

GEOSECS EXPEDITION

LEG G

R/V MELVILLE

INFORMAL REPORT AND INDEX OF  
NAVIGATION, MAGNETIC AND DEPTH DATA

Wellington, New Zealand (5 February 1974)

to

Wellington, New Zealand (6 March 1974)

Chief Scientist - J. Edmond

Resident Marine Tech - R. Wilson

Post-Cruise Processing by - S. Smith, U. Albright,

G. Psaropulos, R. Lingley, J.L. Abbott

Prepared by

Underway Data Processing Group

S.I.O. Geological Data Center

Scripps Institution of Oceanography

La Jolla, California

November 25, 1975

Preliminary Report and Index of Navigation, Depth, Magnetic and Subbottom Profiler Data\*

Contents:

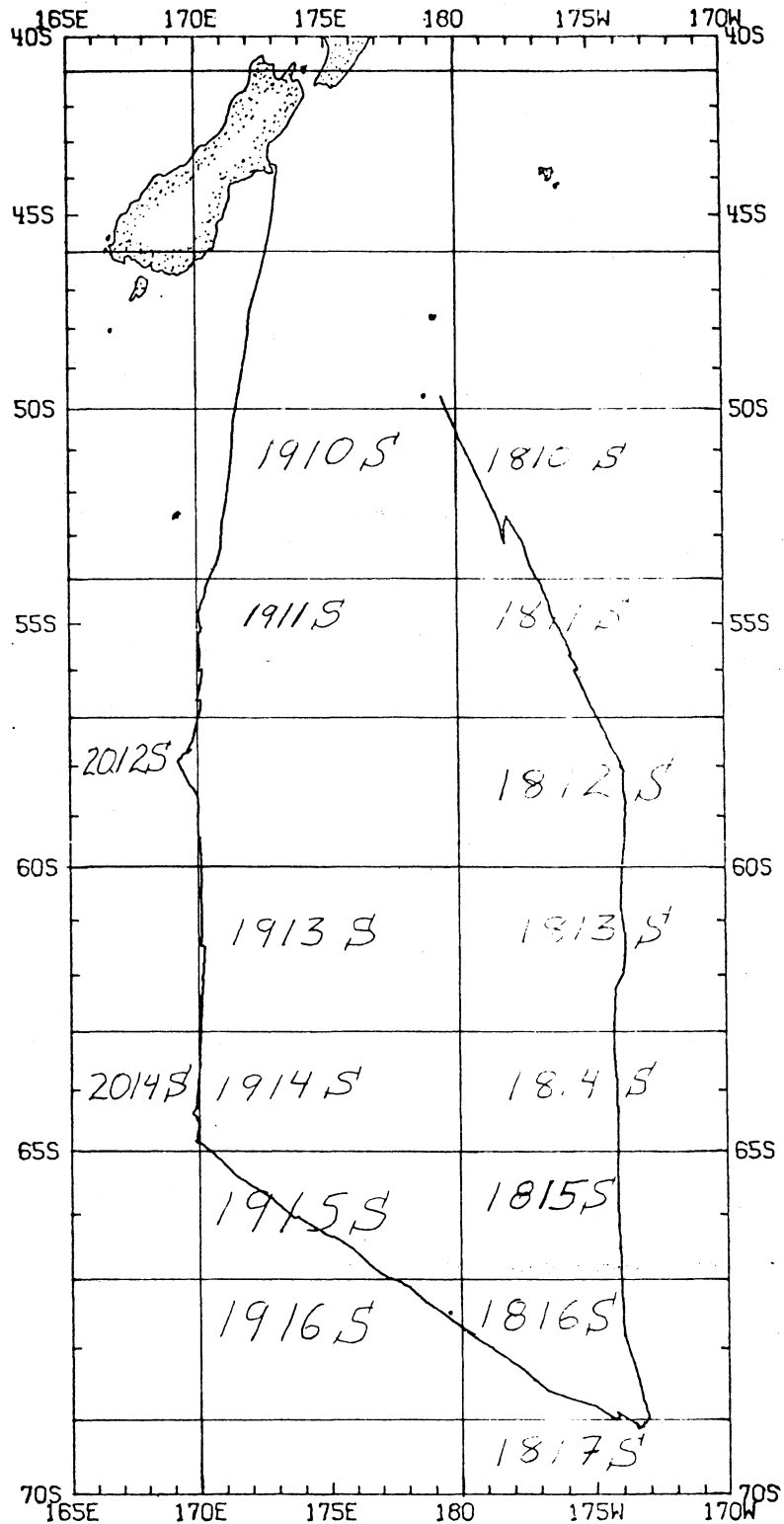
- Index Chart - gives track of cruise leg and boundaries of depth compilation plots (see below).
- Track Charts - annotated with dates (day/month) and hour ticks. The scale (.3"/deg. long) is the same as the index charts of previous SIO cruises published as Report IMR TR-25.
- Profiles - Depth and magnetic 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 T. E. Chase, Curator, Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093 Phone: (714) 452-2182

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 was taken on this leg. Cruise report delay due to shipboard computer/receiver problems requiring reprocessing of satellite fixes.

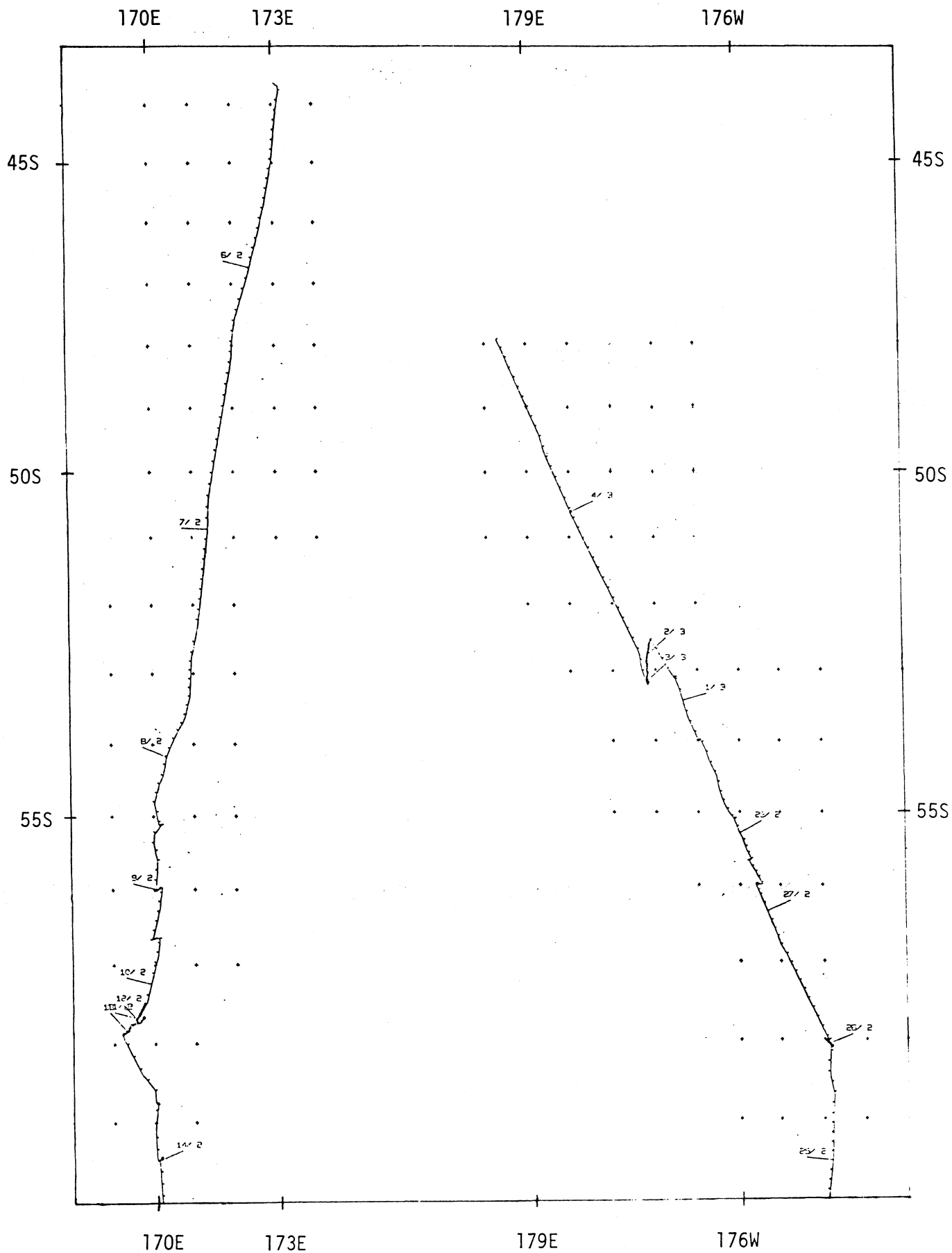


GEOSECS EXPEDITION  
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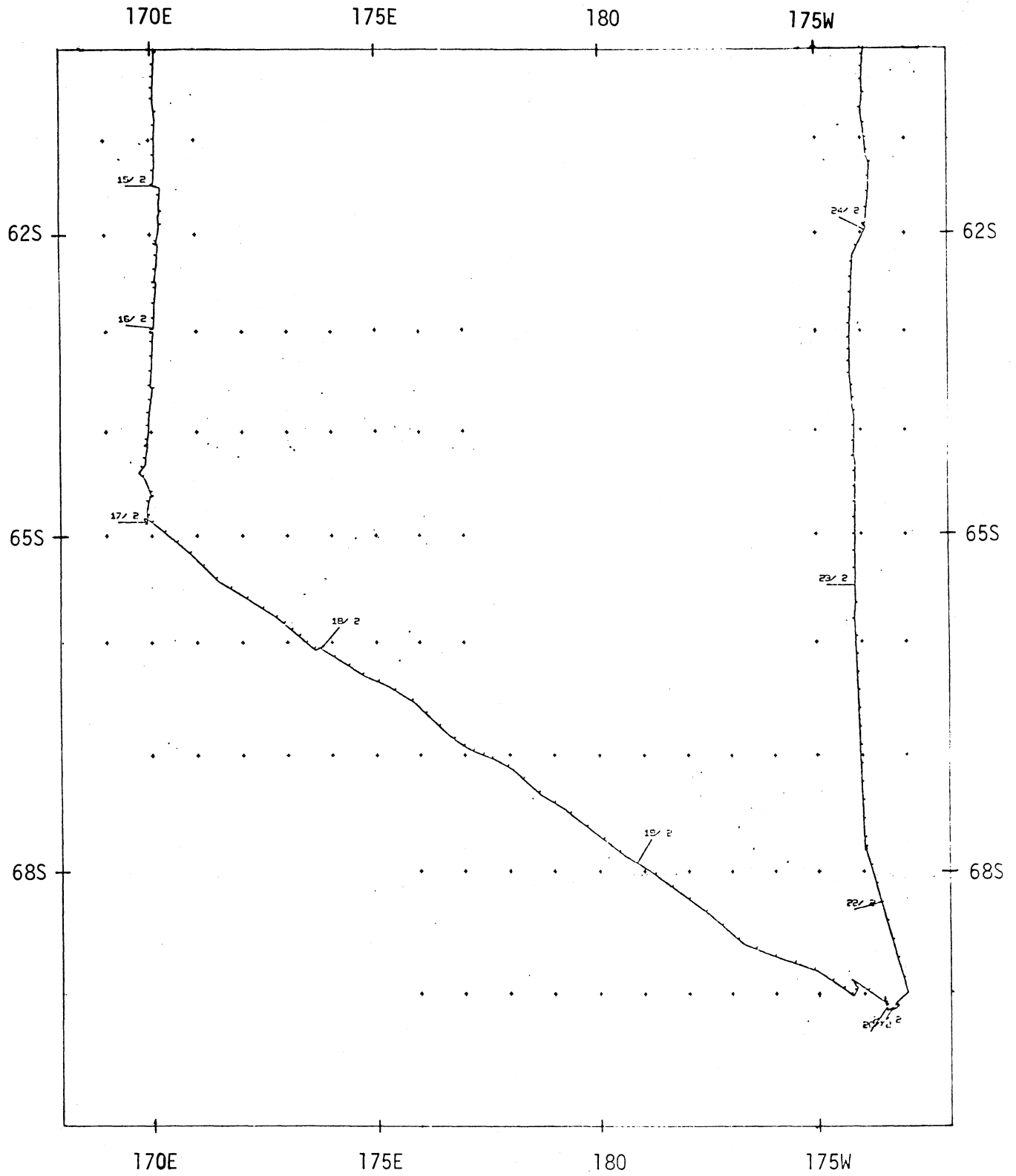
Chief Scientist - J. Edmond  
 Lyttelton N.Z. - Wellington N.Z. (5 February 1974 - 6 March 1974)

TOTAL MILEAGE

- 1) Cruise - 3369 miles
- 2) Bathymetry - 1819 miles
- 3) Magnetics - 1962 miles
- 4) Seismic Reflection - none collected

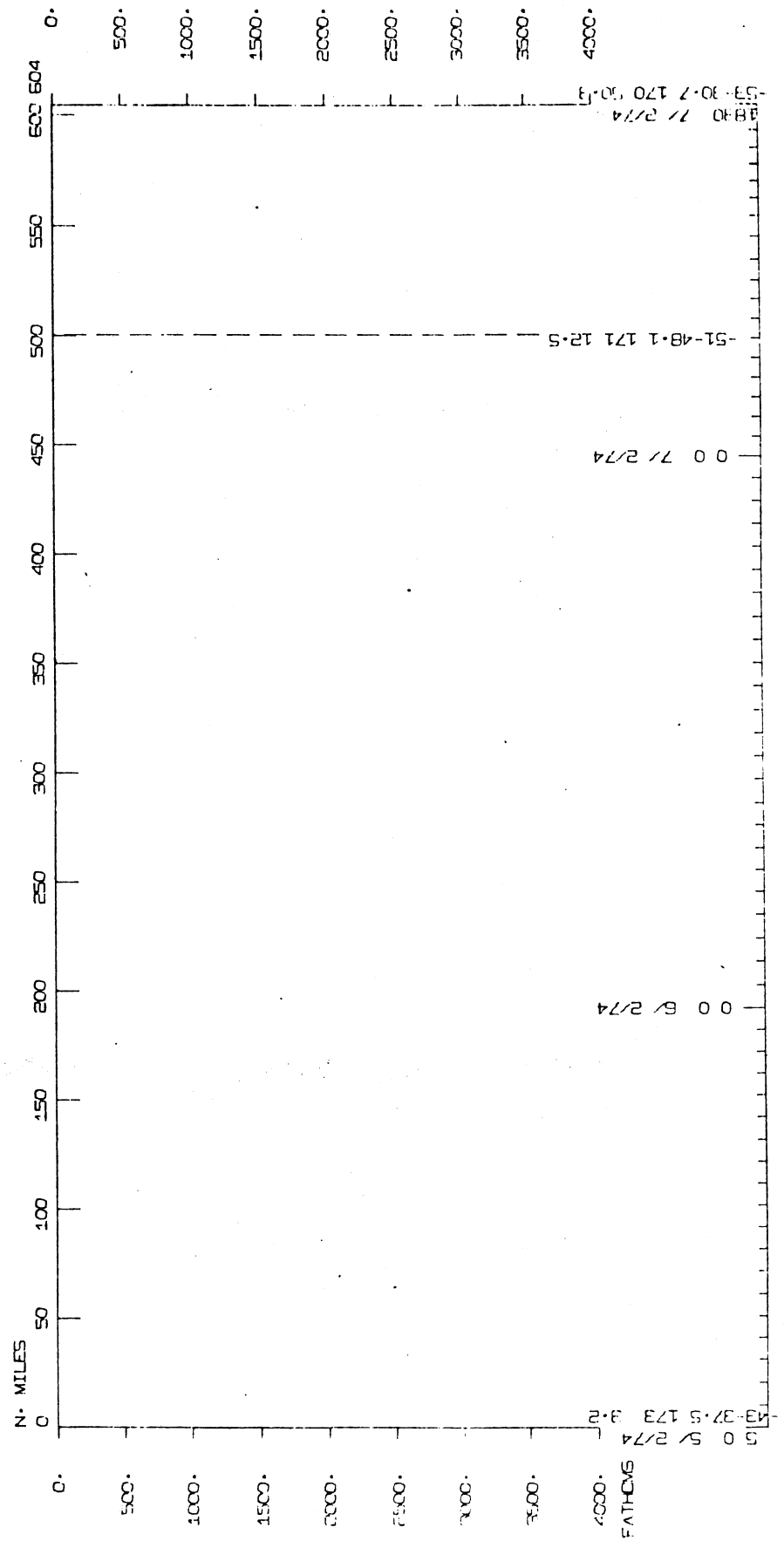
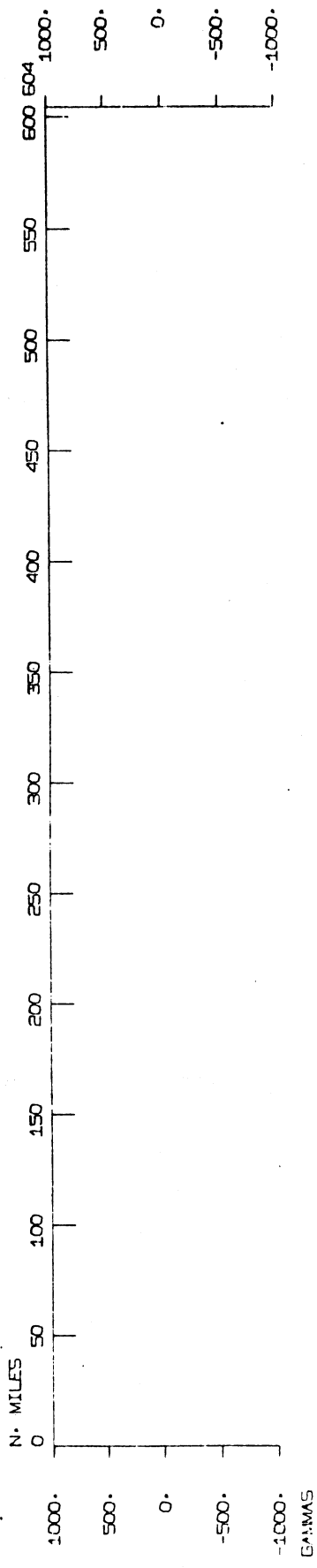


GEOSECS LEG G TRACK PLOT (1 of 2)



GEOSECS LEG G TRACK PLOT (2 of 2)

GEOLOGICAL LOG



53-30-2 170 10-3  
 8840 7/274

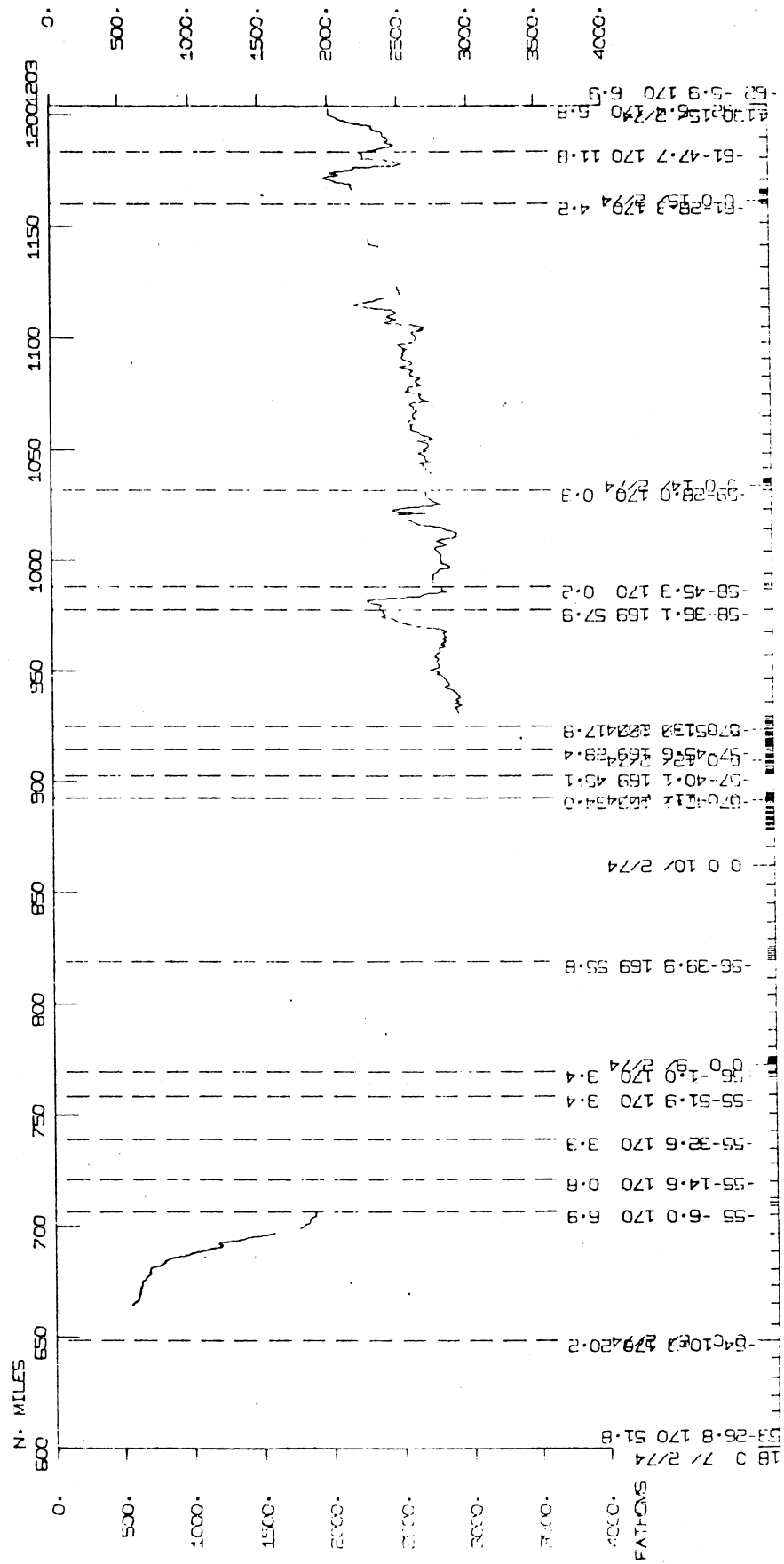
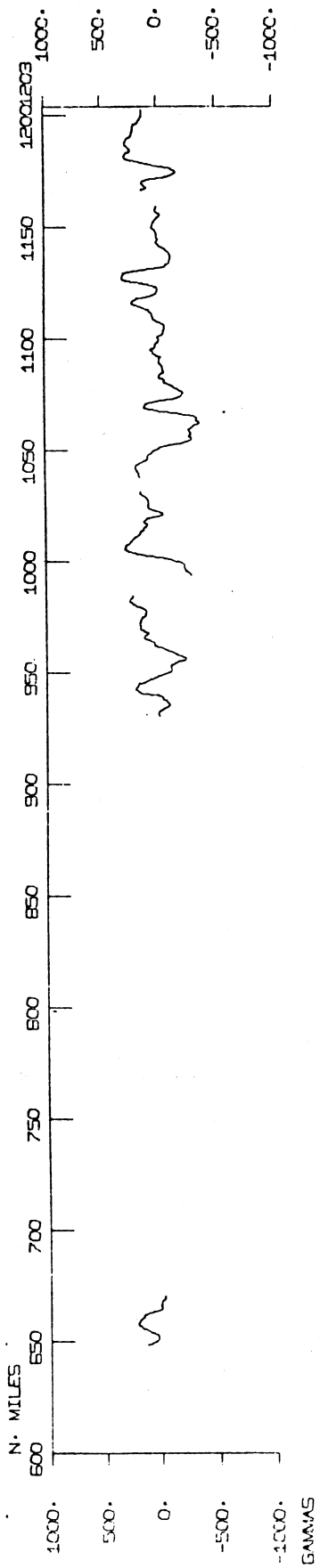
51-48.1 171 12.5

0 0 7/274

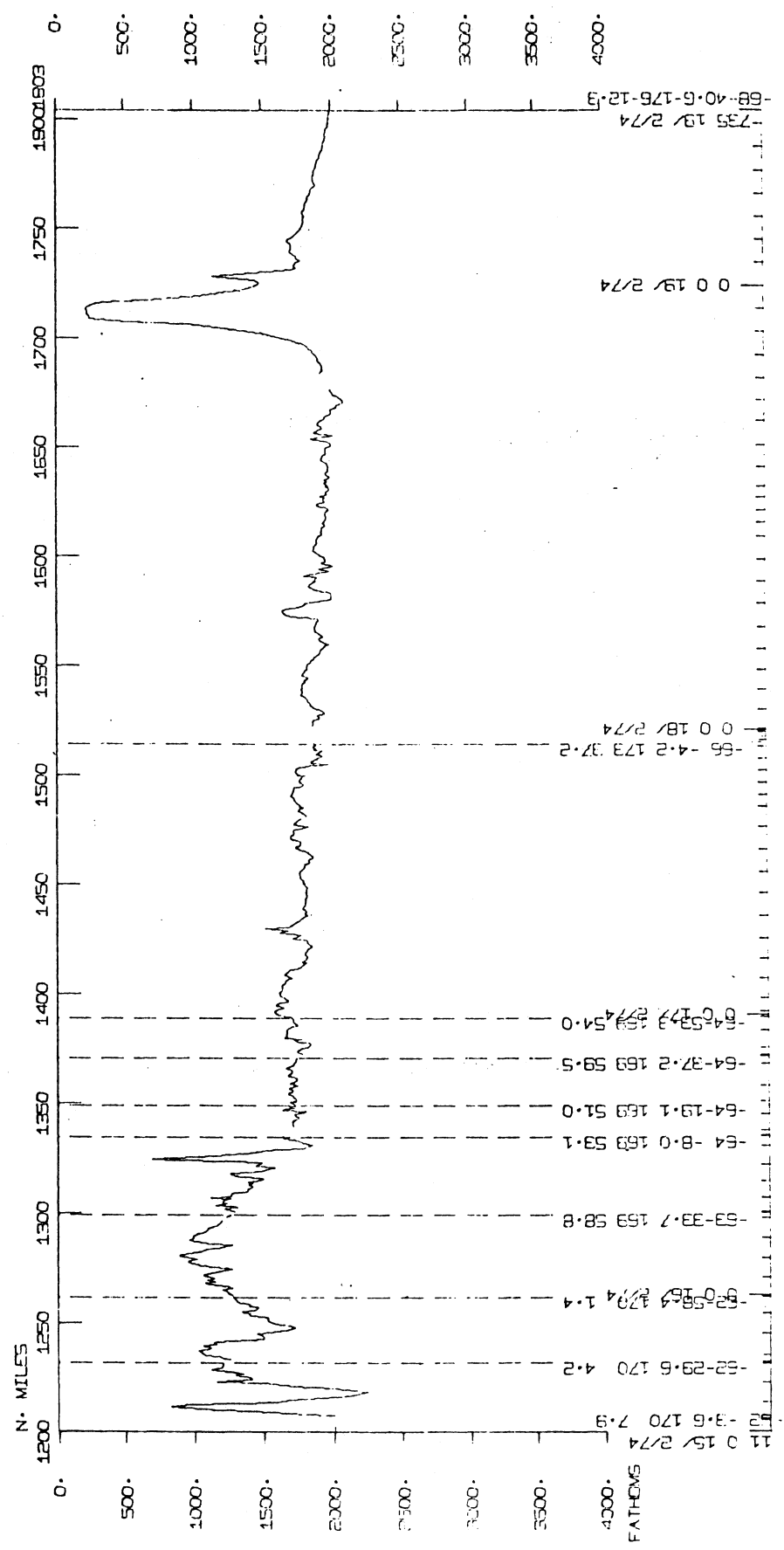
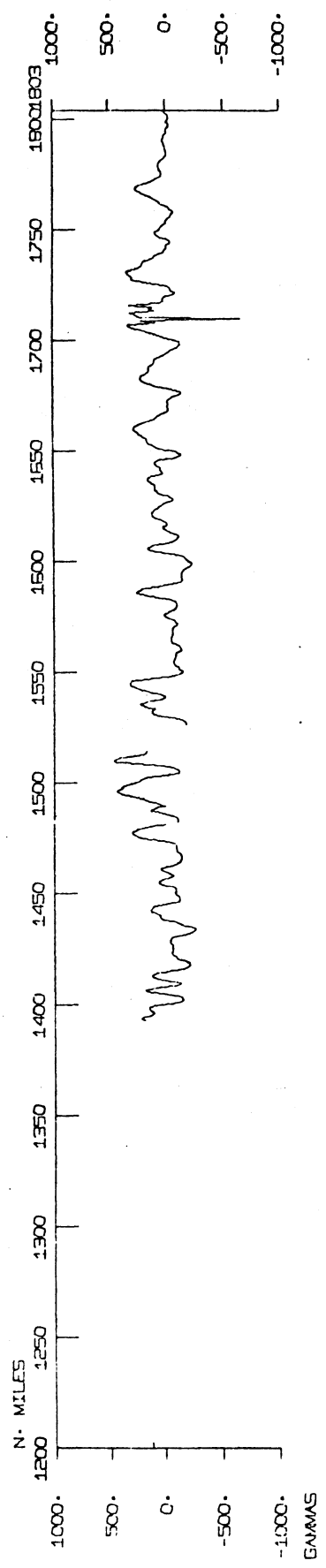
0 0 8/274

53-37.5 173 8.5  
 5 0 8/274

# GEOSECS LEG C

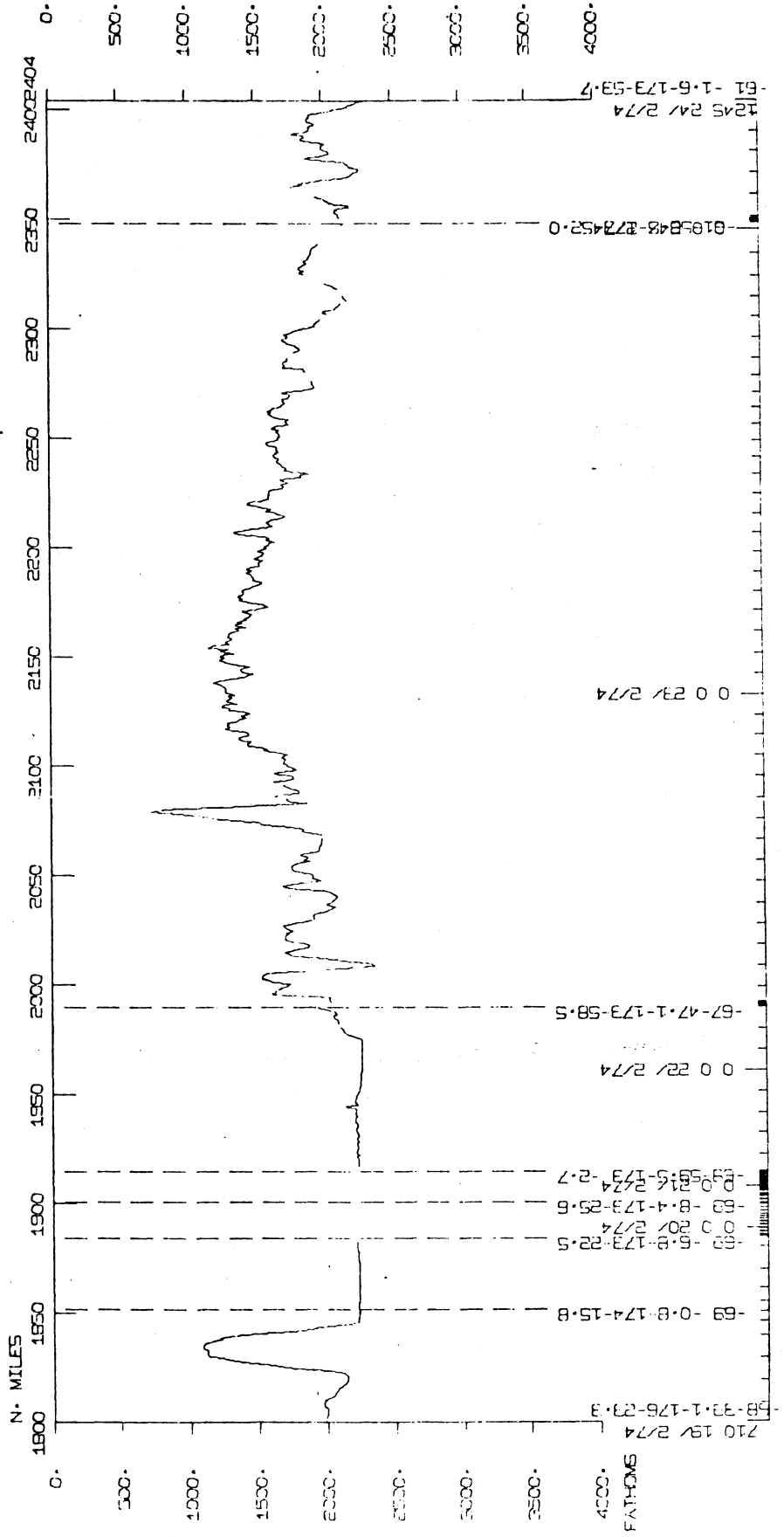
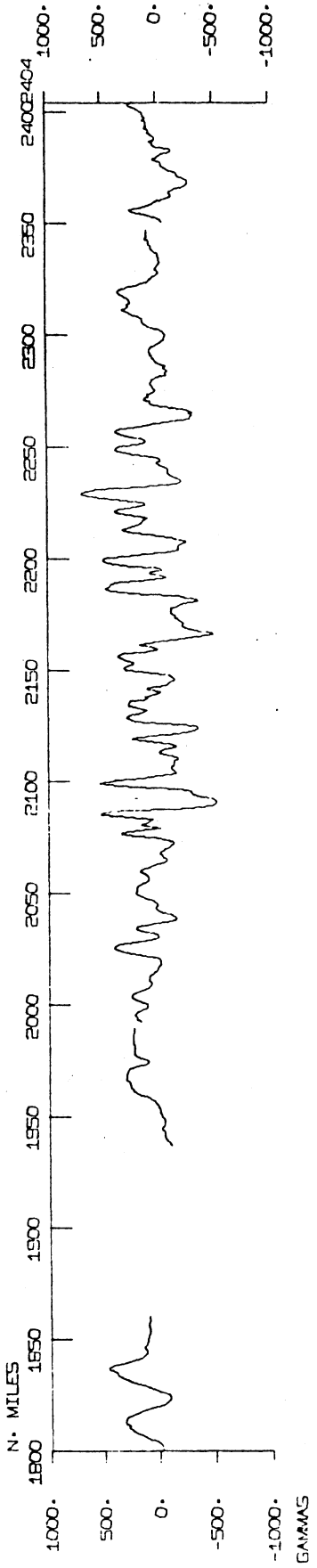


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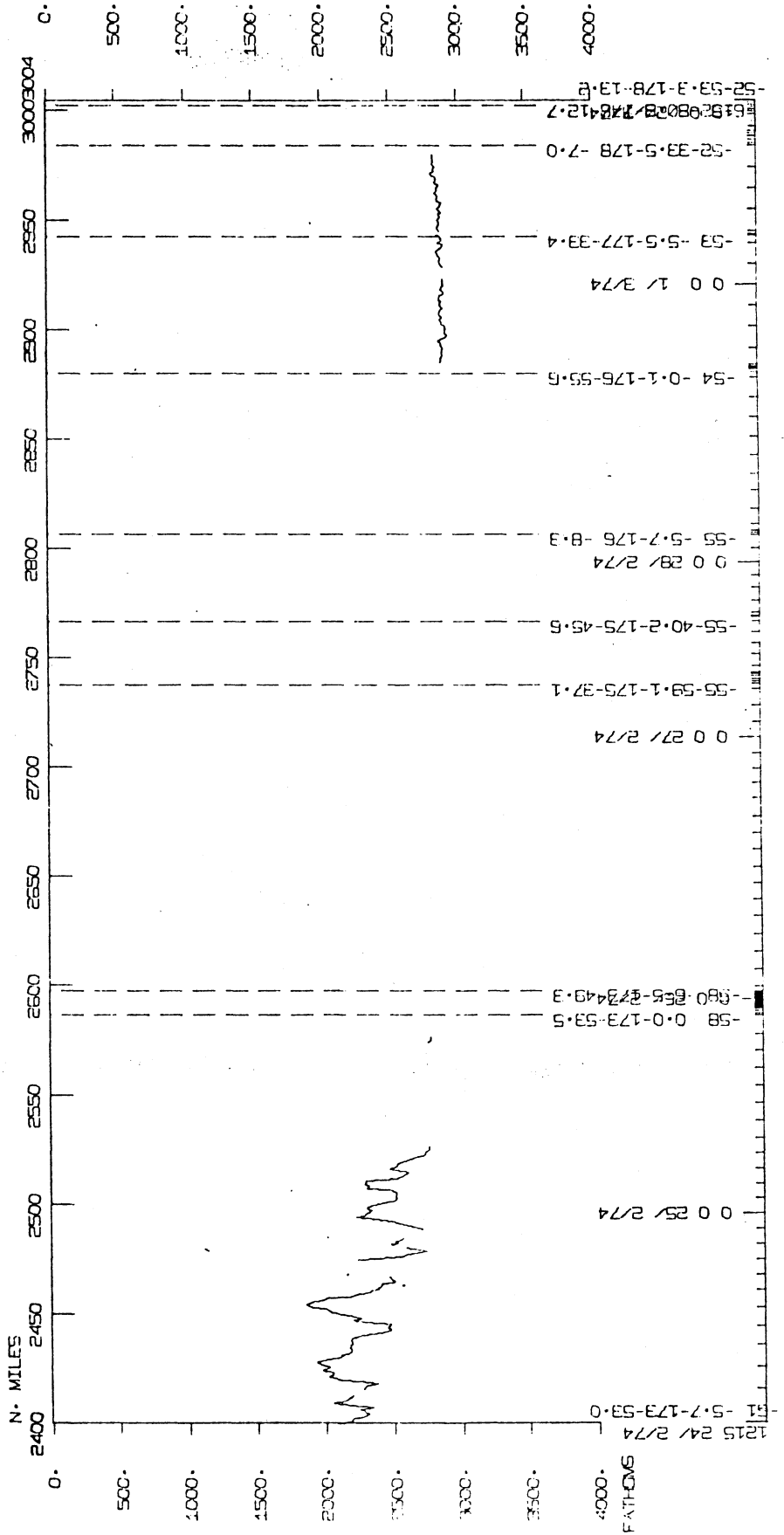
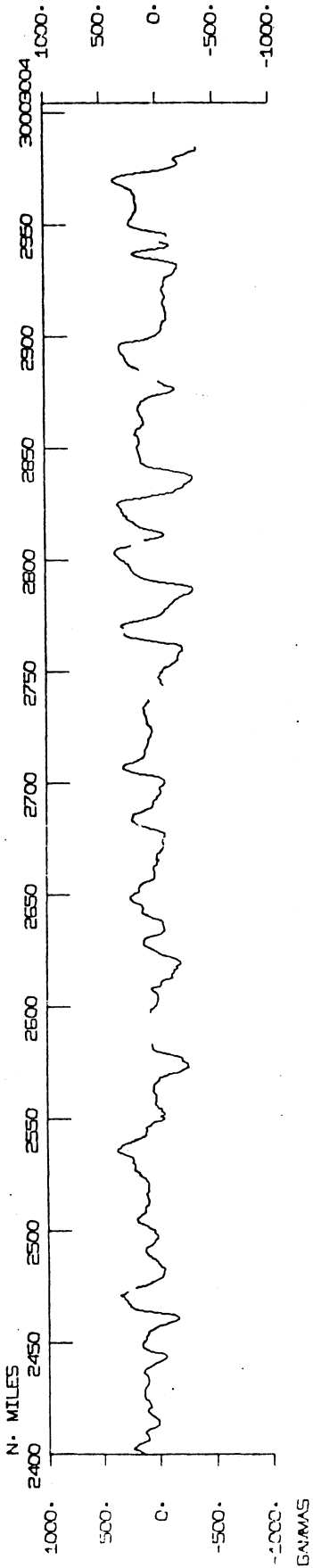




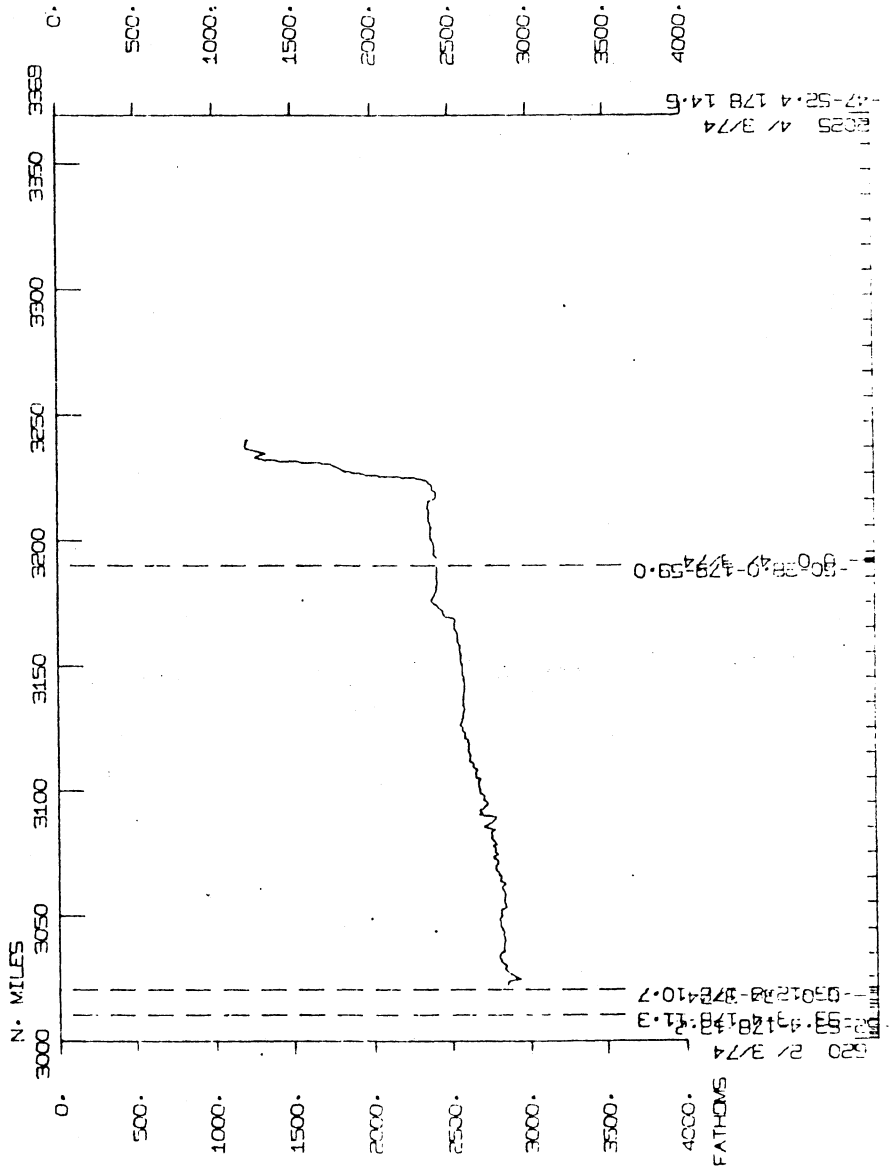
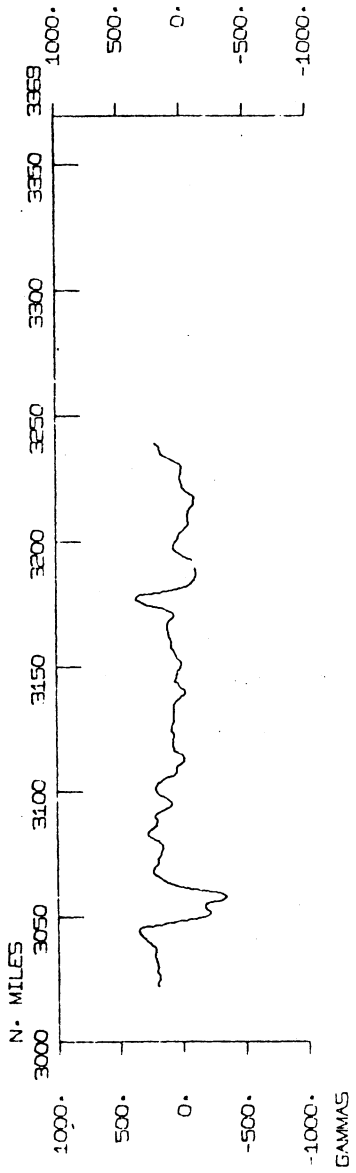
# GROSSING LOG



# GEOSECS LEG 0



GEOSECS LEG 0



## SAMPLE INDEX

## GEOSECS EXPEDITION LEG G

LISTED 04DEC75

0406 050274	LGPT B WELLINGTON, N.Z.	43 375S 173 32E F	GEC SOGMV
1900 060374	LGPT E WELLINGTON, N. Z.	41 525S 176 232E F	GEC SOGMV

## \*\*\*PERSONNEL\*\*\*

0 0 0 0	PECS	EDMOND, J.	SIX	GEC SOGMV
0 0 0 0	PERT	WILSON, R.	GRD	GEC SOGMV
0 0 0 0	PEMT	CUNNINGHAM, L.	GOG	GEC SOGMV
0 0 0 0	PEET	FONG, R.	GOG	GEC SOGMV
0 0 0 0	PEMT	KELLOG, D.	DCP	GEC SOGMV
0 0 0 0	PEET	RENNER, R.	GOG	GEC SOGMV
0 0 0 0	PEMT	SEIFERT, E.	DSU	GEC SOGMV
0 0 0 0	PEMT	TOY, C.	GOG	GEC SOGMV
0 0 0 0	PEMT	WHITEHOUSE, A.	GOG	GEC SOGMV
0 0 0 0	PECT	WYBORNEY, G.	GOG	GEC SOGMV
0 0 0 0	PE	BOS, D.	GOG	GEC SOGMV
0 0 0 0	PE	BREEZE, C.	GOG	GEC SOGMV
0 0 0 0	PE	DIXON, F.	GOG	GEC SOGMV
0 0 0 0	PE	GOBAT, D.	SIX	GEC SOGMV
0 0 0 0	PE	HESTER, A.	GOG	GEC SOGMV
0 0 0 0	PE	HOROWITZ, R.	GOG	GEC SOGMV
0 0 0 0	PE	JAMES, B.	GOG	GEC SOGMV
0 0 0 0	PE	KADAR, S.	WHO	GEC SOGMV
0 0 0 0	PE	LONGINELLI, A.	SIX	GEC SOGMV
0 0 0 0	PE	LOWE, D.	NZD	GEC SOGMV
0 0 0 0	PE	MCGILL, C.	NZD	GEC SOGMV
0 0 0 0	PE	PRICE, W.	GOG	GEC SOGMV
0 0 0 0	PE	SLATER, E.	CAN	GEC SOGMV
0 0 0 0	PE	SUNDQUIST, E.	GOG	GEC SOGMV
0 0 0 0	PE	WILLIAMS, S.	LDO	GEC SOGMV

\*\*\* 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 LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	08DEC75	PAGE 1	CRUISE LEG-SHIP
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 UNDERWAY DATA - CURATOR T.E. CHASE 2ND FLOOR AQUARIUM (EXT.2182)  
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\*\*\*LOG BOOK\*\*\*

0015	080274			LBWP B	GEOPHYSICAL LOG	GDC 54	104S	170 204E	S	GECSO	GMV
0730	040374			LBWP E	GEOPHYSICAL LOG	GDC 49	511S	179 303E	S	GECSO	GMV

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

1836	5 274			NVBP B	BRIDGE PLOT 01	GDC 45	514S	172 441E	S	GECSO	GMV
1900	6 274			NVBP E	BRIDGE PLOT 01	GDC 50	7S	171 307E	S	GECSO	GMV
2100	6 274			NVBP B	BRIDGE PLOT 02	GDC 50	216S	171 251E	S	GECSO	GMV
1500	7 274			NVBP E	BRIDGE PLOT 02	GDC 53	41S	170 559E	S	GECSO	GMV
1800	7 274			NVBP B	BRIDGE PLOT 03	GDC 53	268S	170 518E	S	GECSO	GMV
1048	9 274			NVBP E	BRIDGE PLOT 03	GDC 56	236S	170 40E	S	GECSO	GMV
1940	9 274			NVBP B	BRIDGE PLOT 04	GDC 56	409S	170 66E	S	GECSO	GMV
625	14 274			NVBP E	BRIDGE PLOT 04	GDC 59	255S	170 38E	S	GECSO	GMV
625	14 274			NVBP B	BRIDGE PLOT 05	GDC 59	255S	170 38E	S	GECSO	GMV
1841	15 274			NVBP E	BRIDGE PLOT 05	GDC 62	297S	170 64E	S	GECSO	GMV
2045	15 274			NVBP B	BRIDGE PLOT 06	GDC 62	491S	170 31E	S	GECSO	GMV
545	17 274			NVBP E	BRIDGE PLOT 06	GDC 65	152S	171 25E	S	GECSO	GMV
545	17 274			NVBP B	BRIDGE PLOT 07	GDC 65	152S	171 25E	S	GECSO	GMV
24	19 274			NVBP E	BRIDGE PLOT 07	GDC 67	580S	179 4W	S	GECSO	GMV
900	19 274			NVBP B	BRIDGE PLOT 08	GDC 68	454S	175 342W	S	GECSO	GMV
147	22 274			NVBP E	BRIDGE PLOT 08	GDC 67	588S	173 497W	S	GECSO	GMV
349	22 274			NVBP B	BRIDGE PLOT 09	GDC 67	473S	173 585W	S	GECSO	GMV
336	23 274			NVBP E	BRIDGE PLOT 09	GDC 64	542S	174 83W	S	GECSO	GMV
336	23 274			NVBP B	BRIDGE PLOT 10	GDC 64	542S	174 83W	S	GECSO	GMV
604	24 274			NVBP E	BRIDGE PLOT 10	GDC 61	549S	173 535W	S	GECSO	GMV
604	24 274			NVBP B	BRIDGE PLOT 11	GDC 61	549S	173 535W	S	GECSO	GMV
2300	24 274			NVBP E	BRIDGE PLOT 11	GDC 59	376S	173 497W	S	GECSO	GMV
2300	24 274			NVBP B	BRIDGE PLOT 12	GDC 59	376S	173 497W	S	GECSO	GMV
315	27 274			NVBP E	BRIDGE PLOT 12	GDC 55	593S	175 370W	S	GECSO	GMV
315	27 274			NVBP B	BRIDGE PLOT 13	GDC 55	593S	175 370W	S	GECSO	GMV
1930	28 274			NVBP E	BRIDGE PLOT 13	GDC 54	5S	176 582W	S	GECSO	GMV
1930	28 274			NVBP B	BRIDGE PLOT 14	GDC 54	5S	176 582W	S	GECSO	GMV
830	3 374			NVBP E	BRIDGE PLOT 14	GDC 52	358S	178 296W	S	GECSO	GMV

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210	8	274		DPRT B GDR 12 KHZ R-01		GDC 54	269S	170 137E	S GECSOGMV
700	8	274		DPRT E GDR 12 KHZ R-01		GDC 55	41S	170 65E	S GECSOGMV
937	13	274		DPRT B GDR 12 KHZ R-02		GDC 57	563S	169 141E	S GECSOGMV
1500	13	274		DPRT E GDR 12 KHZ R-02		GDC 58	448S	169 590E	S GECSOGMV
1840	13	274		DPRT B GDR 12 KHZ R-03		GDC 58	469S	170 16E	S GECSOGMV
2256	13	274		DPRT E GDR 12 KHZ R-03		GDC 59	275S	170 0E	S GECSOGMV
0645	14	274		DPRT B GDR 12 KHZ R-04		GDC 59	276S	170 30E	S GECSOGMV
2055	14	274		DPRT E GDR 12 KHZ R-04		GDC 61	276S	170 41E	S GECSOGMV
724	15	274		DPRT B GDR 12 KHZ R-05		GDC 61	305S	170 130E	S GECSOGMV
1024	16	274		DPRT E GDR 12 KHZ R-05		GDC 64	74S	169 533E	S GECSOGMV
1305	16	274		DPRT B GDR 12 KHZ R-06		GDC 64	81S	169 546E	S GECSOGMV
1613	17	274		DPRT E GDR 12 KHZ R-06		GDC 66	42S	173 371E	S GECSOGMV
207	18	274		DPRT B GDR 12 KHZ R-07		GDC 66	36S	173 458E	S GECSOGMV
1725	19	274		DPRT E GDR 12 KHZ R-07		GDC 69	68S	173 225W	S GECSOGMV
1920	21	274		DPRT B GDR 12 KHZ R-08		GDC 68	587S	173 33W	S GECSOGMV
300	22	274		DPRT E GDR 12 KHZ R-08		GDC 67	475S	173 582W	S GECSOGMV
912	22	274		DPRT B GDR 12 KHZ R-09		GDC 67	494S	173 585W	S GECSOGMV
1530	22	274		DPRT E GDR 12 KHZ R-09		GDC 66	496S	174 40W	S GECSOGMV
1541	22	274		DPRT B GDR 12 KHZ R-10		GDC 66	479S	174 42W	S GECSOGMV
6	24	274		DPRT E GDR 12 KHZ R-10		GDC 61	575S	173 526W	S GECSOGMV
700	24	274		DPRT B GDR 12 KHZ R-11		GDC 61	542S	173 524W	S GECSOGMV
529	25	274		DPRT E GDR 12 KHZ R-11		GDC 58	523S	173 466W	S GECSOGMV
2012	28	274		DPRT B GDR 12 KHZ R-12		GDC 53	599S	176 589W	S GECSOGMV
215	1	374		DPRT E GDR 12 KHZ R-12		GDC 53	57S	177 333W	S GECSOGMV
450	1	374		DPRT B GDR 12 KHZ R-13		GDC 53	74S	177 327W	S GECSOGMV
610	1	374		DPRT E GDR 12 KHZ R-13		GDC 52	573S	177 438W	S GECSOGMV
610	1	374		DPRT B GDR 12 KHZ R-14		GDC 52	573S	177 438W	S GECSOGMV
900	1	374		DPRT E GDR 12 KHZ R-14		GDC 52	336S	178 68W	S GECSOGMV
440	3	374		DPRT B GDR 12 KHZ R-15		GDC 53	117S	178 115W	S GECSOGMV
2128	3	374		DPRT E GDR 12 KHZ R-15		GDC 50	383S	179 584W	S GECSOGMV
249	4	374		DPRT B GDR 12 KHZ R-16		GDC 50	353S	179 599E	S GECSOGMV
730	4	374		DPRT E GDR 12 KHZ R-16		GDC 49	508S	179 300E	S GECSOGMV

\*\*\*FATHOGRAMS \*\*\*

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

6	8	274		MGR	B MAGNETICS R-01	GDC 54	103S	170 203E	S GECSOGMV
720	4	374		MGR	E MAGNETICS R-01	GDC 49	519S	179 306E	S GECSOGMV

## \*\*\*GEOCHEMICAL STATION-LARGE VOLUME\*\*\*

146	10	274		GCLV	B GEOSECS STA 282	GOG 57	292S	169 474E	S GECSOGMV
928	13	274		GCLV	E GEOSECS STA 282	GOG 57	552S	169 132E	S GECSOGMV
1725	19	274		GCLV	B GEOSECS STA 287	GOG 69	68S	173 225W	S GECSOGMV
1914	21	274		GCLV	E GEOSECS STA 287	GOG 68	597S	173 25W	S GECSOGMV
1210	25	274		GCLV	B GEOSECS STA 290	GOG 58	0S	173 535W	S GECSOGMV
840	26	274		GCLV	E GEOSECS STA 290	GOG 58	65S	173 493W	S GECSOGMV
912	1	374		GCLV	B GEOSECS STA 293	GOG 52	336S	178 70W	S GECSOGMV
427	3	374		GCLV	E GEOSECS STA 293	GOG 53	130S	178 107W	S GECSOGMV

## \*\*\*GEOCHEMICAL STATION-SMALL VOLUME\*\*\*

1823	8	274		GCSV	B GEOSECS STA 280	GOG 56	13S	170 19E	S GECSOGMV
723	9	274		GCSV	E GEOSECS STA 280	GOG 55	579S	170 119E	S GECSOGMV
1300	9	274		GCSV	B GEOSECS STA 281	GOG 56	399S	169 558E	S GECSOGMV
1900	9	274		GCSV	E GEOSECS STA 281	GOG 56	384S	170 65E	S GECSOGMV
2100	14	274		GCSV	B GEOSECS STA 285	GOG 61	280S	170 41E	S GECSOGMV
712	15	274		GCSV	E GEOSECS STA 285	GOG 61	301S	170 129E	S GECSOGMV
1613	17	274		GCSV	B GEOSECS STA 286	GOG 66	42S	173 371E	S GECSOGMV
200	18	274		GCSV	E GEOSECS STA 286	GOG 66	32S	173 446E	S GECSOGMV
300	22	274		GCSV	B GEOSECS STA 288	GOG 67	475S	173 582W	S GECSOGMV
912	22	274		GCSV	E GEOSECS STA 288	GOG 67	494S	173 585W	S GECSOGMV
14	24	274		GCSV	B GEOSECS STA 289	GOG 61	573S	173 525W	S GECSOGMV
652	24	274		GCSV	E GEOSECS STA 289	GOG 61	546S	173 525W	S GECSOGMV
315	27	274		GCSV	B GEOSECS STA 291	GOG 55	593S	175 370W	S GECSOGMV
1240	27	274		GCSV	E GEOSECS STA 291	GOG 56	1S	175 271W	S GECSOGMV
1330	28	274		GCSV	B GEOSECS STA 292	GOG 54	2S	176 559W	S GECSOGMV
2007	28	274		GCSV	E GEOSECS STA 292	GOG 54	1S	176 587W	S GECSOGMV
2128	3	374		GCSV	B GEOSECS STA 294	GOG 50	383S	179 584W	S GECSOGMV
240	4	374		GCSV	E GEOSECS STA 294	GOG 50	358S	179 597W	S GECSOGMV

TIME GMT	DATE D.M.Y.	TIME TZ LOC LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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## \*\*\*SALINITY, TEMPERATURE, DEPTH\*\*\*

717	8	274	GCTD B	GEOSECS STA 279	GOG 55	62S	170 68E	S GECSOGMV
1045	8	274	GCTD E	GEOSECS STA 279	GOG 55	63S	170 119E	S GECSOGMV
1500	13	274	GCTD B	GEOSECS STA 283	GOG 58	448S	169 590E	S GECSOGMV
1840	13	274	GCTD E	GEOSECS STA 283	GOG 58	469S	170 16E	S GECSOGMV
2256	13	274	GCTD B	GEOSECS STA 284	GOG 59	275S	170 0E	S GECSOGMV
628	14	274	GCTD E	GEOSECS STA 284	GOG 59	255S	170 37E	S GECSOGMV

## \*\*\*HEAT FLOW\*\*\*

512	15	274	HF2M	HEAT FLOW	4010M	MPL 61	301S 170 105E	S GECSOGMV
1259	15	274	HF2M	HEAT FLOW	3774M	MPL 62	57S 170 70E	S GECSOGMV
1749	15	274	HF2M	HEAT FLOW	2207M	MPL 62	294S 170 57E	S GECSOGMV
2300	15	274	HF2M	HEAT FLOW	2375M	MPL 62	579S 170 23E	S GECSOGMV
505	16	274	HF2M	HEAT FLOW	2375M	MPL 63	334S 170 6E	S GECSOGMV
1346	16	274	HF2M	HEAT FLOW	3083M	MPL 64	135S 169 521E	S GECSOGMV
1908	16	274	HF2M	HEAT FLOW	3188M	MPL 64	372S 169 591E	S GECSOGMV
1335	21	274	HF2M	HEAT FLOW	4149M	MPL 69	10S 173 71W	S GECSOGMV
439	22	274	HF2M	HEAT FLOW	3809M	MPL 67	477S 173 585W	S GECSOGMV
543	24	274	HF2M	HEAT FLOW 1	3951M	MPL 61	550S 173 539W	S GECSOGMV
850	27	274	HF2M	HEAT FLOW 1	5043M	MPL 56	0S 175 292W	S GECSOGMV
1818	28	274	HF2M	HEAT FLOW 1	5163M	MPL 54	5S 176 588W	S GECSOGMV
318	28	274	HF2M	HEAT FLOW 1	5295M	MPL 55	52S 176 74W	S GECSOGMV
1437	28	274	HF2M	HEAT FLOW 1	5401M	MPL 54	8S 176 576W	S GECSOGMV
336	1	374	HF2M	HEAT FLOW 1	5397M	MPL 53	61S 177 324W	S GECSOGMV
27	2	374	HF2M	HEAT FLOW 1	5275M	MPL 52	479S 178 120W	S GECSOGMV

## \*\*\*CORES\*\*\*

1012	2	374	COG	CORE 1	5299M	MPL 52	568S 178 119W	S GECSOGMV
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## \*\*\*BATHY THERMOGRAPH\*\*\*

0	8	274	BTX	NO. SAMPLES = 3	BTS 54	105S	170 199E	S GECSOGMV
0	9	274	BTX	NO. SAMPLES = 1	BTS 55	600S	170 61E	S GECSOGMV
0	10	274	BTX	NO. SAMPLES = 1	BTS 57	144S	169 543E	S GECSOGMV
0	13	274	BTX	NO. SAMPLES = 3	BTS 57	511S	169 196E	S GECSOGMV
0	14	274	BTX	NO. SAMPLES = 2	BTS 59	279S	170 30E	S GECSOGMV
0	15	274	BTX	NO. SAMPLES = 1	BTS 61	292S	170 54E	S GECSOGMV
0	16	274	BTX	NO. SAMPLES = 1	BTS 62	575S	170 30E	S GECSOGMV
0	17	274	BTX	NO. SAMPLES = 1	BTS 64	521S	169 522E	S GECSOGMV
0	18	274	BTX	NO. SAMPLES = 3	BTS 66	32S	173 450E	S GECSOGMV