INMD06MV
PE	TAKAHASHI, T.	LDO	INMD06MV
PE	TOGGWEILER, R.	LDO	INMD06MV
PEMT	WELLS, J.	GSX	INMD06MV
PE	WILLIAMS, R.	GSX	INMD06MV

*** 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 ***

1010	070378			LBUW	B UNDERWAY WATCH LOG	GDC	31	459S	115	158E	S INMD06MV
1010	300378			LBUW	E UNDERWAY WATCH LOG	GDC	6	129N	81	408E	S INMD06MV

*** FATHOGRAMS ***

1010	7	378		DPR3	B EDR 3.5 KHZ ROLL-01	GDC	31	459S	115	158E	S INMD06MV
947	8	378		DPR3	E EDR 3.5 KHZ ROLL-01	GDC	29	342S	110	355E	S INMD06MV
958	8	378		DPR3	B EDR 3.5 KHZ ROLL-02	GDC	29	332S	110	333E	S INMD06MV
1530	12	378		DPR3	E EDR 3.5 KHZ ROLL-02	GDC	19	346S	101	214E	S INMD06MV
1453	13	378		DPR3	B EDR 3.5 KHZ ROLL-03	GDC	19	235S	101	111E	S INMD06MV
340	17	378		DPR3	E EDR 3.5 KHZ ROLL-03	GDC	9	238S	94	594E	S INMD06MV
1700	18	378		DPR3	B EDR 3.5 KHZ ROLL-04	GDC	9	175S	94	513E	S INMD06MV
1308	19	378		DPR3	E EDR 3.5 KHZ ROLL-04	GDC	6	286S	92	494E	S INMD06MV
1402	19	378		DPR3	B EDR 3.5 KHZ ROLL-05	GDC	6	208S	92	442E	S INMD06MV
1154	29	378		DPR3	E EDR 3.5 KHZ ROLL-05	GDC	10	114N	83	265E	S INMD06MV
1156	29	378		DPR3	B EDR 3.5 KHZ ROLL-06	GDC	10	111N	83	262E	S INMD06MV
1010	30	378		DPR3	E EDR 3.5 KHZ ROLL-06	GDC	6	129N	81	408E	S INMD06MV

*** MAGNETOMETER ***

1010	7	378		MGR	B MAGNETICS R-01	GDC	31	459S	115	158E	S INMD06MV
1150	26	378		MGR	E MAGNETICS R-01	GDC	8	259N	86	32E	S INMD06MV
350	27	378		MGR	B MAGNETICS R-02	GDC	8	385N	86	34E	S INMD06MV
621	30	378		MGR	E MAGNETICS R-02	GDC	6	478N	82	39E	S INMD06MV

GEOCHEMICAL STATION - LARGE VOLUME

1230	8	378		GCLV	B GEOSECS STA 436	GSX	29	182S	110	33E	S INMD06MV
1510	9	378		GCLV	E GEOSECS STA 436	GSX	29	103S	110	14E	S INMD06MV

TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.		CRUISE LEG-SHIP
30	10 378			GCLV B	GEOSECS STA 437	GSX	27 503S	108 357E	S	INMD06MV
750	11 378			GCLV E	GEOSECS STA 437	GSX	24 259S	104 567E	S	INMD06MV
1600	12 378			GCLV B	GEOSECS STA 438	GSX	19 300S	101 187E	S	INMD06MV
1453	13 378			GCLV E	GEOSECS STA 438	GSX	19 235S	101 111E	S	INMD06MV
1800	15 378			GCLV B	GEOSECS STA 439	GSX	13 31S	97 80E	S	INMD06MV
2300	15 378			GCLV E	GEOSECS STA 439	GSX	13 24S	97 87E	S	INMD06MV
340	17 378			GCLV B	GEOSECS STA 440	GSX	9 238S	94 594E	S	INMD06MV
1700	18 378			GCLV E	GEOSECS STA 440	GSX	9 175S	94 513E	S	INMD06MV
0	19 378			GCLV B	GEOSECS STA 441	GSX	8 172S	94 53E	S	INMD06MV
1900	20 378			GCLV E	GEOSECS STA 441	GSX	5 6S	91 467E	S	INMD06MV
2030	21 378			GCLV B	GEOSECS STA 442	GSX	1 136S	90 462E	S	INMD06MV
150	23 378			GCLV E	GEOSECS STA 442	GSX	1 19S	90 439E	S	INMD06MV
705	23 378			GCLV B	GEOSECS STA 443	GSX	0 1S	90 287E	S	INMD06MV
1502	23 378			GCLV E	GEOSECS STA 443	GSX	0 25N	90 287E	S	INMD06MV
15	24 378			GCLV B	GEOSECS STA 444	GSX	0 334N	88 437E	S	INMD06MV
1737	24 378			GCLV E	GEOSECS STA 444	GSX	0 384N	88 389E	S	INMD06MV
1215	26 378			GCLV B	GEOSECS STA 445	GSX	8 307N	86 22E	S	INMD06MV
0350	270378			GCLV E	GEOSECS STA 445	GSX	8 385N	86 34E	S	INMD06MV
0130	280378			GCLV B	GEOSECS STA 446	GSX	12 302N	84 302E	F	INMD06MV
0020	290378			GCLV E	GEOSECS STA 446	GSX	12 15 N	84 21 E	F	INMD06MV
9900					END SAMPLE INDEX					INMD06MV