

F. DRAKE 77 EXPEDITION

LEG 1

R/V MELVILLE

INFORMAL REPORT AND INDEX OF  
NAVIGATION, DEPTH AND MAGNETIC DATA

San Diego, Calif. (15 December 1976)

to

Valparaiso, Chile (1 January 1977)

Chief Scientist - J. Mammerickx

Resident Marine Tech - W. Keith

Post-Cruise Processing by - S. Smith,

R. Lingley, G. Psaropoulos

Prepared By

Underway Data Processing Group

S.I.O. Geological Data Center

Scripps Institution of Oceanography

La Jolla, California 92093

February 22, 1977

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 (.3"/deg. long) is the same as the index charts of previous SIO cruises published as Report IMR TR-25.

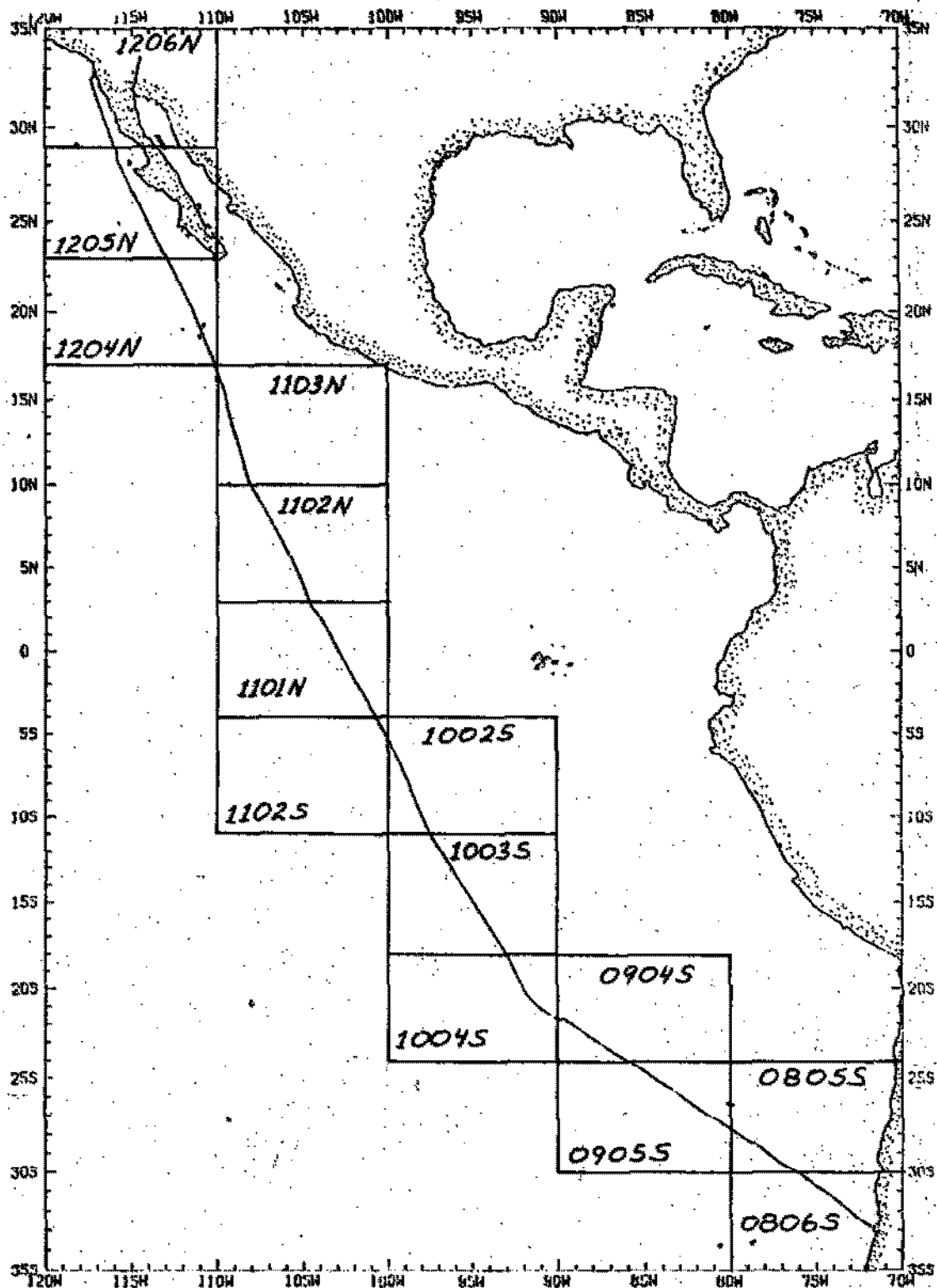
Profiles - Depth and magnetic anomaly vs. distance. Dates (day/month) and positions of major course changes (greater than 30 degrees) are annotated. Sections of track having subbottom profiler (airgun) records have a solid black line along the bottom of the profile.

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 gamma/inch; anomaly scale north of 15°N and south of 15°S = 1000 gamma/inch) from values retrieved at approximately 1 mile spacing and regional field removed using the 1965 IGRF.
4. Card Decks of navigation, depth and magnetics (for specific formats, contact S. M. Smith, Geological Data Center). Phone: (714) 452-2752
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



**F. DRAKE 77 EXPEDITION**

Leg 1

R/V Melville

Chief Scientist - Jacqueline Mammerickx

Ports: San Diego (15 December 1976) - Valparaiso, Chile (1 January 1977)

**TOTAL MILEAGE**

- 1) Cruise - 4850 miles
- 2) Bathymetry - 4641 miles
- 3) Magnetics - 4415 miles
- 4) Seismic Reflection - none collected

115W

110W

105W

30N

30N

25N

25N

20N

20N

15N

15N

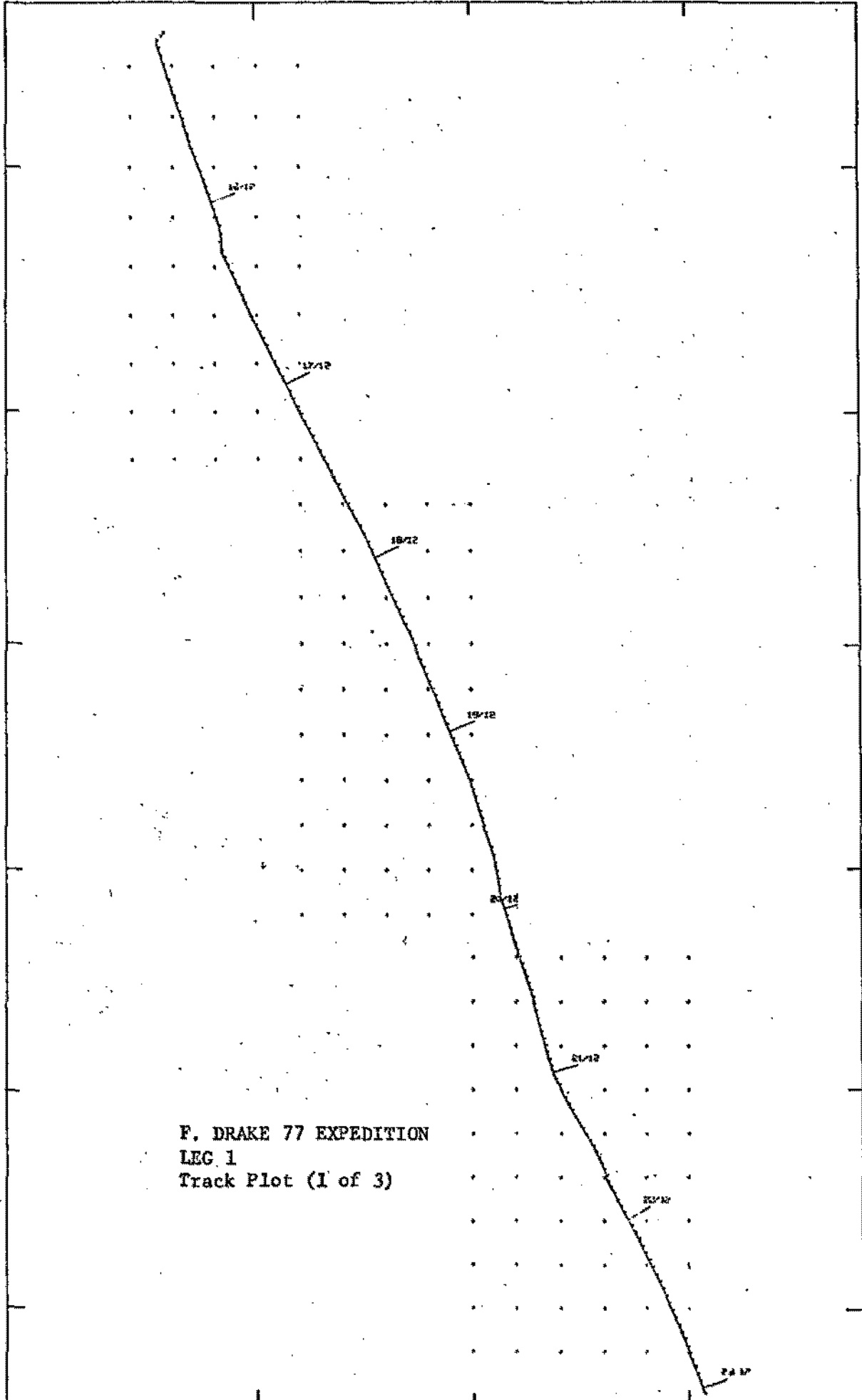
10N

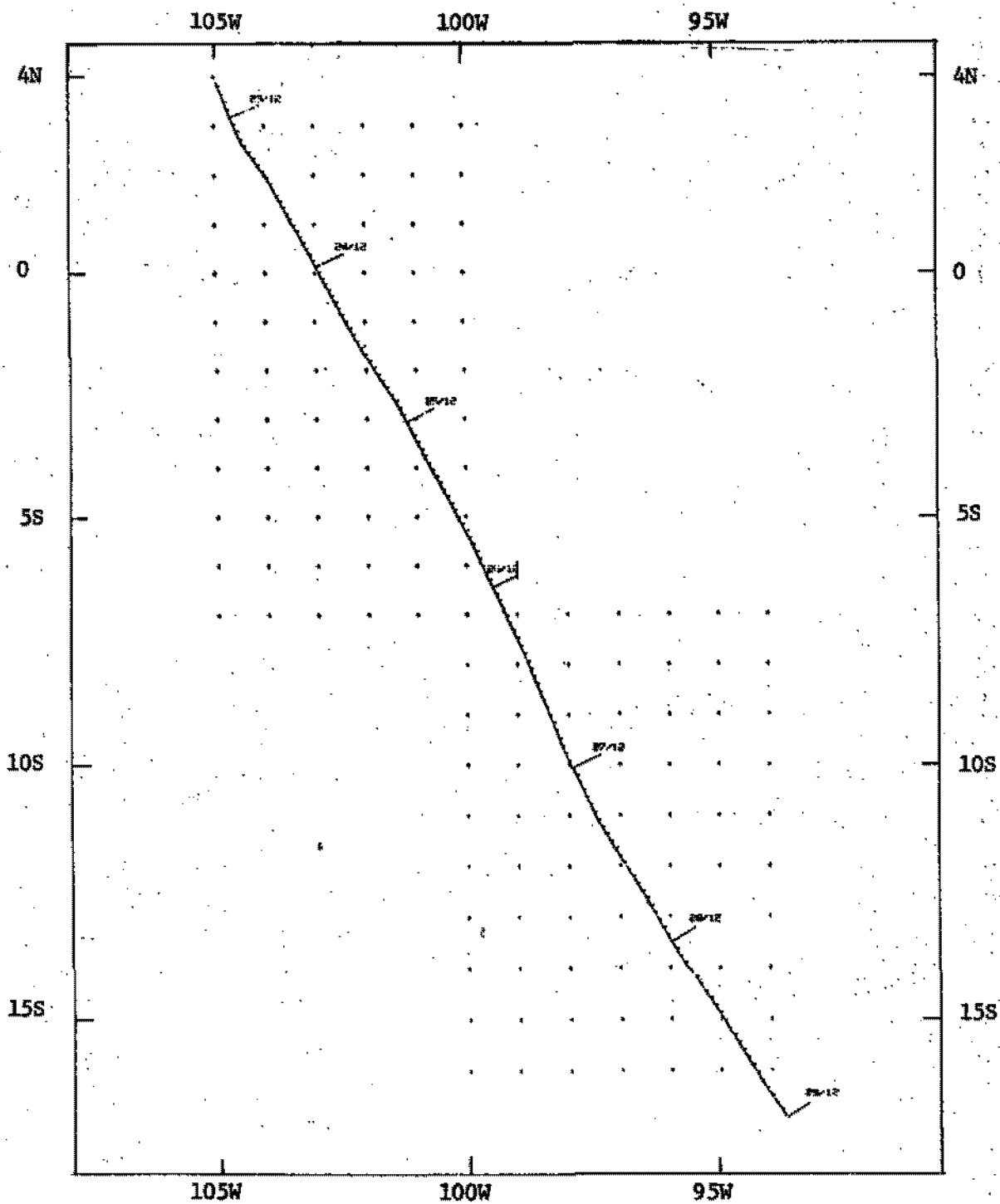
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5N

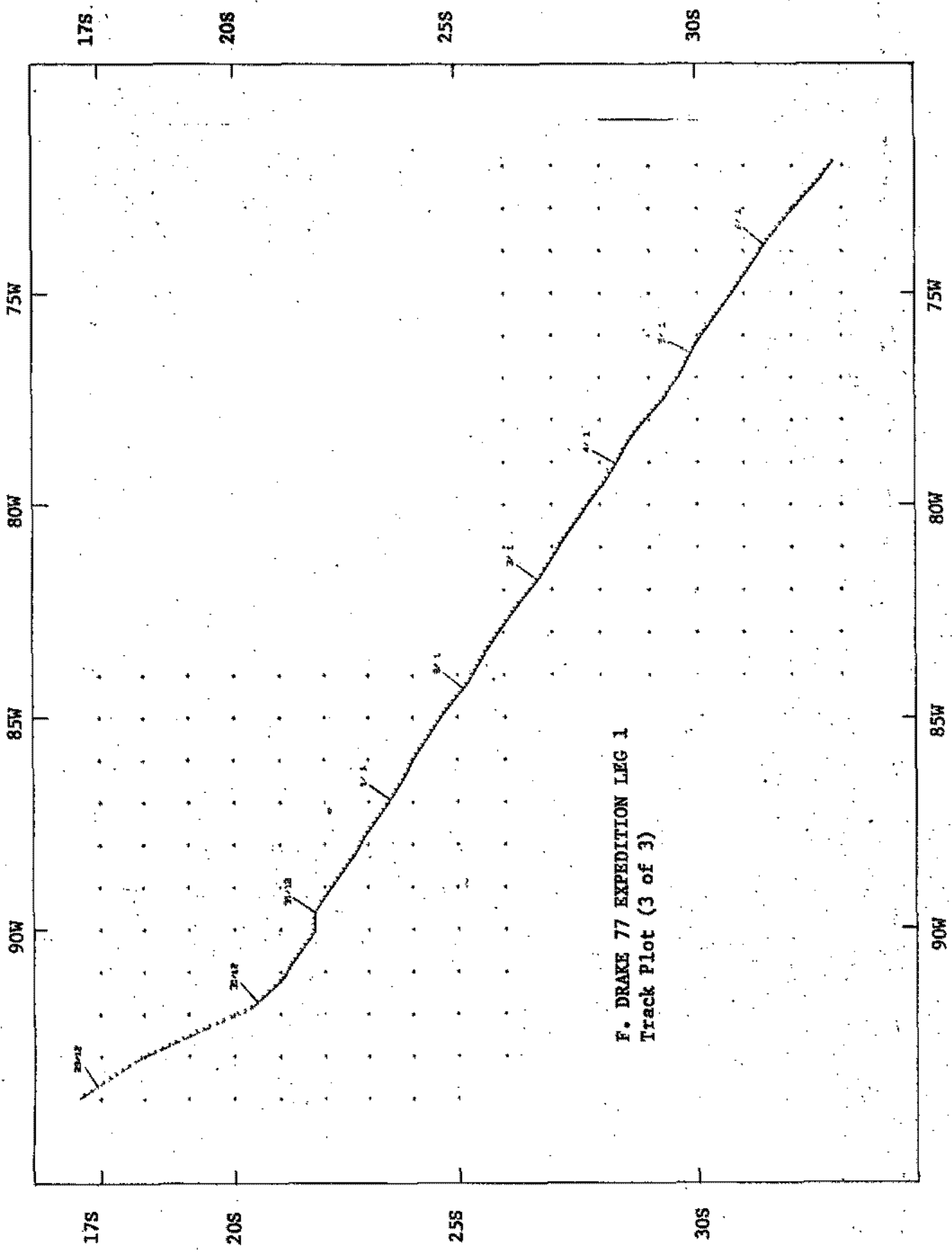
5N

F. DRAKE 77 EXPEDITION  
LEG 1  
Track Plot (1 of 3)





F. DRAKE 77 EXPEDITION  
Track Plot (2 of 3)



F. DRAKE 77 EXPEDITION LEG 1  
Track Plot (3 of 3)

SIO SAMPLE INDEX  
F. DRAKE 77 EXPEDITION LEG 1

FD7701MV

\*\*\*PORTS\*\*\*

207 151276  
2200 6 177

LGPT B SAN DIEGO, CA.  
LGPT E VALPARAISO, CHILE

32 425N 117 143W F FD7701MV  
33 20S 71 370W F FD7701MV

\*\*\* PERSONNEL \*\*\*

PECS MAMMERICKX, J.  
PERT KEITH, W.  
PECT HENRY, A.  
PE HARTNETT, L.  
PE SIMPKINS, J.

~~SIO~~ GRP  
SIO  
~~SIO~~ MTG  
OSU  
OSU

FD7701MV  
FD7701MV  
FD7701MV  
FD7701MV  
FD7701MV

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

TIME GMT	DATE D.M.Y.	TIME TZ LUG LDC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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## UNDERWAY DATA - CURATOR S.M.SMITH (EXT.-2752)

## \*\*\* LOG BOOKS \*\*\*

2010	151276			LRUW B UNDERWAY WATCH LUG	GDC 29	533N	116 195W	S FD7701MV
1900	6 177			LRUW E UNDERWAY WATCH LUG	GDC 32	498S	71 542W	S FD7701MV

## \*\*\* NAVIGATION PLOTS \*\*\*

2300	181276			NVBP B BRIDGE PLOT 01	GDC 18	134N	110 342W	S FD7701MV
46	211276			NVBP E BRIDGE PLOT 01	GDC 10	169N	108 81W	S FD7701MV
252	271276			NVBP B BRIDGE PLOT 1A	GDC 10	297S	97 433W	S FD7701MV
412	291276			NVBP E BRIDGE PLOT 1A	GDC 17	317S	93 179W	S FD7701MV
312	211276			NVBP B BRIDGE PLOT 02	GDC 9	560N	107 579W	S FD7701MV
2226	221276			NVBP E BRIDGE PLOT 02	GDC 3	247N	104 456W	S FD7701MV
58	251276			NVBP B BRIDGE PLOT 03	GDC 3	126S	101 69W	S FD7701MV
252	271276			NVBP E BRIDGE PLOT 03	GDC 10	297S	97 433W	S FD7701MV
412	291276			NVBP B BRIDGE PLOT 04	GDC 17	317S	93 179W	S FD7701MV
0	1 177			NVBP E BRIDGE PLOT 04	GDC 23	290S	86 565W	S FD7701MV
144	1 177			NVBP B BRIDGE PLOT 05	GDC 23	367S	86 445W	S FD7701MV
1435	4 177			NVBP E BRIDGE PLOT 05	GDC 29	163S	77 307W	S FD7701MV
1435	4 177			NVBP B BRIDGE PLOT 06	GDC 29	163S	77 307W	S FD7701MV
1200	5 177			NVBP E BRIDGE PLOT 06	GDC 30	370S	75 112W	S FD7701MV
1628	151276			NVBP B BRIDGE PLOT 6A	GDC 30	255N	116 350W	S FD7701MV
2310	151276			NVBP E BRIDGE PLOT 6A	GDC 29	255N	116 75W	S FD7701MV

## \*\*\* FATHOGRAMS \*\*\*

2010	151276			DPR3 B GDR 3.5KHZ R-01	GDC 29	533N	116 195W	S FD7701MV
756	171276			DPR3 E GDR 3.5KHZ R-01	GDC 24	201N	113 389W	S FD7701MV
800	171276			DPR3 B GDR 3.5KHZ R-02	GDC 24	195N	113 386W	S FD7701MV
440	181276			DPR3 E GDR 3.5KHZ R-02	GDC 21	68N	111 534W	S FD7701MV
445	181276			DPR3 B GDR 3.5KHZ R-03	GDC 21	60N	111 530W	S FD7701MV
601	191276			DPR3 E GDR 3.5KHZ R-03	GDC 17	67N	110 58W	S FD7701MV



TIME		DATE	TIME	TZ	SAMP	DISP		17FEB77		PAGE	2
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604	19	1276			DPR3	B GDR 3.5KHZ R-04	GDC 17	62N 110	56W S	FD7701MV	
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603	20	1276			DPR3	B GDR 3.5KHZ R-05	GDC 13	92N 108	591W S	FD7701MV	
600	21	1276			DPK3	E GDR 3.5KHZ R-05	GDC 9	319N 107	447W S	FD7701MV	
604	21	1276			DPR3	B GDR 3.5KHZ R-06	GDC 9	313N 107	444W S	FD7701MV	
600	22	1276			DPK3	E GDR 3.5KHZ R-06	GDC 6	57N 105	568W S	FD7701MV	
603	22	1276			DPR3	B GDR 3.5KHZ R-07	GDC 6	52N 105	565W S	FD7701MV	
600	23	1276			DPK3	E GDR 3.5KHZ R-07	GDC 2	189N 104	127W S	FD7701MV	
604	23	1276			DPR3	B GDR 3.5KHZ R-08	GDC 2	184N 104	124W S	FD7701MV	
600	24	1276			DPK3	E GDR 3.5KHZ R-08	GDC 0	372S 102	351W S	FD7701MV	
604	24	1276			DPR3	B GDR 3.5KHZ R-09	GDC 0	377S 102	348W S	FD7701MV	
600	26	1276			DPK3	E GDR 3.5KHZ R-09	GDC 7	199S 99	40W S	FD7701MV	
604	26	1276			DPR3	B GDR 3.5KHZ R-10	GDC 7	205S 99	37W S	FD7701MV	
600	27	1276			DPK3	E GDR 3.5KHZ R-10	GDC 10	575S 97	299W S	FD7701MV	
604	27	1276			DPR3	B GDR 3.5KHZ R-11	GDC 10	581S 97	297W S	FD7701MV	
600	28	1276			DPK3	E GDR 3.5KHZ R-11	GDC 14	200S 95	240W S	FD7701MV	
604	28	1276			DPR3	B GDR 3.5KHZ R-12	GDC 14	205S 95	237W S	FD7701MV	
530	29	1276			UPK3	E GDR 3.5KHZ R-12	GDC 17	430S 93	101W S	FD7701MV	
533	29	1276			DPR3	B GDR 3.5KHZ R-13	GDC 17	434S 93	98W S	FD7701MV	
2158	29	1276			DPK3	E GDR 3.5KHZ R-13	GDC 20	145S 91	562W S	FD7701MV	
2158	29	1276			DPR3	B GDR 3.5KHZ R-14	GDC 20	145S 91	562W S	FD7701MV	
330	31	1276			DPK3	E GDR 3.5KHZ R-14	GDC 22	25S 89	109W S	FD7701MV	
333	31	1276			DPR3	B GDR 3.5KHZ R-15	GDC 22	27S 89	105W S	FD7701MV	
0	2	177			DPK3	E GDR 3.5KHZ R-15	GDC 25	76S 84	194W S	FD7701MV	
5	2	177			DPR3	B GDR 3.5KHZ R-16	GDC 25	80S 84	189W S	FD7701MV	
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1835	2	177			DPK3	B GDR 3.5KHZ R-17	GDC 26	180S 82	219W S	FD7701MV	
2033	3	177			DPK3	E GDR 3.5KHZ R-17	GDC 28	77S 79	260W S	FD7701MV	
2036	3	177			DPR3	B GDR 3.5KHZ R-18	GDC 28	78S 79	257W S	FD7701MV	
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TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
410	5	177		DPR3 B	GDR 3.5KHZ R-19	GDC 30	68S	75 589W	S FD7701MV
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303	6	177		DPR3 B	GDR 3.5KHZ R-20	GDC 31	349S	73 328W	S FD7701MV
1420	6	177		DPR3 E	GDR 3.5KHZ R-20	GDC 32	290S	72 260W	S FD7701MV
1435	6	177		DPR3 B	GDR 3.5KHZ R-21	GDC 32	302S	72 244W	S FD7701MV
1900	6	177		DPR3 E	GDR 3.5KHZ R-21	GDC 32	498S	71 542W	S FD7701MV
2010	151276			DPRT B	GDR 12KHZ R-01	GDC 29	533N	116 195W	S FD7701MV
2243	161276			DPRT E	GDR 12KHZ R-01	GDC 25	463N	114 264W	S FD7701MV

## \*\*\* MAGNETOMETER \*\*\*

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510	251276			MGR E	MAGNETICS R-01	GDC 3	481S	100 489W	S FD7701MV
515	251276			MGR B	MAGNETICS R-02	GDC 3	489S	100 486W	S FD7701MV
230	6 177			MGR E	MAGNETICS R-02	GDC 31	365S	73 360W	S FD7701MV
245	6 177			MGR B	MAGNETICS R-03	GDC 31	376S	73 345W	S FD7701MV
1801	6 177			MGR E	MAGNETICS R-03	GDC 32	451S	72 7W	S FD7701MV
9900					END SAMPLE INDEX				FD7701MV