

GEOPHYSICAL STUDIES OF THE GULF OF ADEN,
GULF OF OMAN AND OWEN BASIN (ARABIAN SEA)

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Data collected by R. R. S. Shackleton
Cruises 3, 4/75

April - May 1975

I. O. S. Data Report No. 13

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Personnel records of the
Department of the Interior
Bureau of Land Management
Washington, D.C.

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Department of the Interior
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Washington, D.C.

ERRATUM

PAGE 14

(3) Section B Should read

This section contains manual copies of navigation track charts generated by the IBM 1130 computer. The tracks were plotted from two minute positions and are scaled at 1:1000,000 at the standard latitude. Each hour is marked on the track, annotated with hour and day number every six hours. The positions of accepted satellite fixes are annotated in hours and minutes.

(4) Section C Should read

This section contains tabulated six minute listings of the uncorrected magnetic and bathymetric data, and reduced magnetic, gravity and bathymetric data. All data has been produced from the data files. The data file is searched for significant maxima or minima not sampled on the six minute interval and these are written onto the field of the previous six minute sample followed by an asterisk and the time recorded as minutes past the hour.

This document describes geophysical data collected by the Deep Sea Floor Group of the Institute of Oceanographic Sciences (Wormley), and continues the series of I. O. S. Data reports on geophysical cruises. The series is intended to provide an efficient means of documenting the data not only for internal use but also for distribution to the scientific community. On citing this report in a bibliography the reference should be followed by the words "UNPUBLISHED MANUSCRIPT" in accordance with accepted bibliographic custom.

PREVIOUS REPORTS IN THIS SERIES

- JONES M. T. , 1972. Bathymetric and Magnetic Traverses in the area of Rockall Bank and King's Trough; R. R. S. "Discovery" Cruise 33, National Institute of Oceanography Data Report Geophysics 1, 21pp and figs. (Unpublished manuscript).
- JONES M. T. , 1973. Bathymetric and Magnetic Traverses across the North Atlantic; N. C. Marcel Bayard, Cantat II Ocean Survey Cruise, National Institute of Oceanography Data Report Geophysics 2, 24pp and figs. (Unpublished manuscript).
- OLLIFF N. J. , 1973. "GLORIA" in Peake and Freen Deeps and on the Azores-Gibraltar Rise; R. R. S. "Discovery" Cruise 43, National Institute of Oceanography Data Report Geophysics 3, 20pp and figs. (Unpublished manuscript).
- OLLIFF, N. J. , 1973. Bathymetric and Magnetic Traverses over the Rockall Plateau; R. R. S. "Discovery" Cruise 47, National Institute of Oceanography Data Report Geophysics 4, 20pp and figs. (Unpublished manuscript).
- MILES, P. R. , 1976. "GLORIA" studies of the Mid-Atlantic Ridge (FAMOUS area) and the Azores-Gibraltar Plate Boundary; R. R. S. "Discovery" Cruise 54, Institute of Oceanographic Sciences Data Report No. 8, 22pp and figs. (Unpublished manuscript).
- MILES, P. R. , 1976. Bathymetric and Magnetic Traverses over the South West Margin of the Rockall Plateau; R. R. S. "Discovery" Cruise 60, Institute of Oceanographic Sciences Data Report No. 9, 23pp and figs. (Unpublished manuscript).
- MILES, P. R. , 1977. "GLORIA" and Geophysical Studies on the Mid-Atlantic Ridge and north of the Azores; R. R. S. "Discovery" Cruise 73, Institute of Oceanographic Sciences Data Report No. 12, 23 pp and figs. (Unpublished manuscript).

ABSTRACT

This report contains magnetic, gravity, seismic and bathymetric data collected by the I. O. S. projects during Cruises 3/75 and 4/75 on R. R. S. Shackleton in April - May 1975. The profiles and track charts were all generated automatically from data files set up from the shipboard data logger. Included in the report is a description of methods used in data acquisition and preparation

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SECTION A : 1:2,000,000 Profiles of Reduced Data and PES records

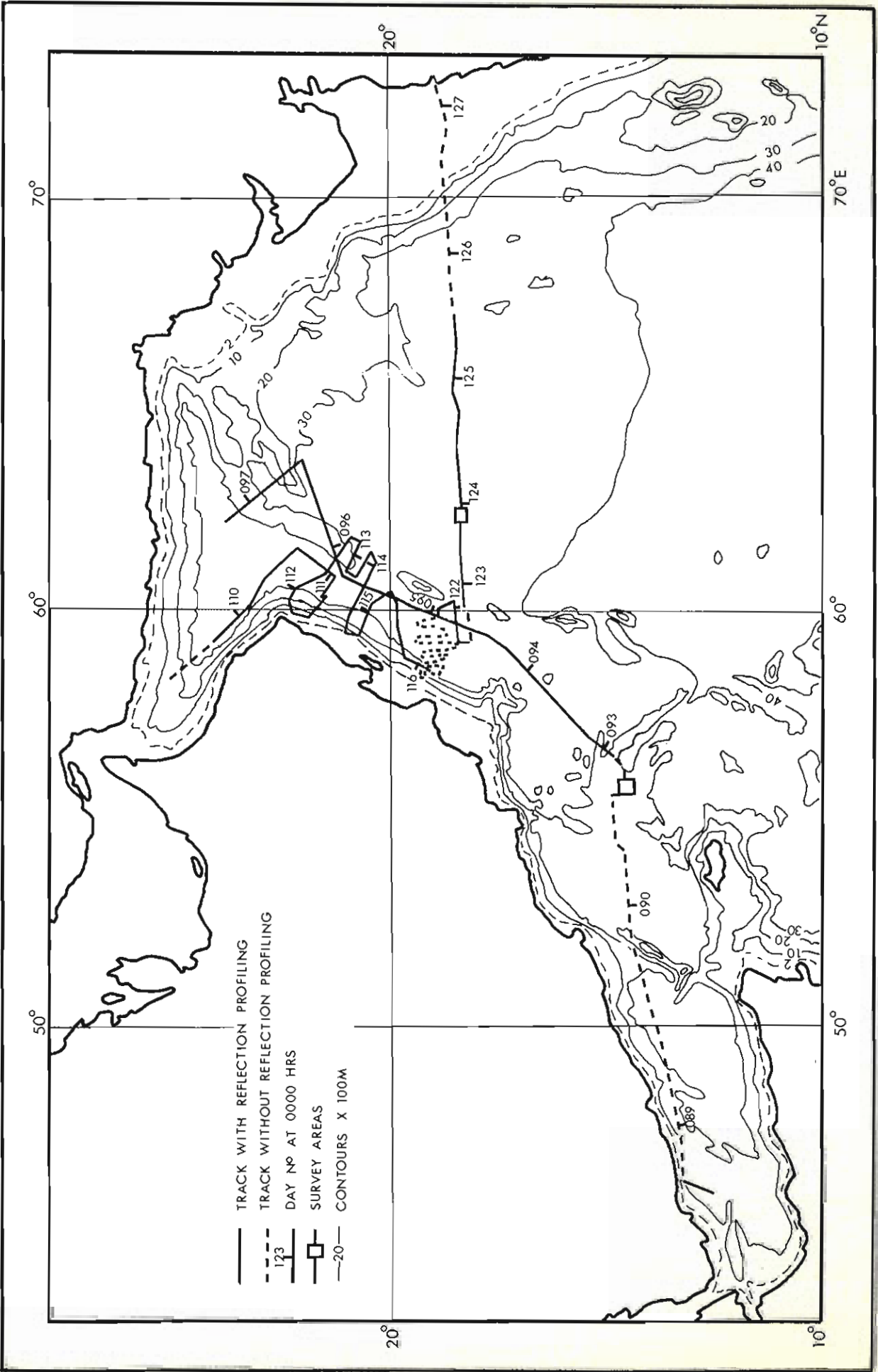
B : 1:1,000,000 Track Charts

C : Data Lists

D : Station Position Tables

E : Seismic Reflection Records

FIG 1



CRUISE OBJECTIVES

Cruise 3/75

1. Magnetic survey, western Gulf of Aden.
2. Seismic refraction experiment, East Sheba Ridge.
3. Subduction zone off the Makran coast, Gulf of Oman.
4. Reflection profiles across the Murray Ridge.
5. Passage track over Owen Basin.

Cruise 4/75

6. Geophysical study of the Owen Basin.
7. Organic geochemistry of recent sediments.
8. Other geological sampling.
9. On-line digital processing of seismic profiles.

INSTRUMENTATION

Magnetics: A Varian Type 4937 proton precession magnetometer was operated for most of the cruise. The instrument functioned successfully although the towed fish sustained minor shark bite damage. The data were recorded in analogue form on a chart recorder and also stored in digital form on the shipboard data logger at six second intervals. The chart record occasionally contained noise spikes of unknown origin which could not be connected with the ship's own radio transmission.

Bathymetry: Either an I. O. S. Mark III Precision Echo Sounder and towed fish or a Kelvin Hughes MS38 with hull transducer was used to record continuous soundings on a mifax display at an assumed velocity of 800 fms/sec. Readings were entered into the log book at 10 minute intervals and subsequently manually transferred to the data logger.

Gravimeter: A La Coste-Romberg marine gravimeter was used from Djibouti to Bombay to continuously measure gravity. Cross-coupling and total corrections, spring tension and total gravity values were displayed on a chart recorder and gravity was logged by the data logger. Spring tension and gravity were also output every five minutes on a digital printer.

The generally low sea-states during both cruises probably meant that good quality data were obtained and this is confirmed by preliminary estimates of cross-over differences. The La Coste meter was tied into land base stations at Djibouti, Dubai and Bombay by means of a Worden Educator land gravimeter. The La Coste meter had drifted at a mean rate of +0.048 mgal/day between Djibouti and Bombay. The gravity data was finally corrected for drift and Eötvös correction when the data logger tapes were processed at Barry.

NAVIGATION

The following navigational aids were used:

- (a) Satellite Navigation System using a Magnavox 702CA receiver working in conjunction with the shipboard Hewlett Packard 2100 computer.
- (b) Redifon Omega receiver.

The computer was used throughout the cruise to control the navigation and was used as the prime navaid. The Magnavox Satellite Navigator and Hewlett Packard 2100 computer performed satisfactorily. The only problem was the occasional corruption of the stored computer program which caused satellite passes to be ignored and corrupted ancillary software facilities. This problem was overcome by reloading the program.

During Cruise 4, when a set of satellite alerts was regularly taken to the bridge, there were less poor fixes caused by the ship changing course or speed during a satellite pass.

Overall the fixes given by the satellite navigator were very good even for a satellite having a high or low angle of elevation. The operation of the whole system, considering the high temperature and humidity, was excellent.

The Redifon Omega receiver was switched on throughout the cruises but, due to propagation and station problems, doubtful useful navigational information was obtained from the chart records.

SHIPBOARD ACQUISITION OF DATA

Cruise data was sampled and stored on magnetic tape by the data logger at one second intervals, each logger tape lasting about 14 hours.

Data Logger Tape Format:

Serial Number

Time

Navigational Aids (4 channels)

Ship's Head

Digital Input

A-D channels for Analogue Inputs (6 channels)

Observed Magnetics

La Coste Gravimeter

Loran

Loran

PROCESSING AND EDITING OF DATA

The completed data logger tapes were processed on the portable IBM 1130 computer system at the Institute of Oceanographic Sciences, Shipborne Computer Group, Barry.

Data from each logger tape is initially transferred to the working disk files GEO. . , Fig. 2. Various filtering and transfer routines are used to load the magnetic/bathymetric 6 second sampling files MGEOS, BGEOS plus the general 2 minute data file IIDAS, then to load the working data files MGEOF, BGEOF and IIDAT. Data required unfiltered is entered directly to IIDAT. This data can now be displayed for editing in profile and/or list form using efficient editing routines. The editing procedure involves the identification and removal of data errors and inconsistencies. The reduction of the geophysical data to magnetic anomaly, bouguer anomaly and corrected metres is made using a suite of geophysical programs which reduce and load the data to the permanent data file GEOF. The ship's D. R. navigation stored in NAVF1 by TRACK is merged with the manually entered satellite data in NAVF4 by CADJ to place course corrected navigation in GEOF. Unless automatic echo sounder tracking is used, depths are entered manually into GEOF with the loading program making the necessary calculation concerning Matthews area.

The gravity and magnetic data were reduced using

- (a) The Geodetic Reference System 1967,
- (b) The International Geomagnetic Reference Field 1975.

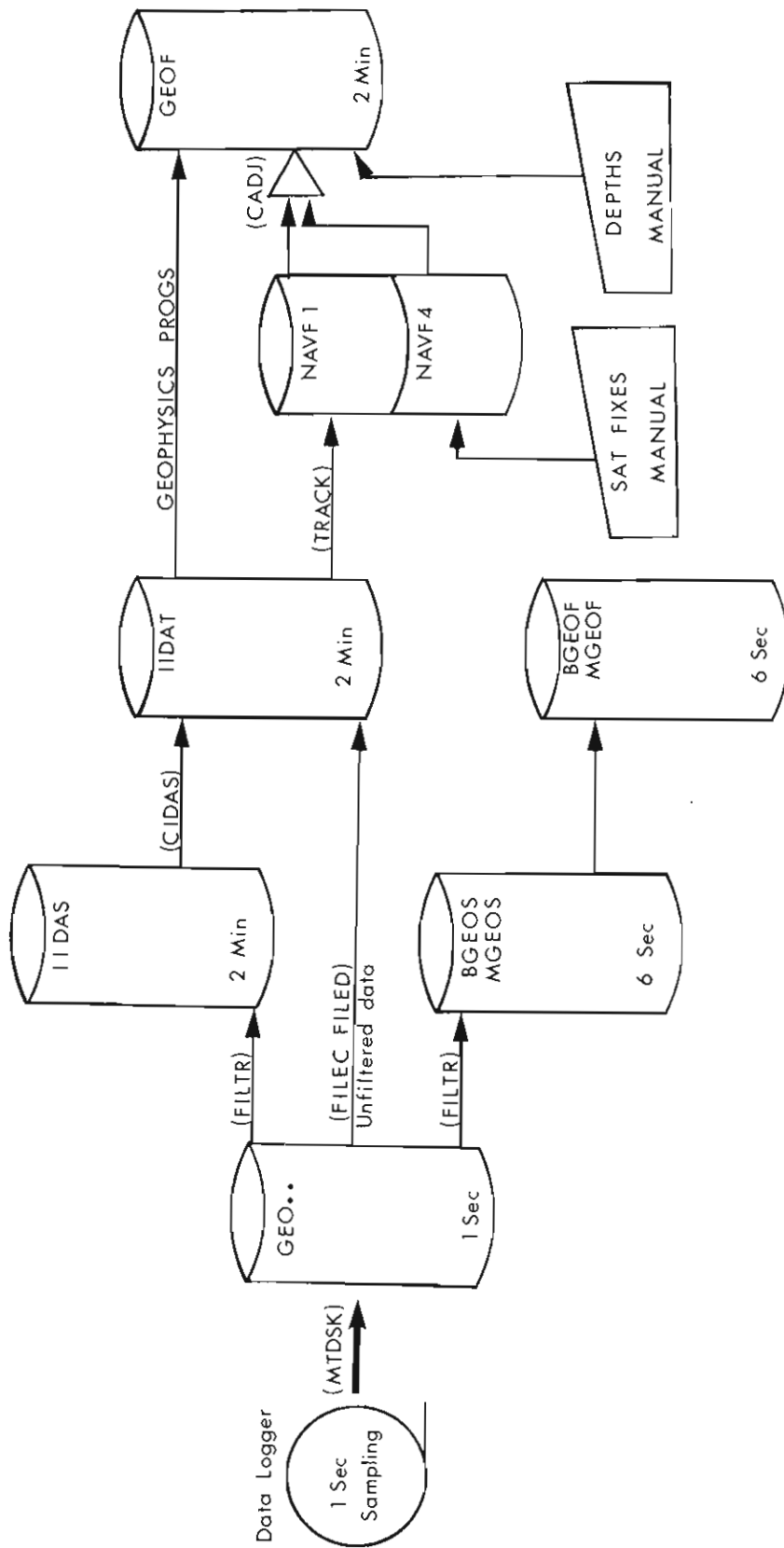


FIG 2 PROCESSING AND EDITING OF DATA

DATA PRESENTATION

This report is intended to meet as effectively as possible the varying requirements of the personnel most likely to make use of the bathymetric, magnetic and seismic data of Shackleton Cruise 3/4/75. Because of the large volume of data involved, it is not considered practical to include listings of the original data files. The data is presented at three levels of processing:

- (a) Summarised listings of raw data;
- (b) Summarised listings of reduced data;
- (c) Profiles of reduced data.

It is intended that when used in conjunction with the 1:1,000,000 track charts this data should be suitable for incorporation into compilation charts or for further computer orientated calculations. For a more direct scientific interpretation of the data, the 1:2,000,000 profiles are supplemented with a track chart at the same scale overlaid on a bathymetric chart. Reduced copies of the original P. E. S. records are also included in the report to enable study of the bathymetry in more detail than is given by either the profiles or the listings.

(1) Profile Location Sheets

The ship's track for cruise 3/4/75 has been manually prepared on a bathymetric chart of 1:2,000,000 at a standard latitude of 33°N. Except for the 500 metre contour, the contour interval is 1000 metres, which illustrates the prominent features of the sea floor relief and provides a context in which to study the profiles presented in Section A. The profiles have been plotted at the same distance scales as the profile location sheets and are identified on the track by a circular figure representing the start of each profile. Changes in day number are also shown on the tracks by a mark at 0000 hrs annotated with the new day number.

(2) Section A

This section contains profiles together with reduced copies of the original P. E. S. records. Magnetic anomaly, corrected depth, gravity anomaly, course-made-good and speed-made-

good were plotted from the edited data files. The parameters are each plotted against distance run along each track in kilometers from the start of a leg, the distance being scaled to a 1:2,000,000 Mercator grid at 33°N enabling the profiles to be overlaid on the profile location sheets. The distance run axis is marked every 10 kilometers and annotated every 50 kilometers; a time axis in G. M. T. is also included so that the profiles can be correlated with the P. E. S. records and tabular listings of data in section B and C. The magnetic anomaly is plotted at a scale of 160 gammas/cm with a nominal range of ± 400 gammas. Each 2 minute magnetic anomaly value is plotted but the pen is lifted each time there is a data gap in excess of 4 minutes. Corrected depth is plotted at a scale of 1400 m/cm with a nominal range of 0-7000 m. The vertical exaggeration of the bathymetric profiles is 14.3 : 1 at 33°N.

Each profile is accompanied on the facing page by a reduced copy of the relevant section of the P. E. S. record. As the P. E. S. records against time and not distance, it is impractical to provide a one-to-one correspondence in horizontal axis scale between the profiles and P. E. S. records. Correlations between the two have to be made by time: the P. E. S. records are therefore annotated with hour marks. The recorded depth phase of the P. E. S. records are also shown, the 100 fathom lines within this phase are discernable on the original record as horizontal lines.

(3) Section B

This section contains tabulated 6 minute listings of the uncorrected magnetic and bathymetric data. All data presented in section B and C has been produced from the data files. The data file is searched for significant maxima or minima not sampled on the six minute interval and these are written onto the field of the previous six minute sample followed by an asterisk and the time recorded as minutes past the hour.

(4) Section C

This section tabulates six minute listings of the reduced magnetic, gravity and bathymetric data. Magnetic anomaly (total magnetic field minus the International Geomagnetic Reference field), gravity anomaly and the corrected depth, both in fathoms and metres, are read from data files.

(5) Section D

Station position tables.

(6) Section E

Seismic reflection records.

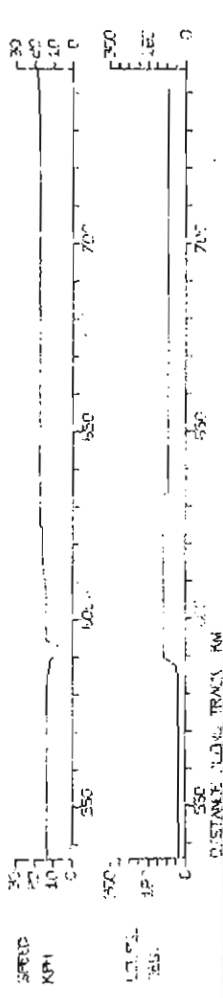
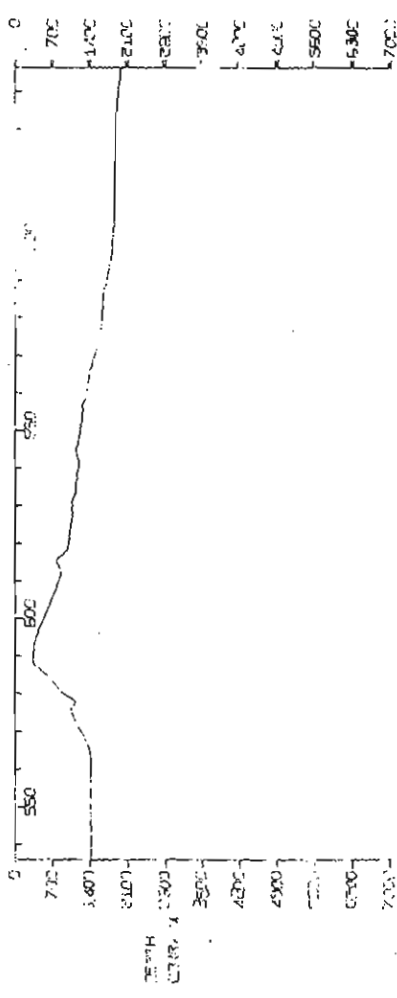
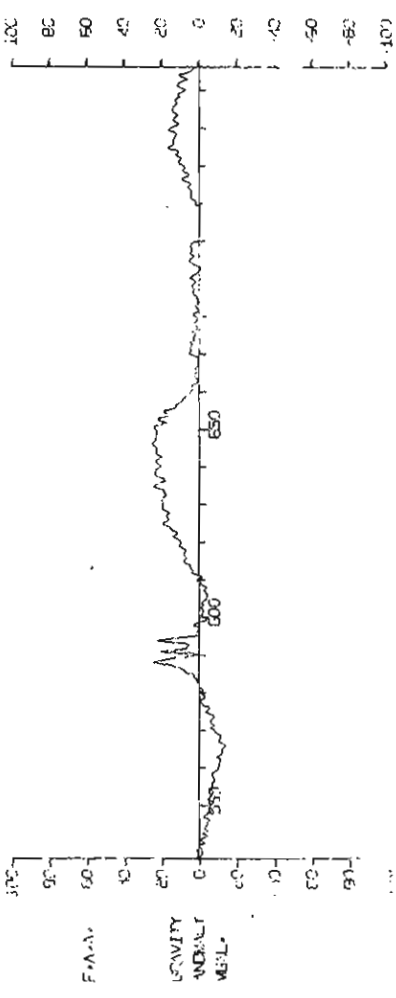
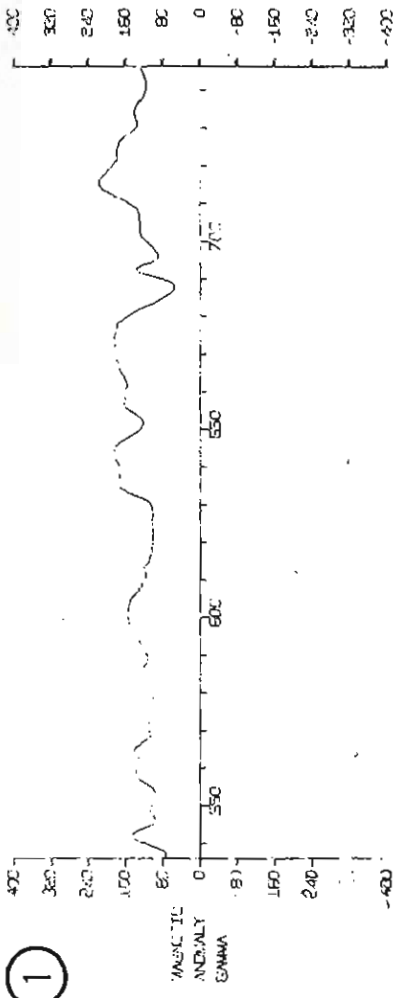
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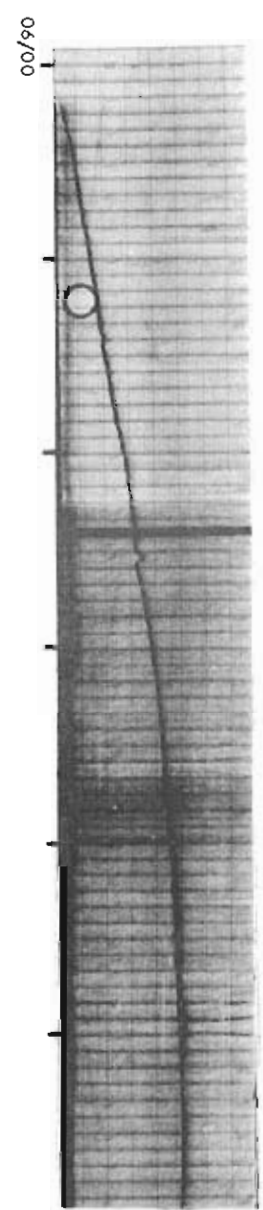
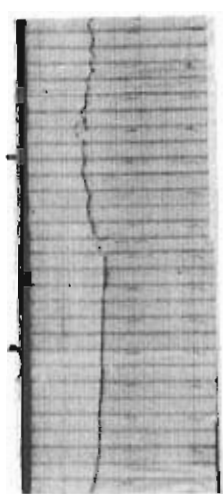
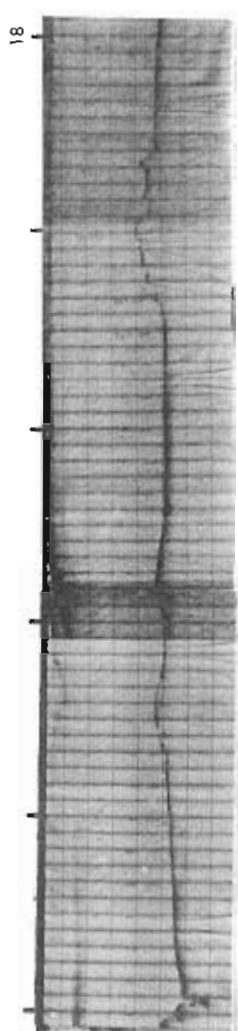
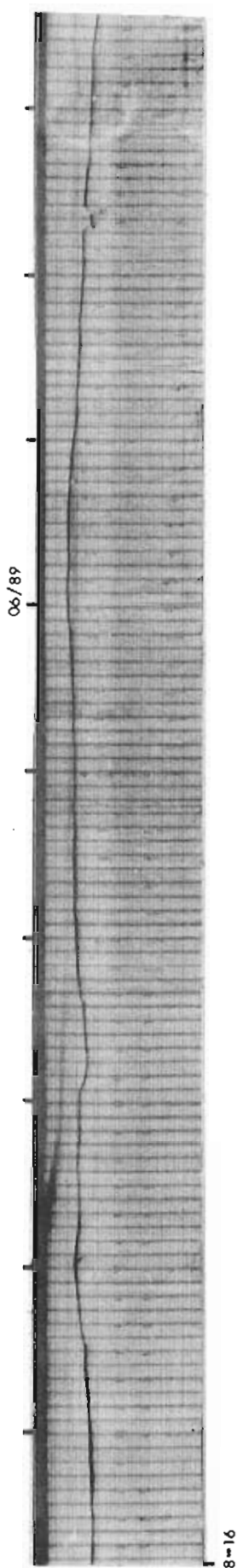
SECTION A

Precision Echo-Sounder Records
1:2,000,000 Profiles of Reduced Data

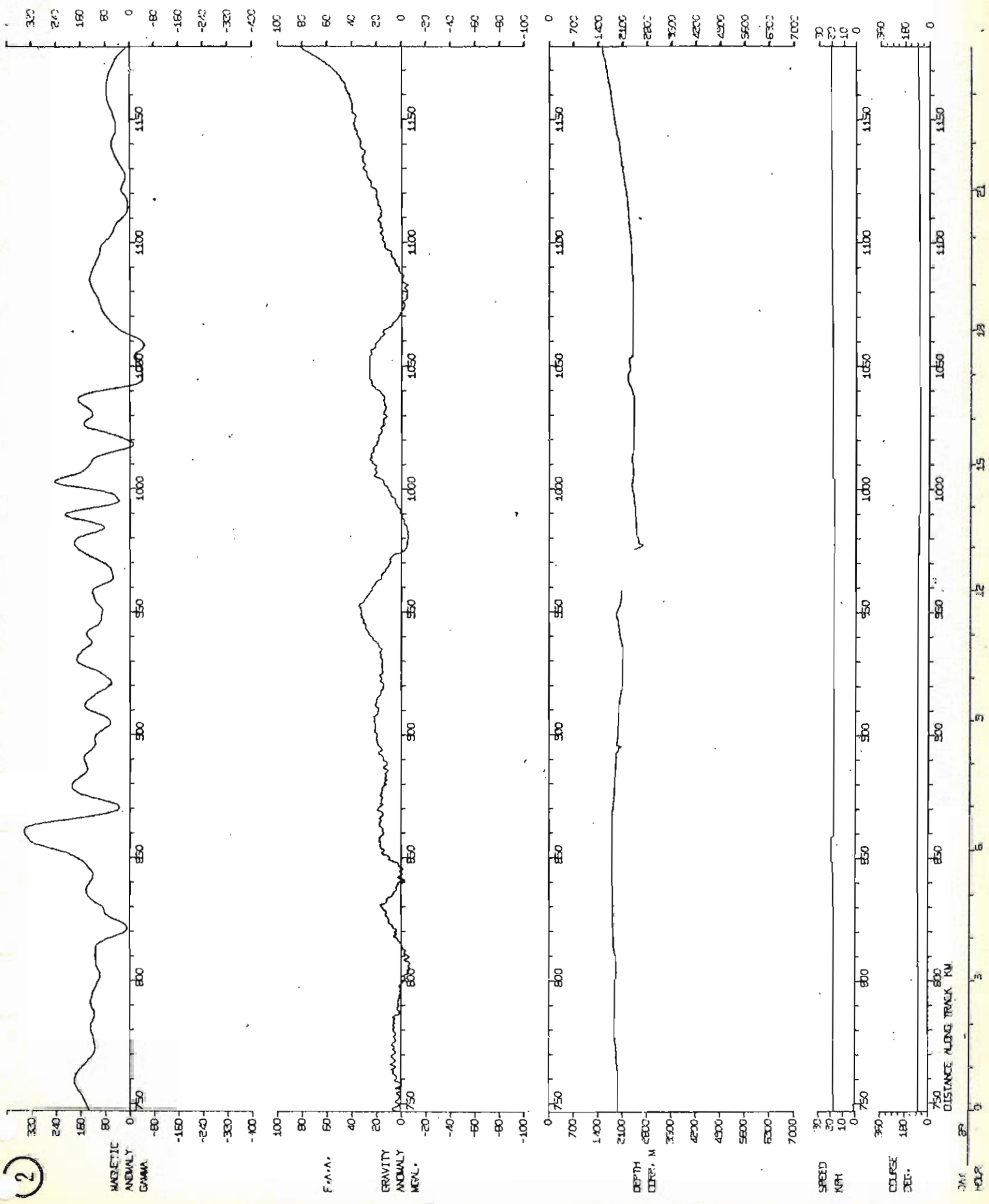
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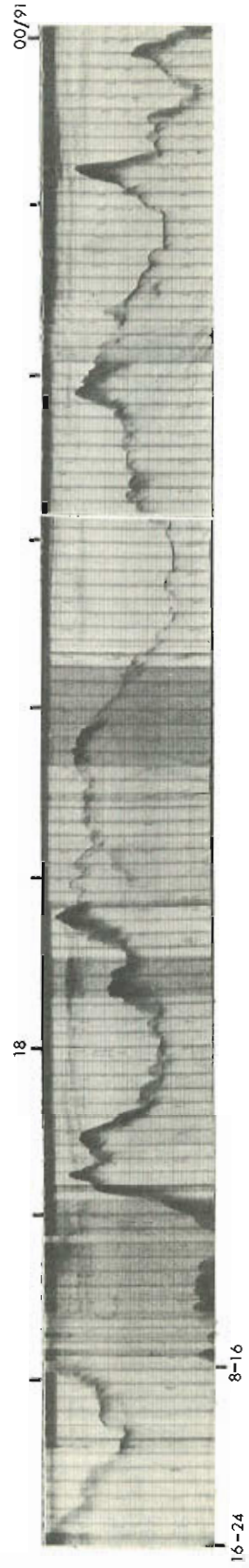
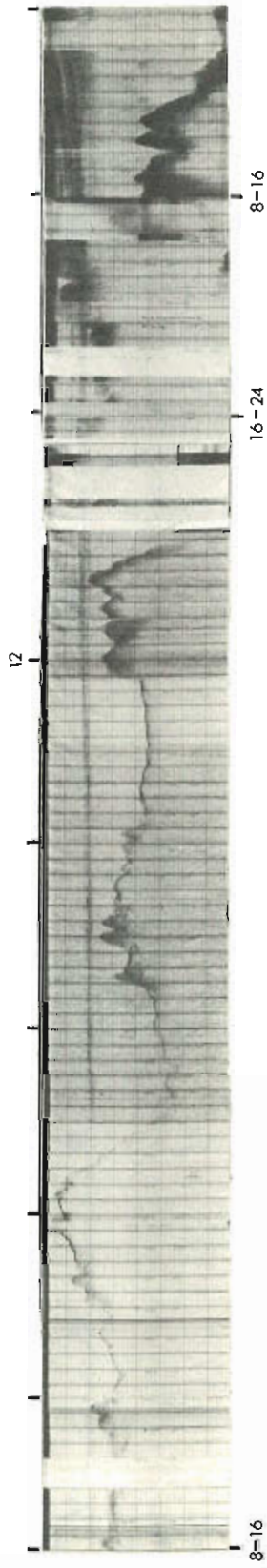
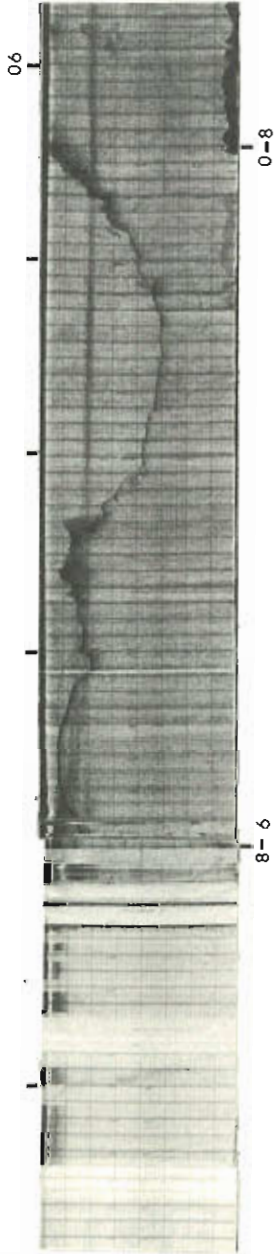


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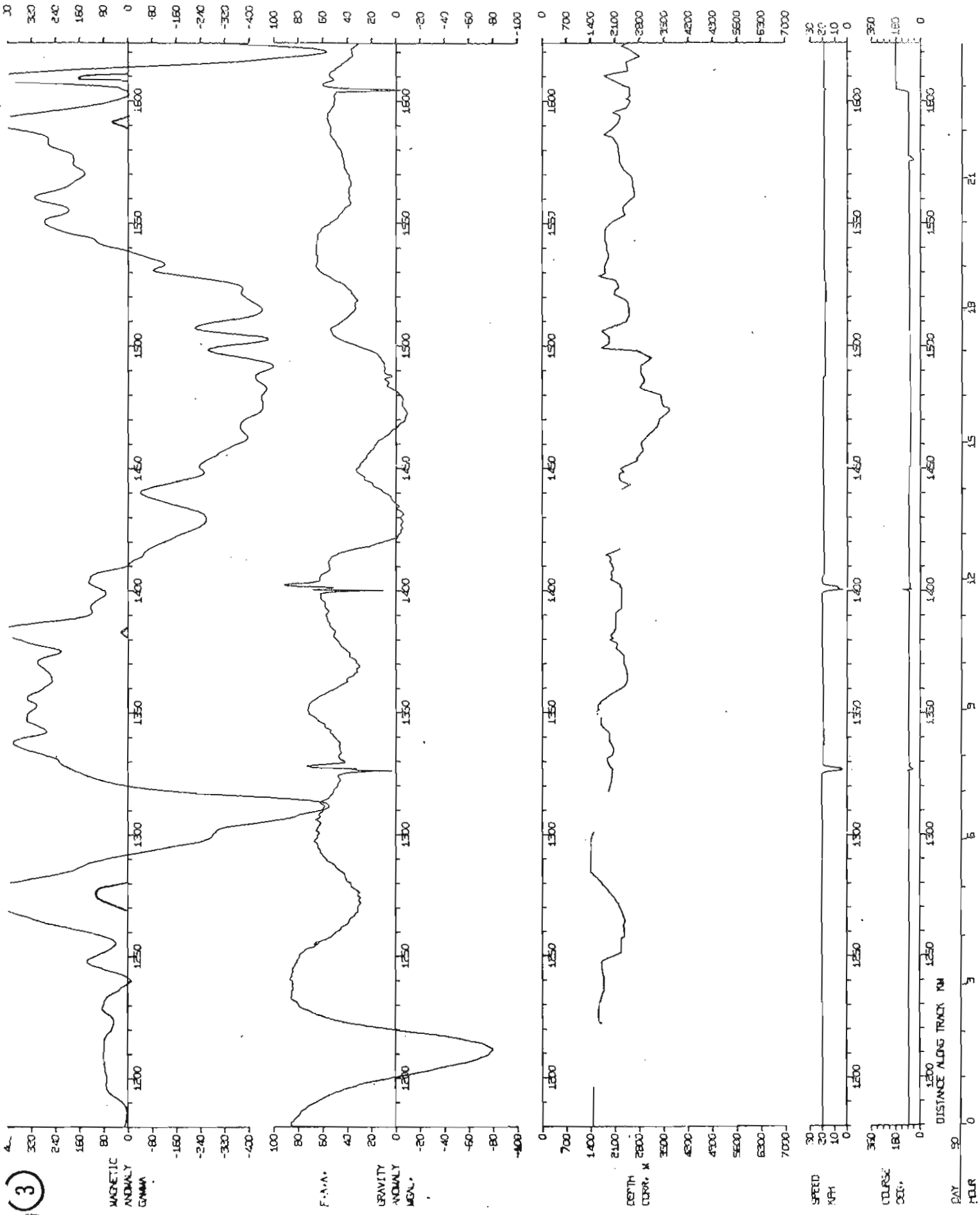


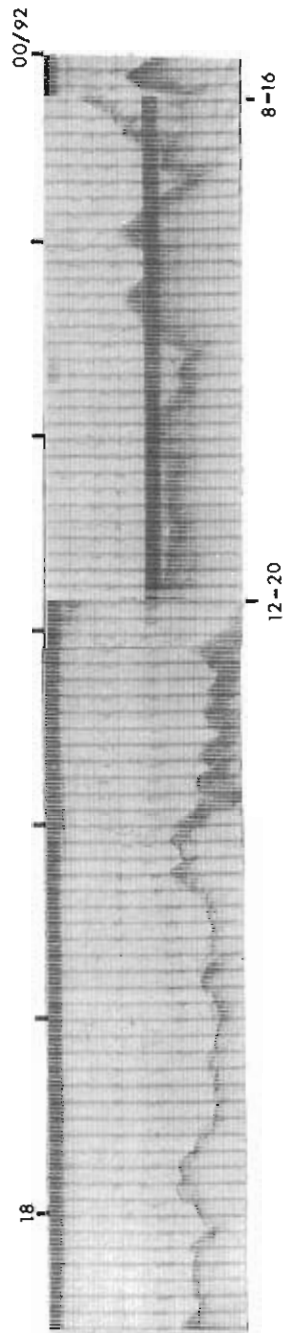
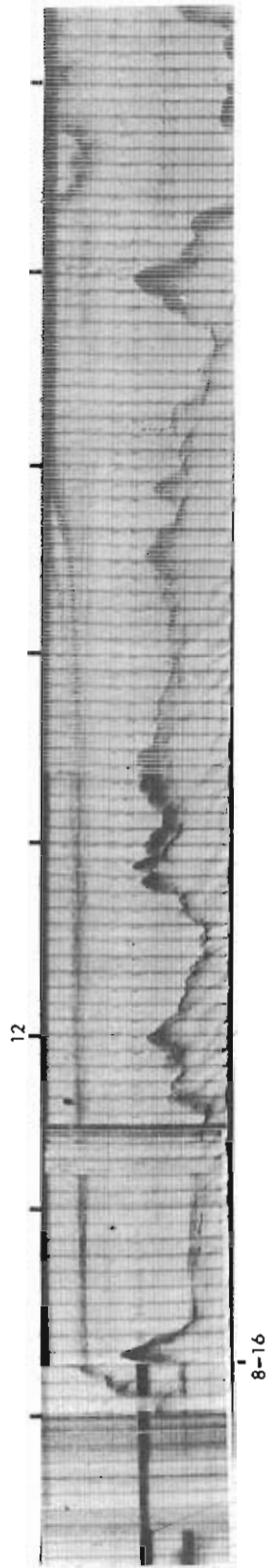
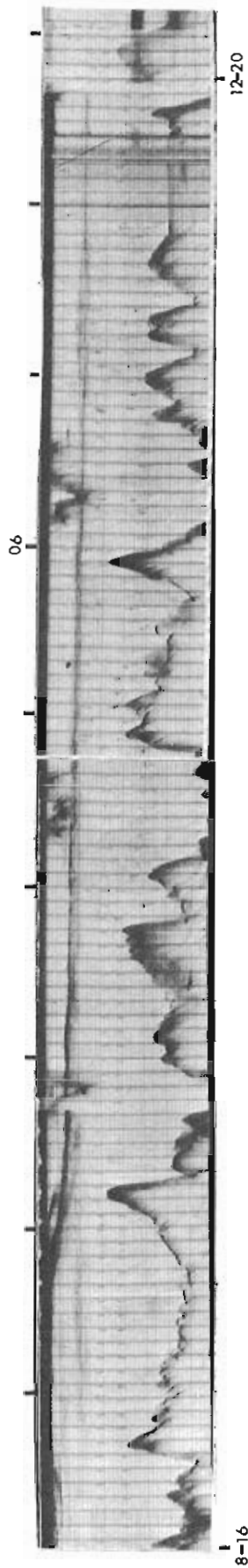
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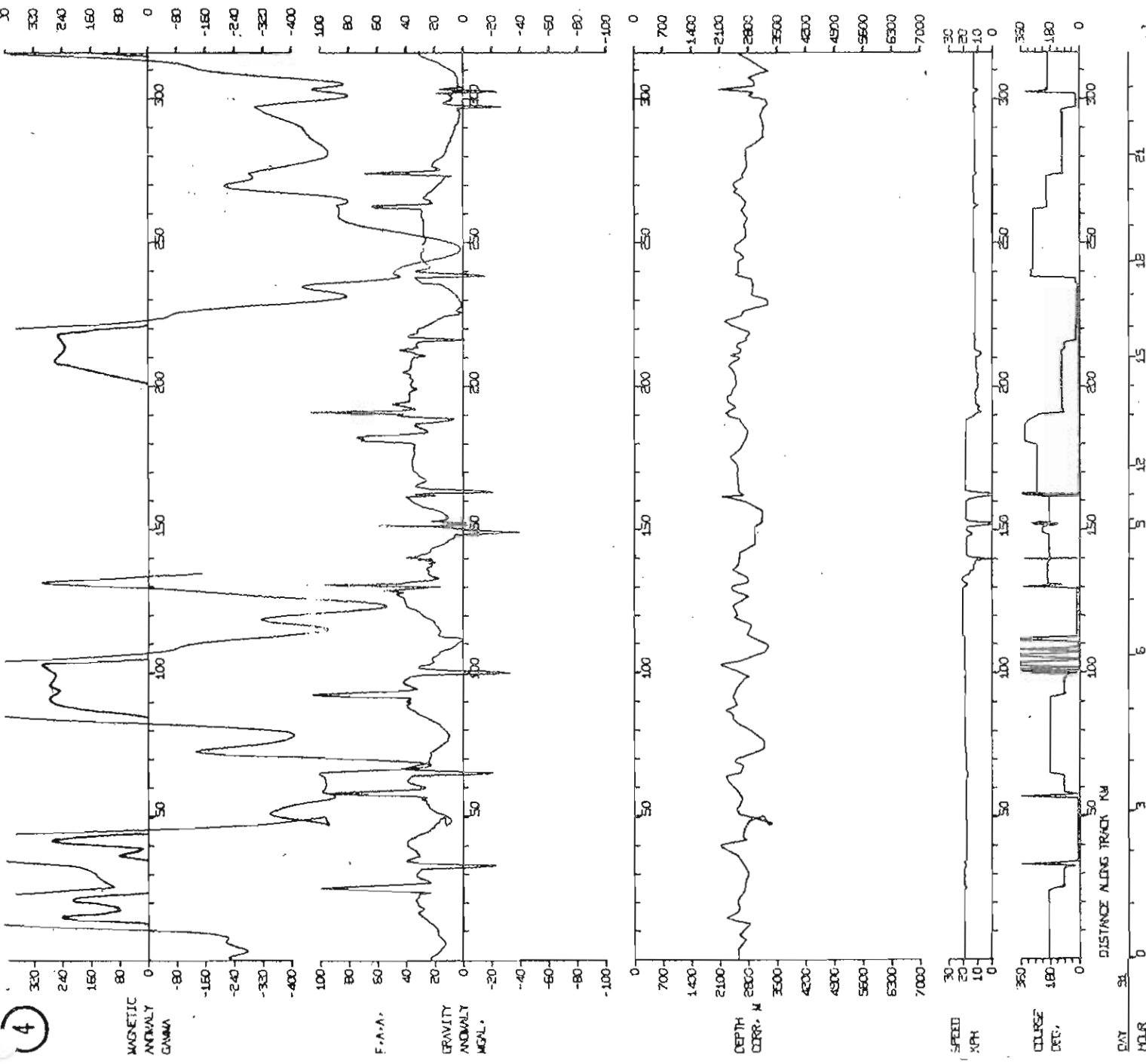


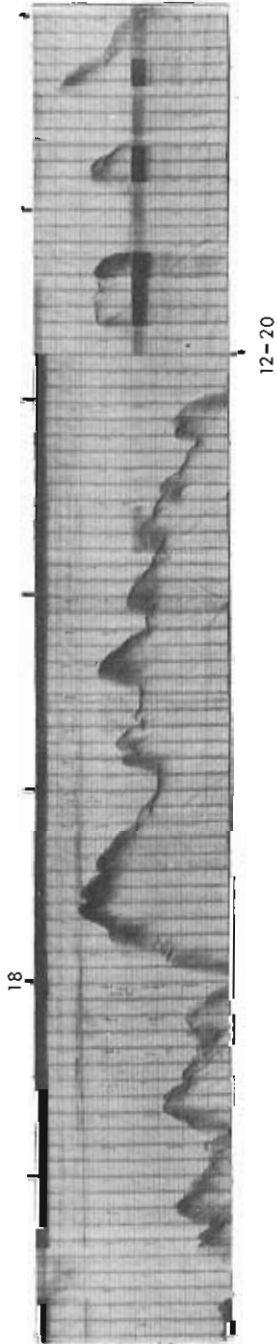
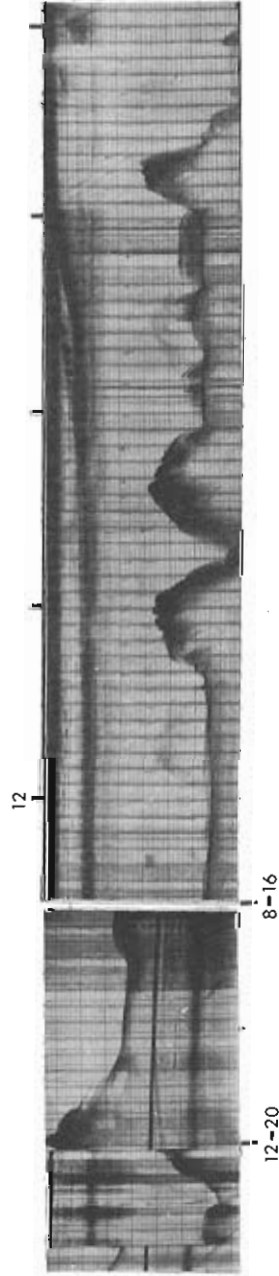
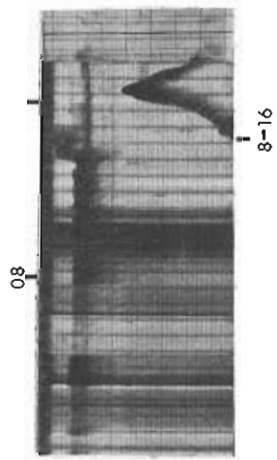
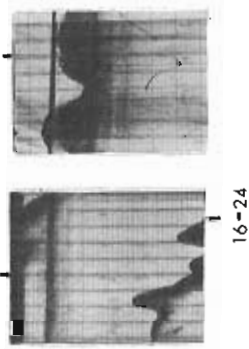
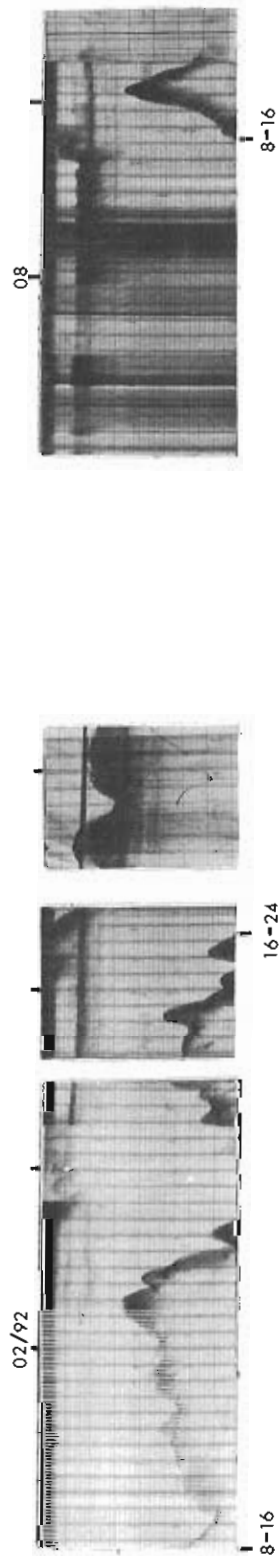


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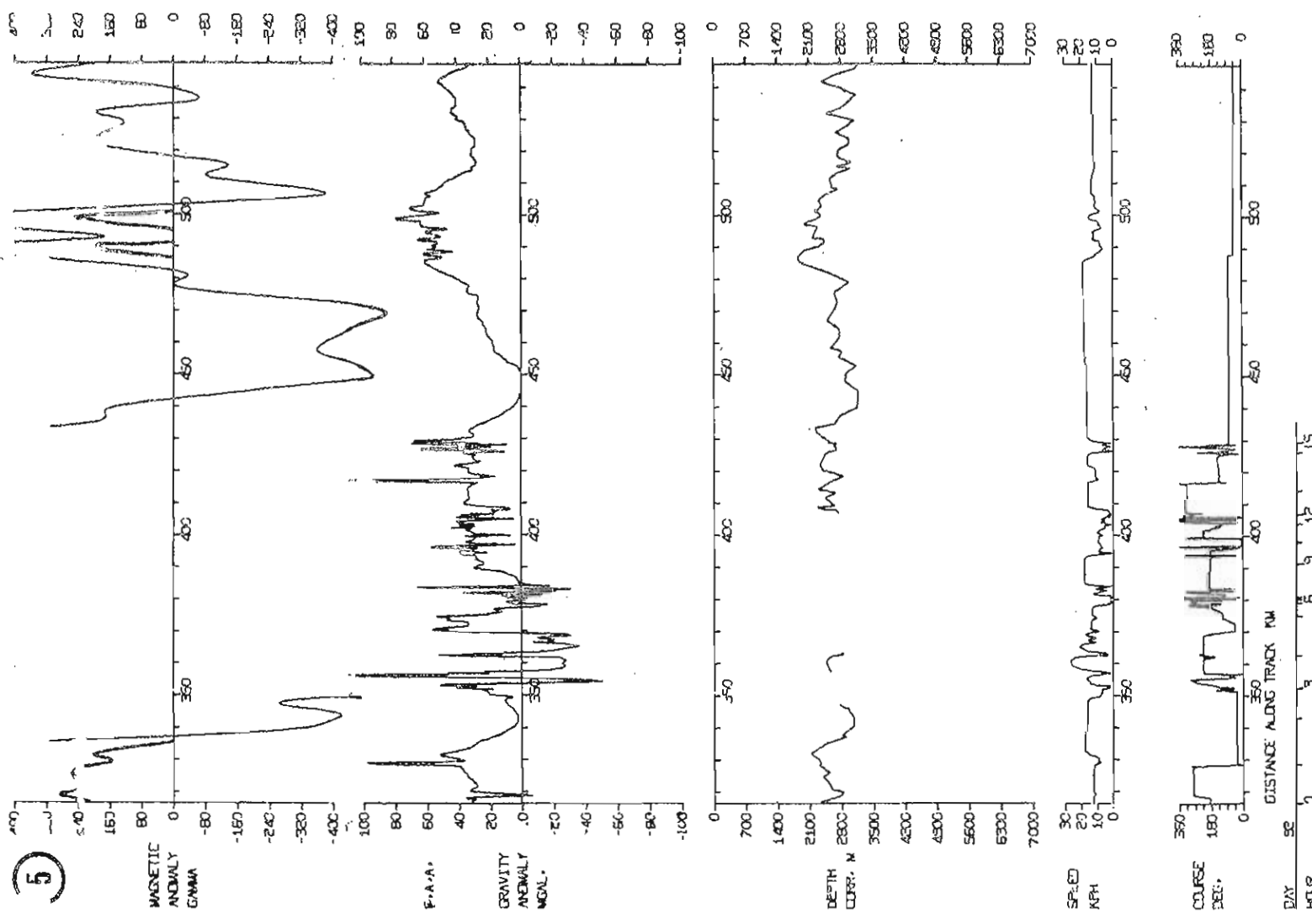




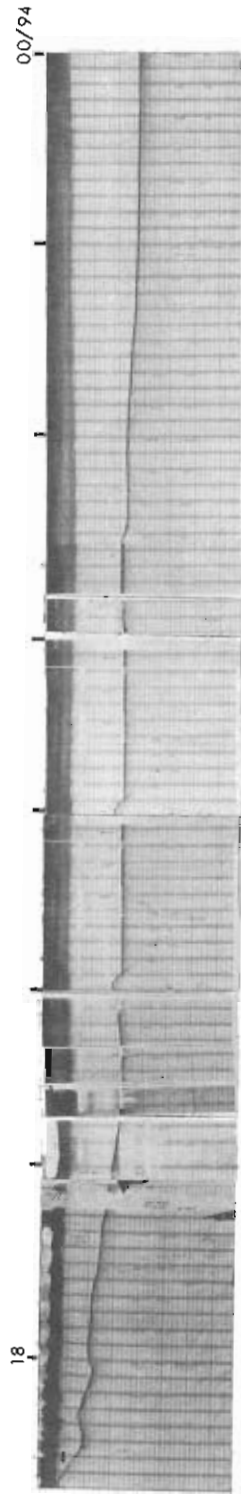
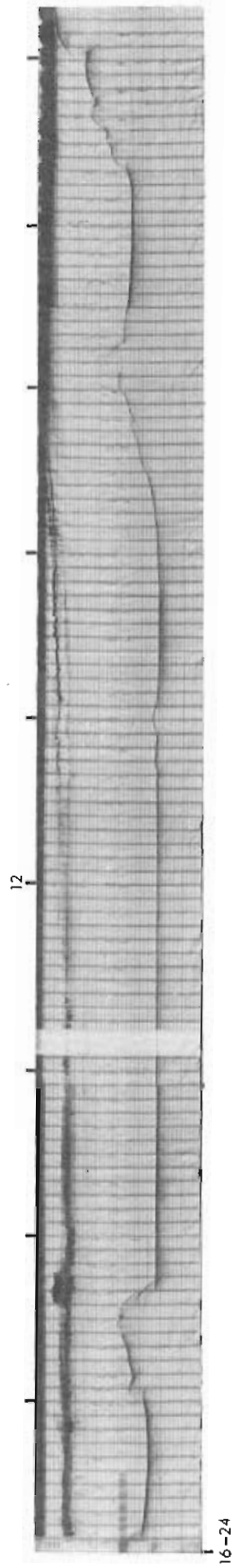
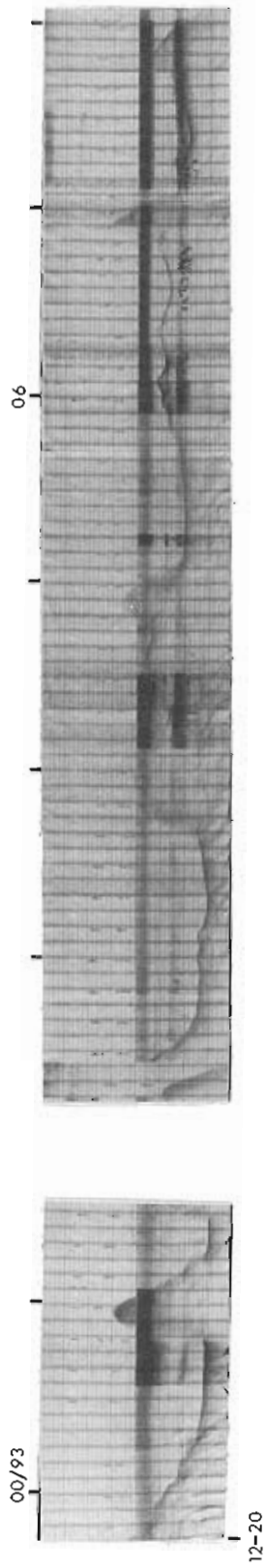




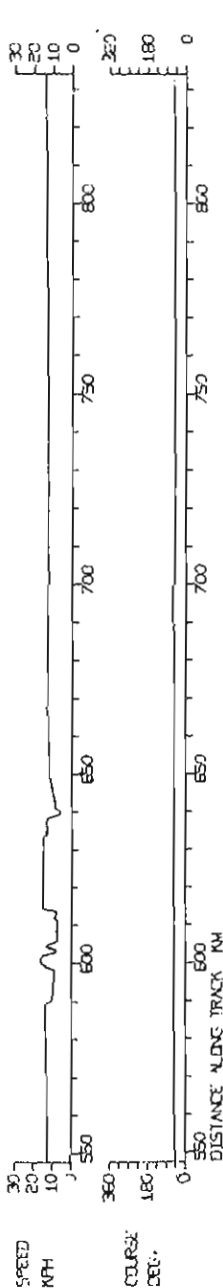
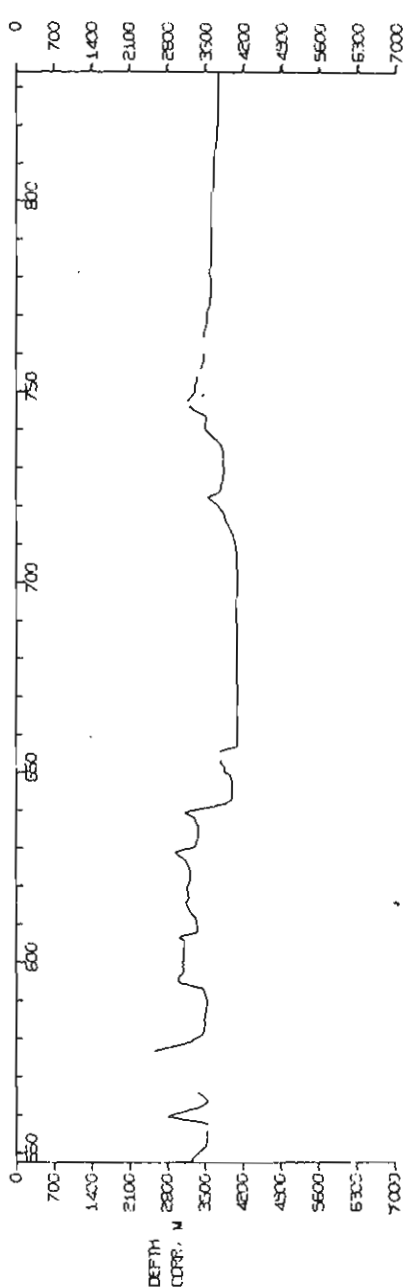
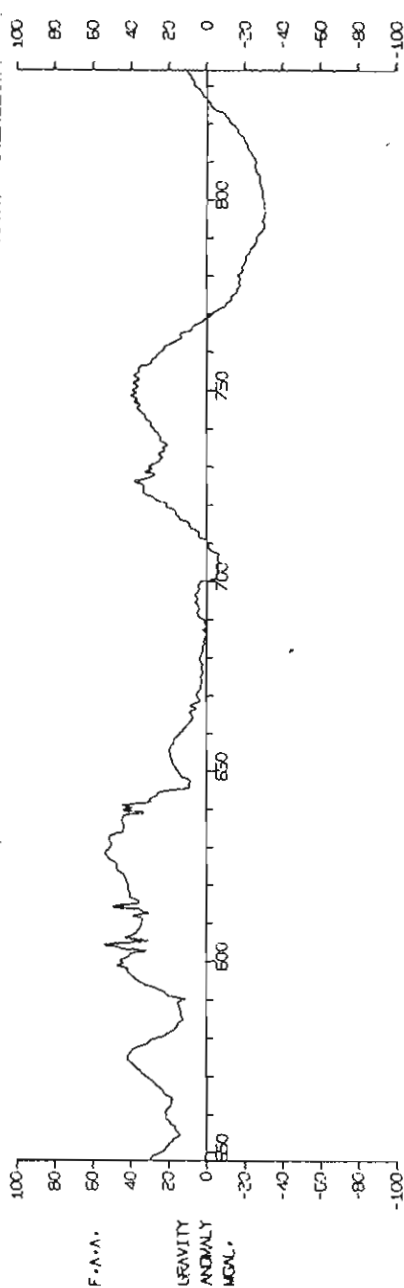
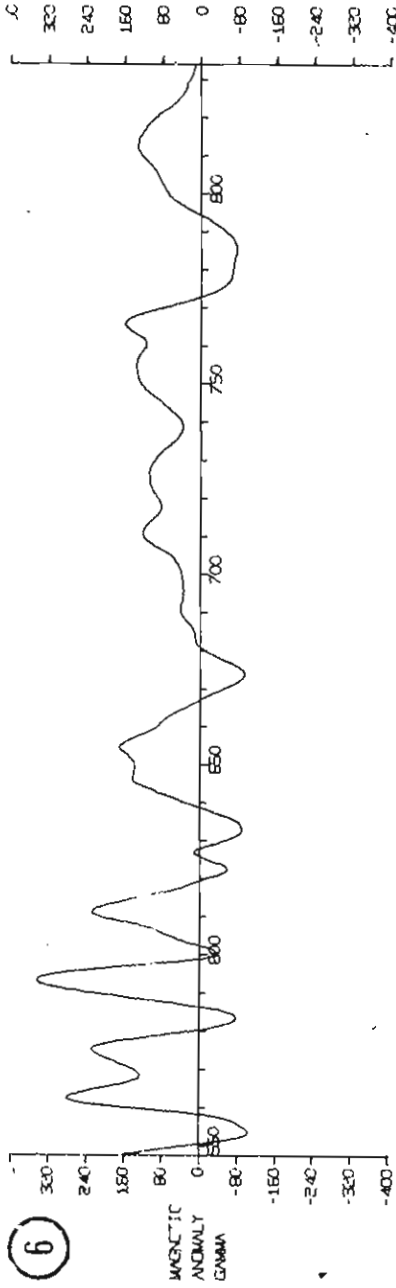
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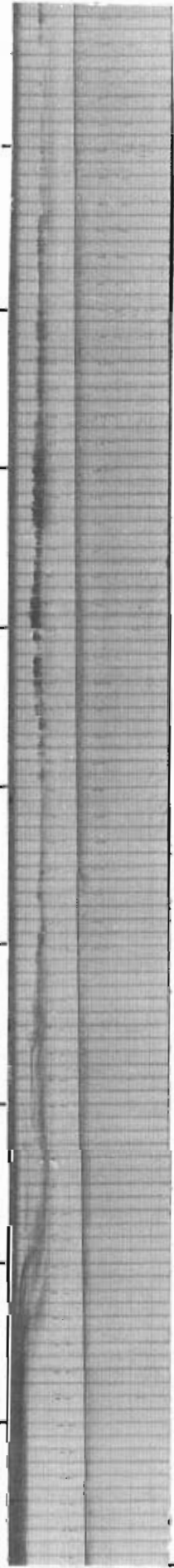


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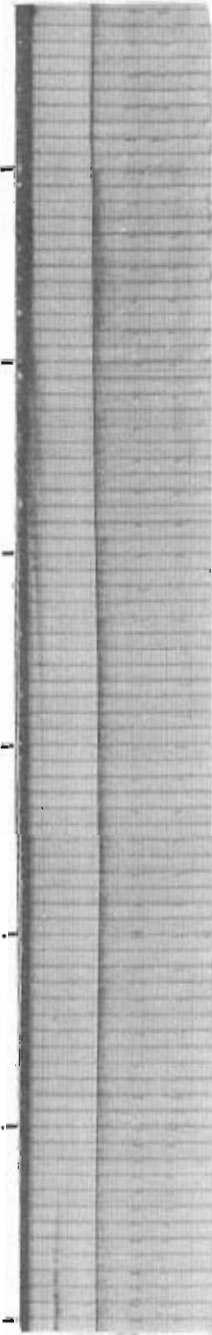
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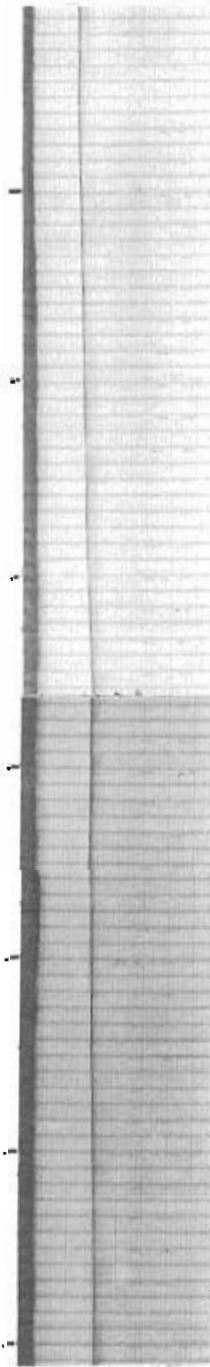


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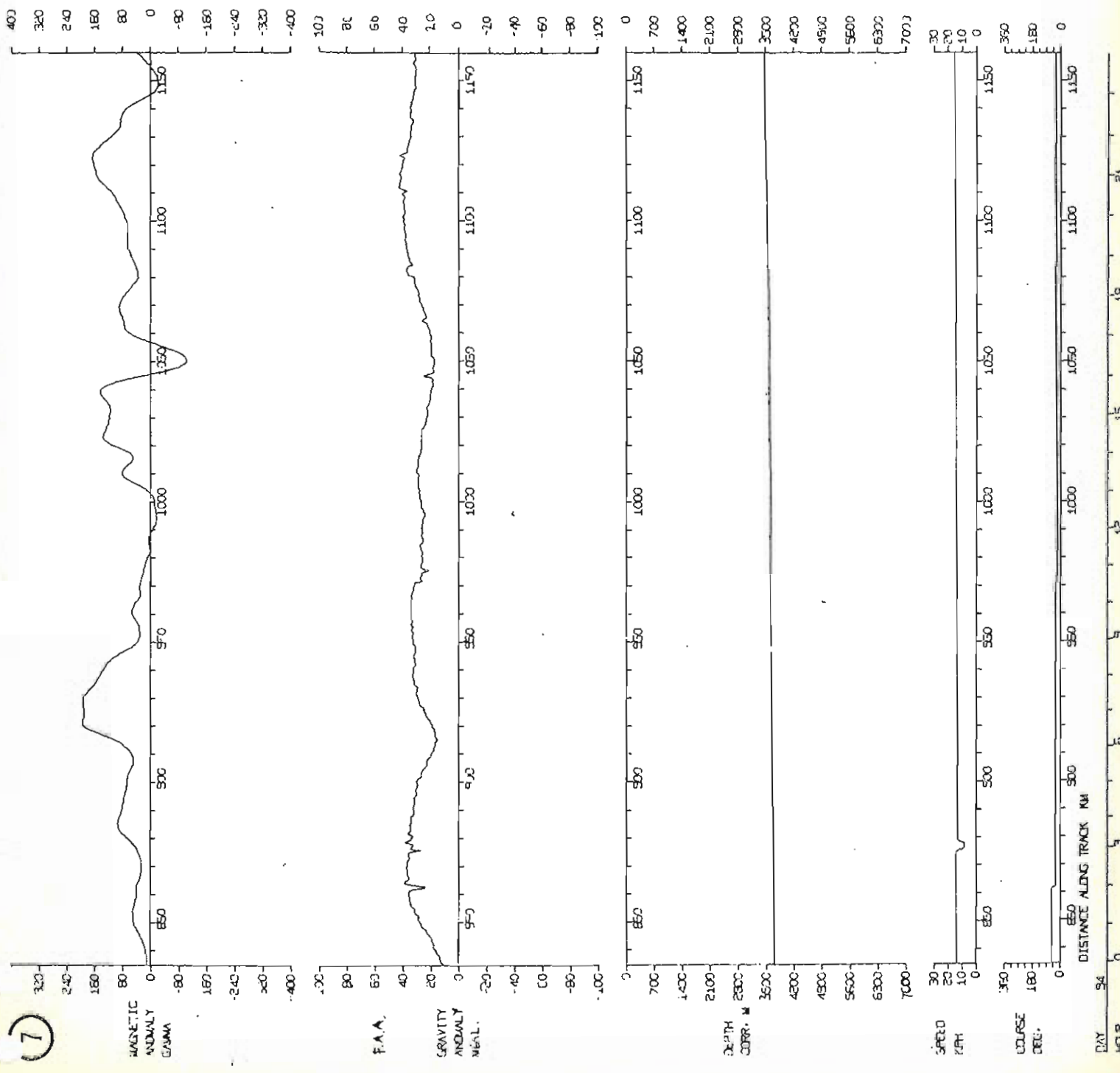
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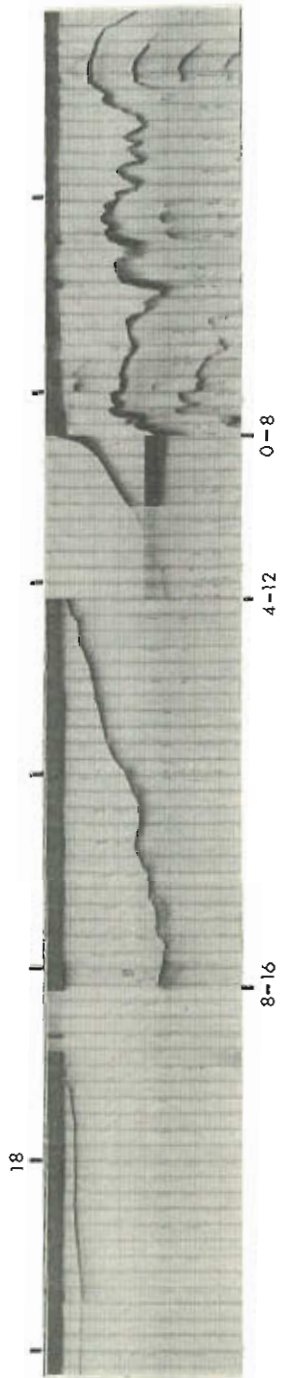
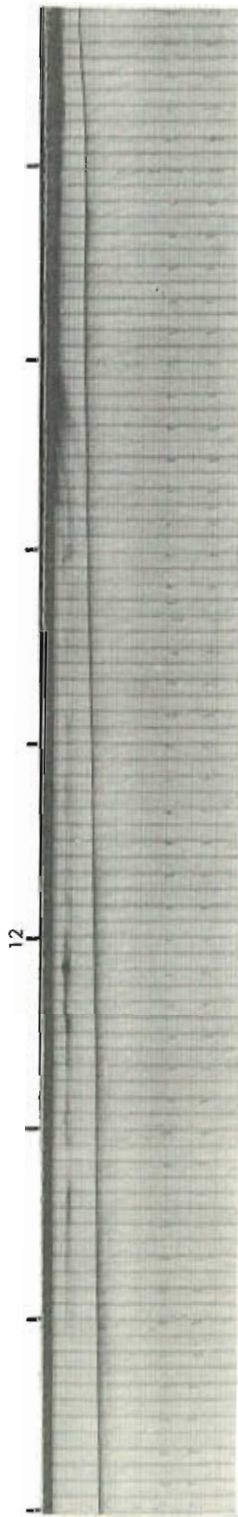
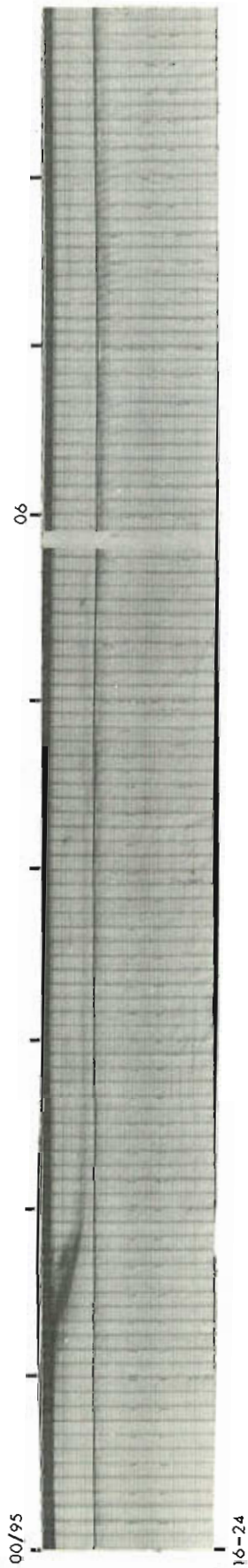


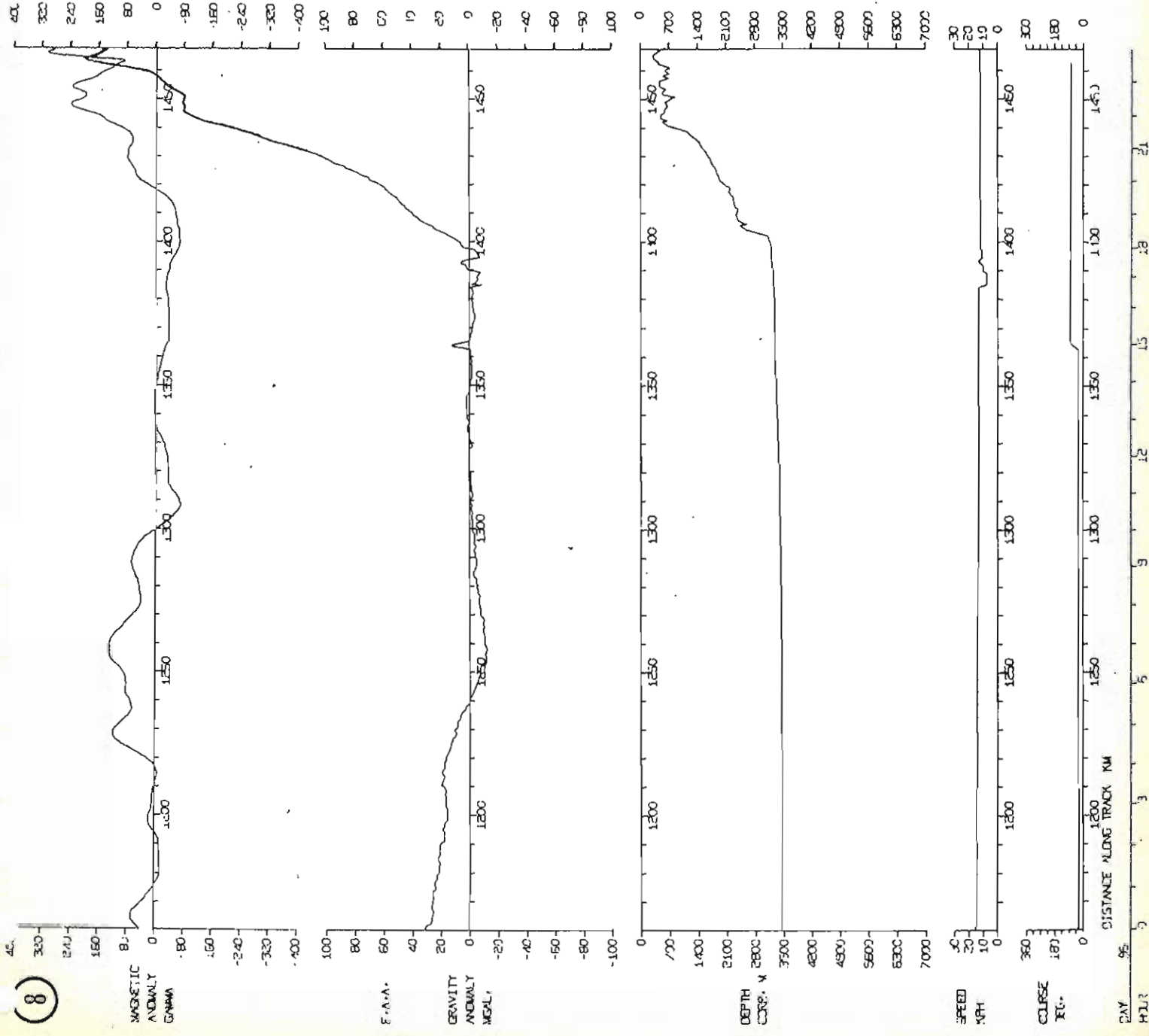
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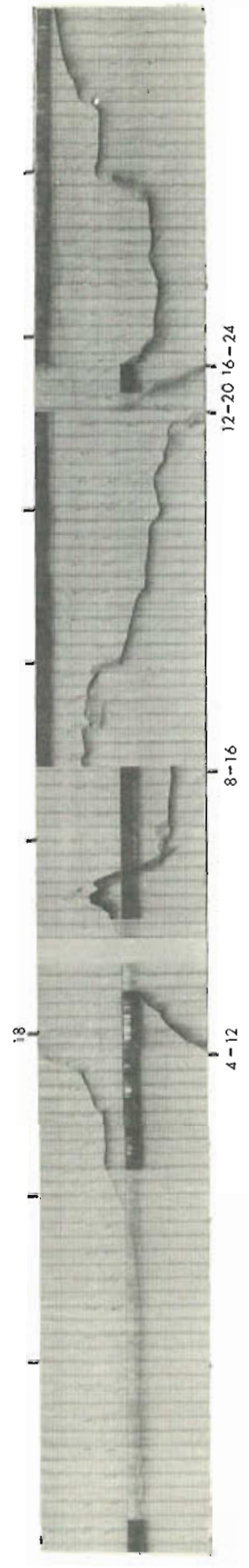
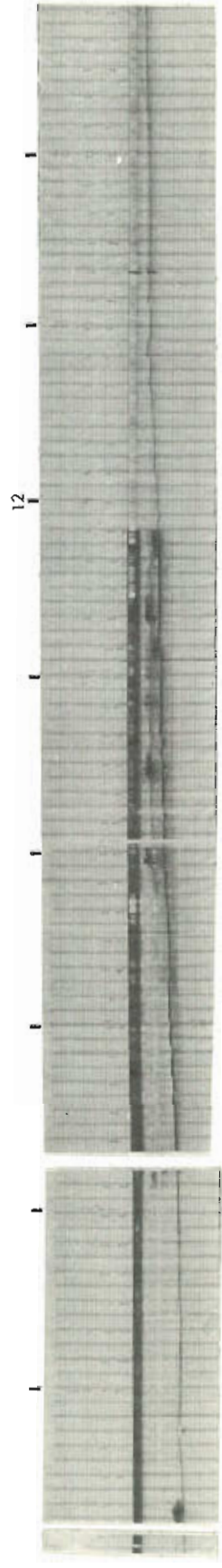
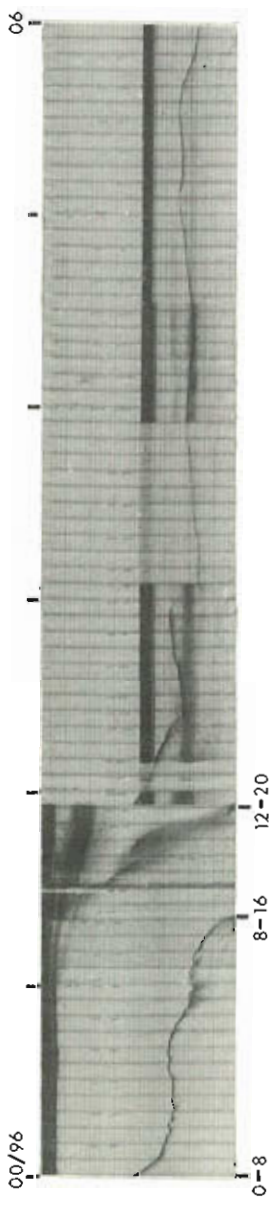


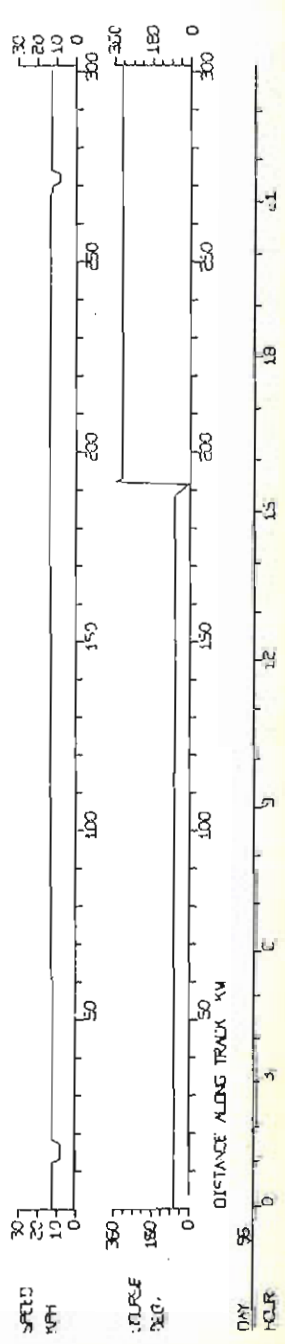
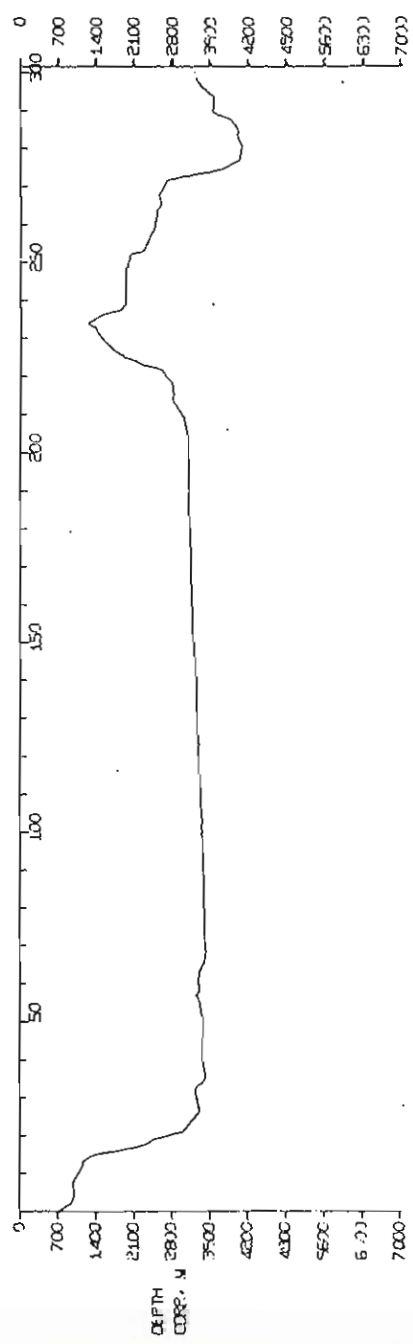
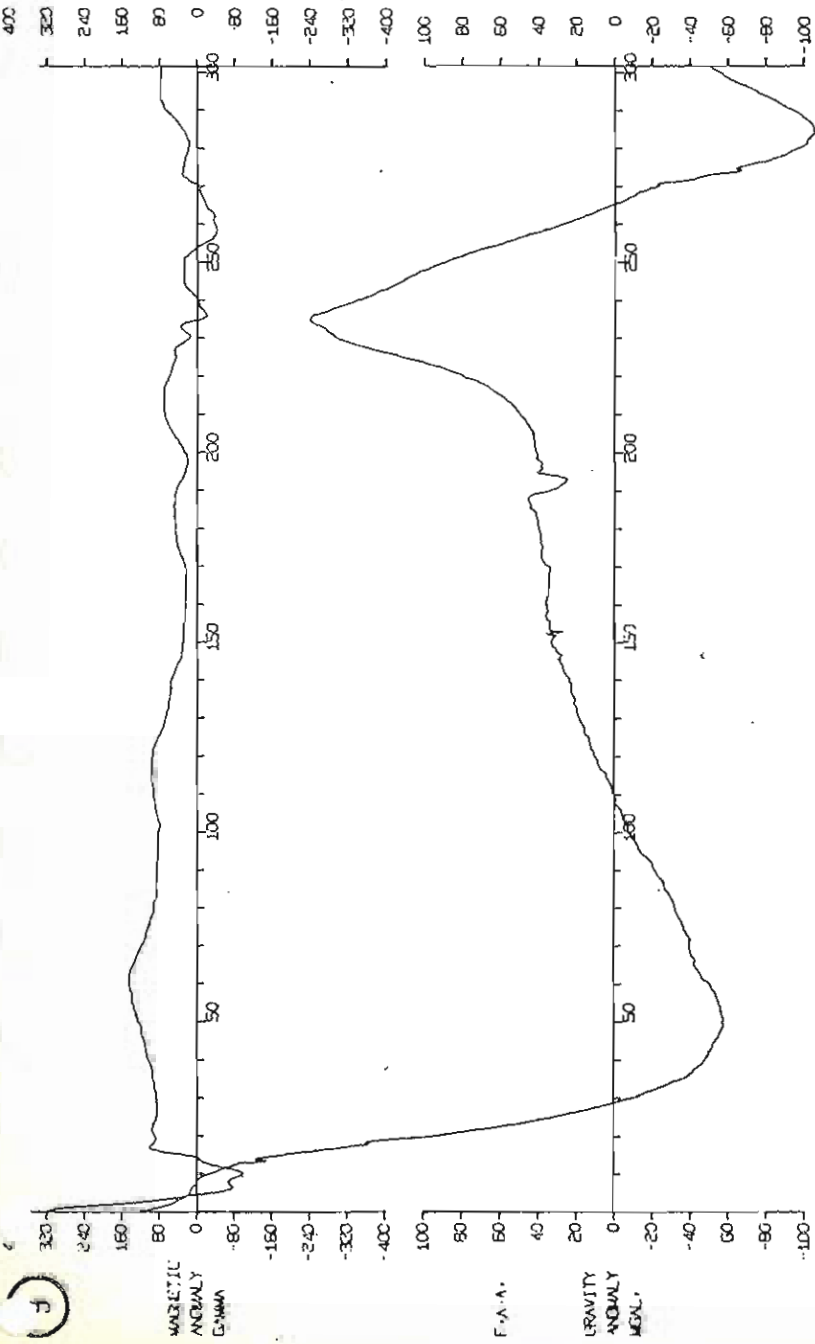
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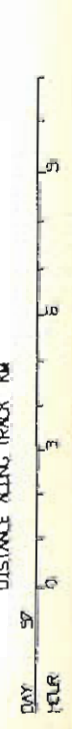
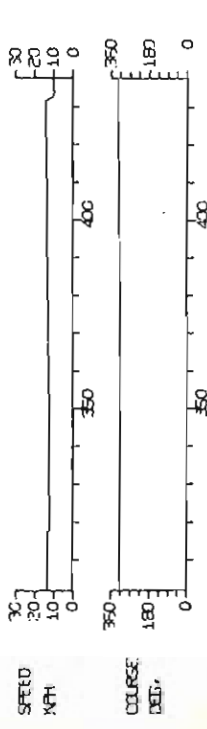
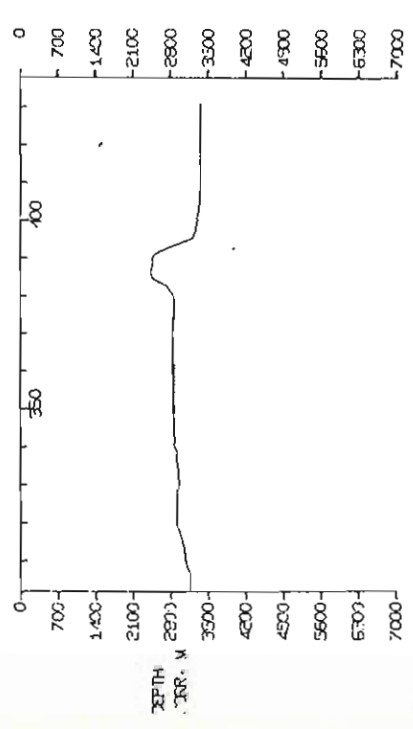
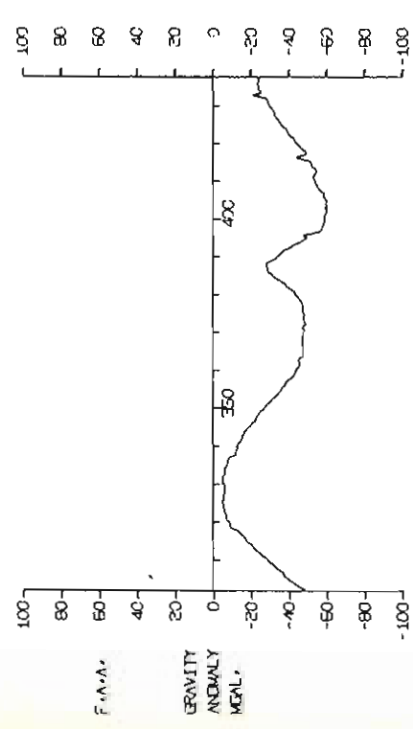
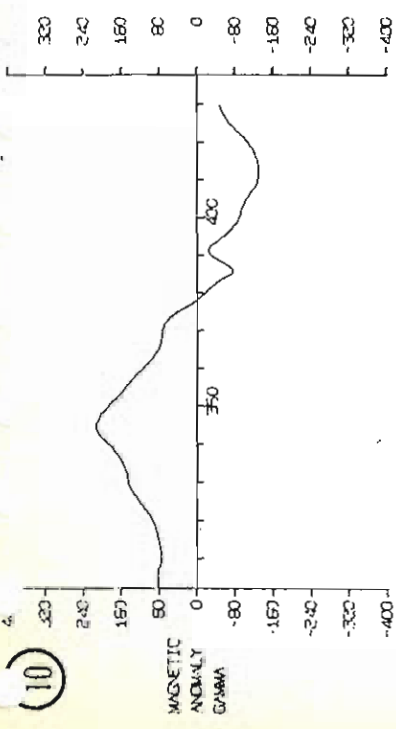


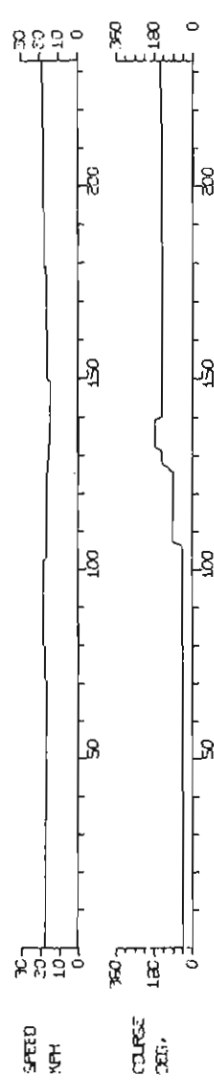
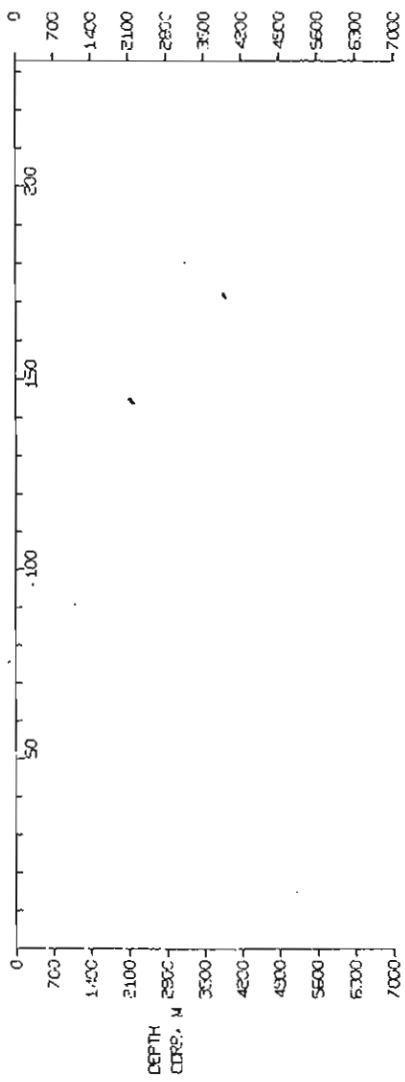
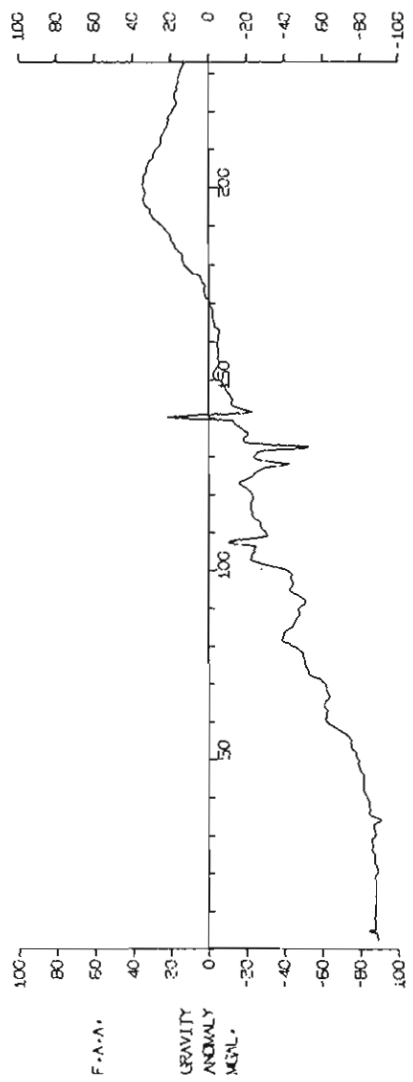
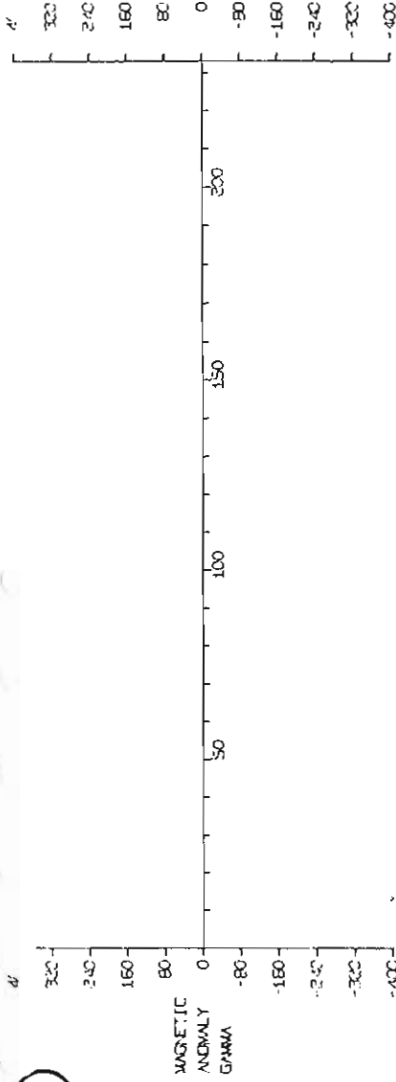


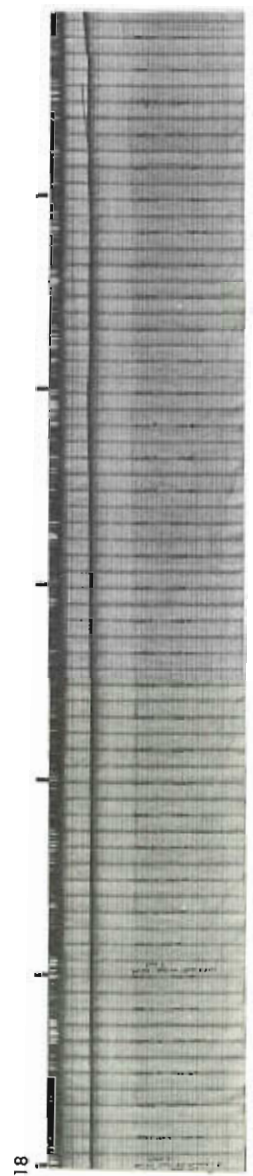
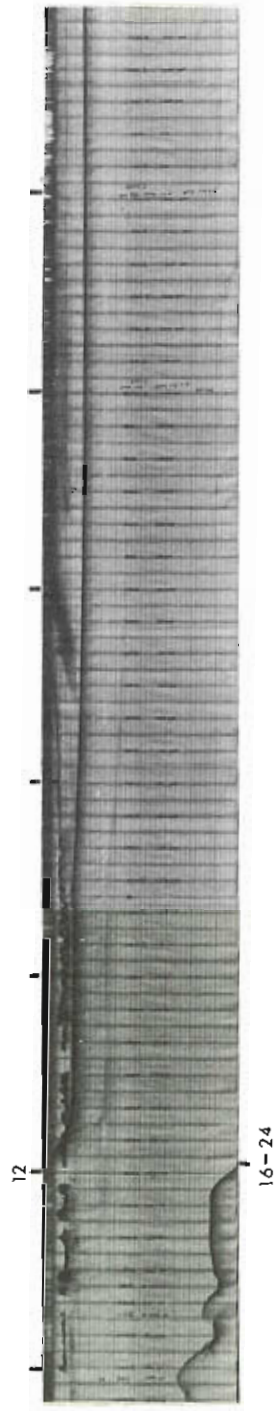
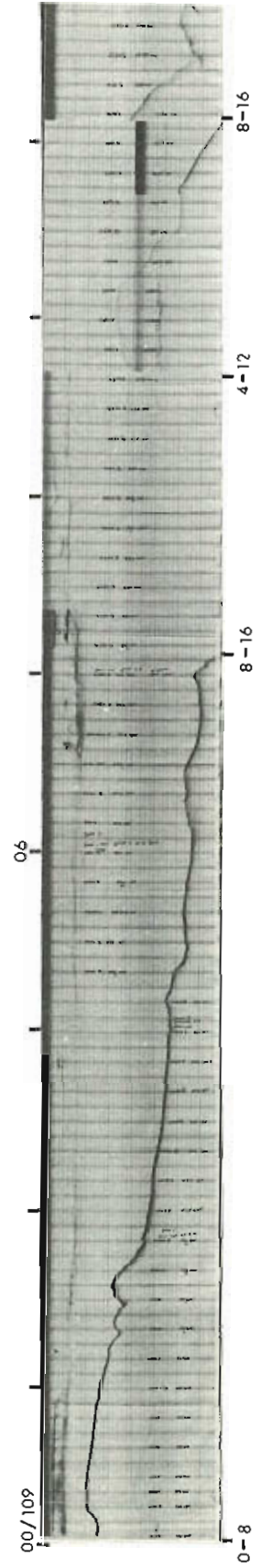


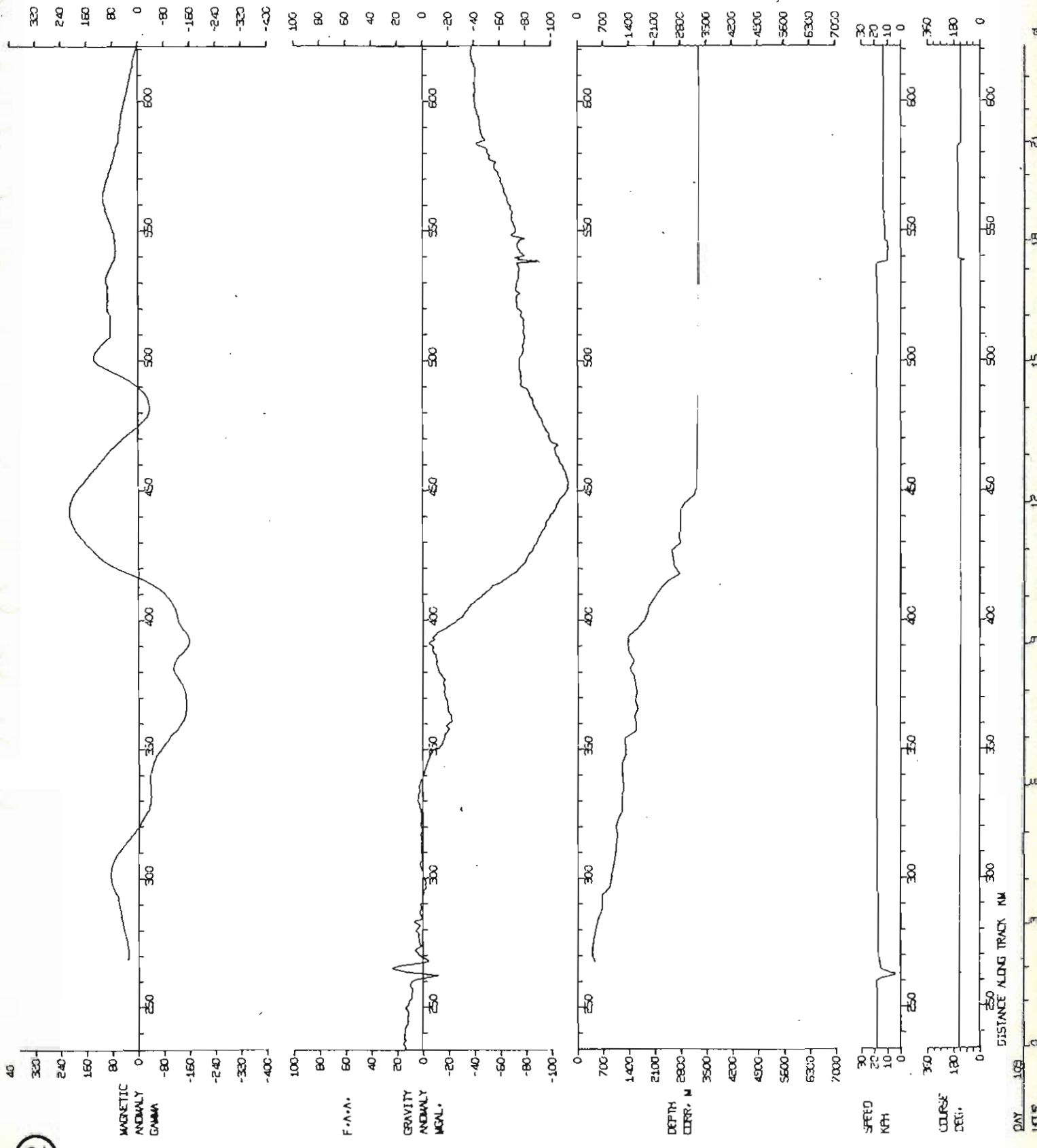
(J)

DAY 55
 HOUR 11



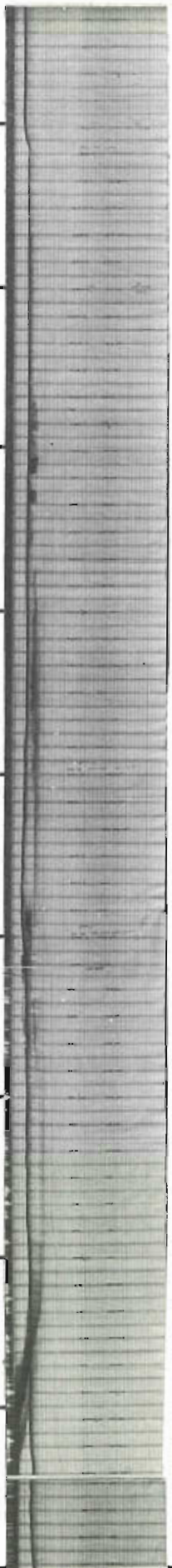






00/110

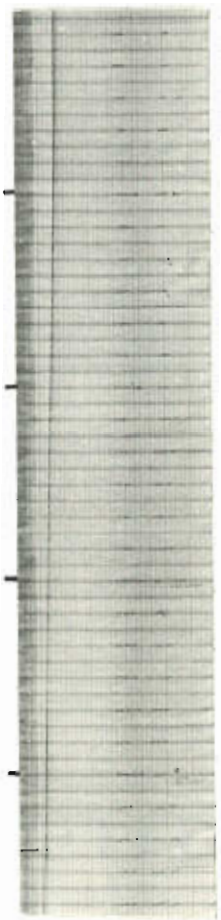
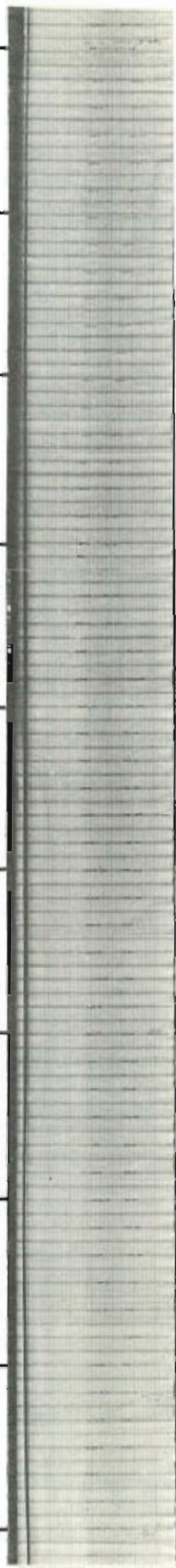
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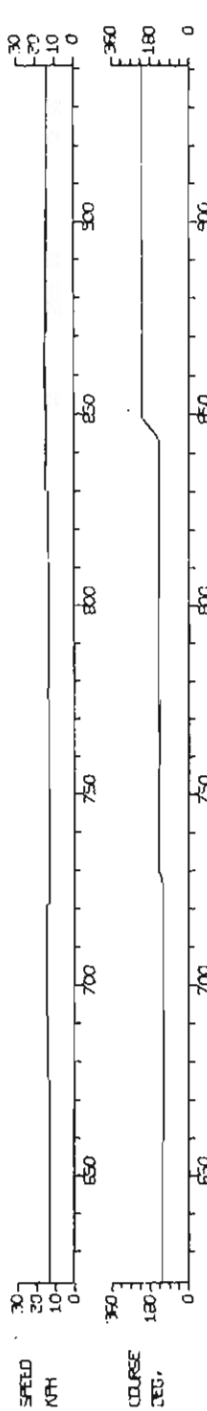
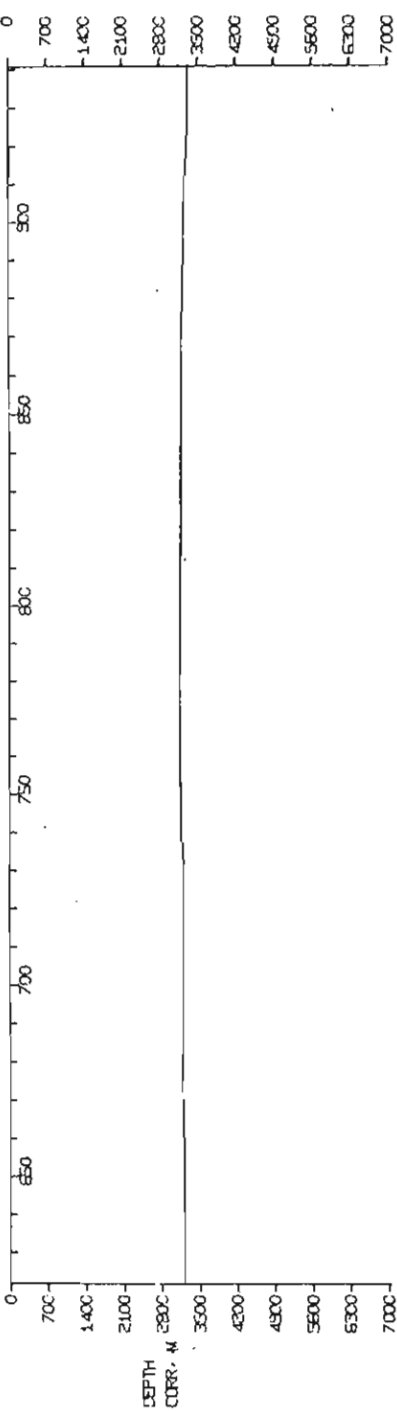
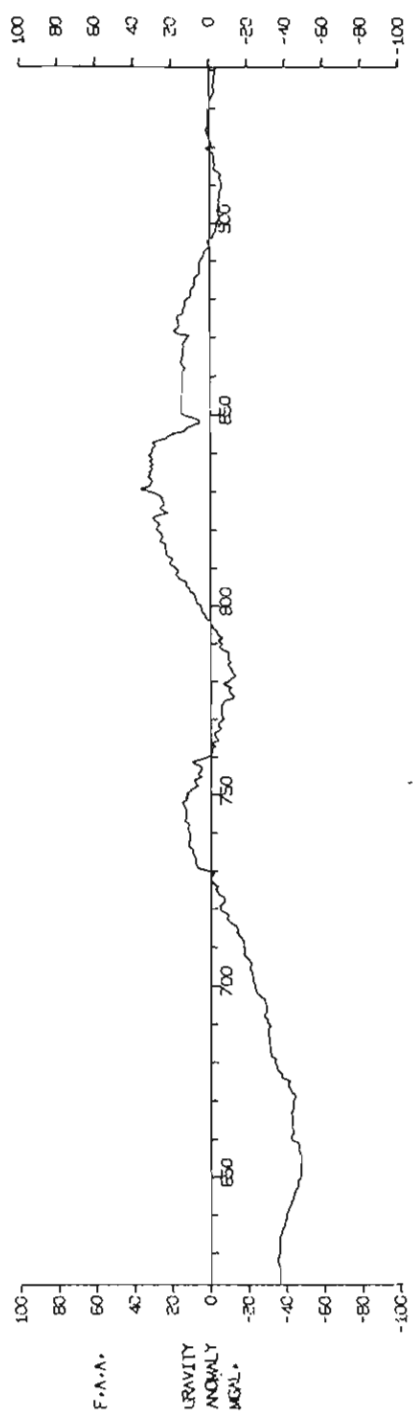
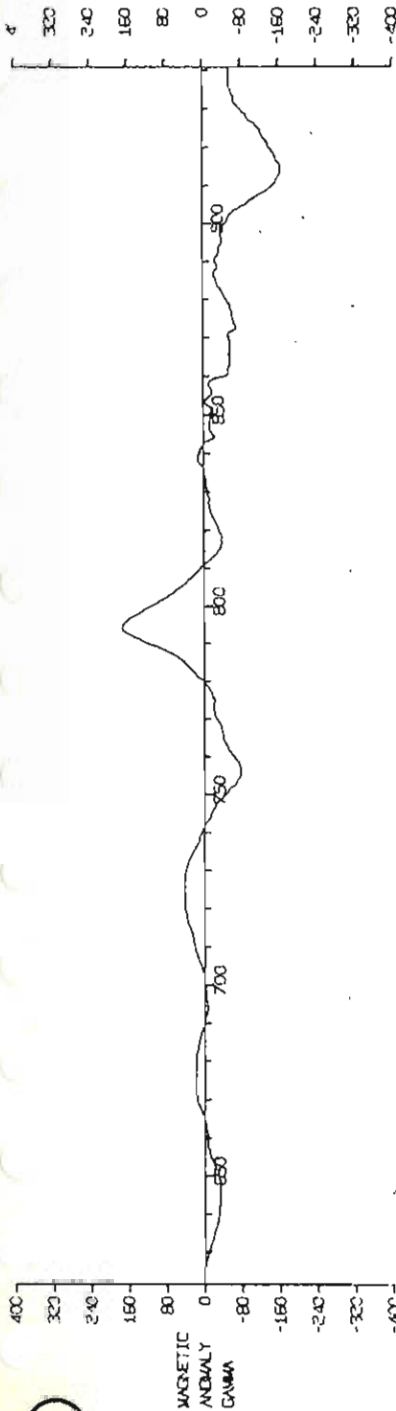


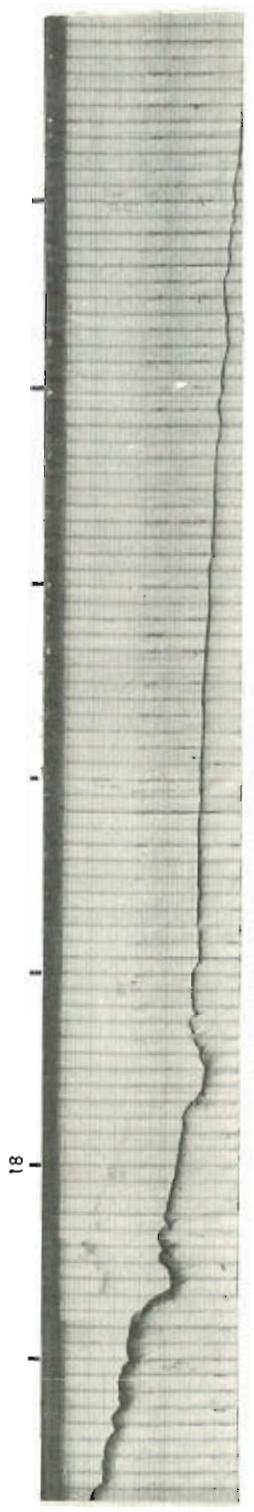
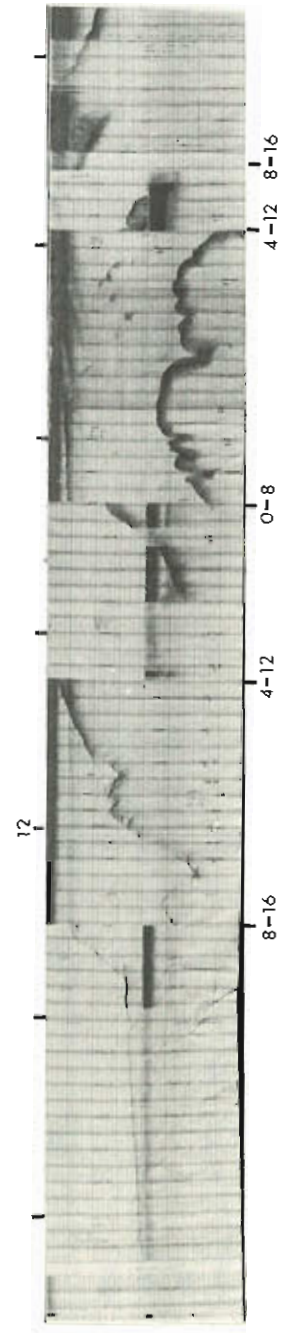
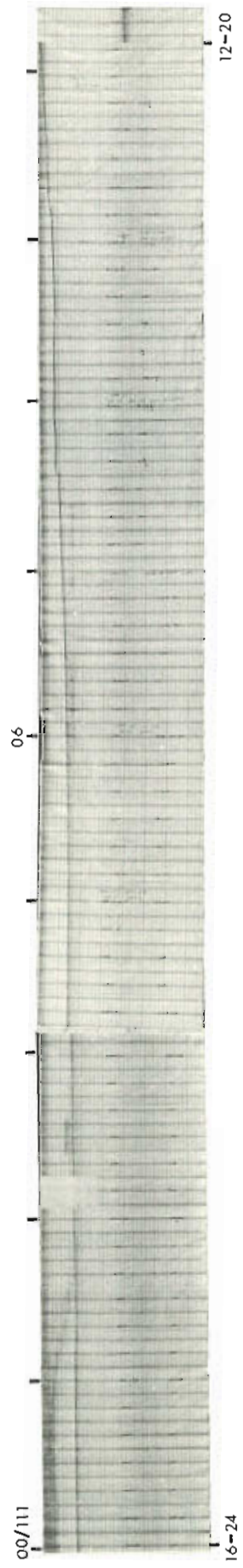
16-24

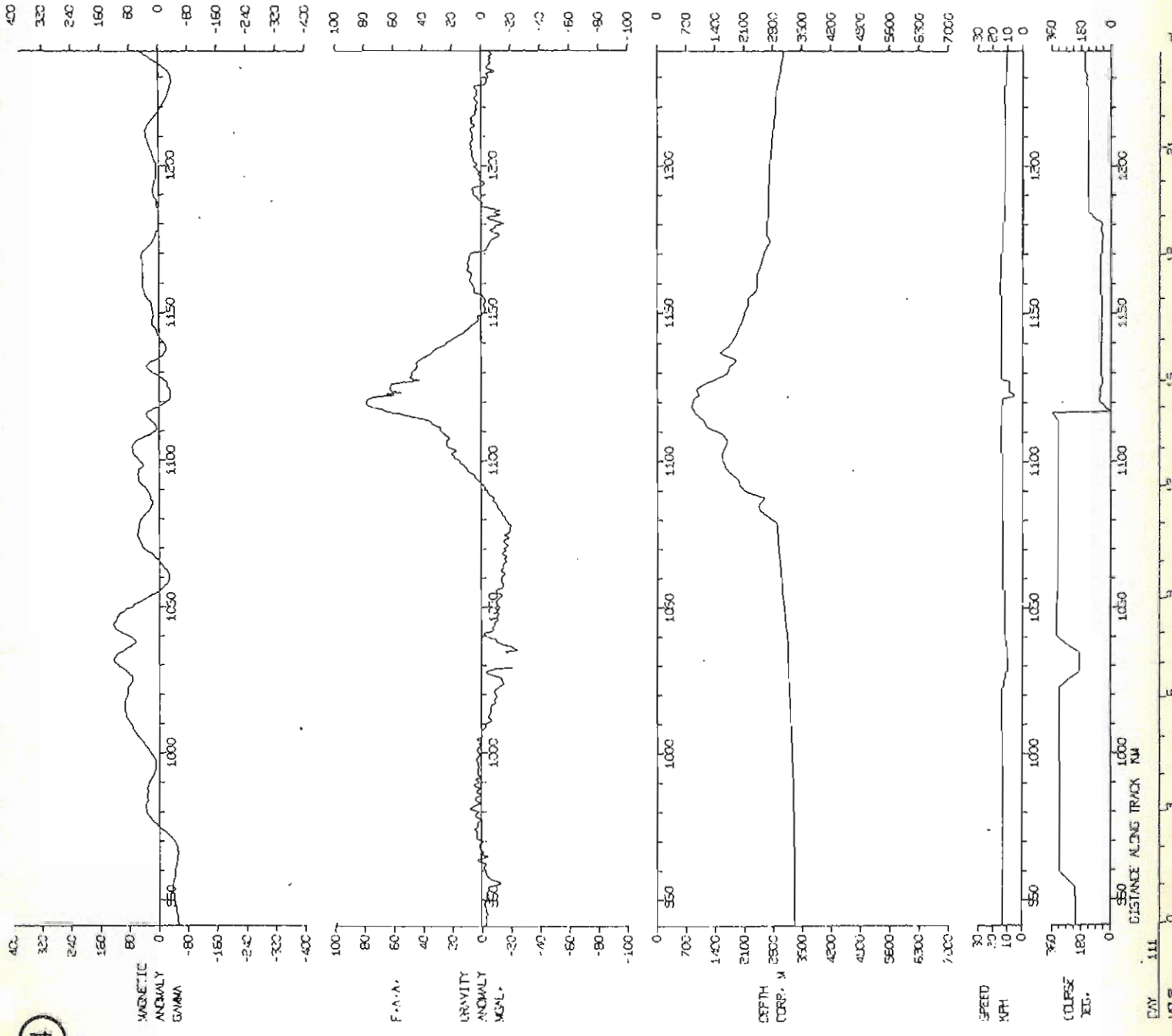
12

18









DAY 111 0 3 6 9 12 15 18 21

DISTANCE ALONG TRACK KM

COURSE DEG.

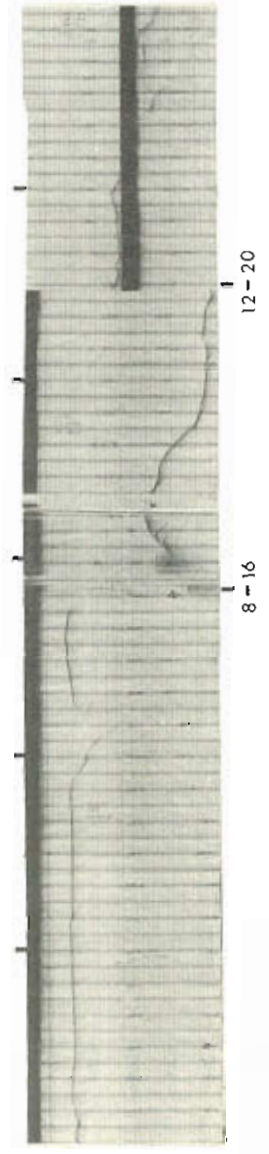
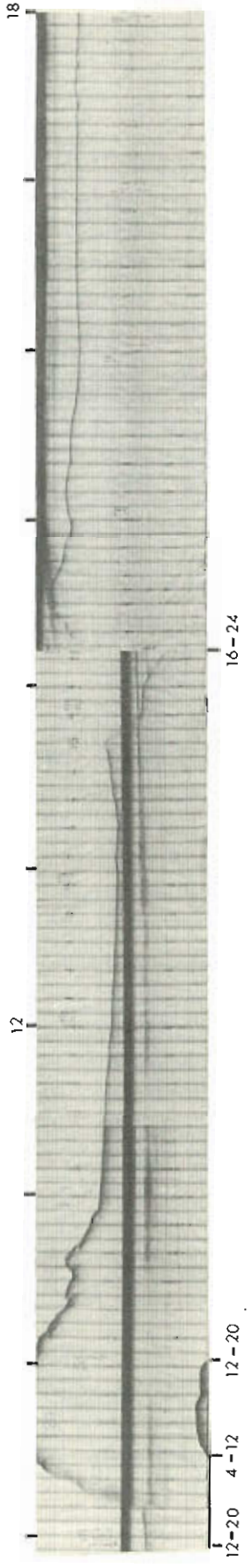
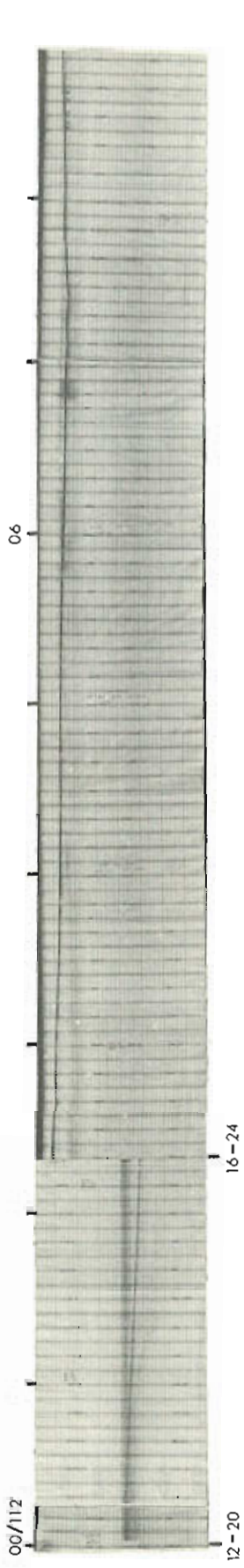
SPEED KPH

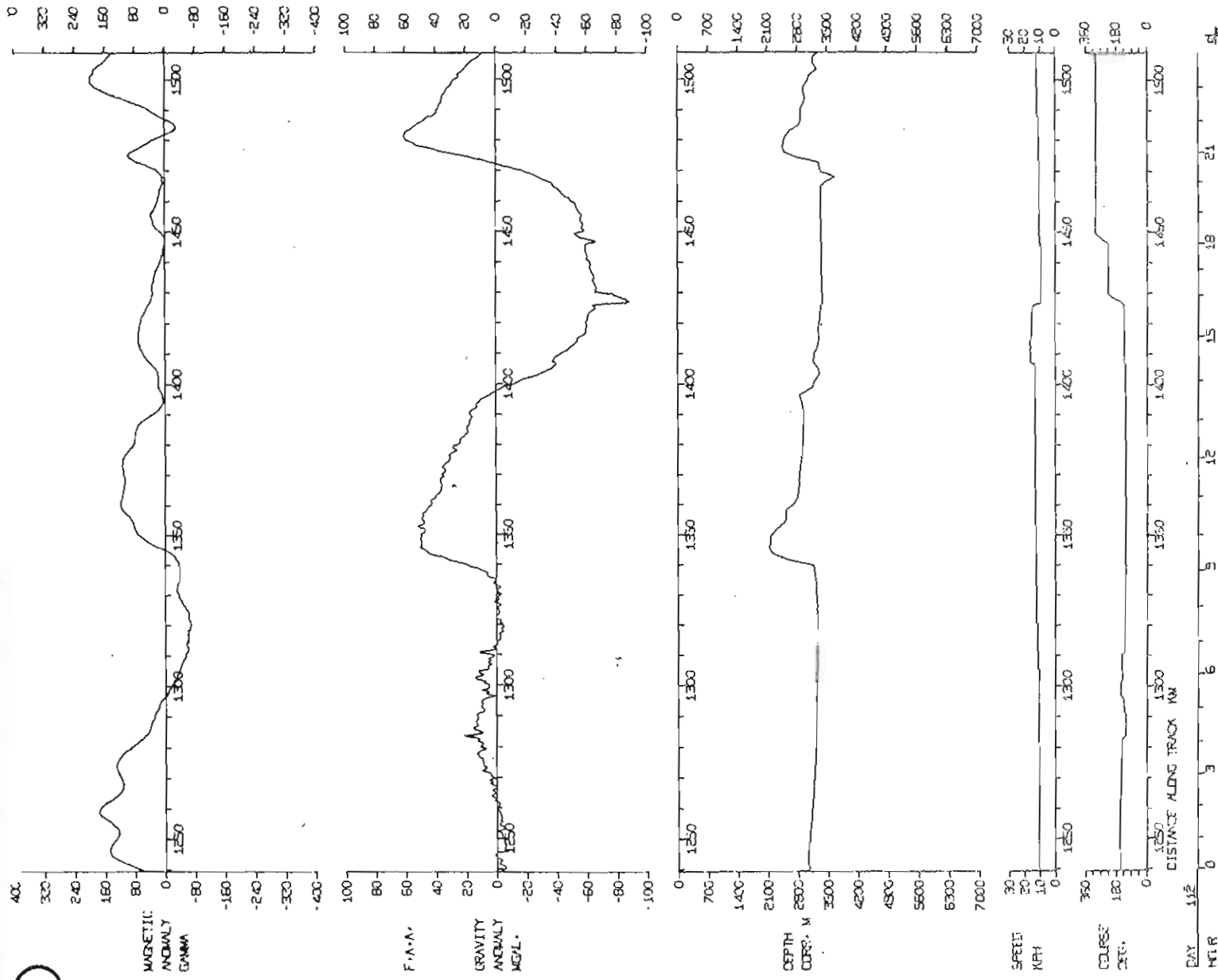
DEPTH CORP. M

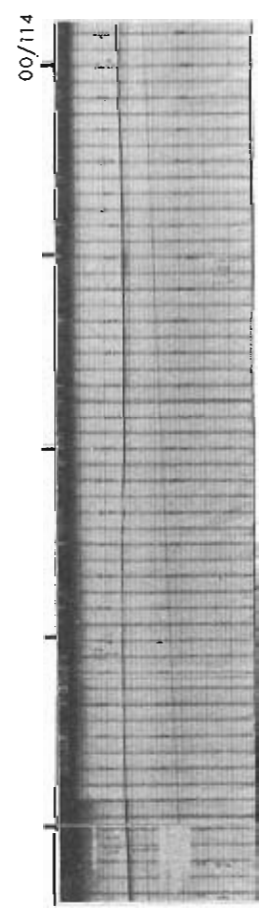
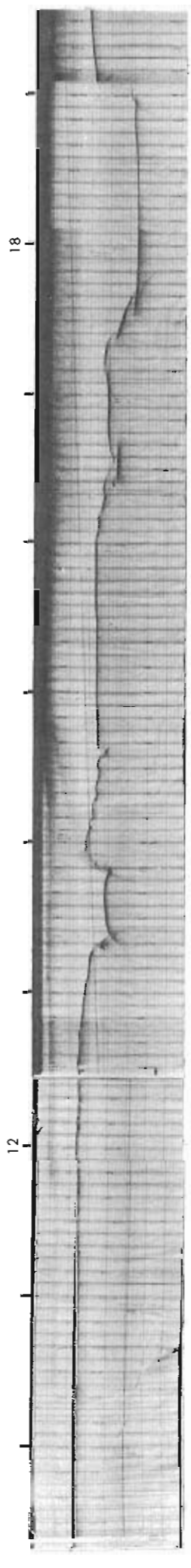
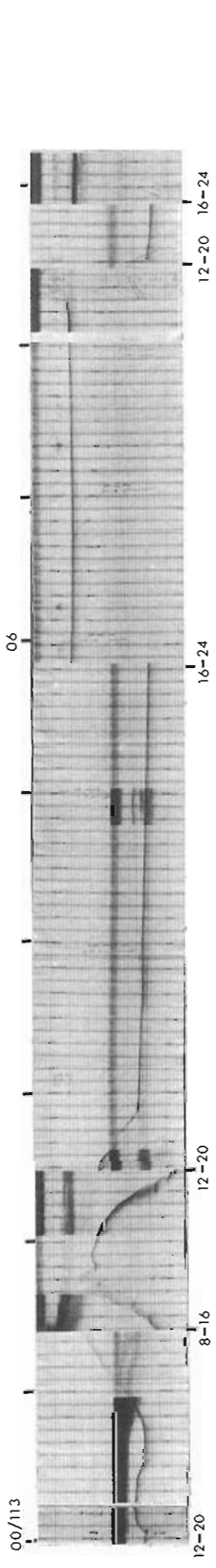
GRAVITY ANOMALY MGAL.

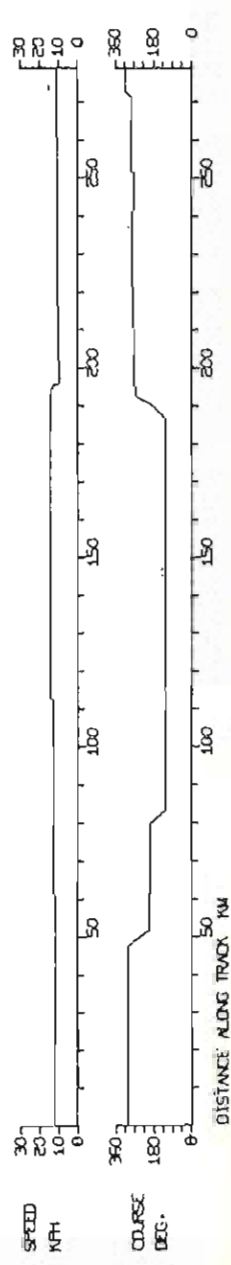
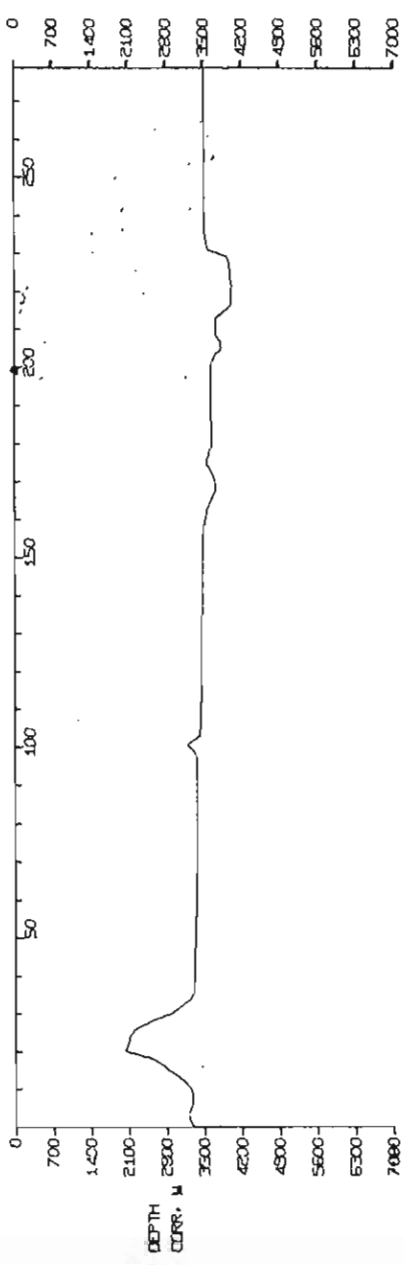
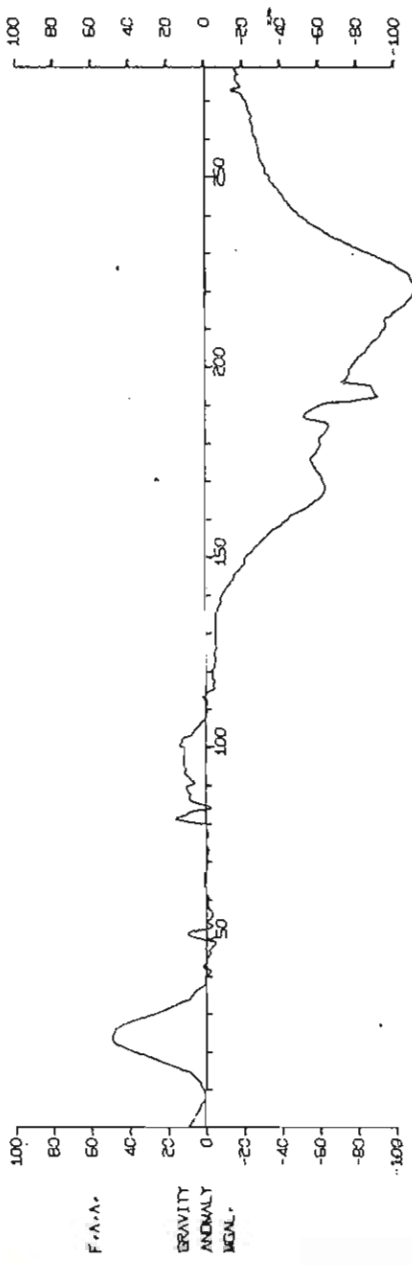
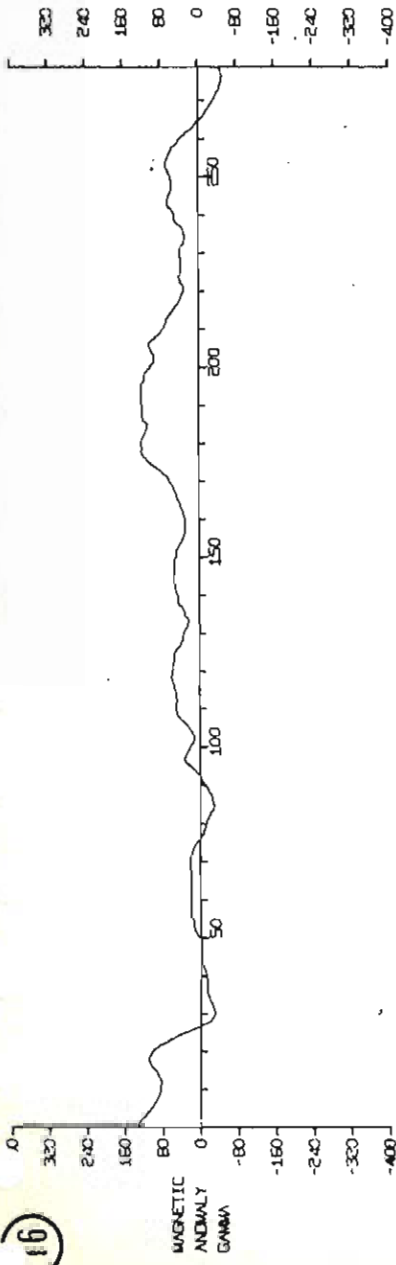
F.A.A.

MAGNETIC ANOMALY GAMMA







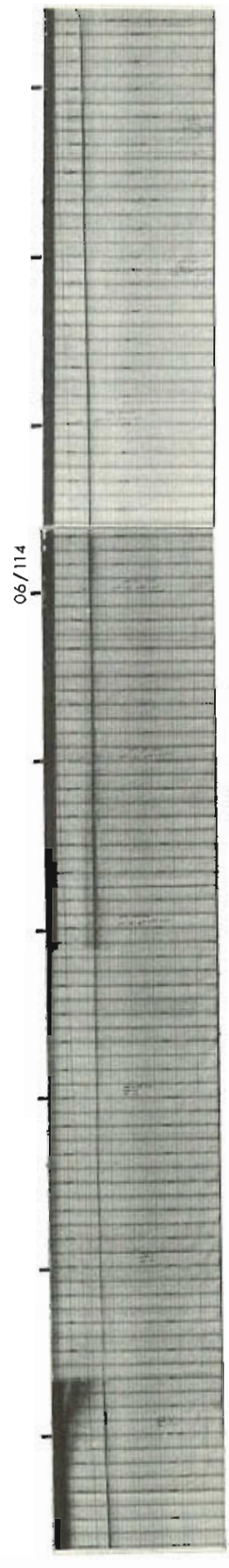


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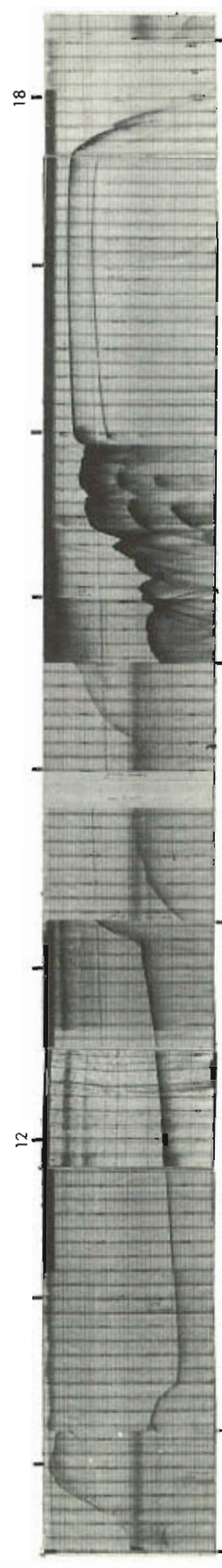
HOUR 0 5 10 15 18 21

DISTANCE ALONG TRACK NM

0 50 100 150 200 250



16-24



12-20

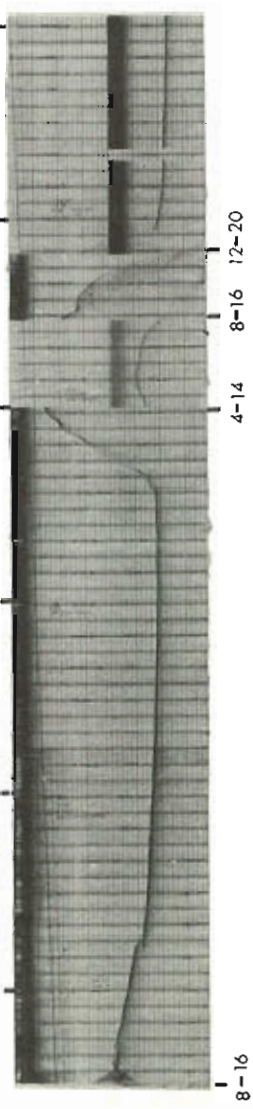
8-16

4-12

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4-12

00/115



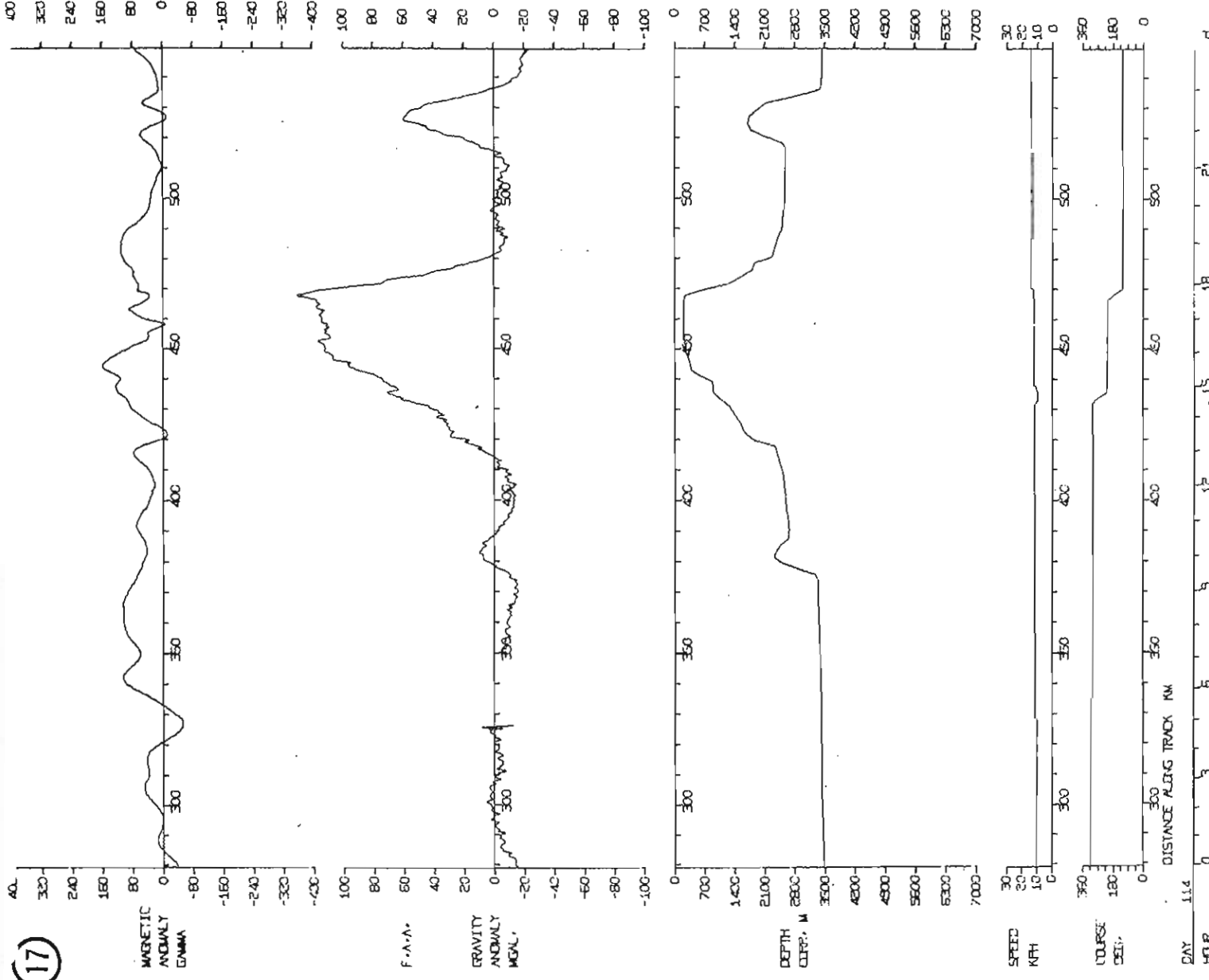
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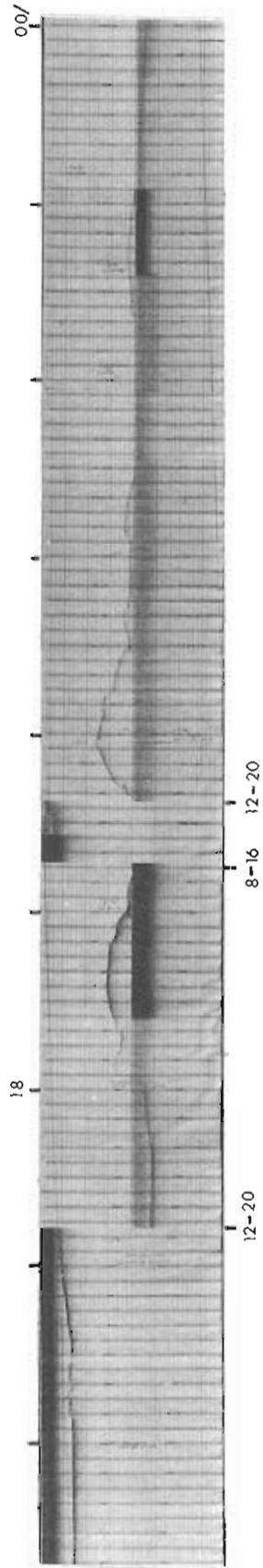
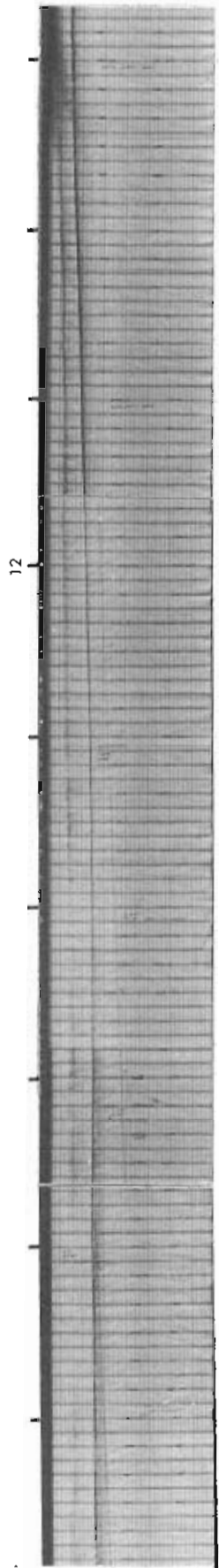
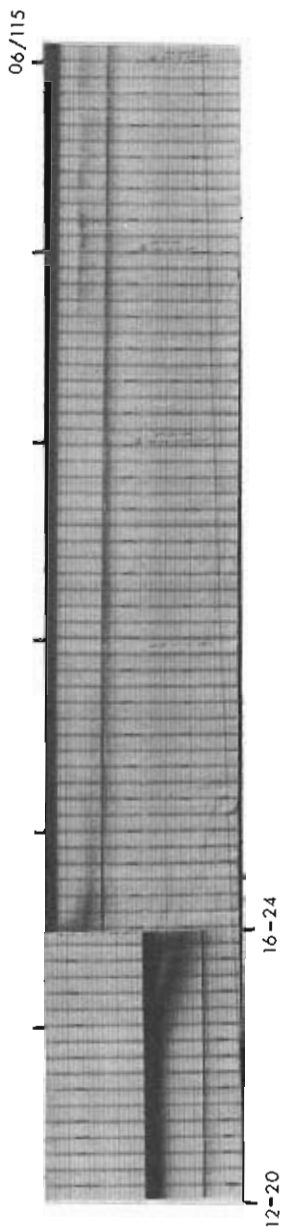
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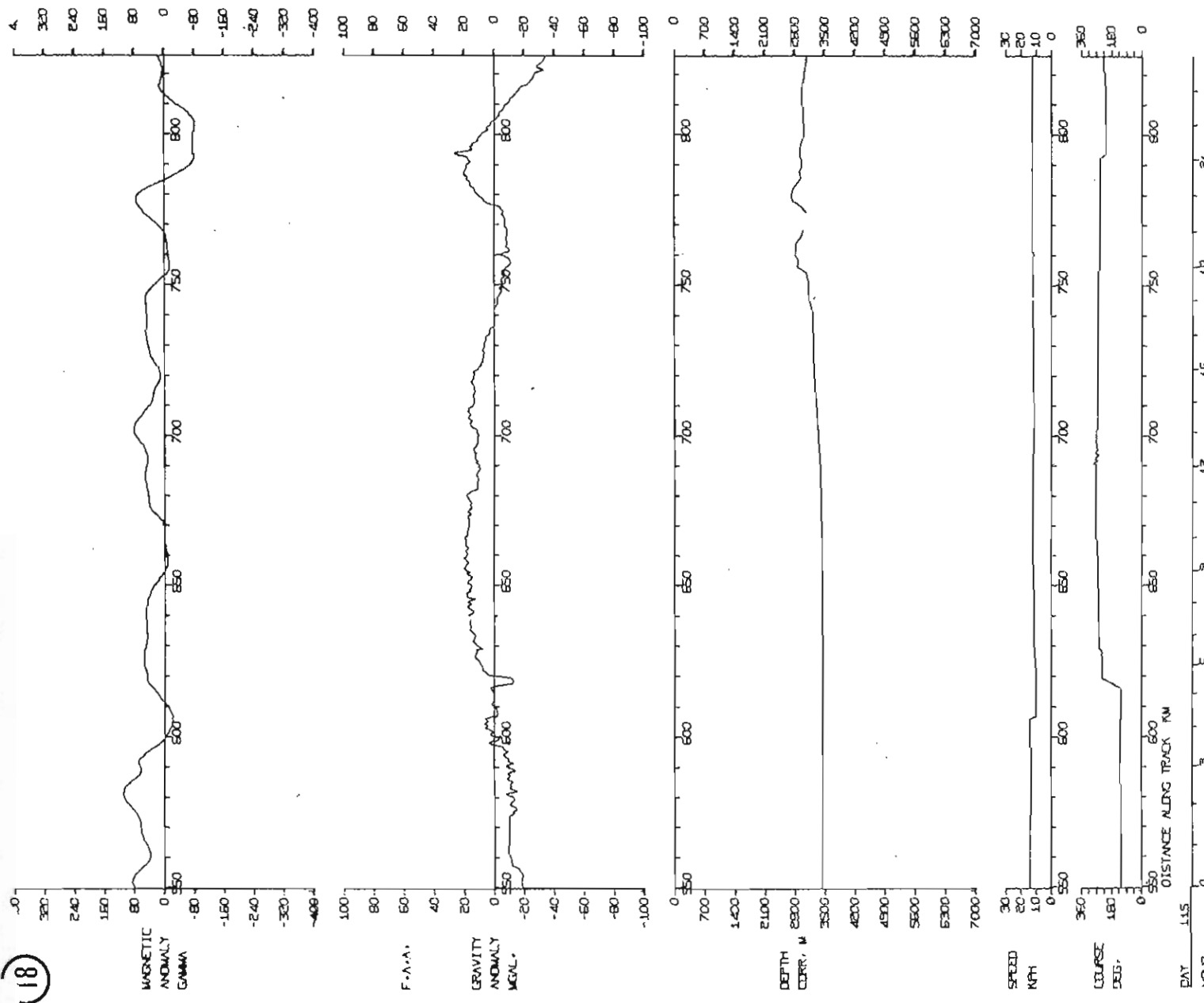
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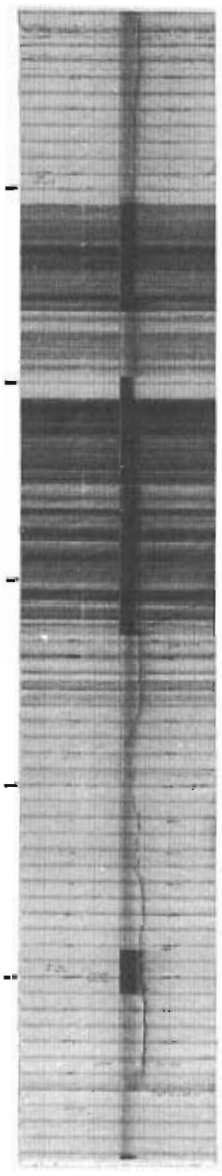
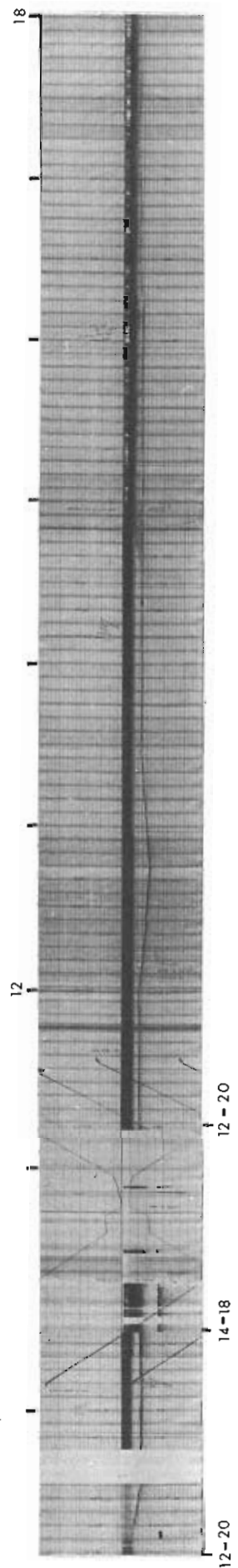
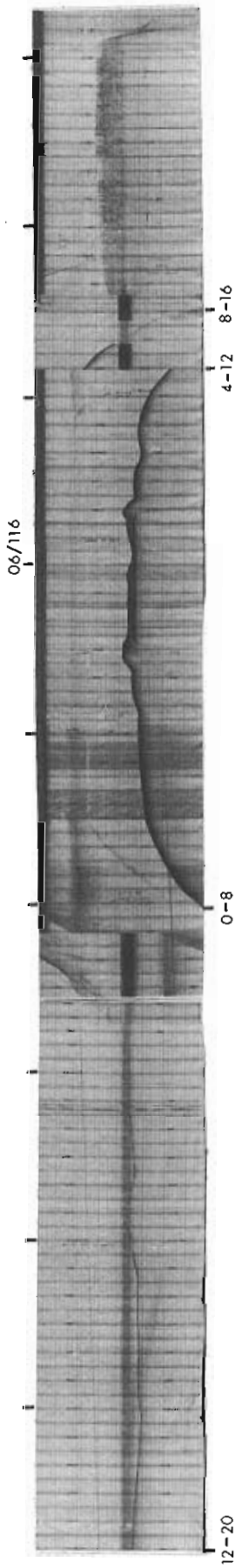
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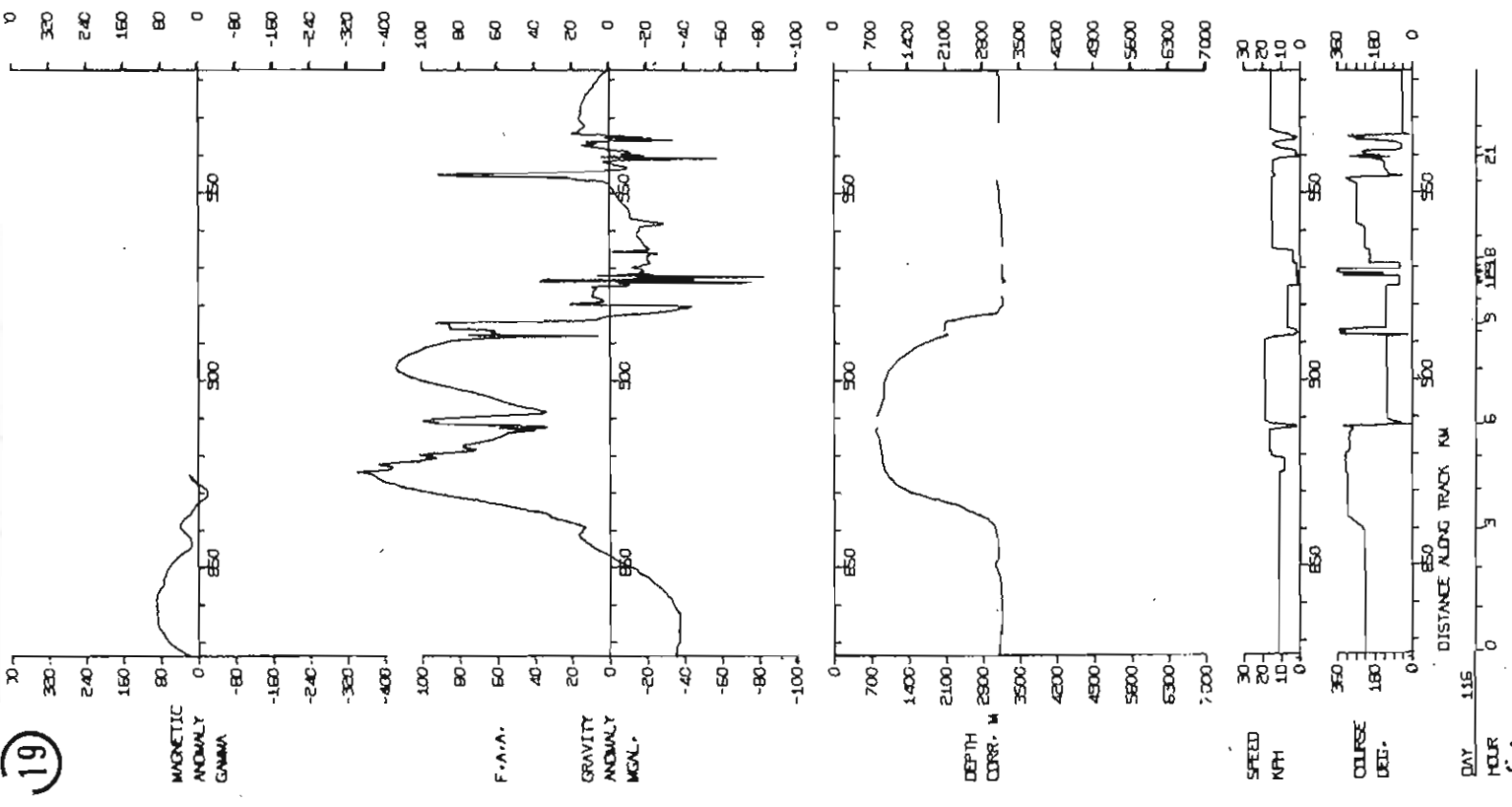
17

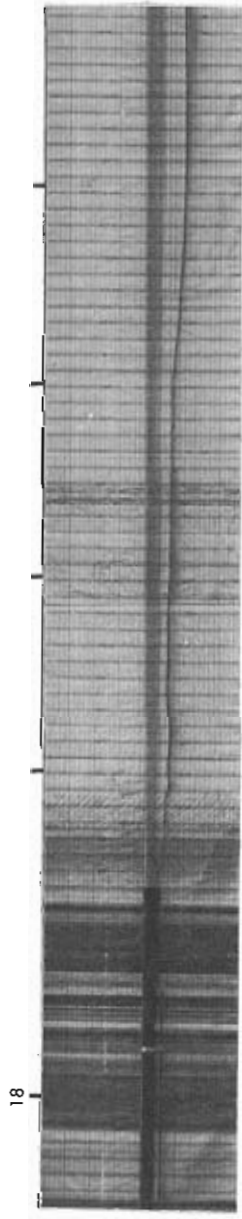
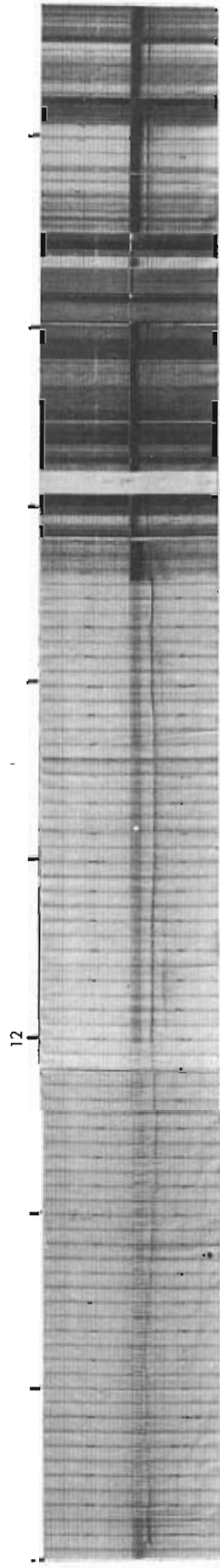
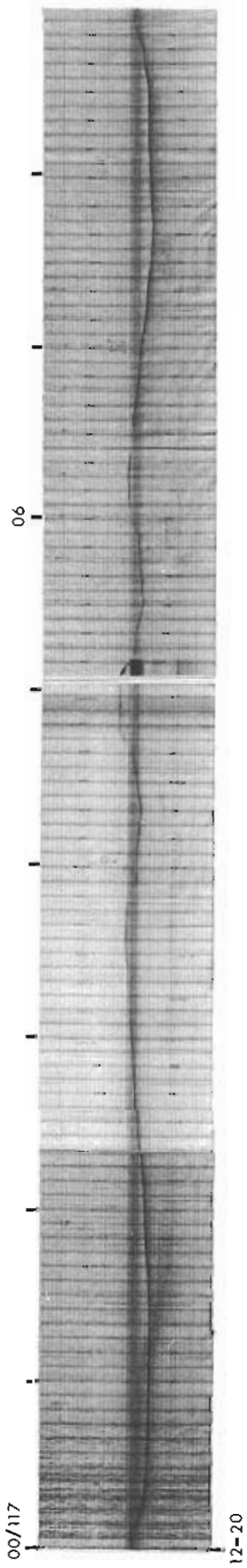


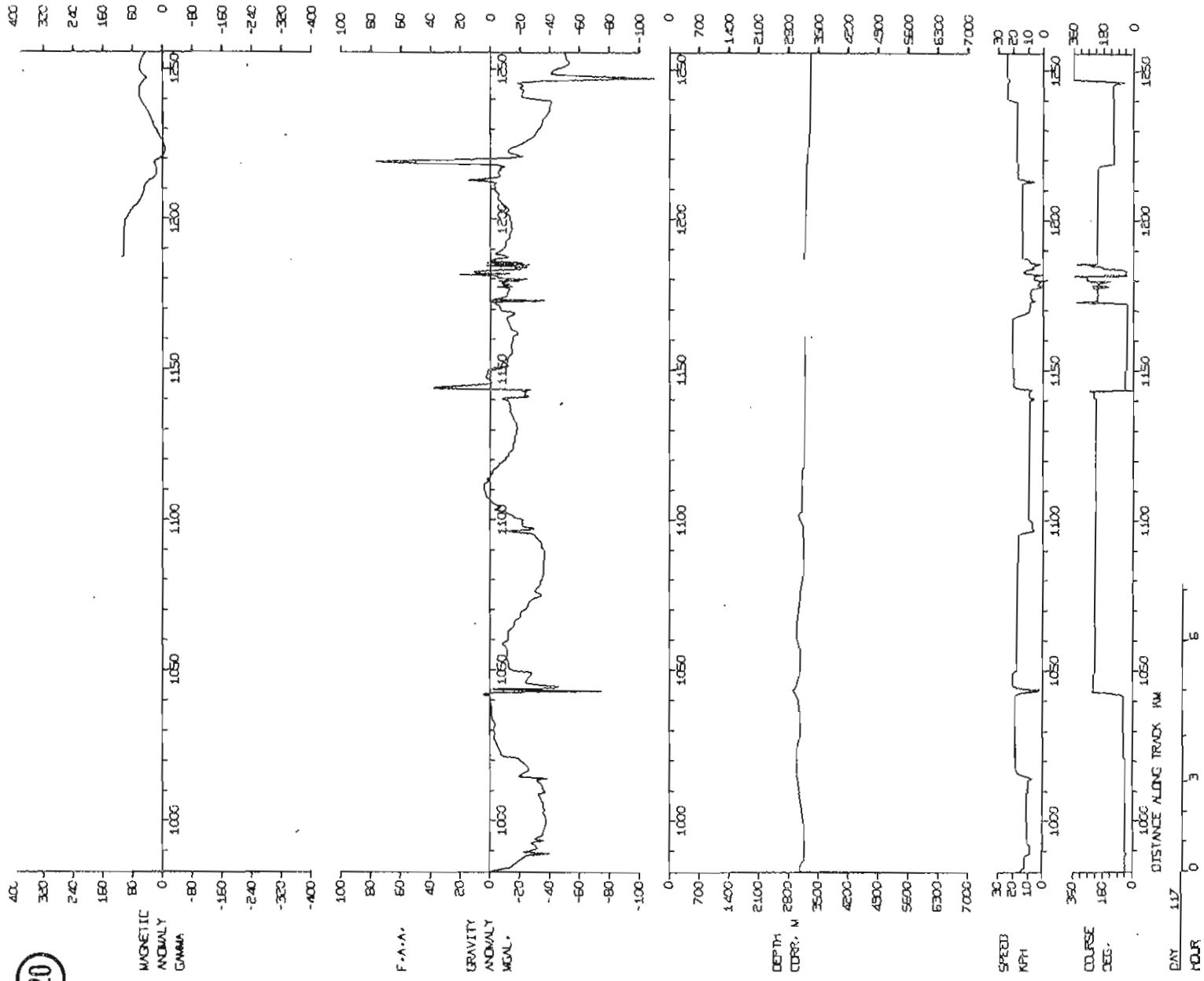




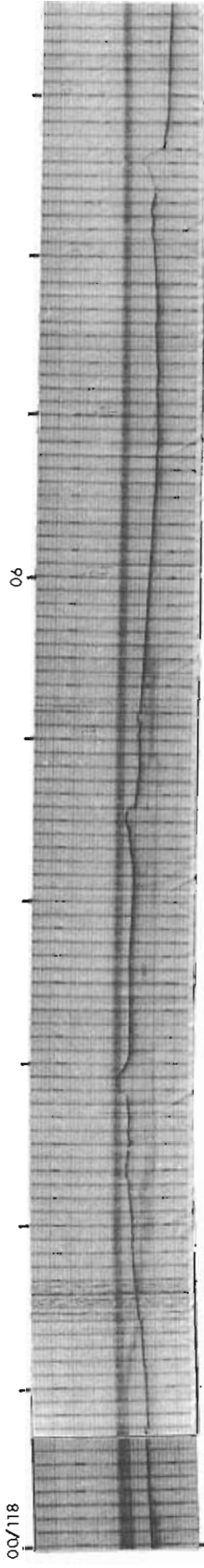






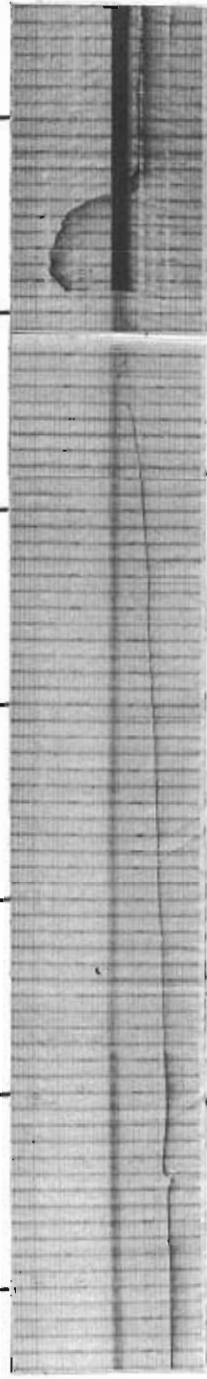


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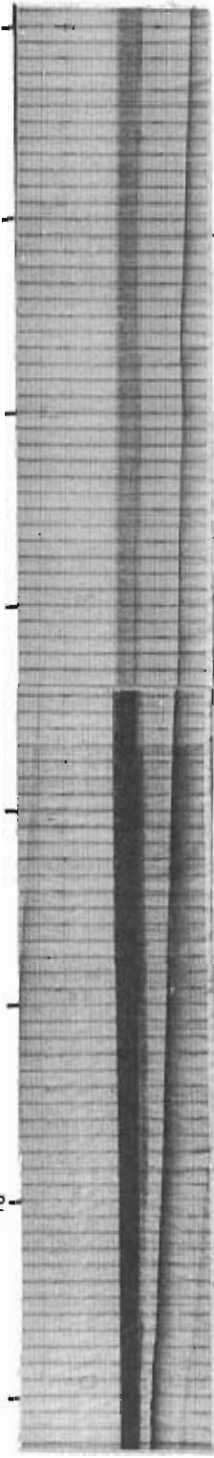
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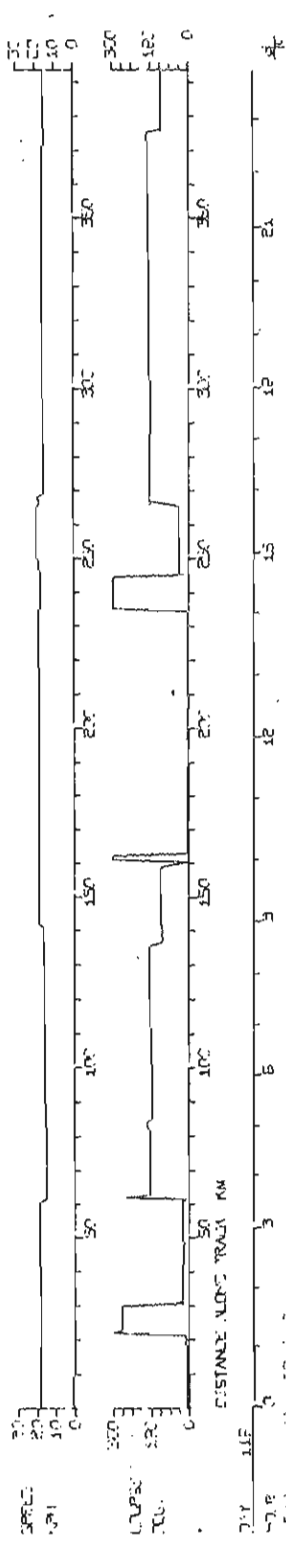
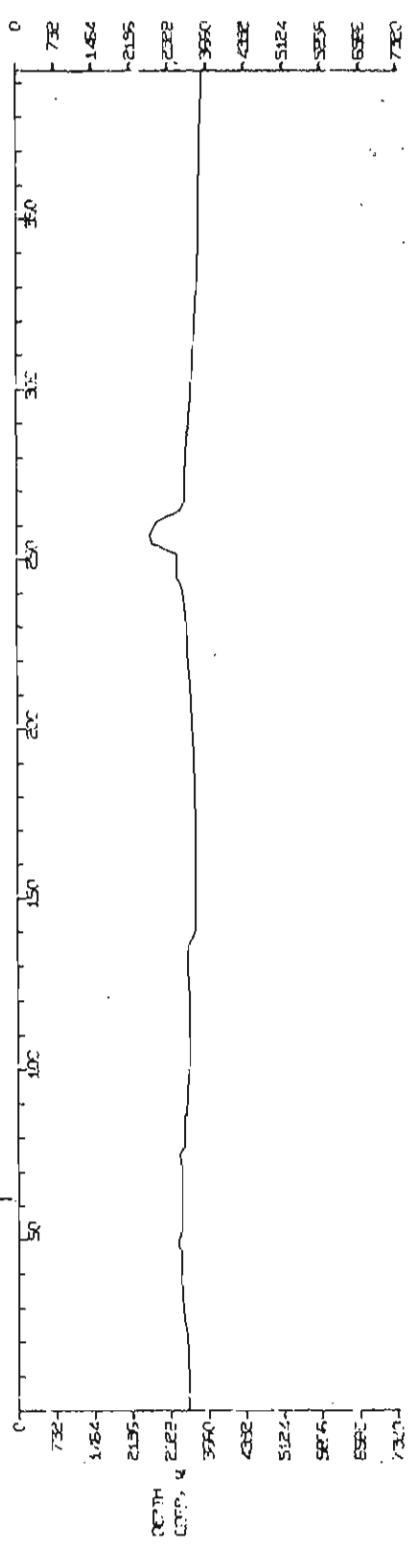
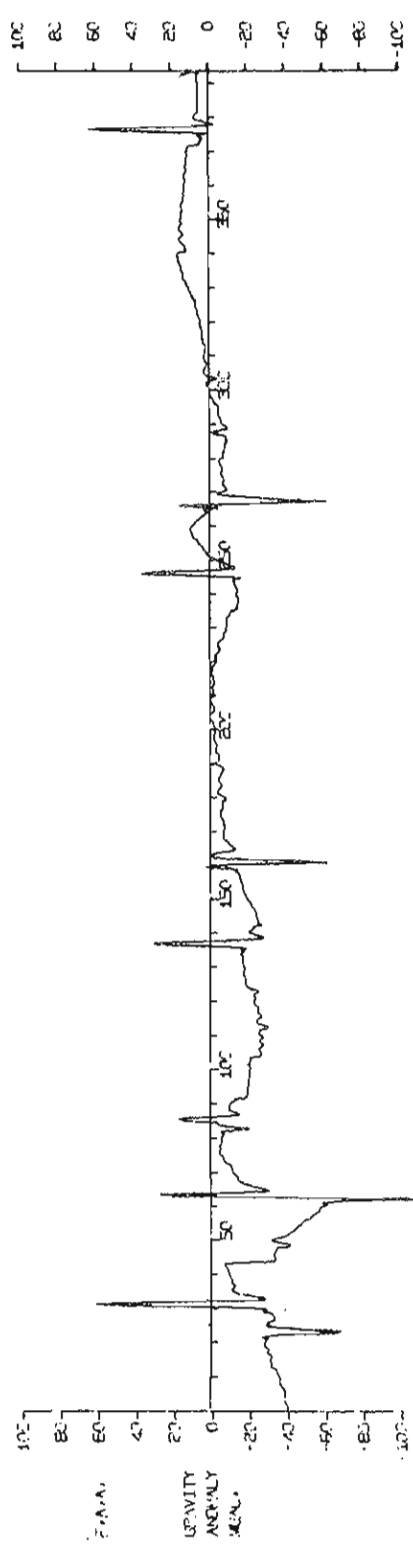
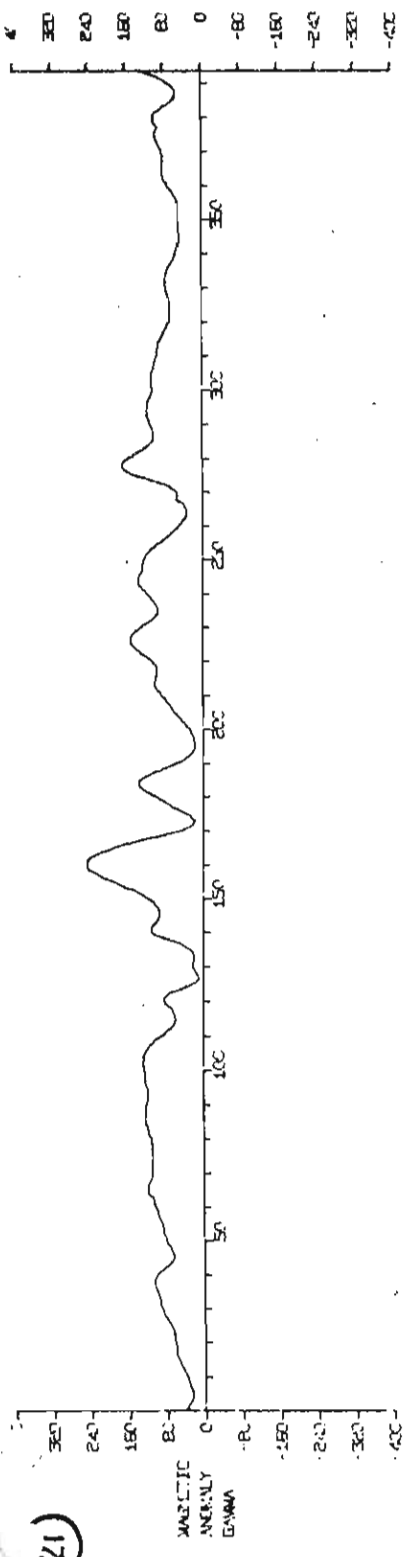
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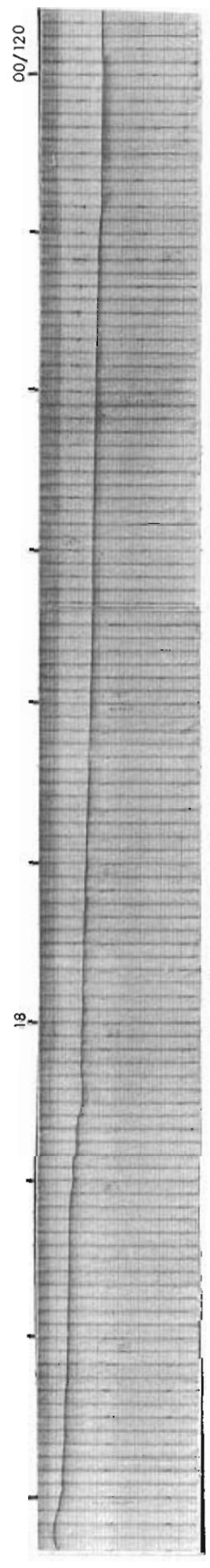
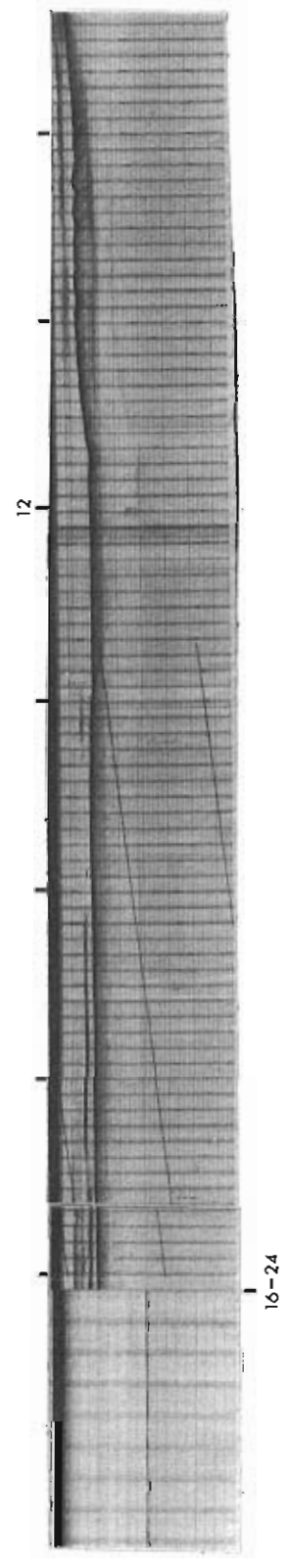
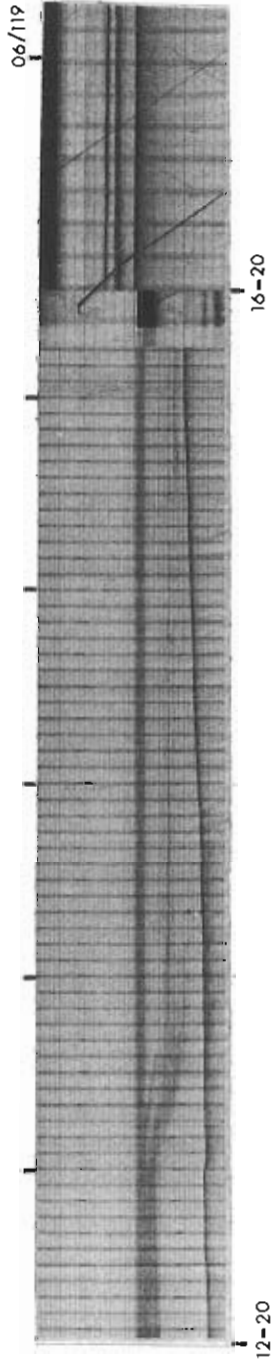


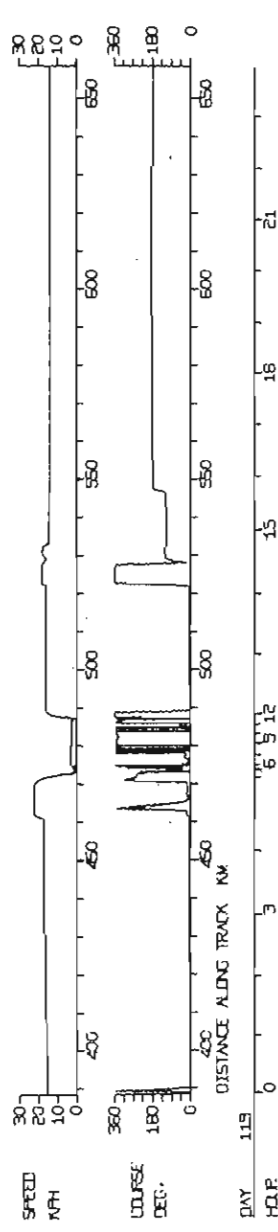
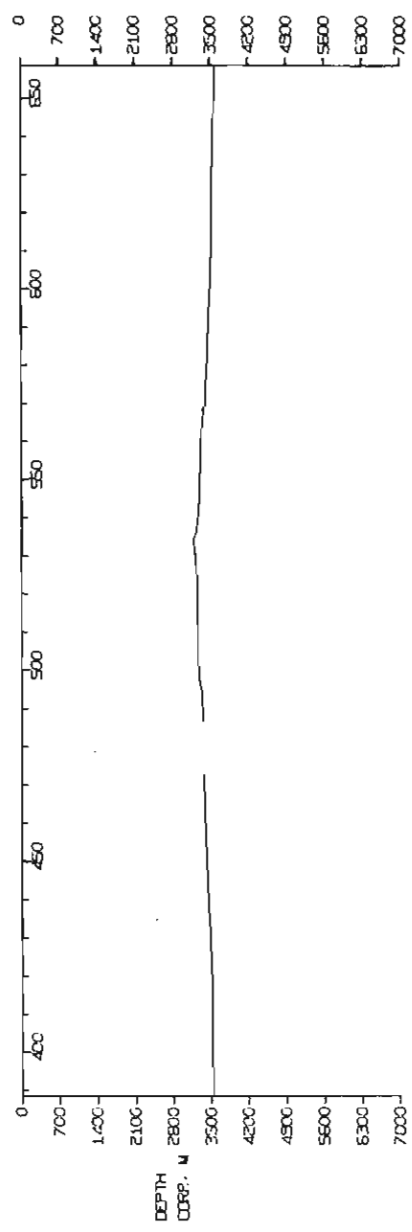
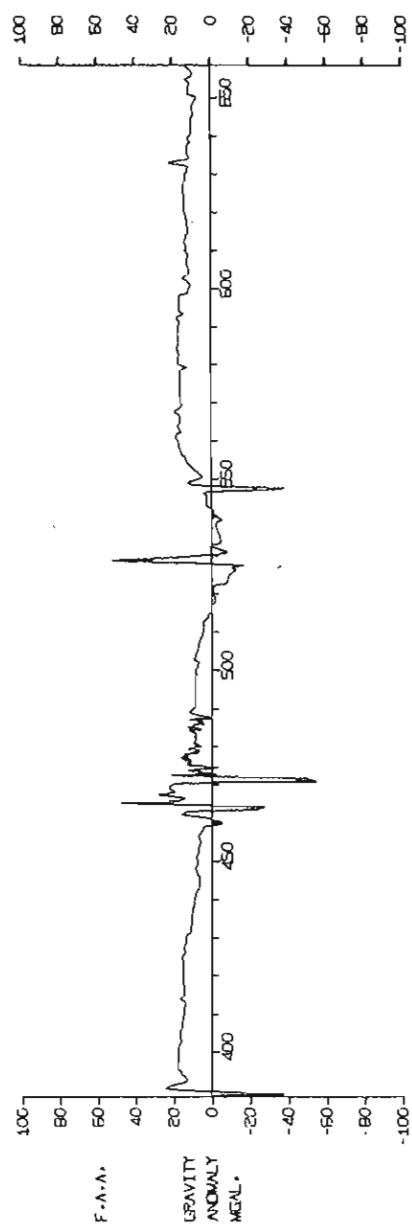
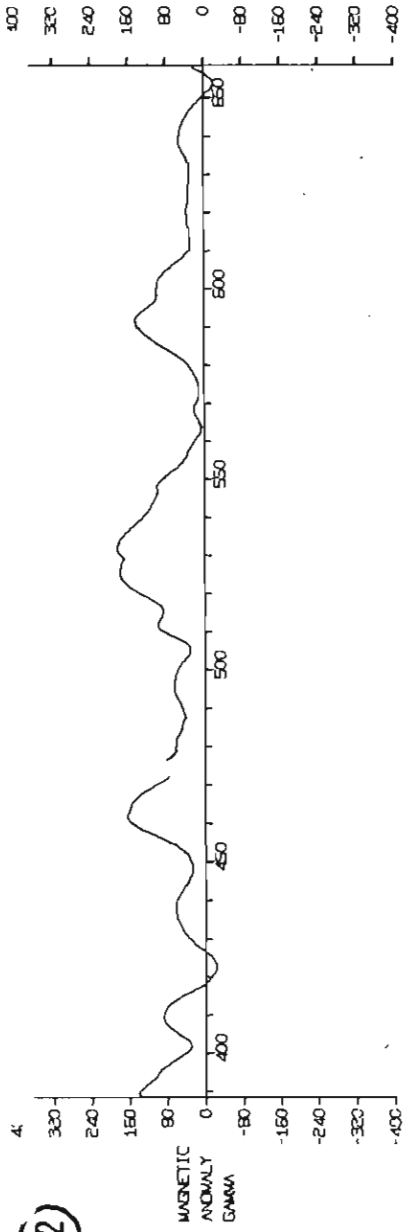
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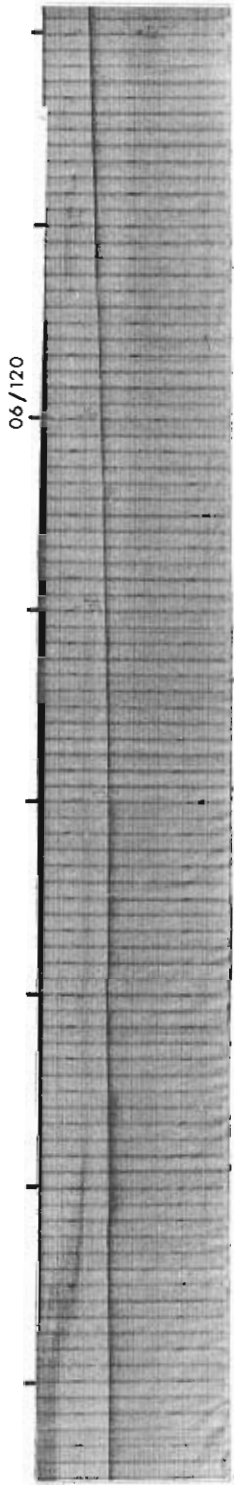
00/119



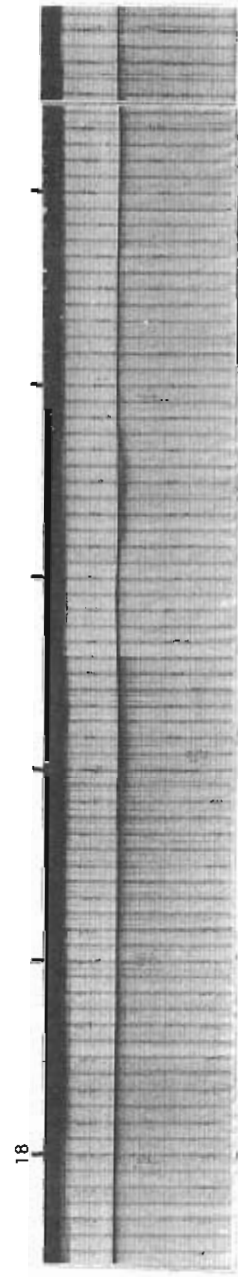
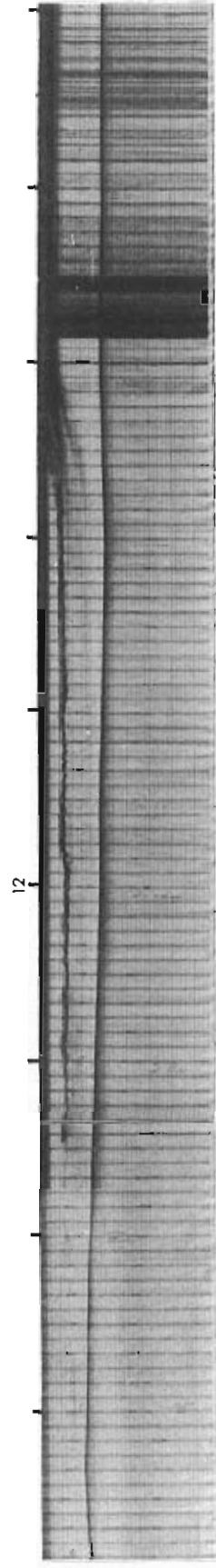


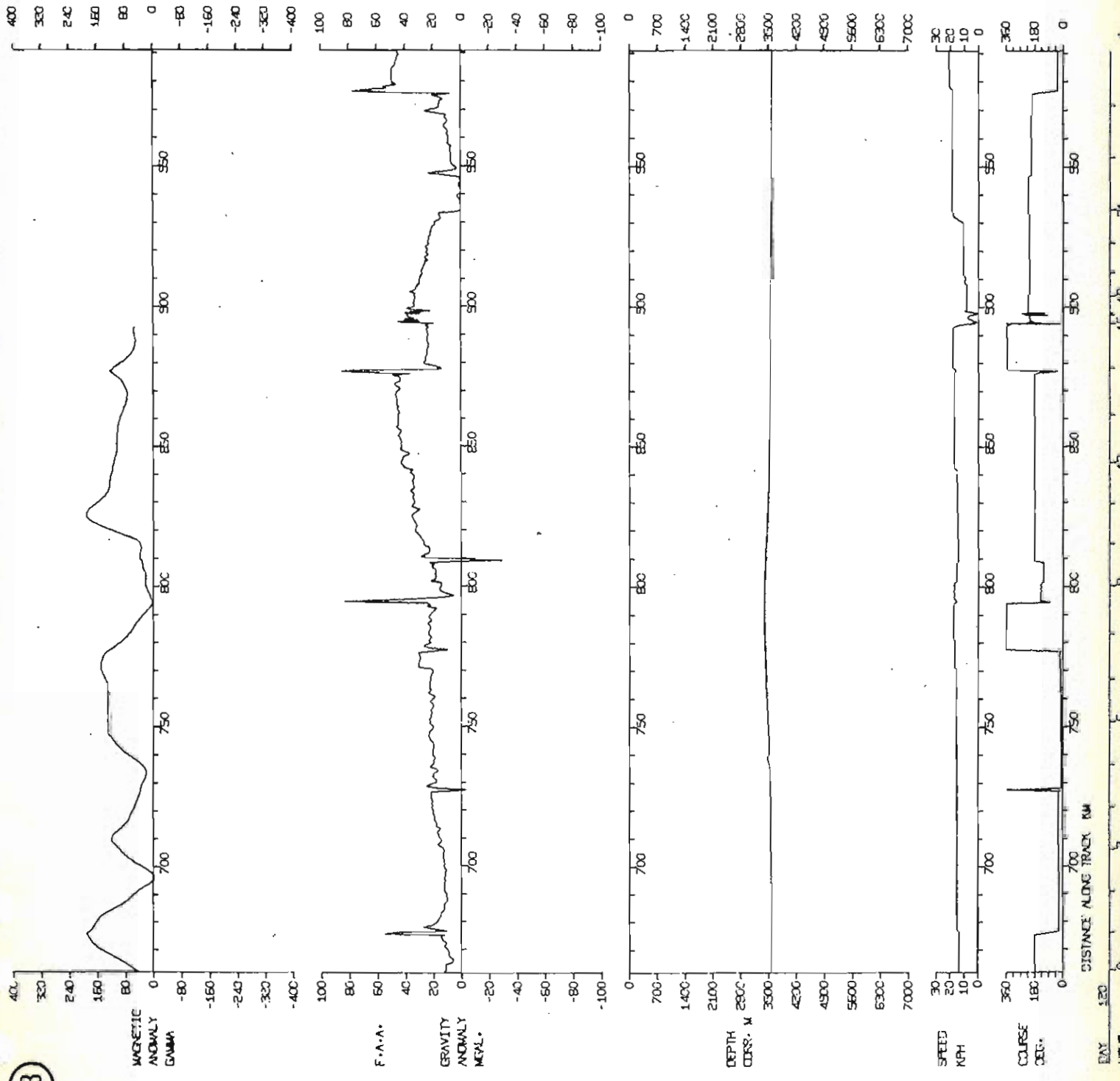


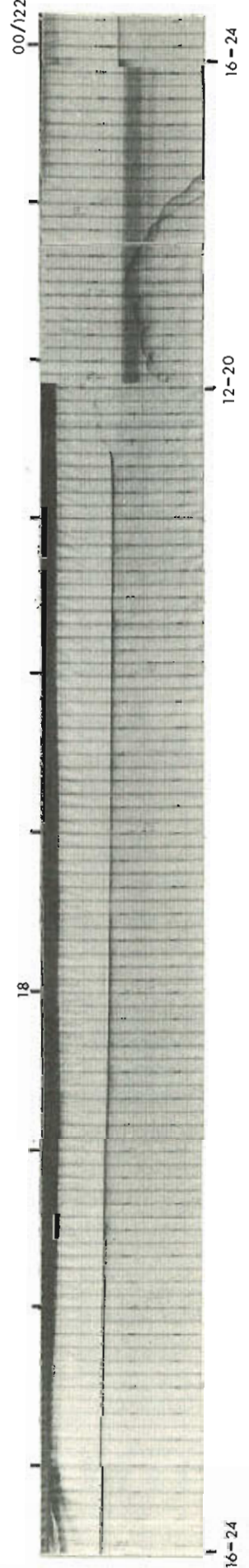
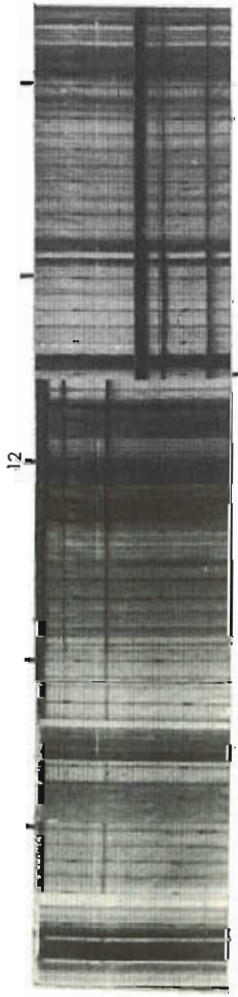
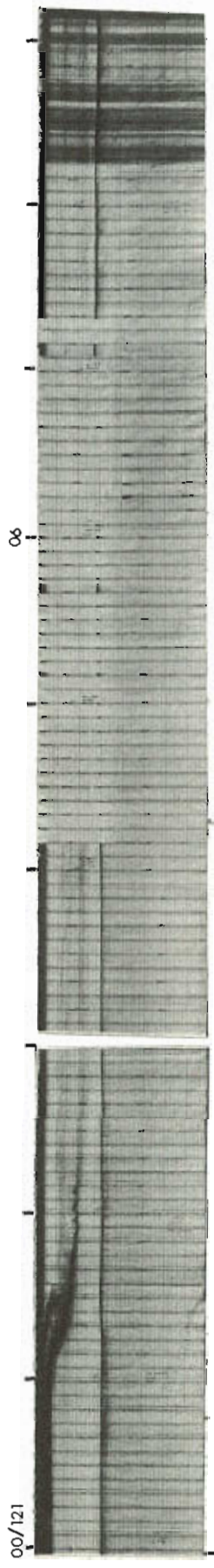


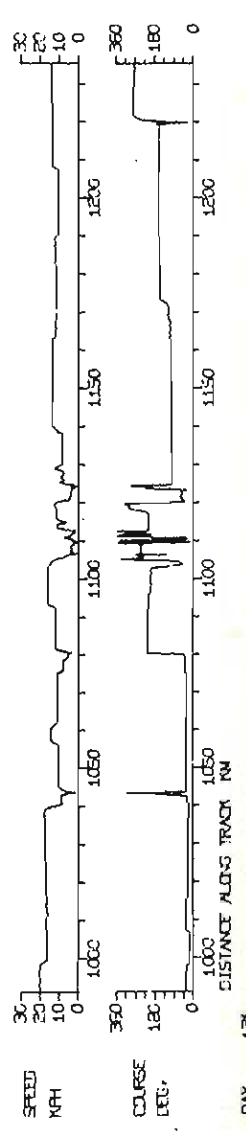
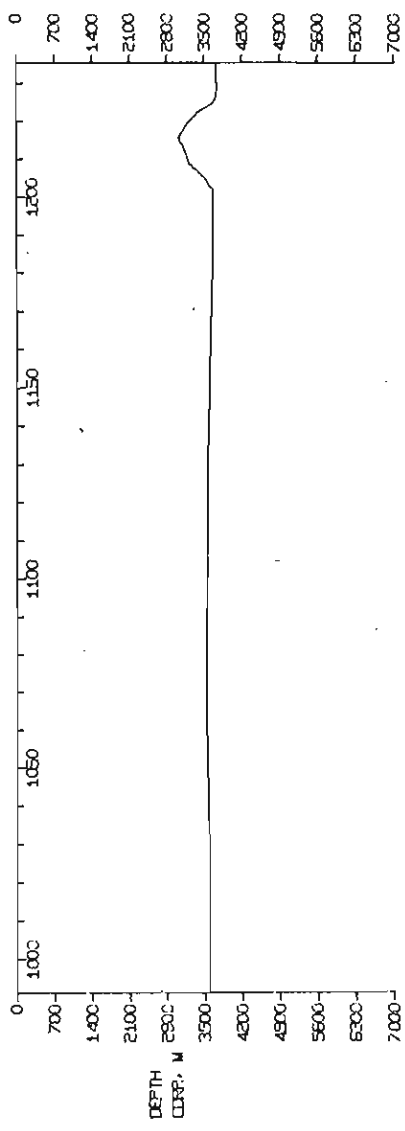
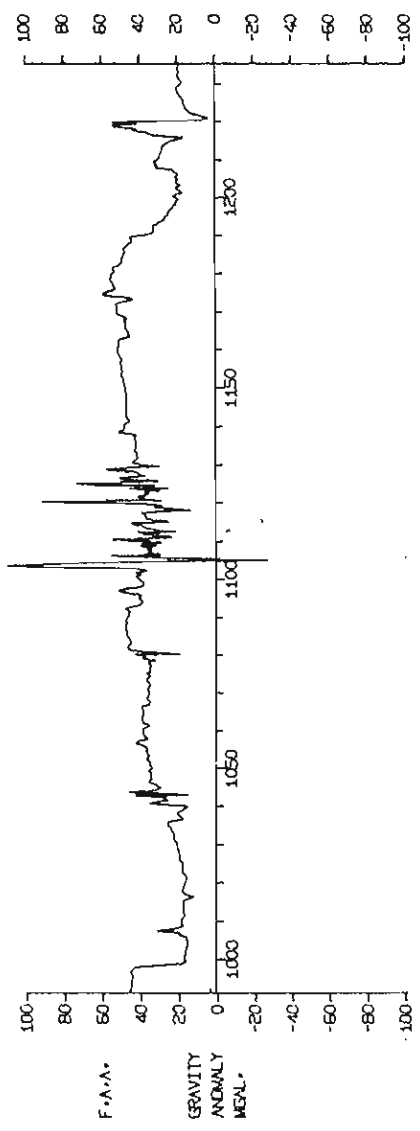
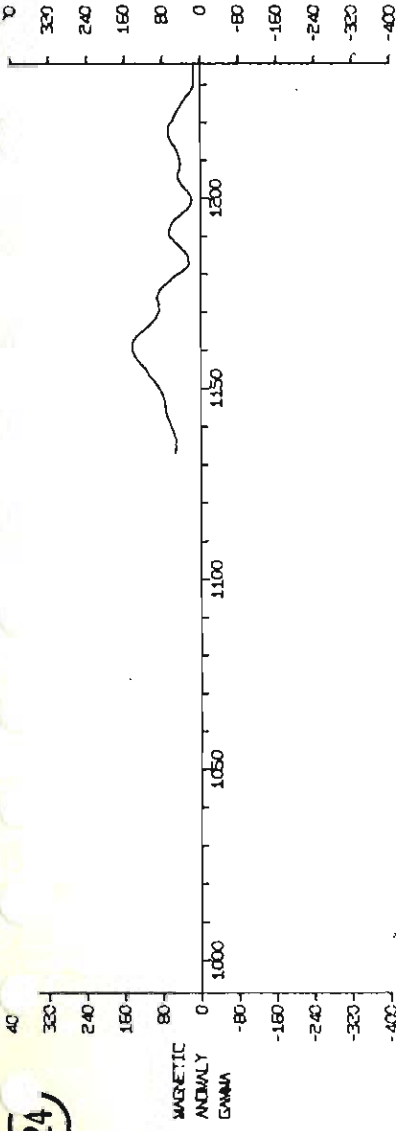


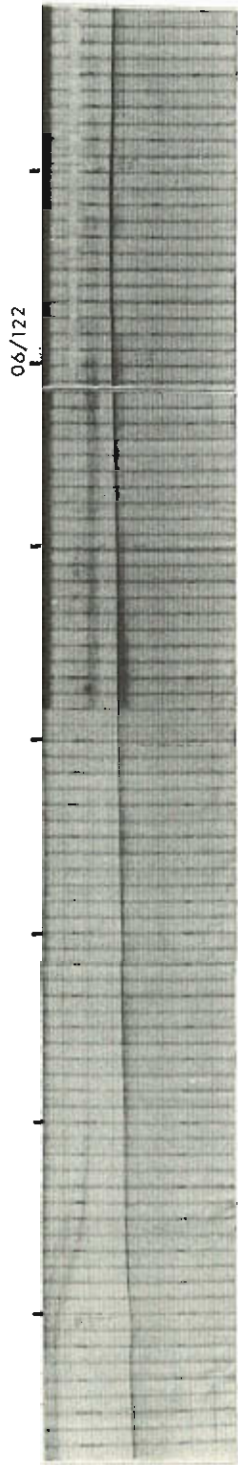
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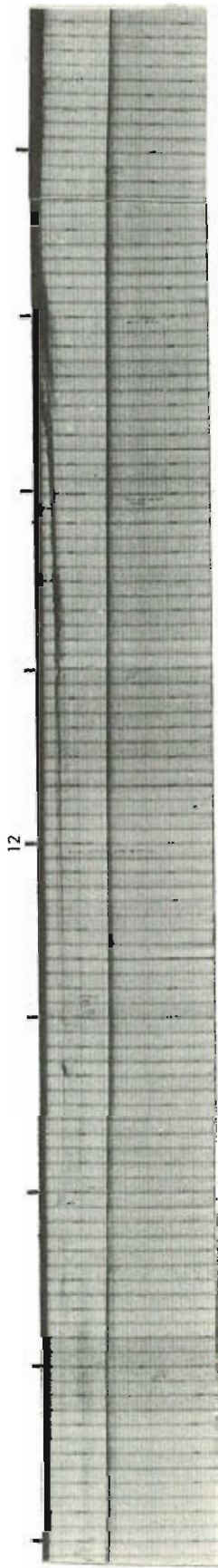




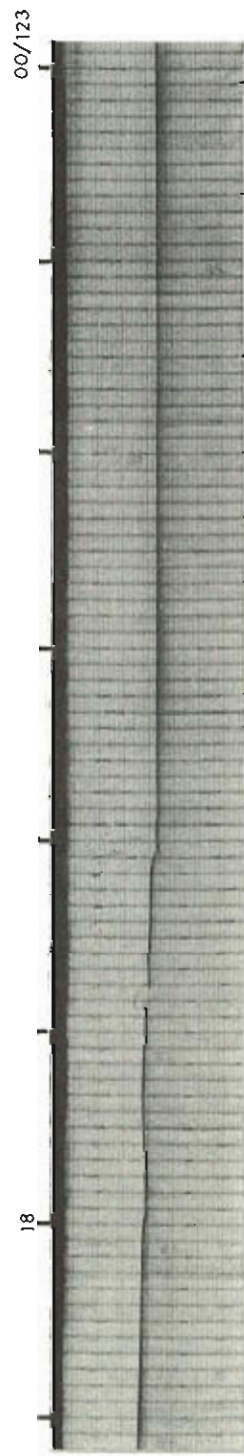




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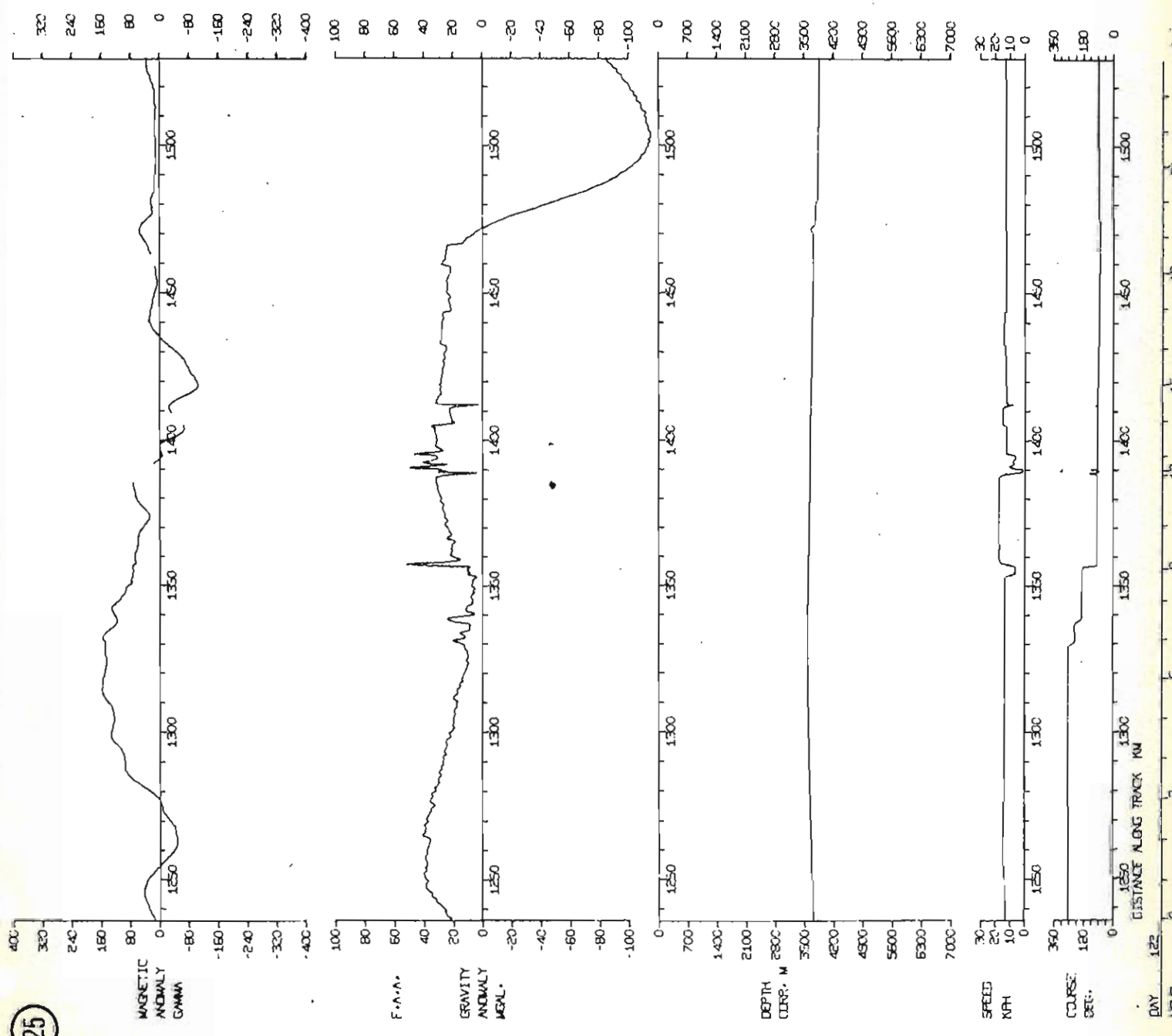


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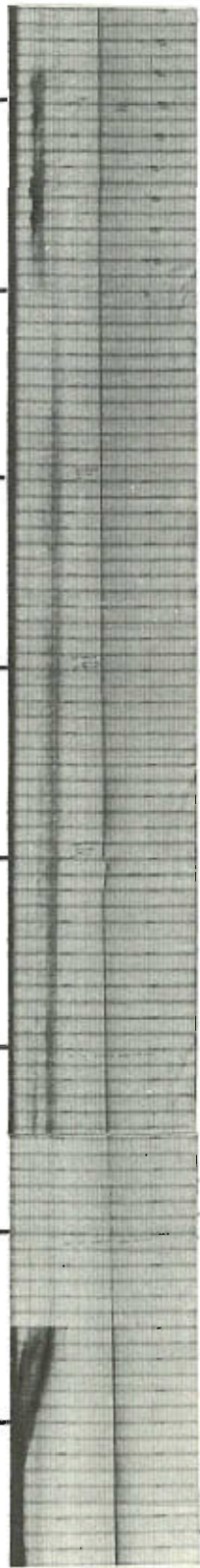


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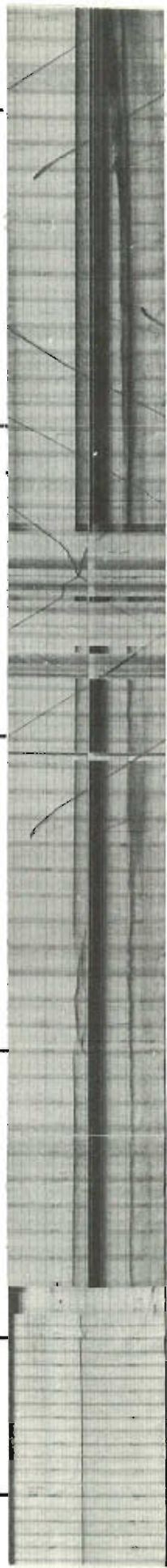
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06/123

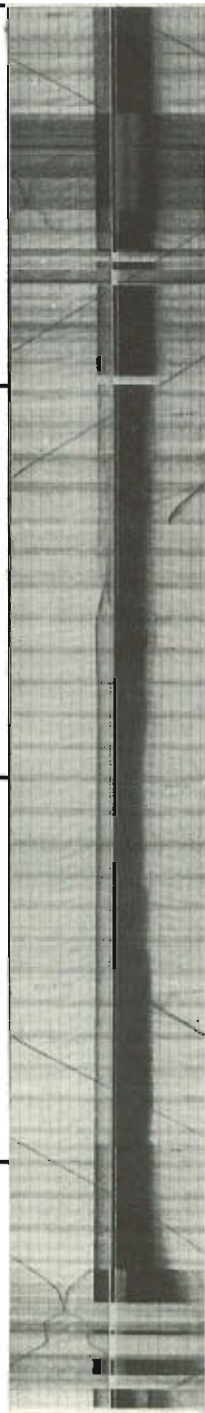


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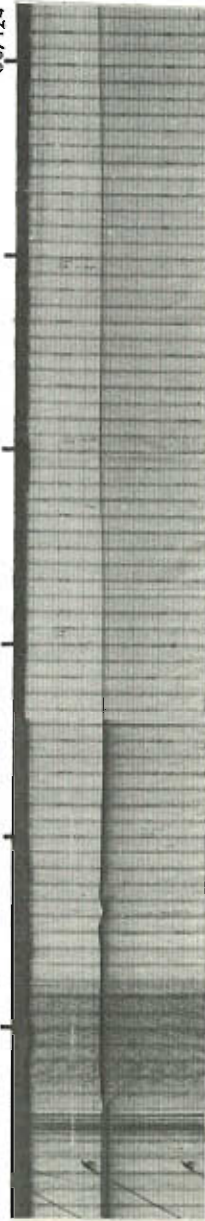


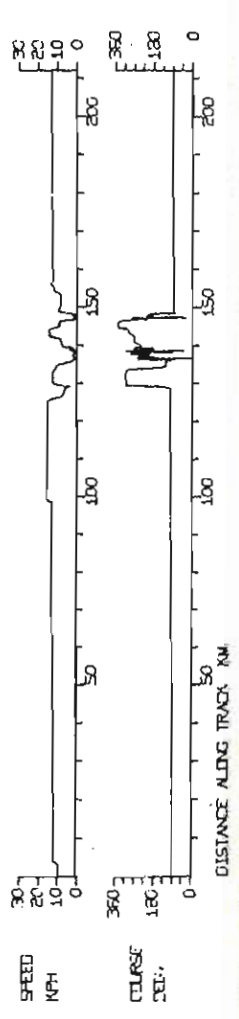
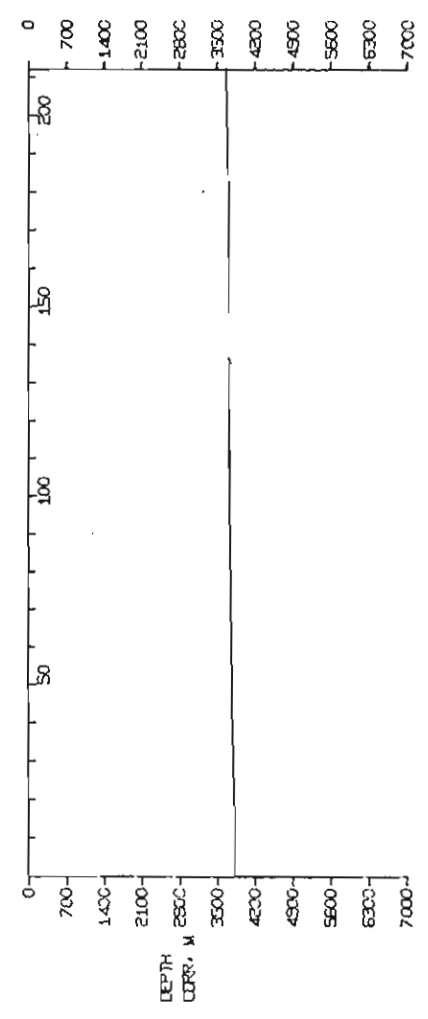
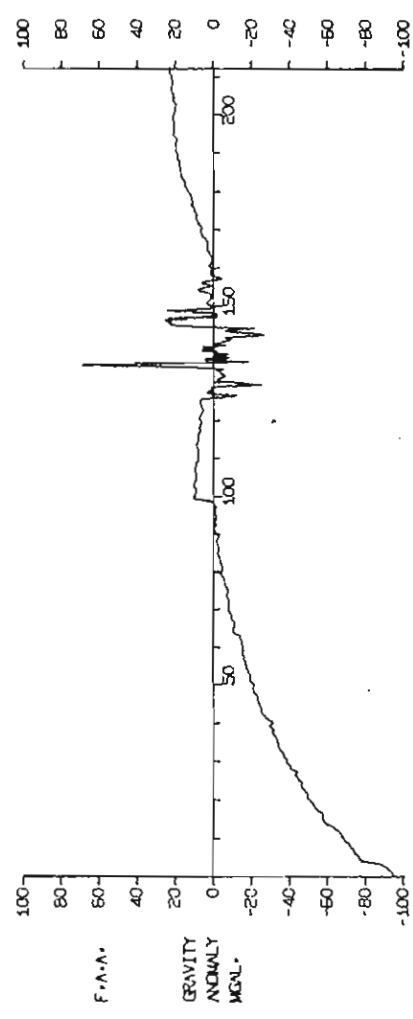
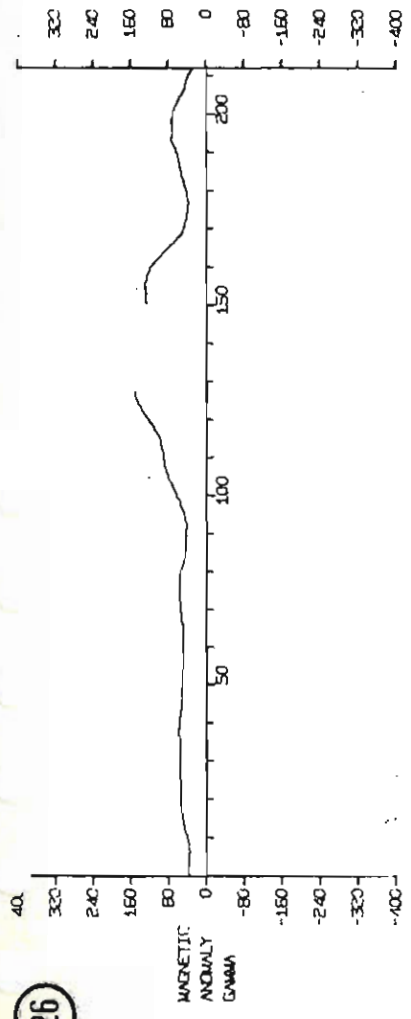
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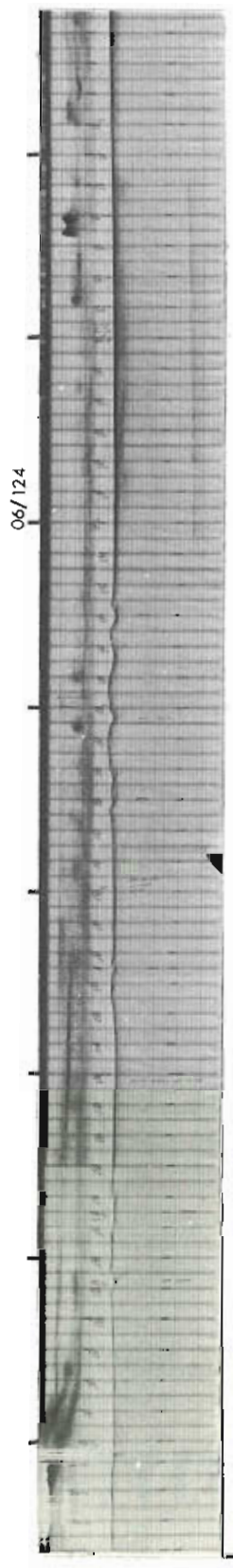
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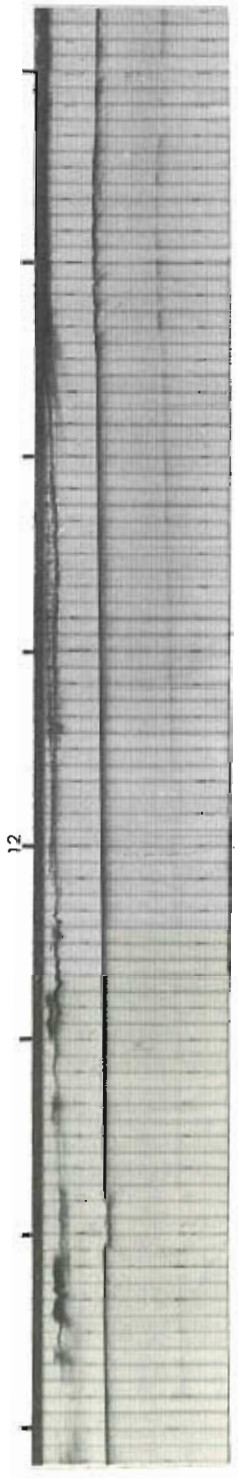
00/124



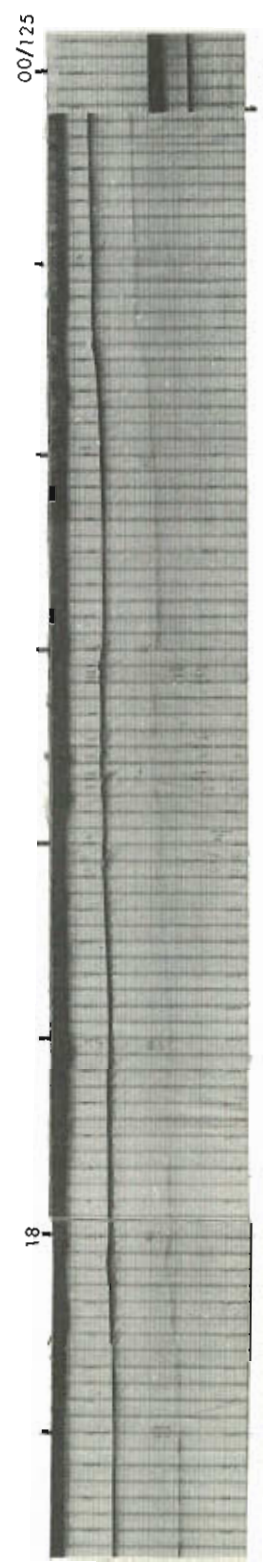




16-24

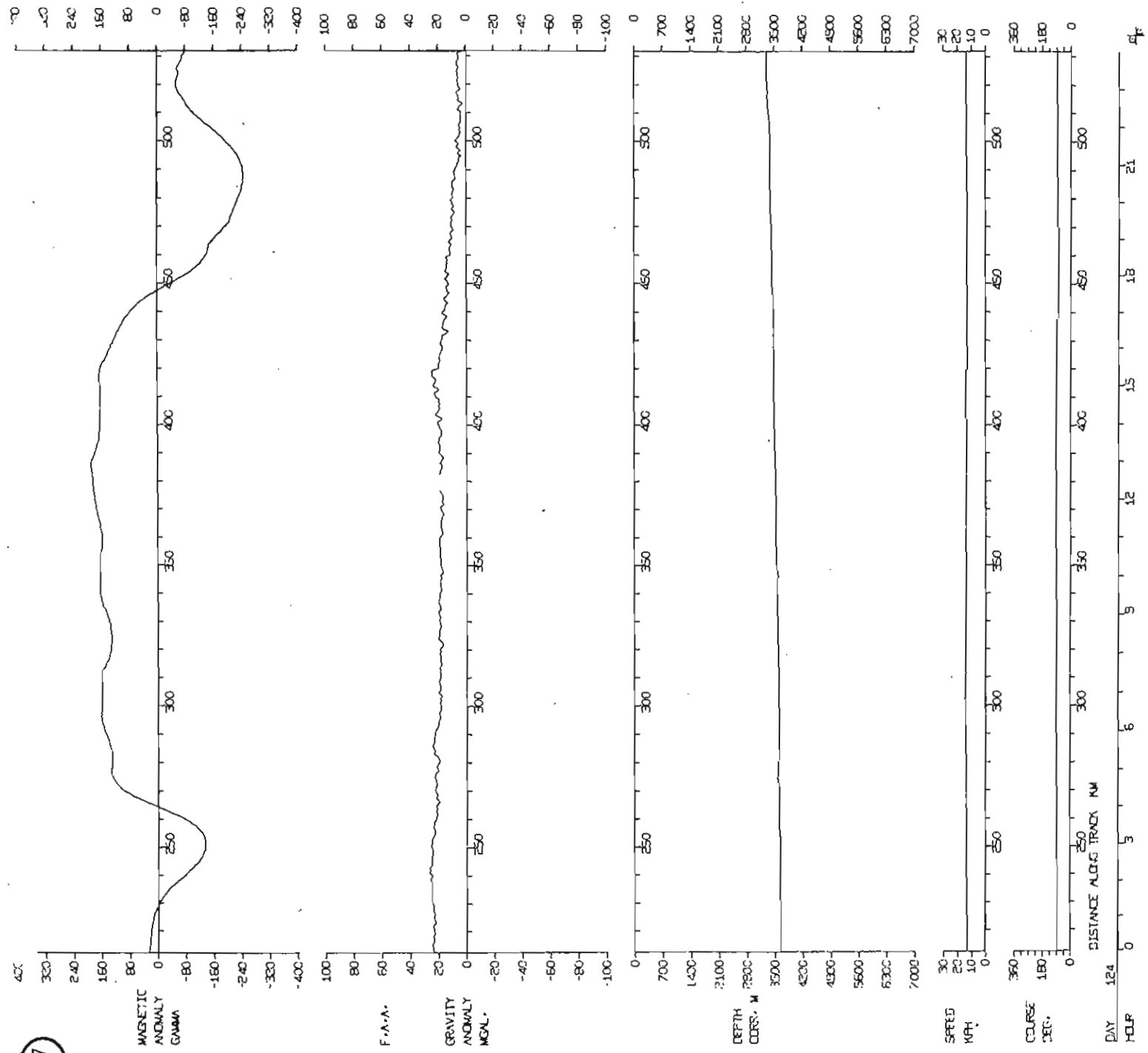


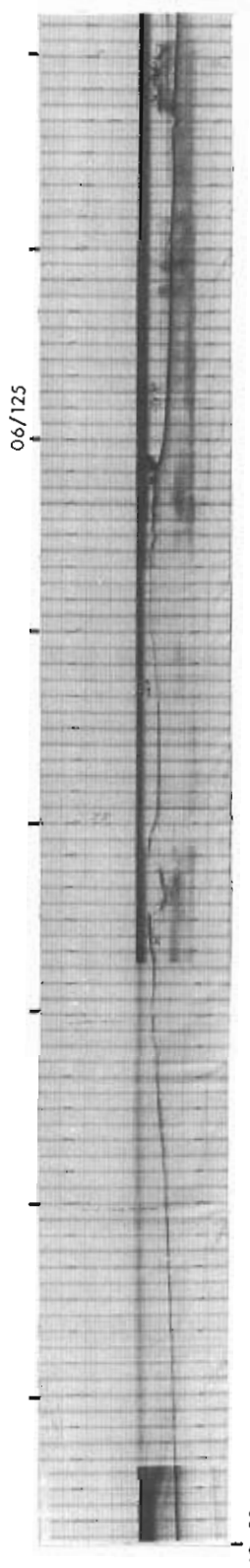
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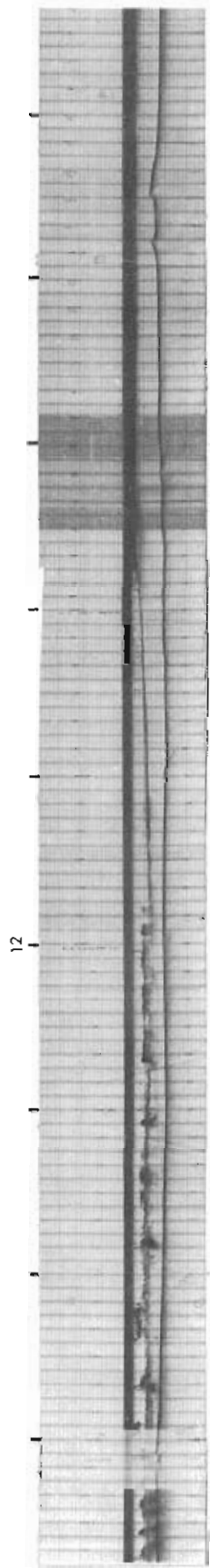
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12-20

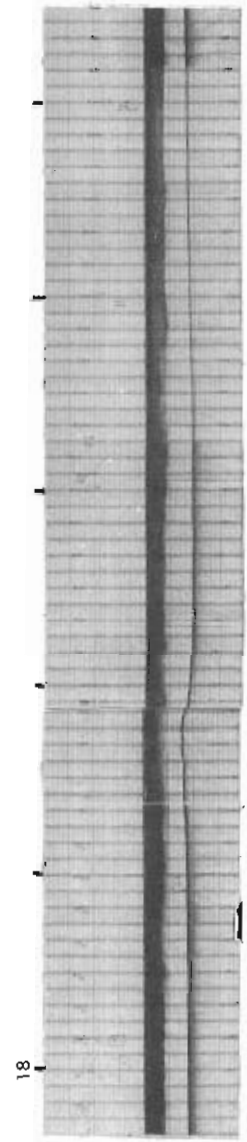




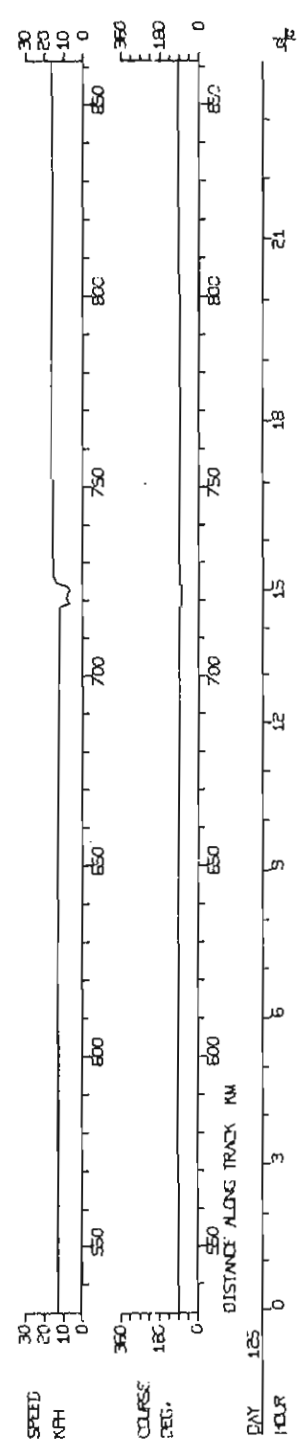
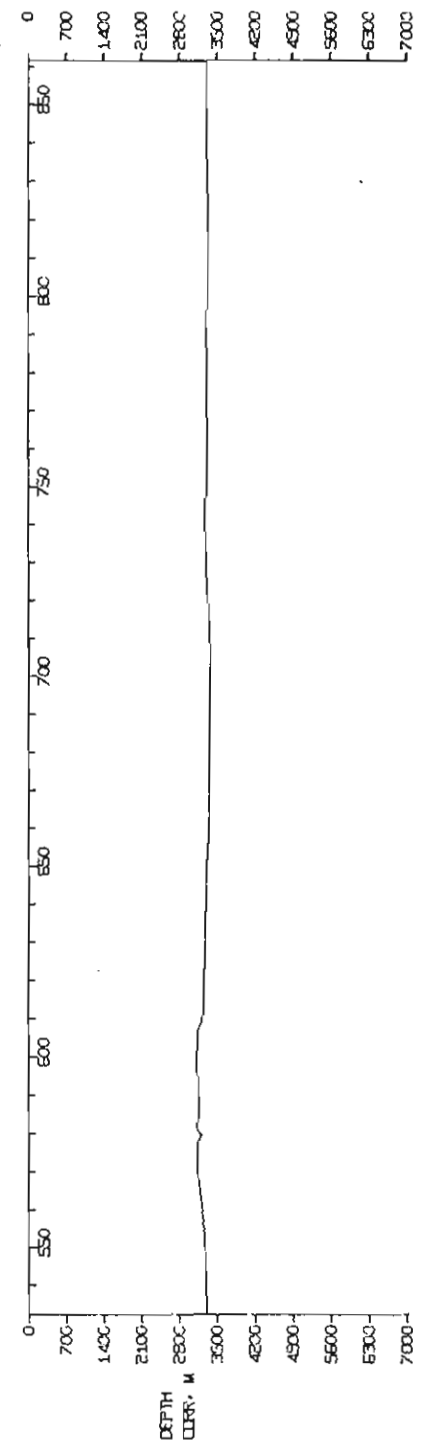
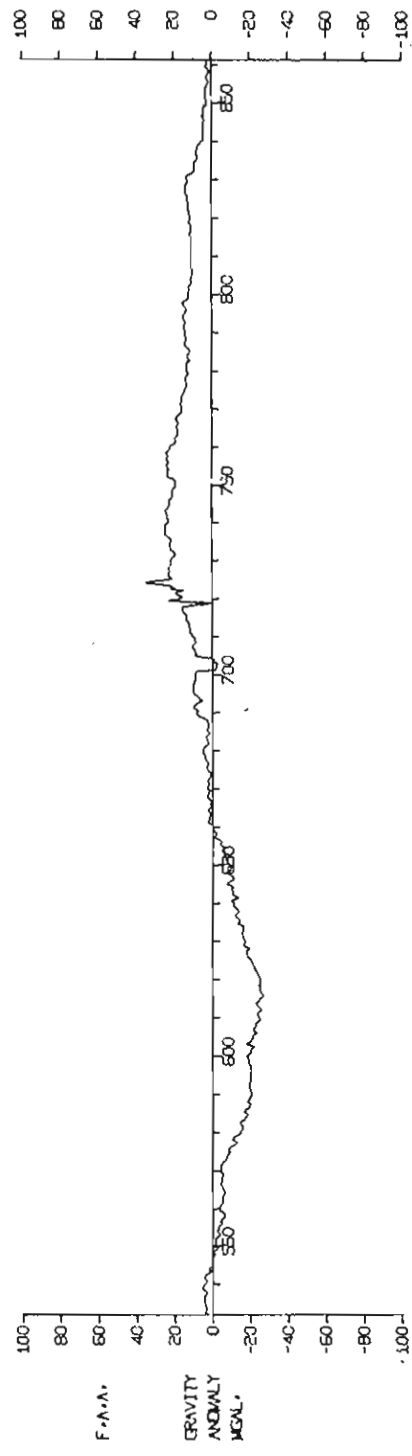
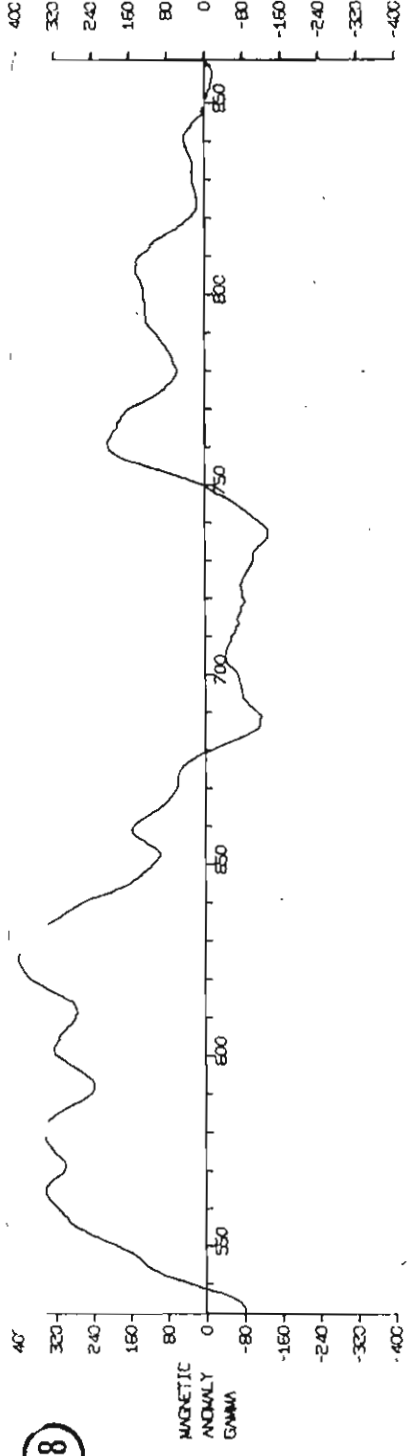
12-20

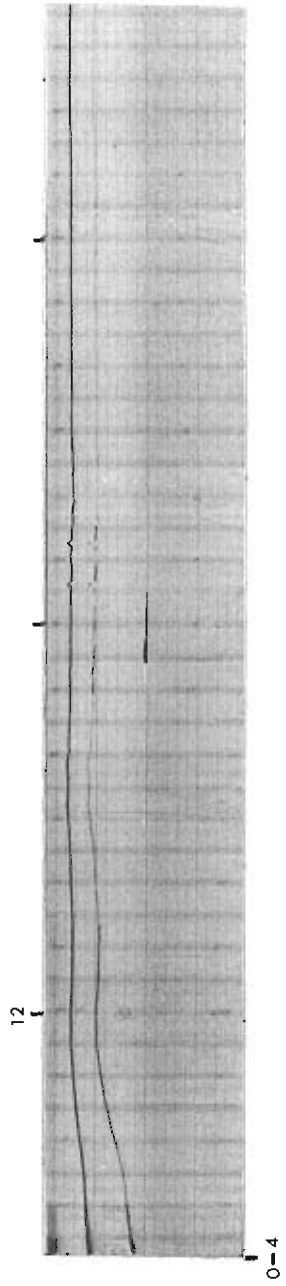
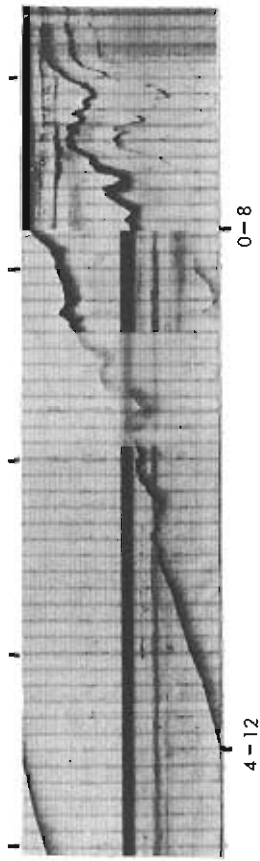
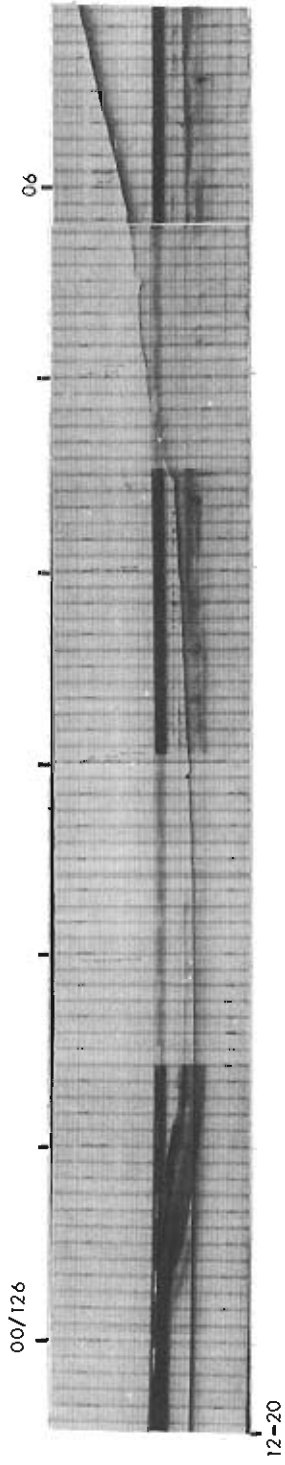


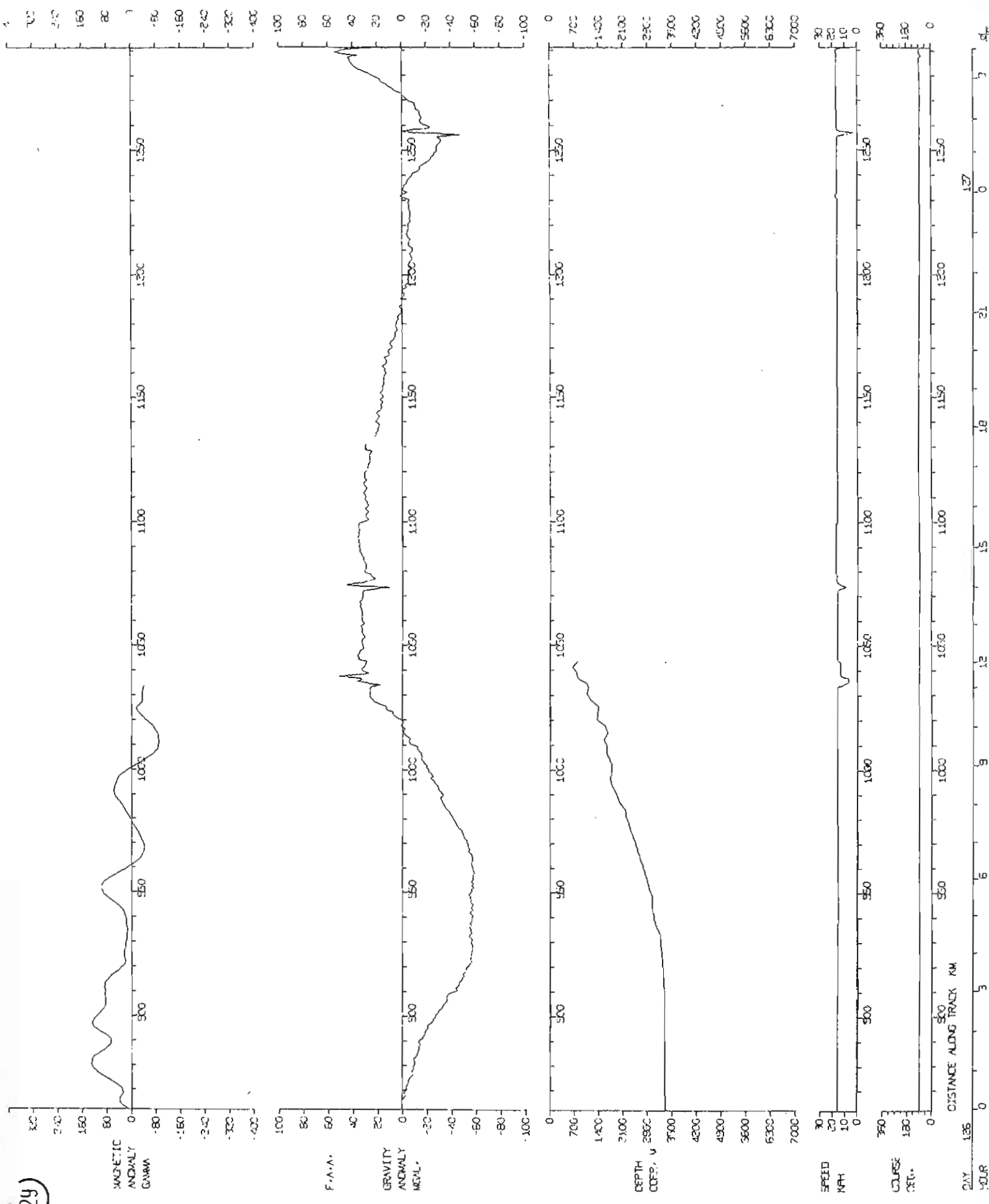
12



18

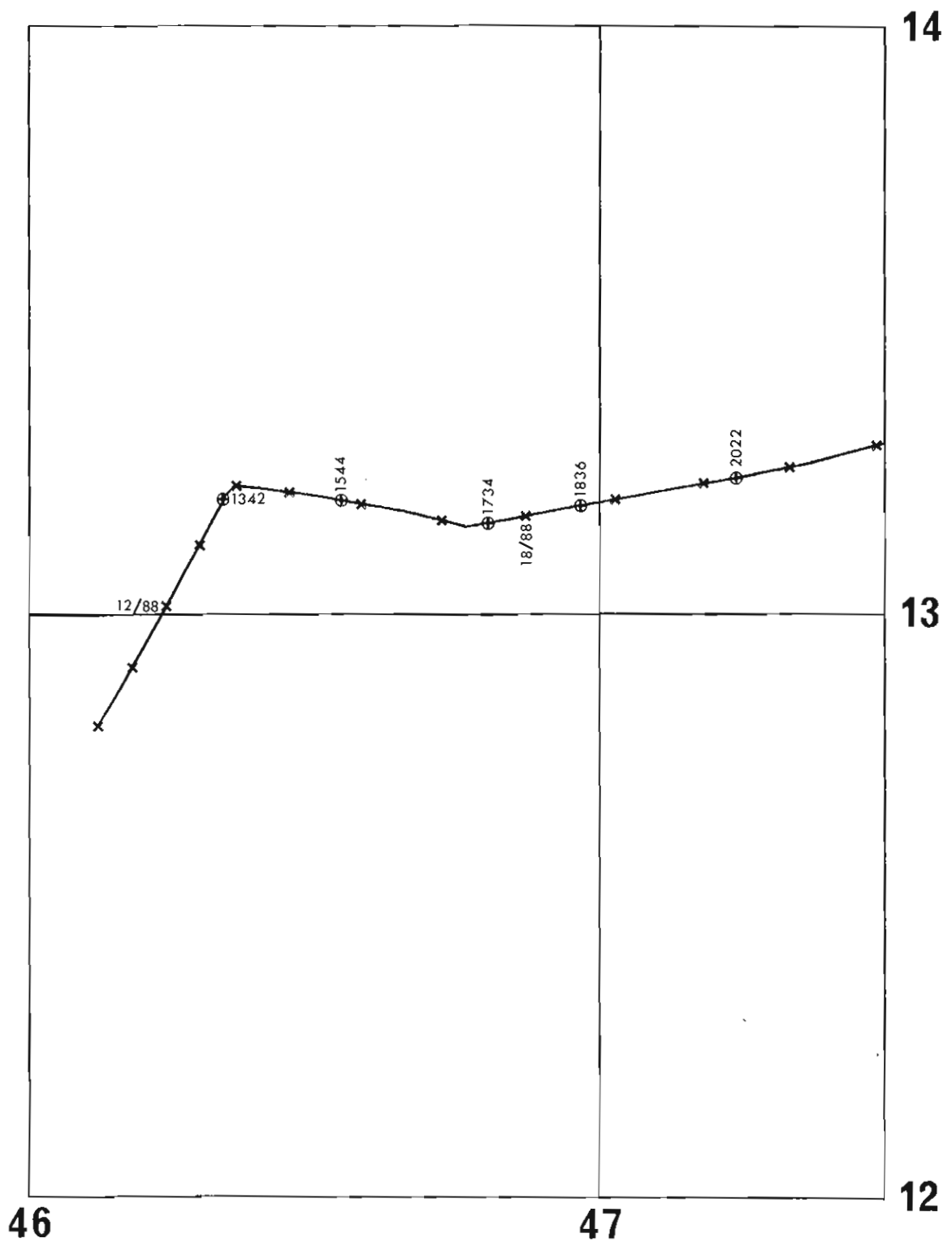


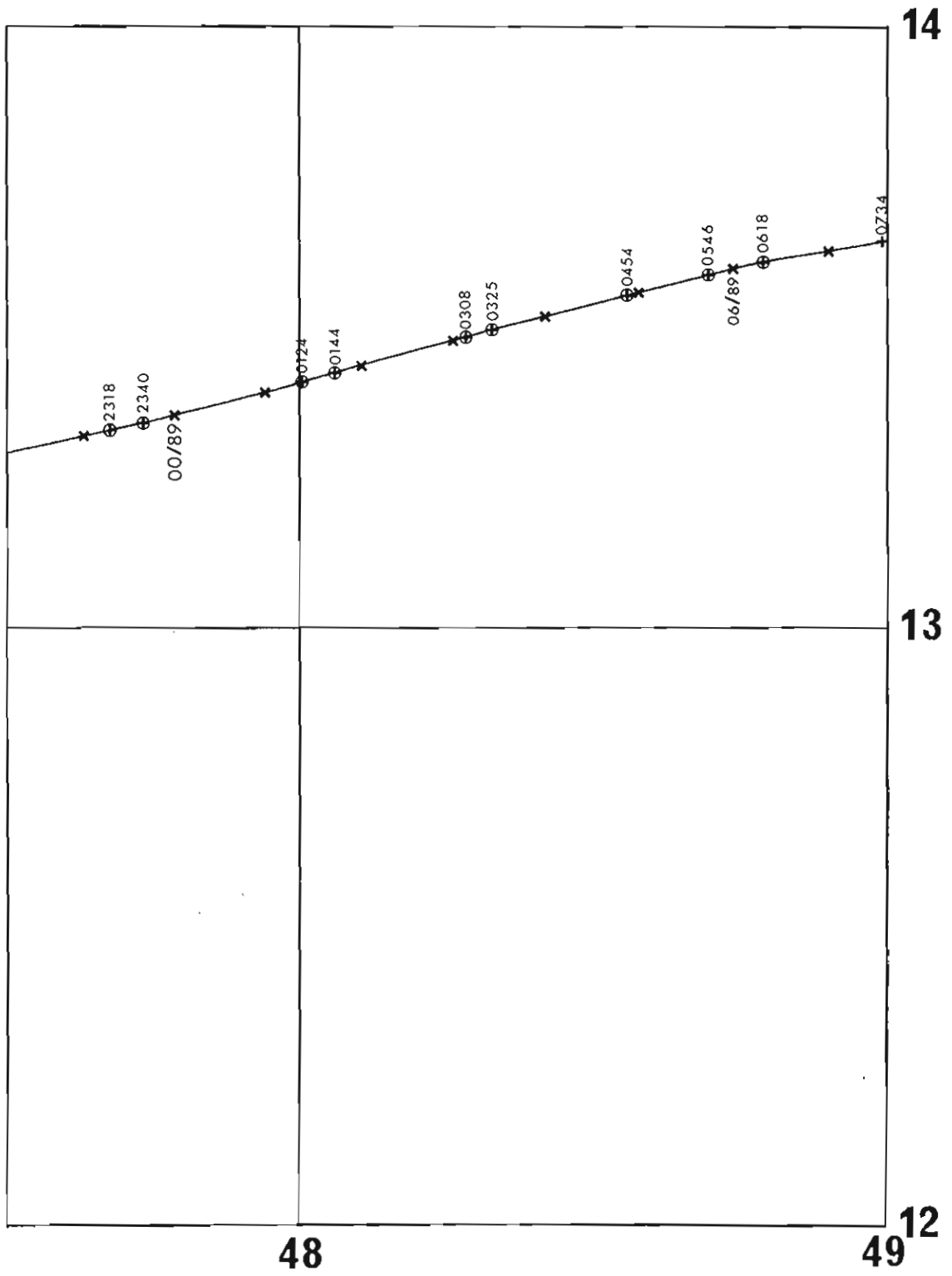


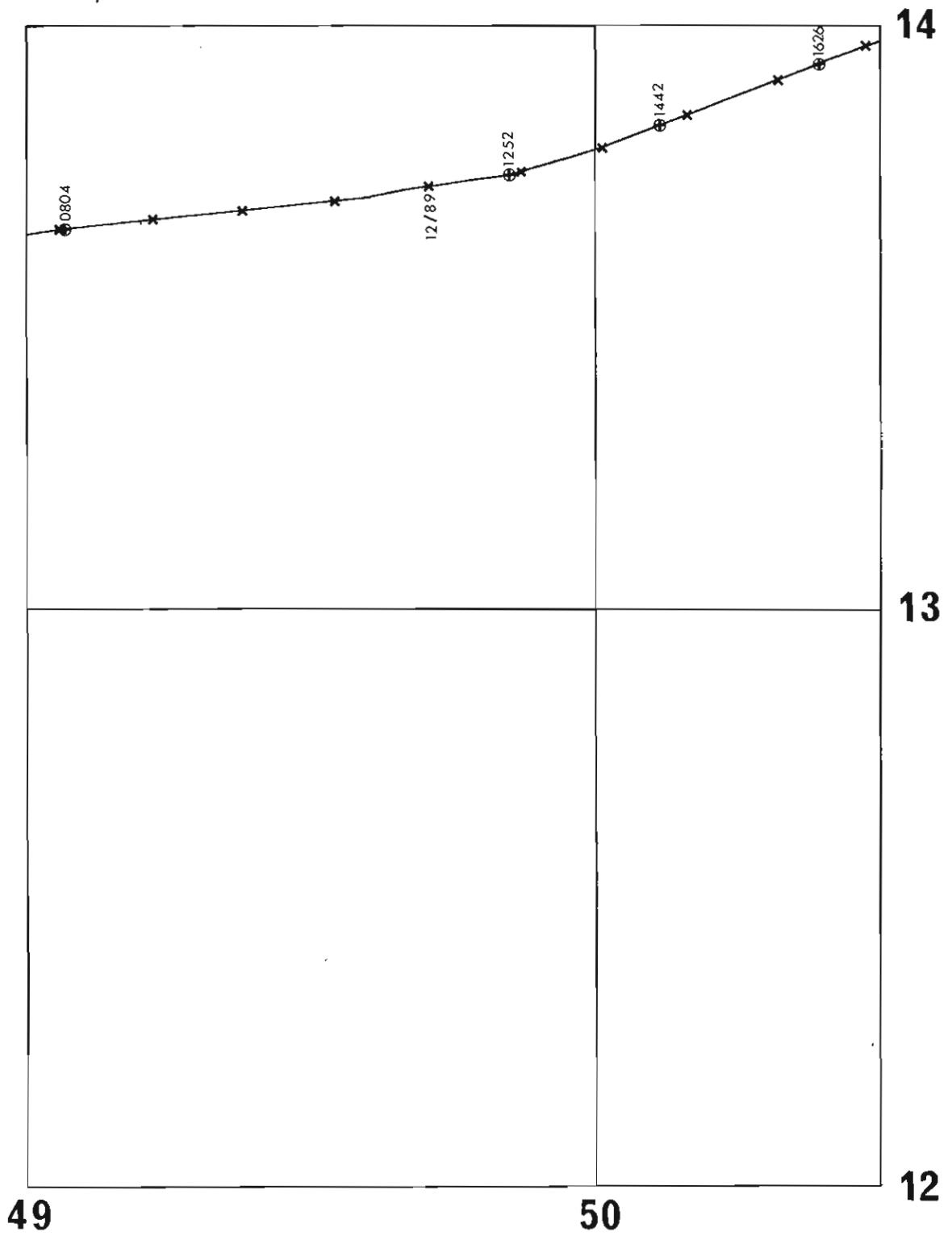


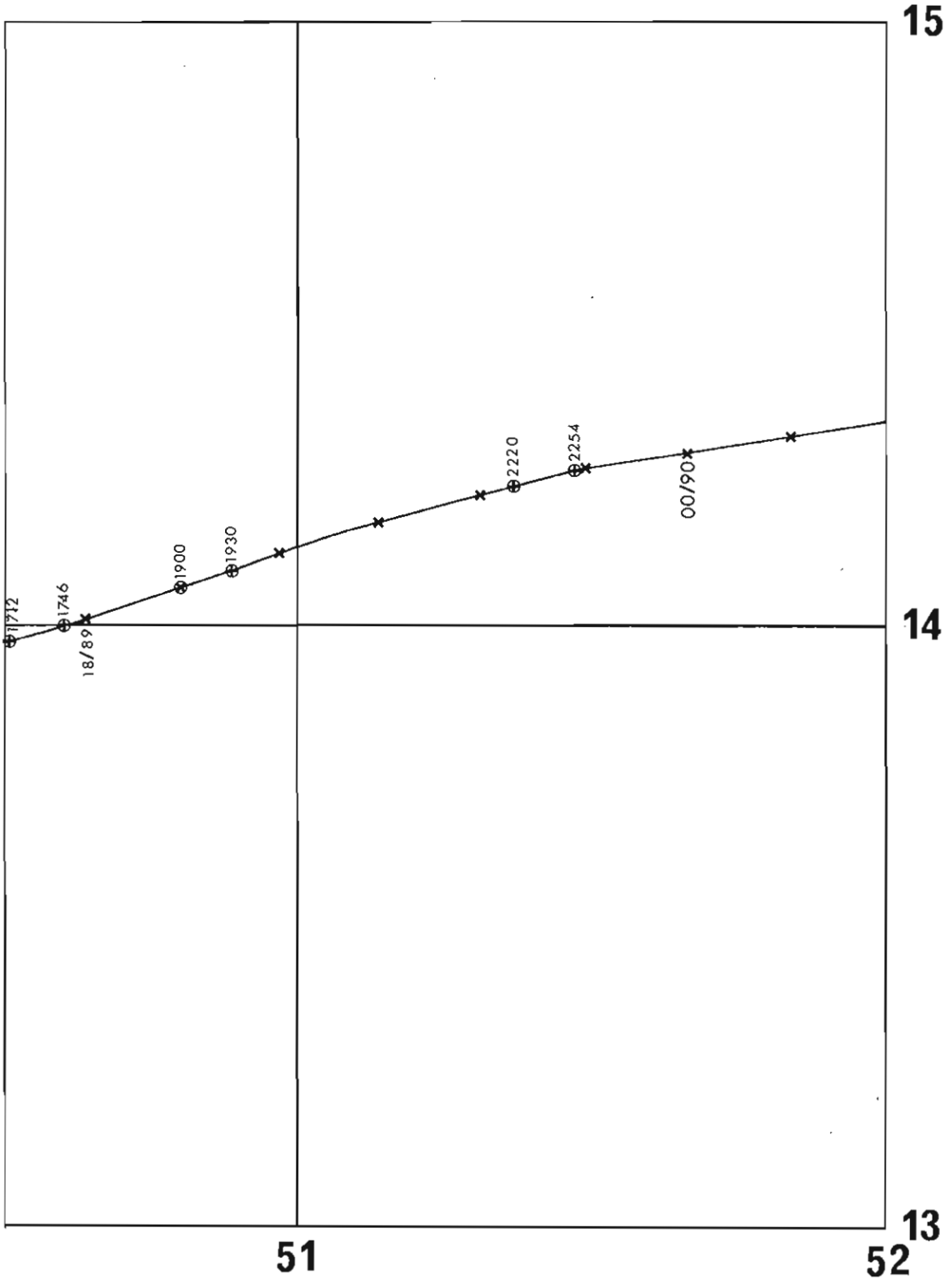
SECTION B

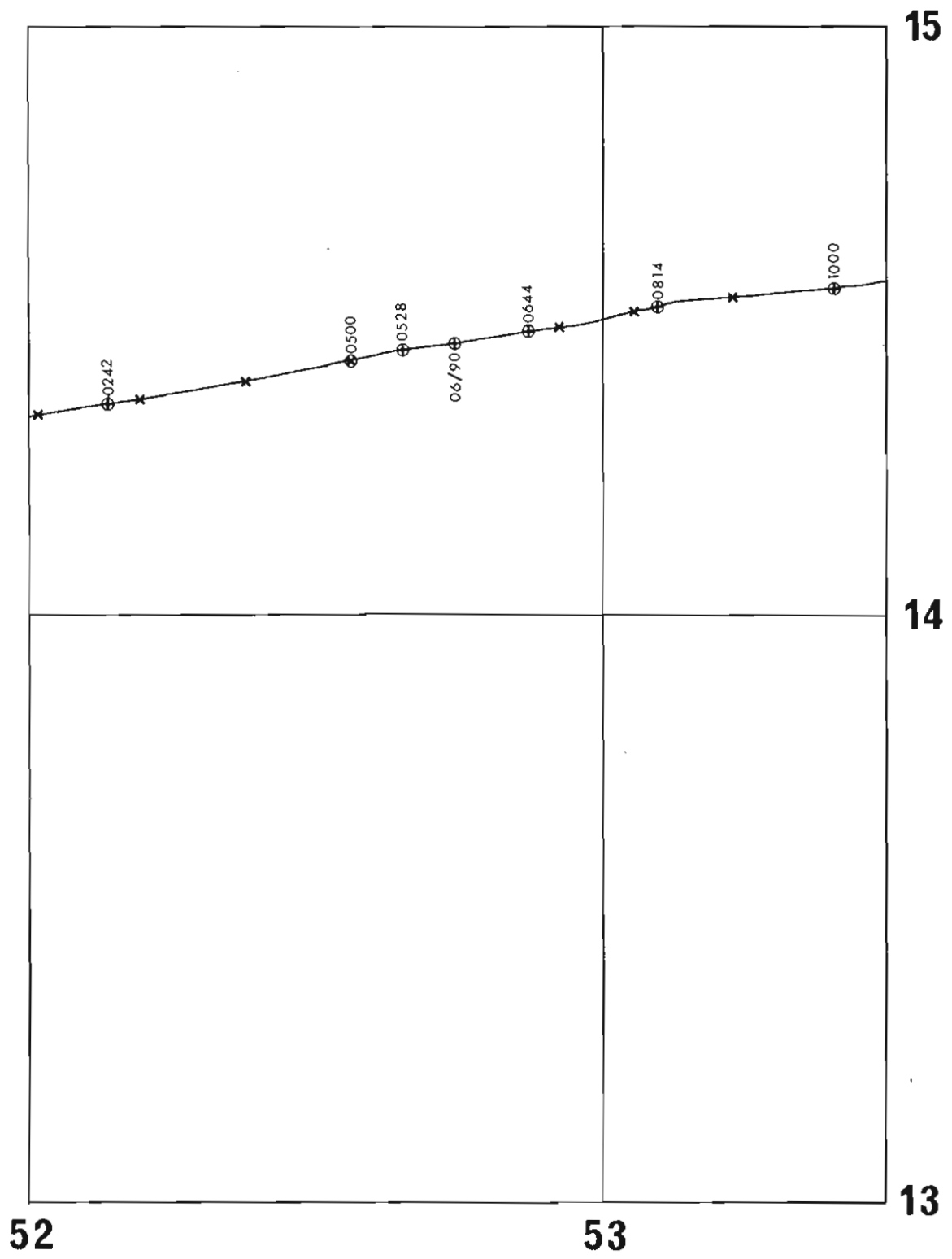
1:1,000,000 Track Charts

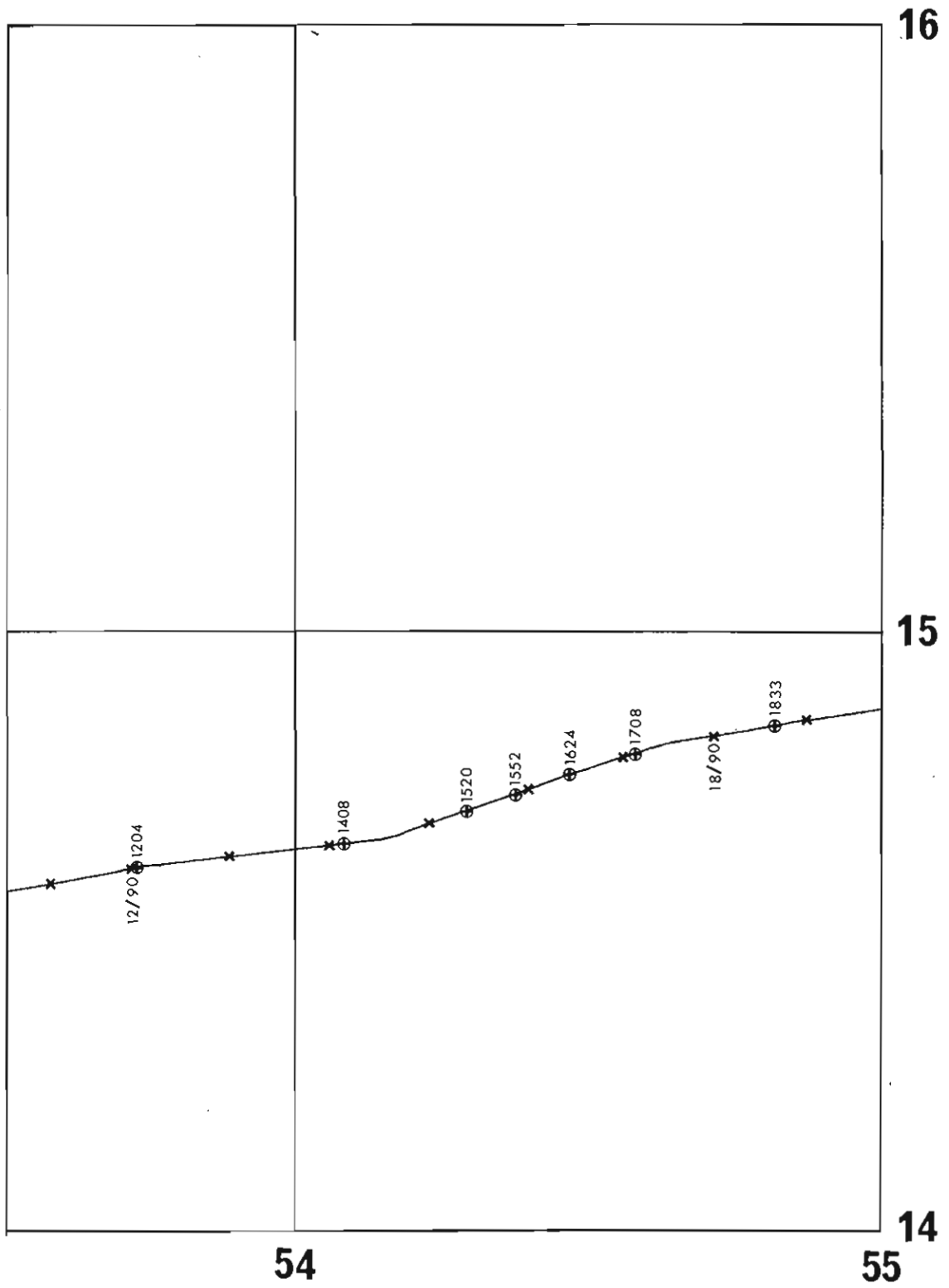


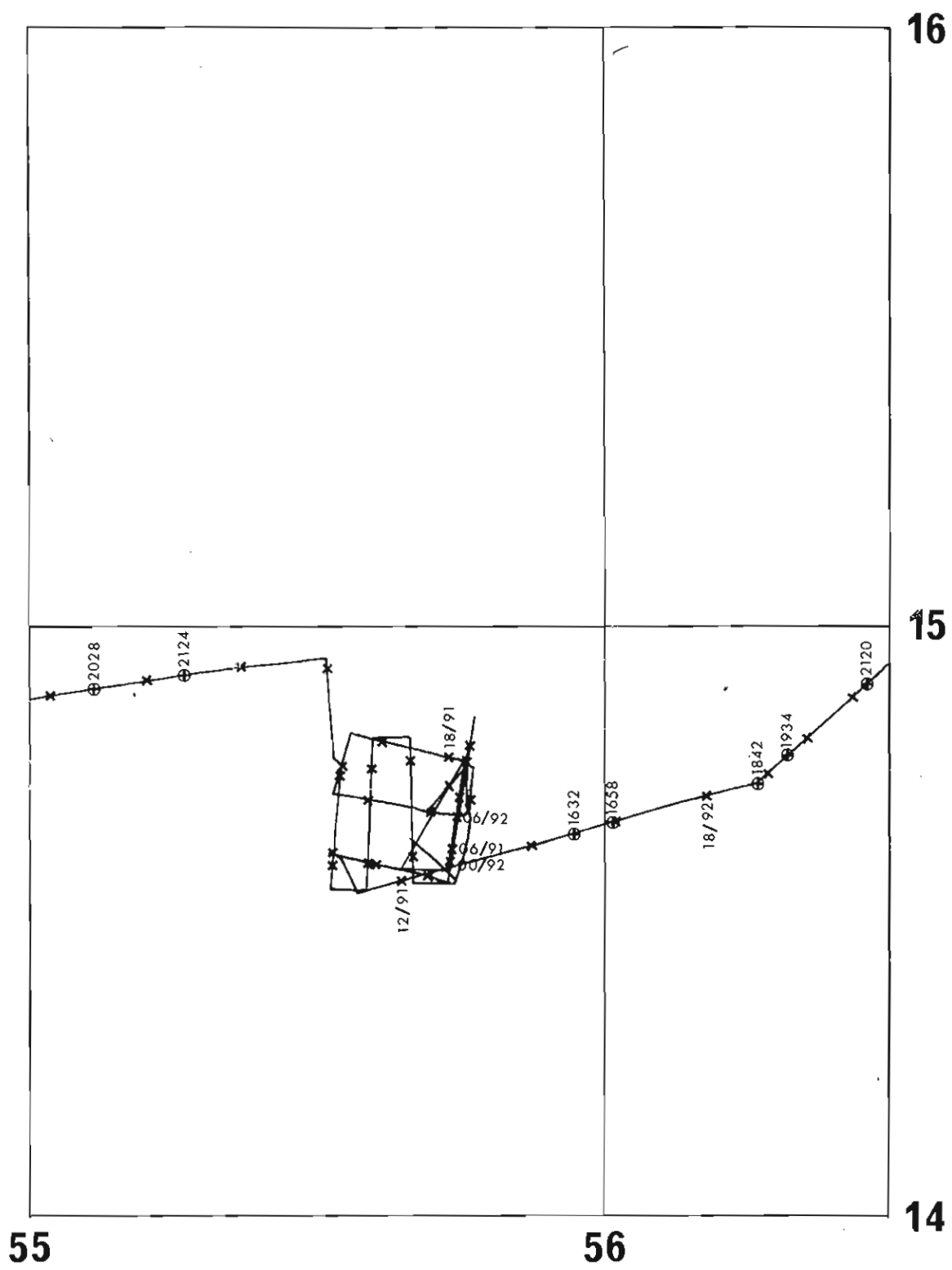


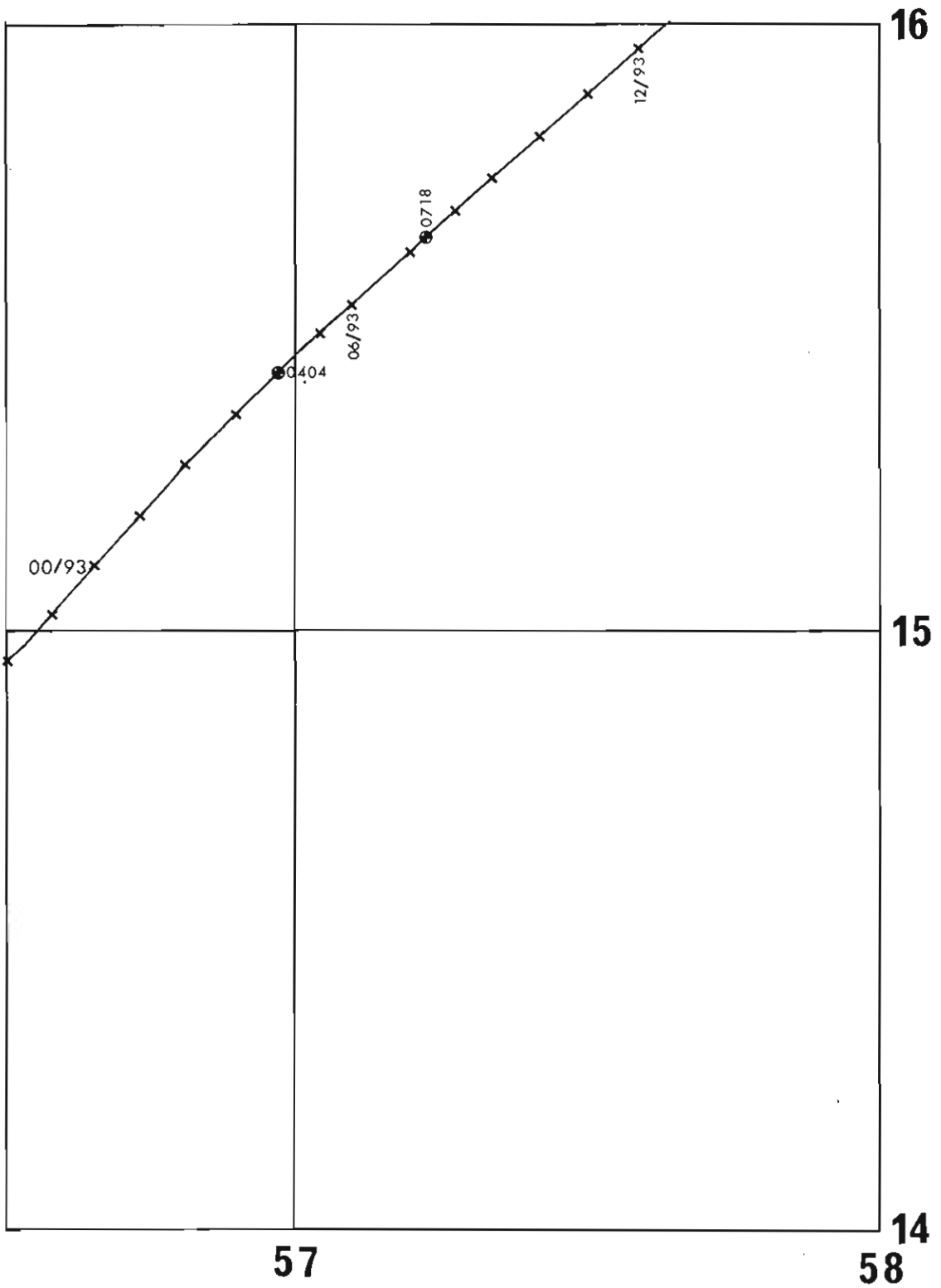


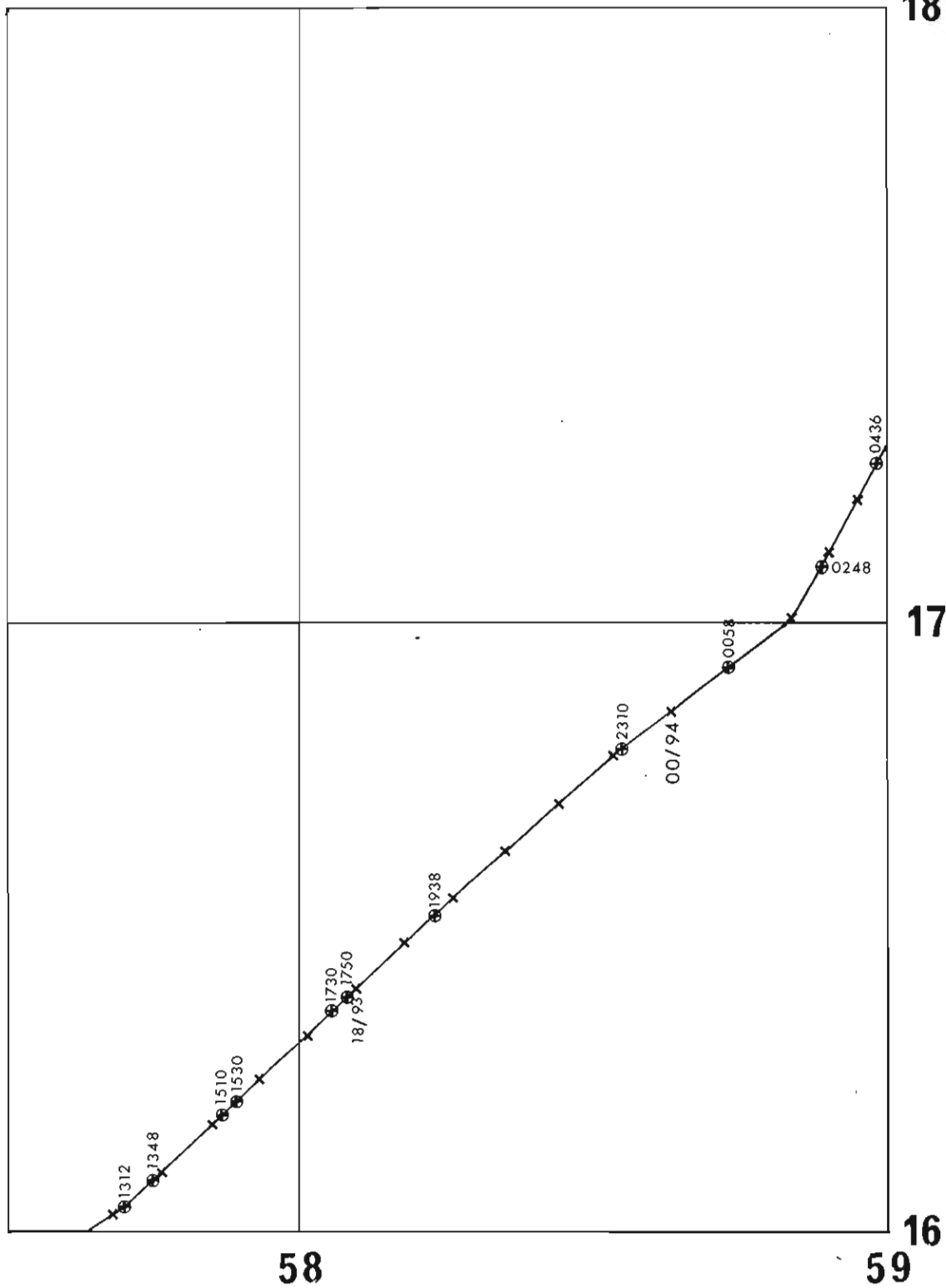


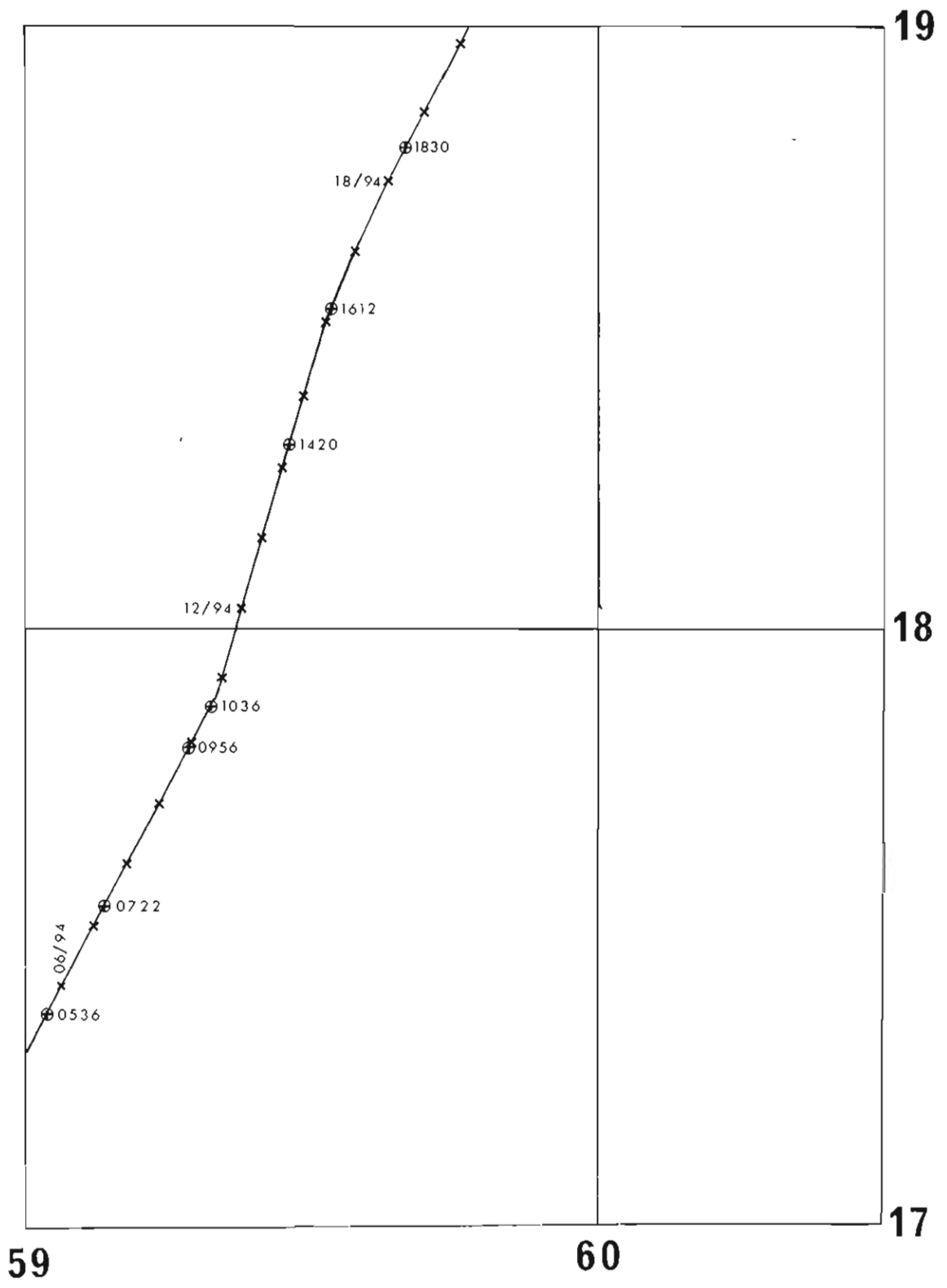


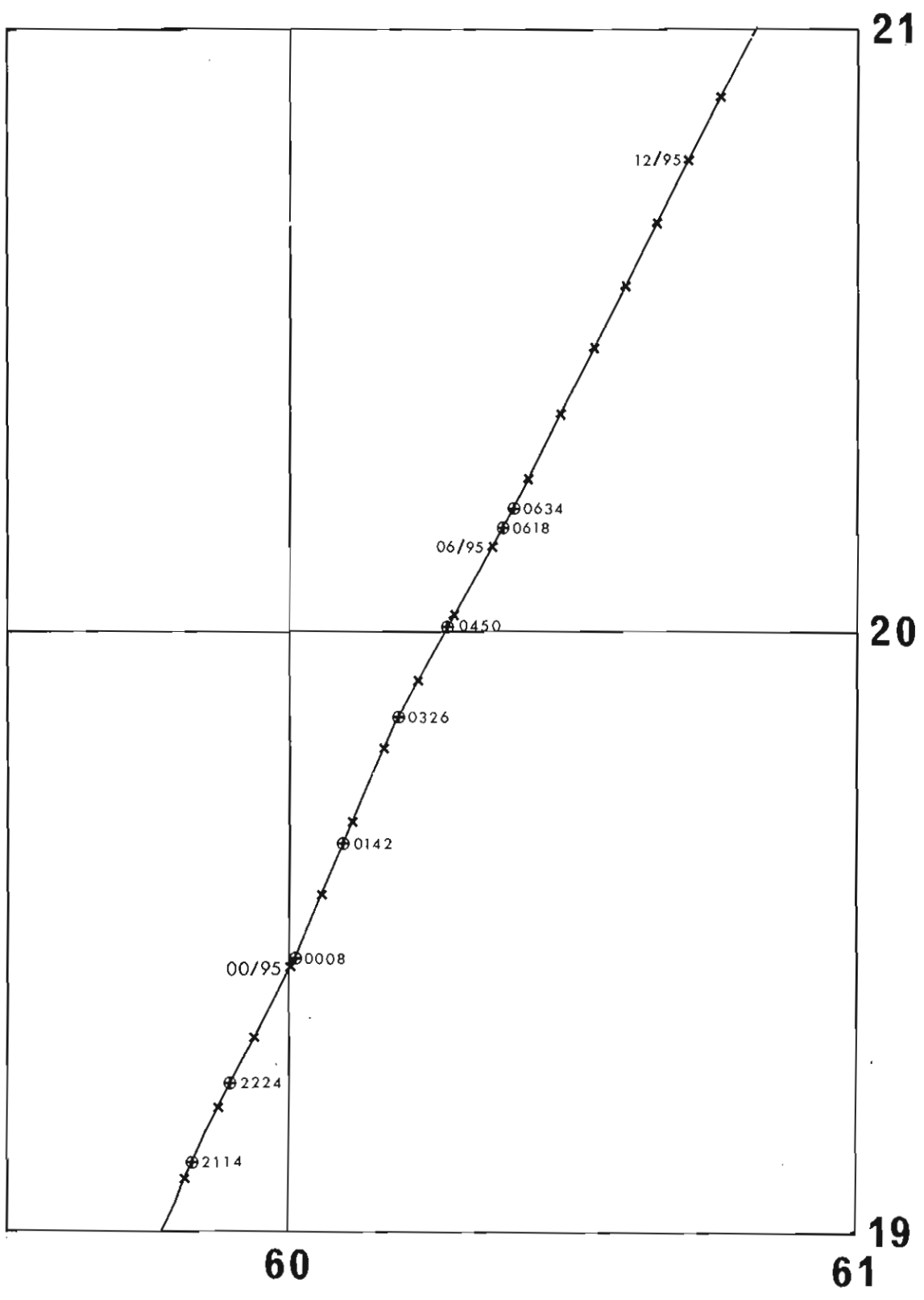


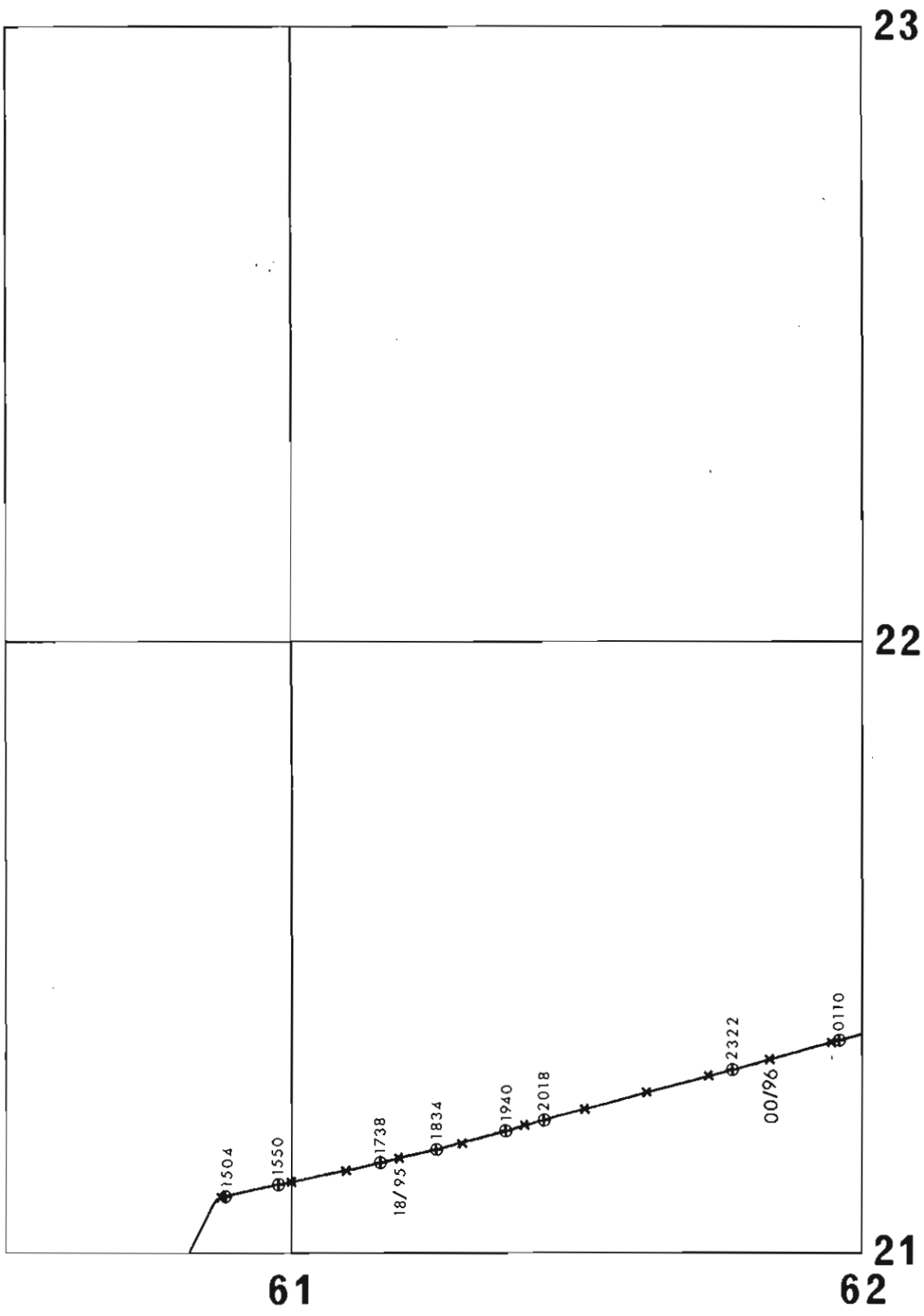


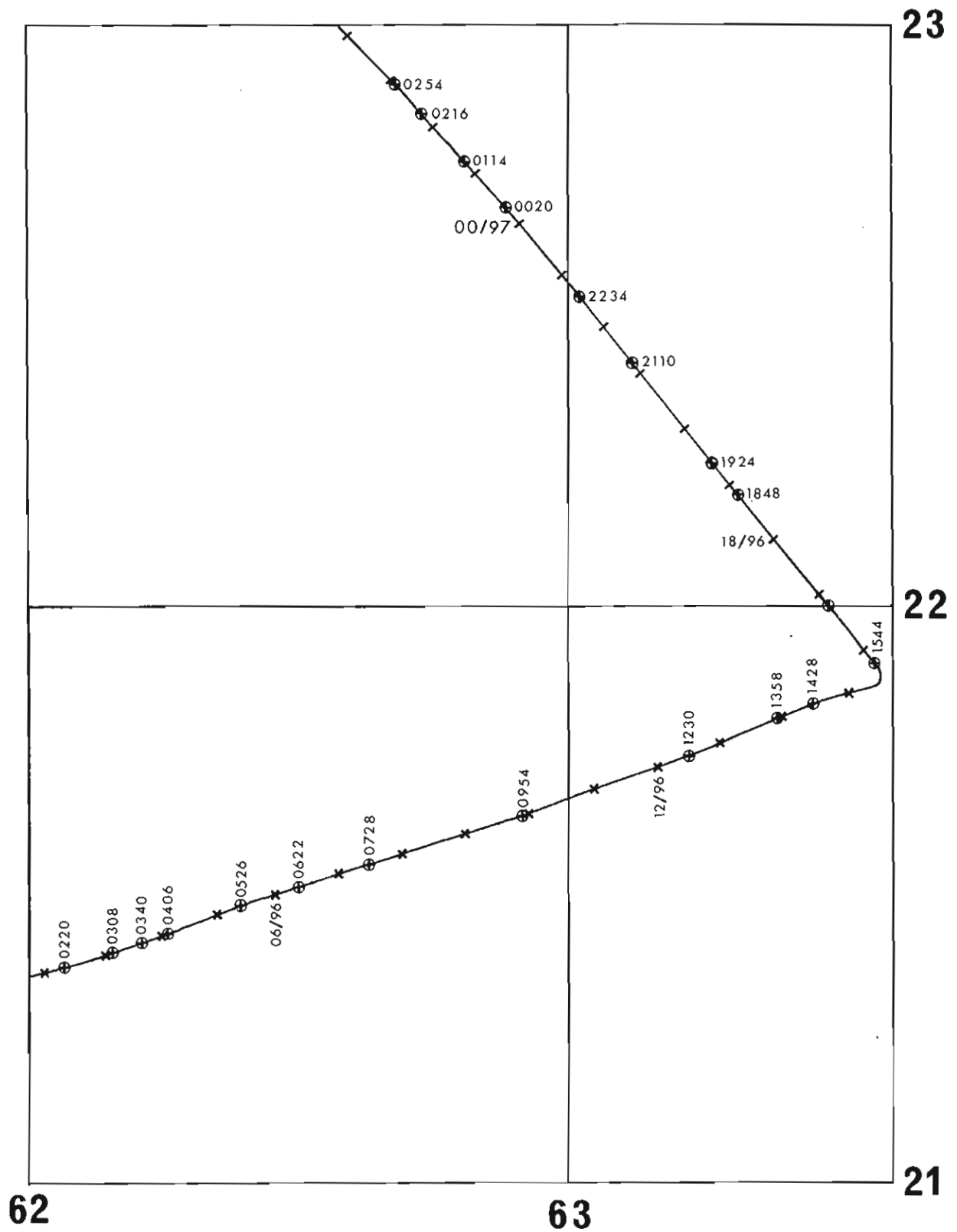


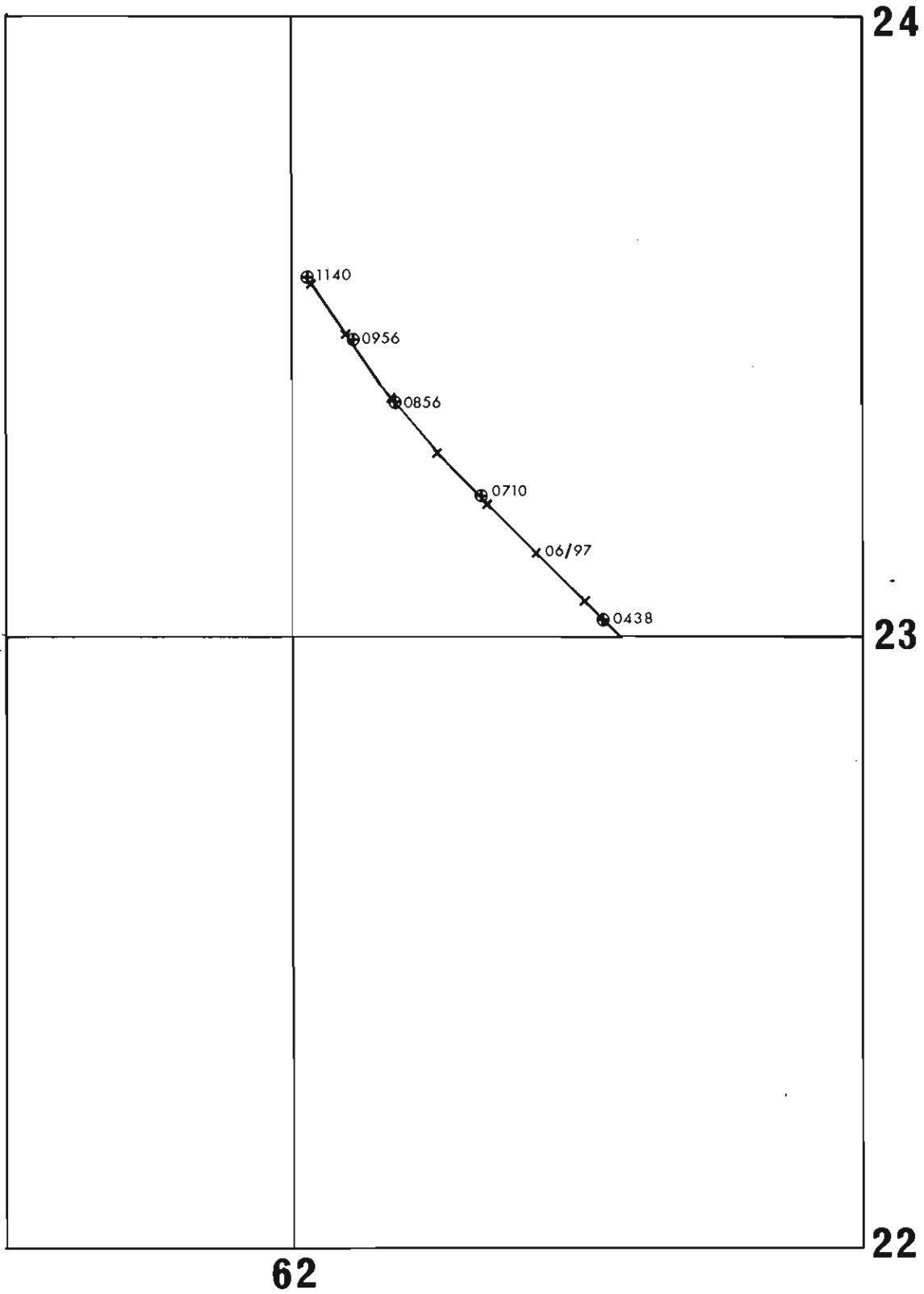


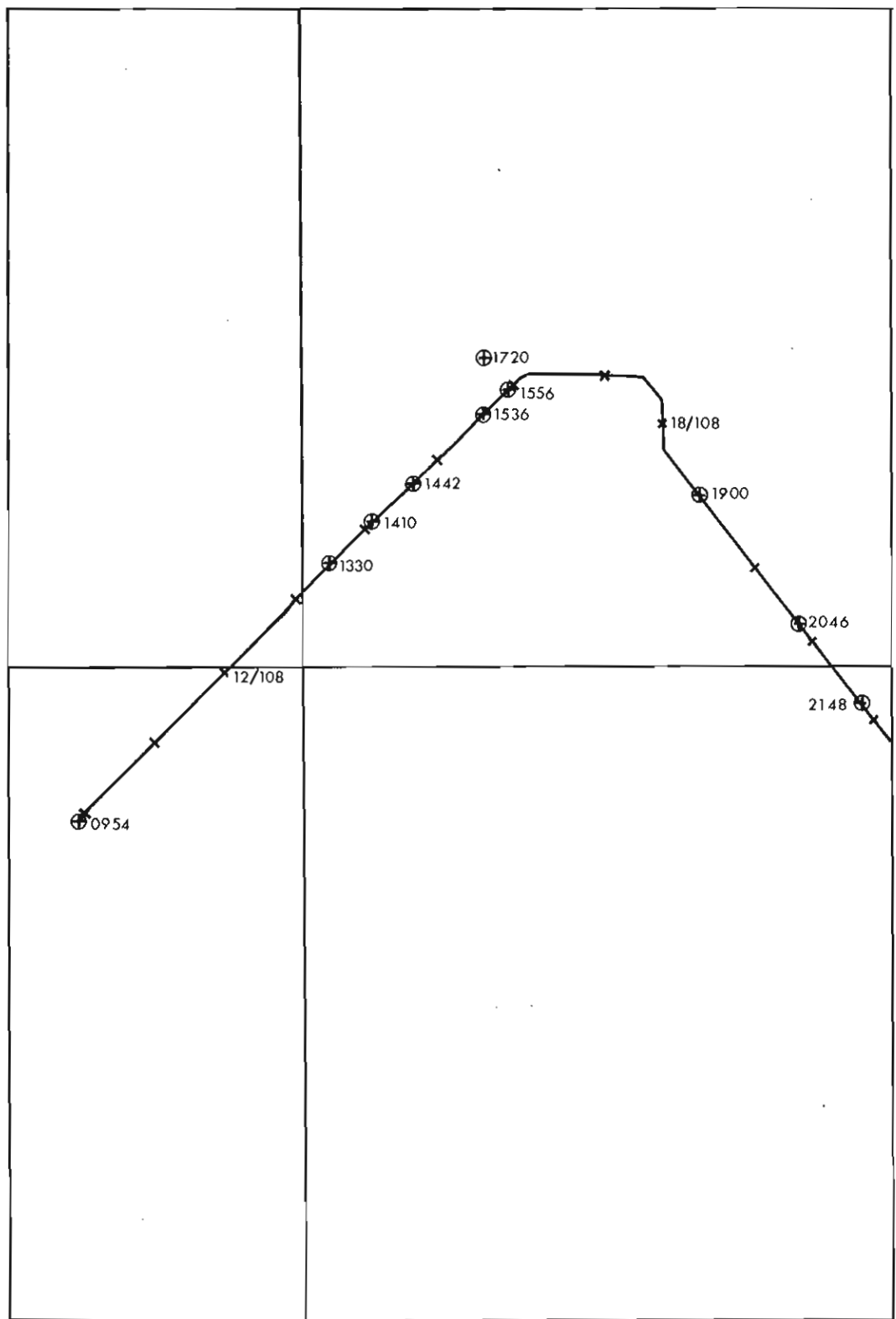












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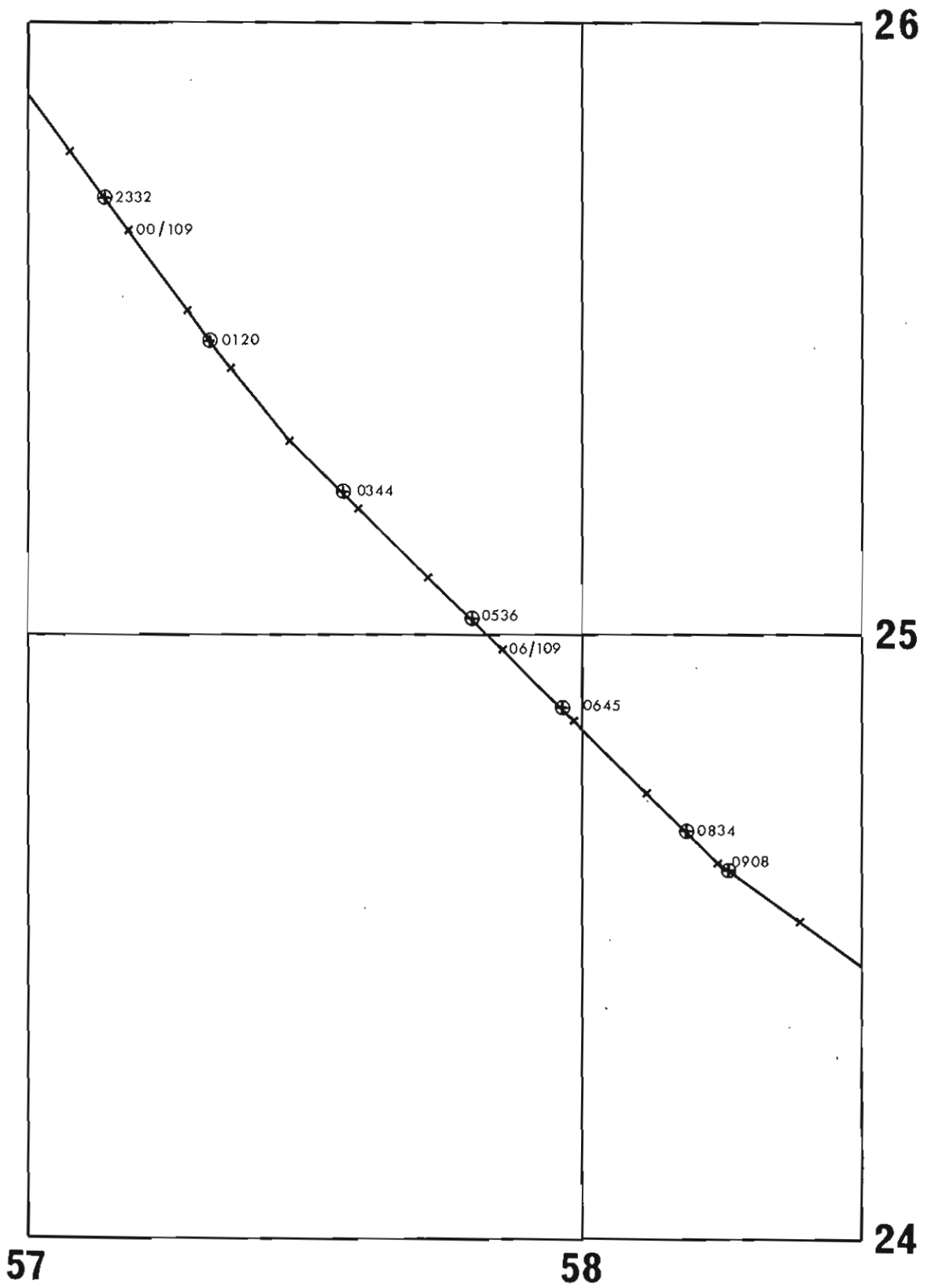
26

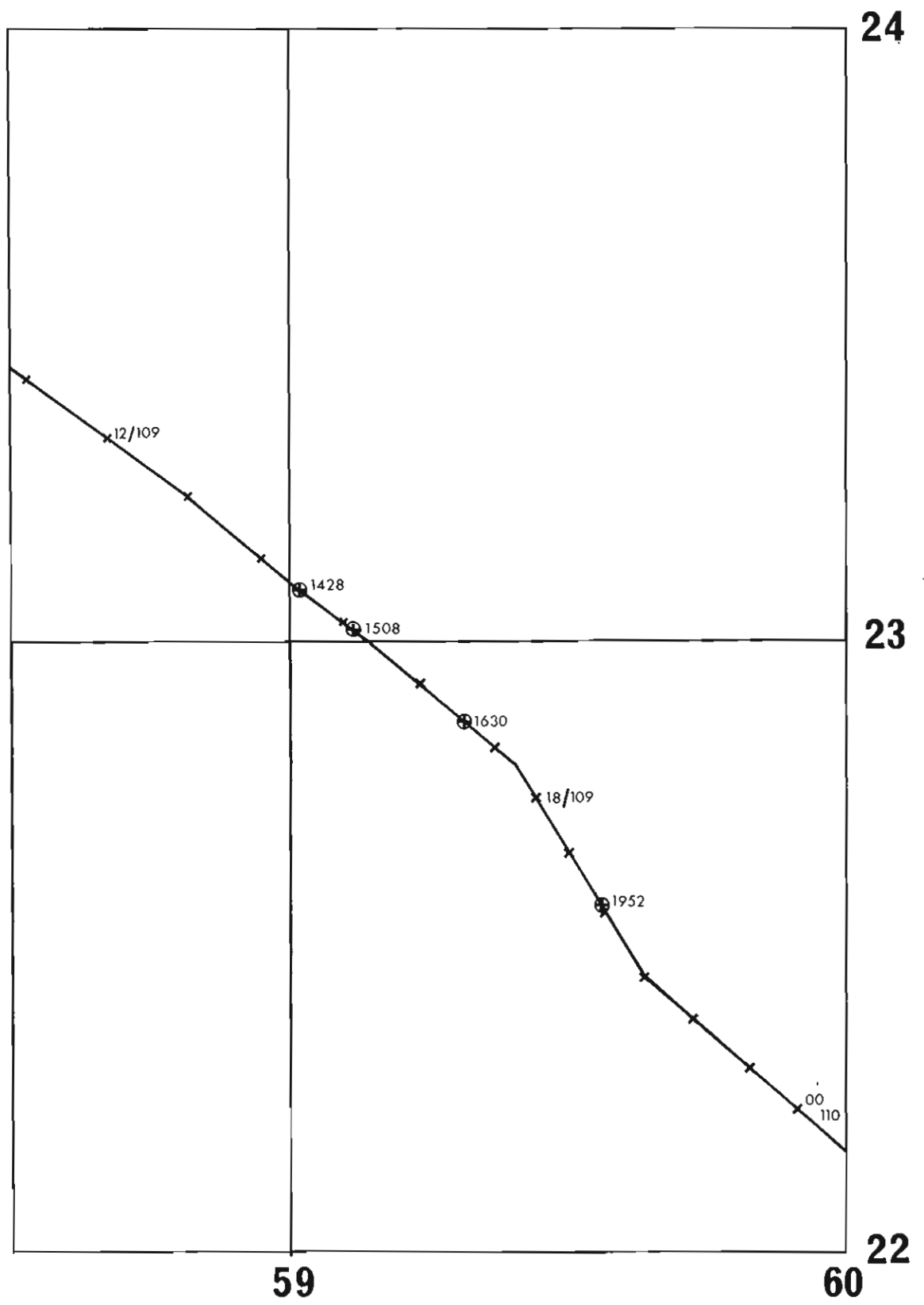
25

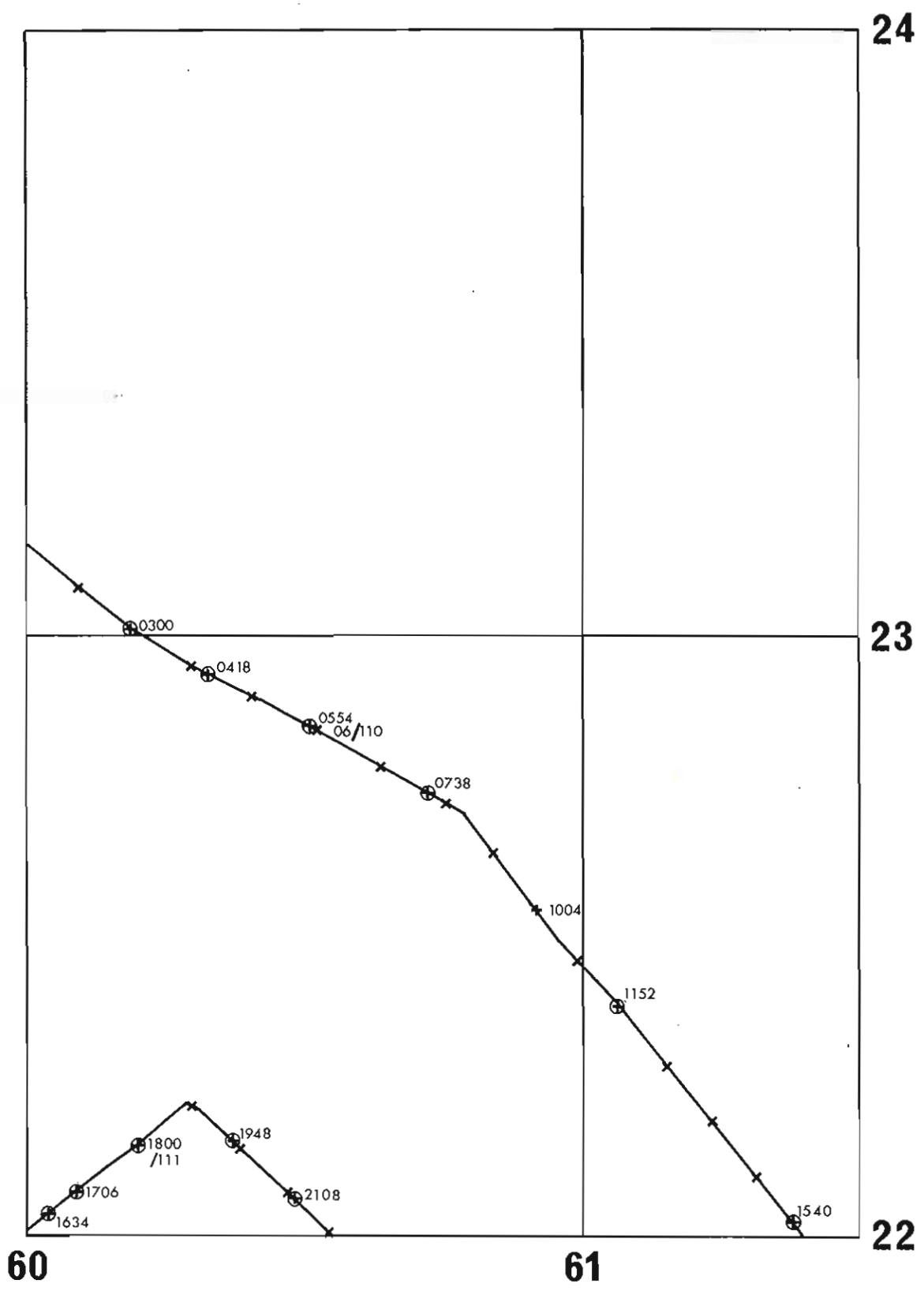
56

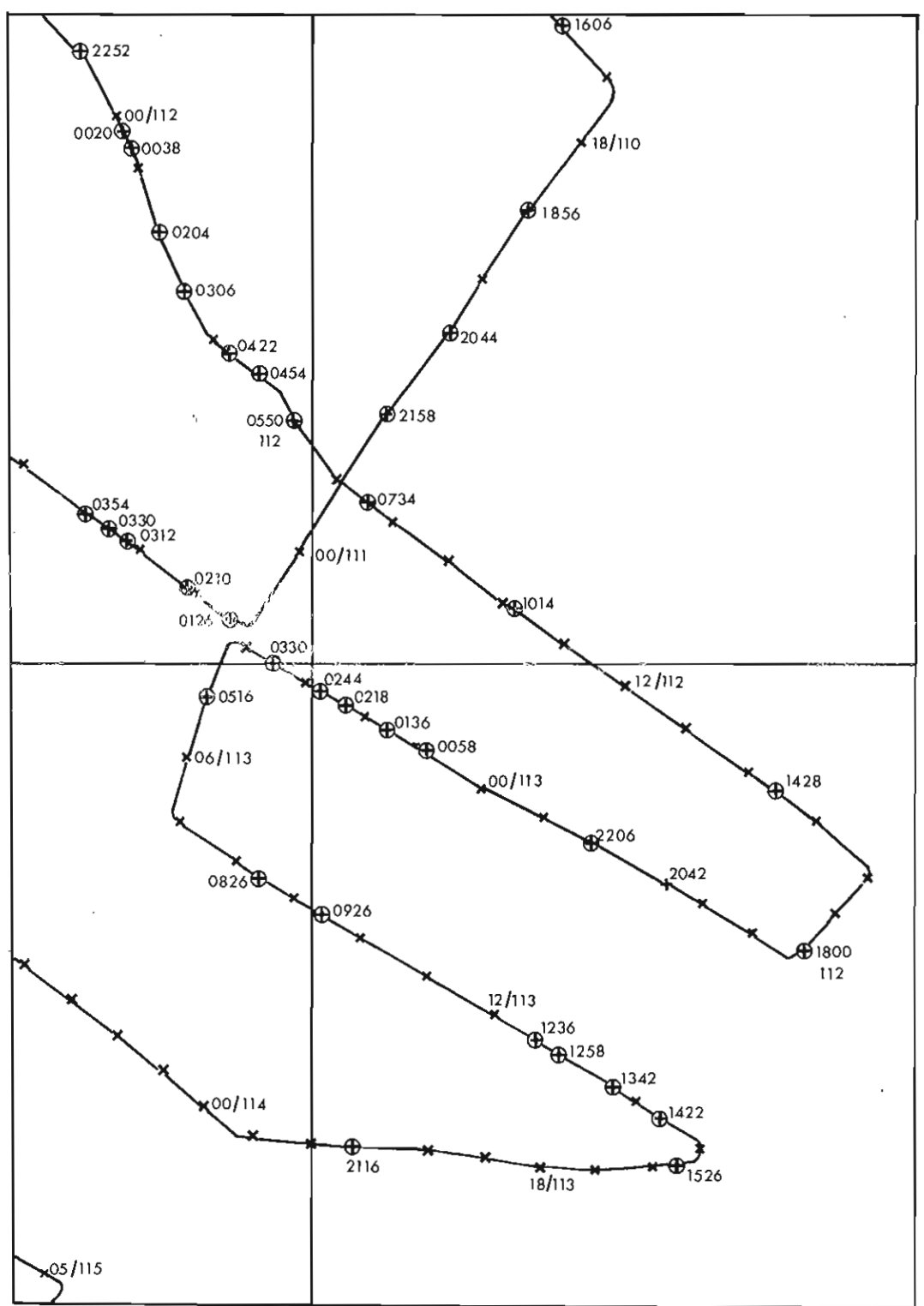
57

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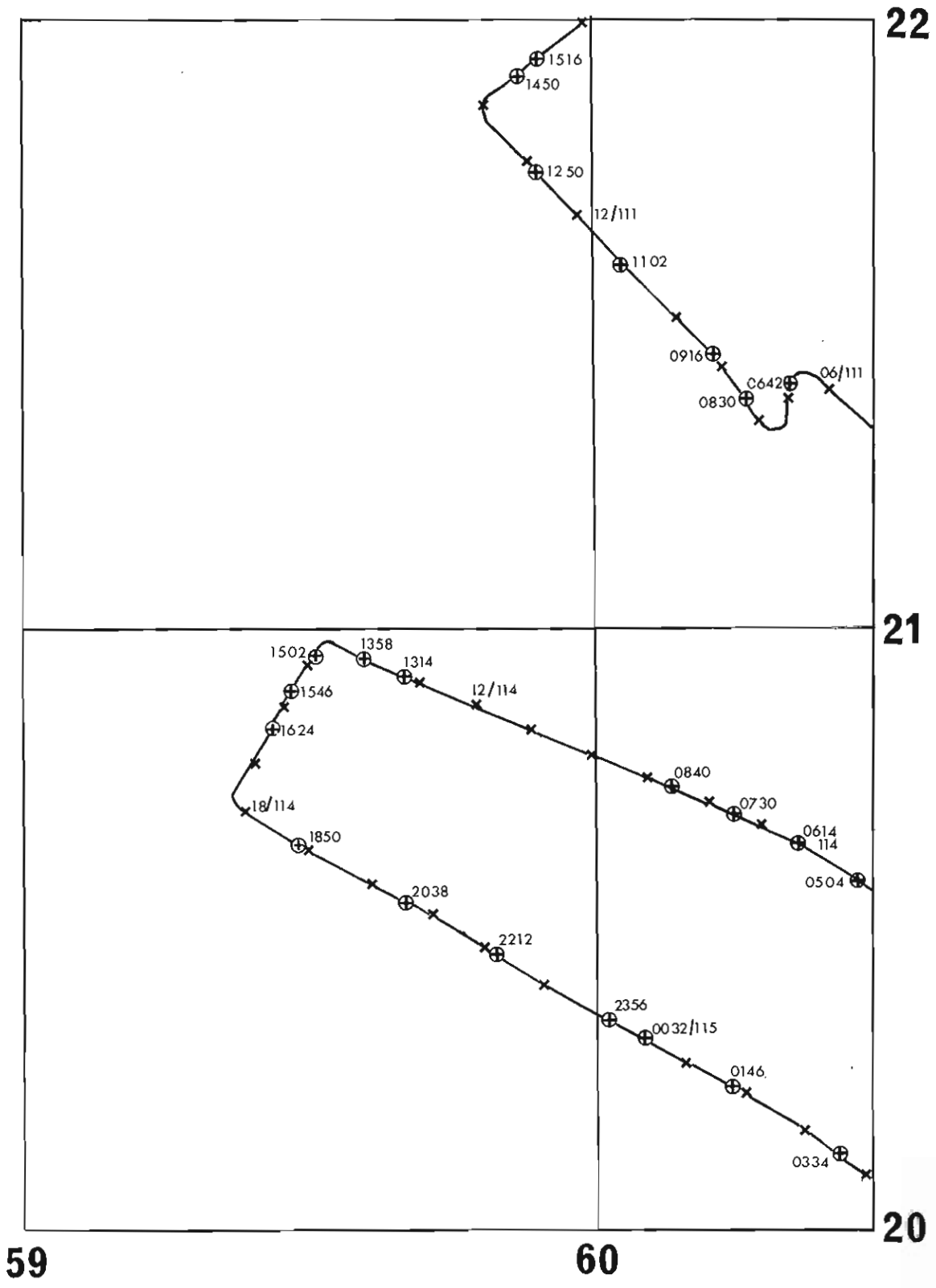
22

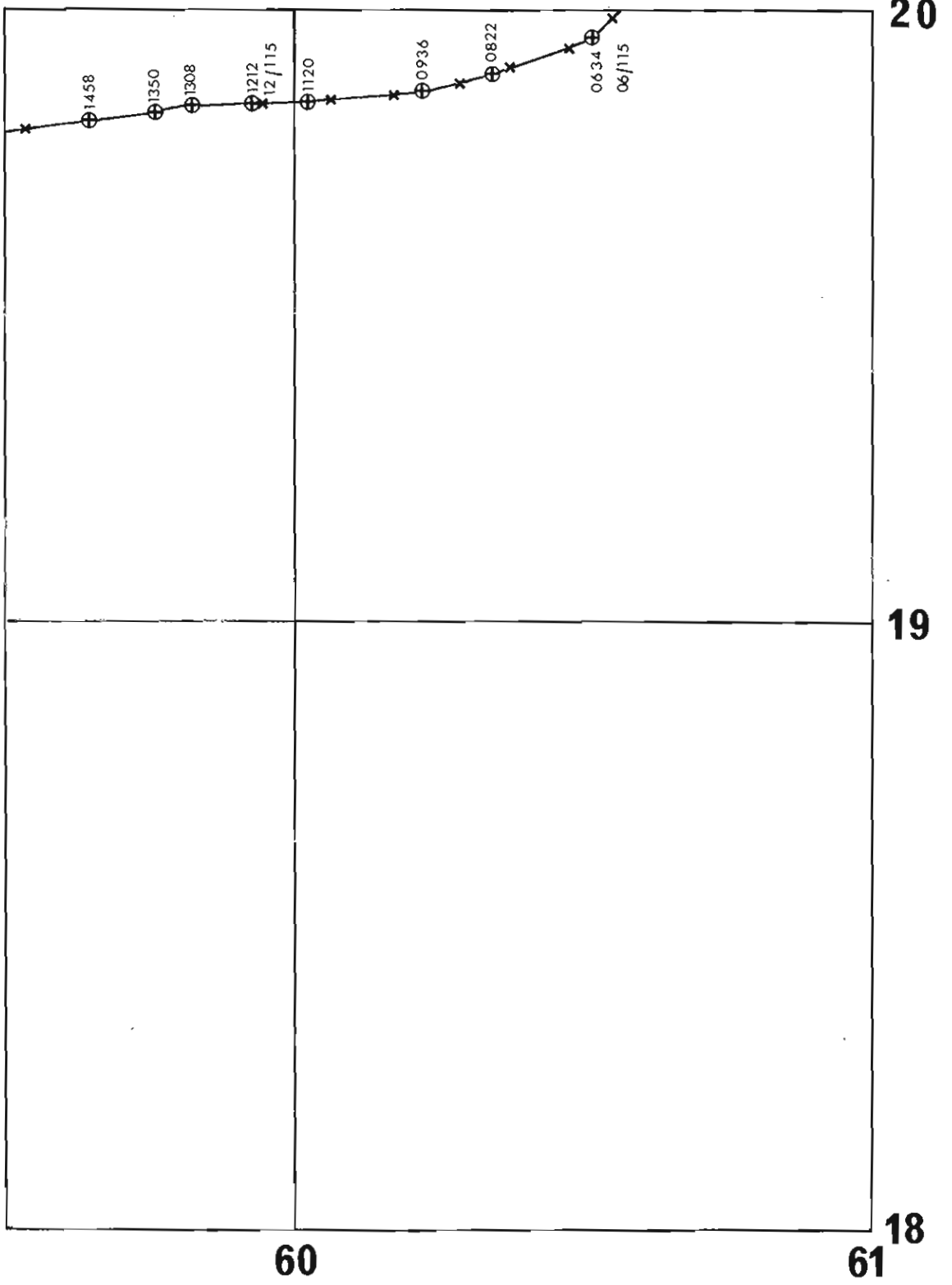
21

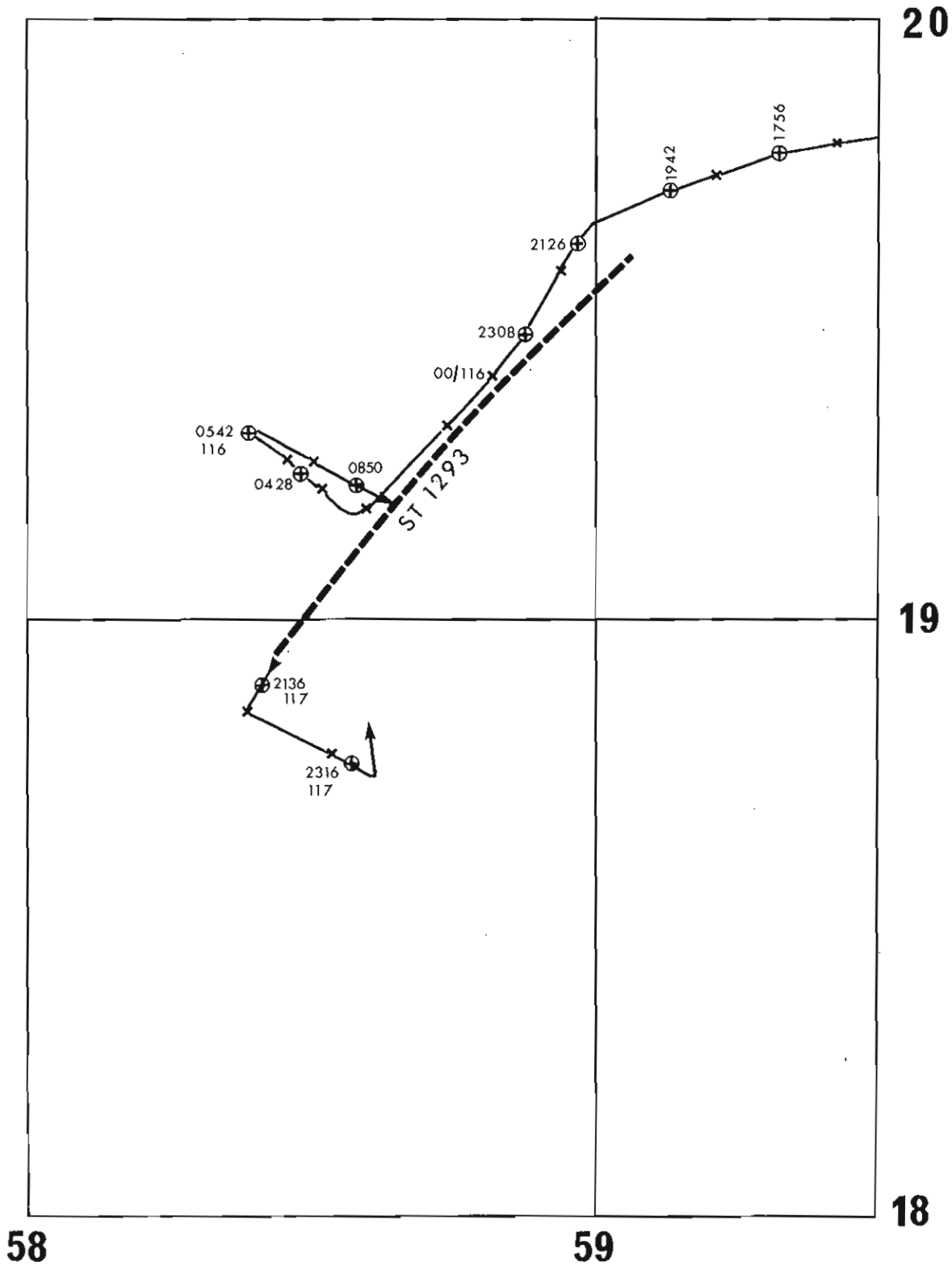
20

61

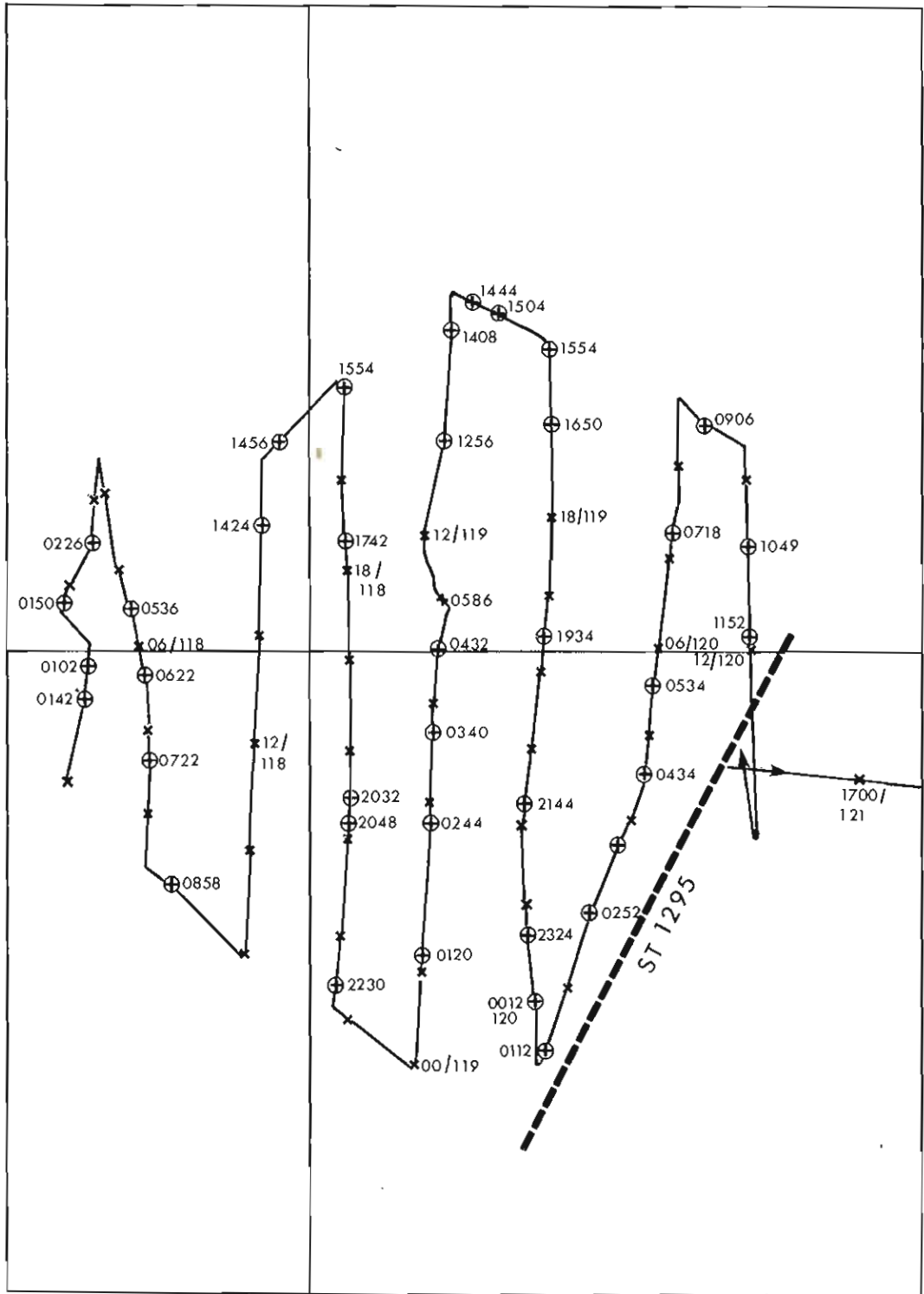
62







20

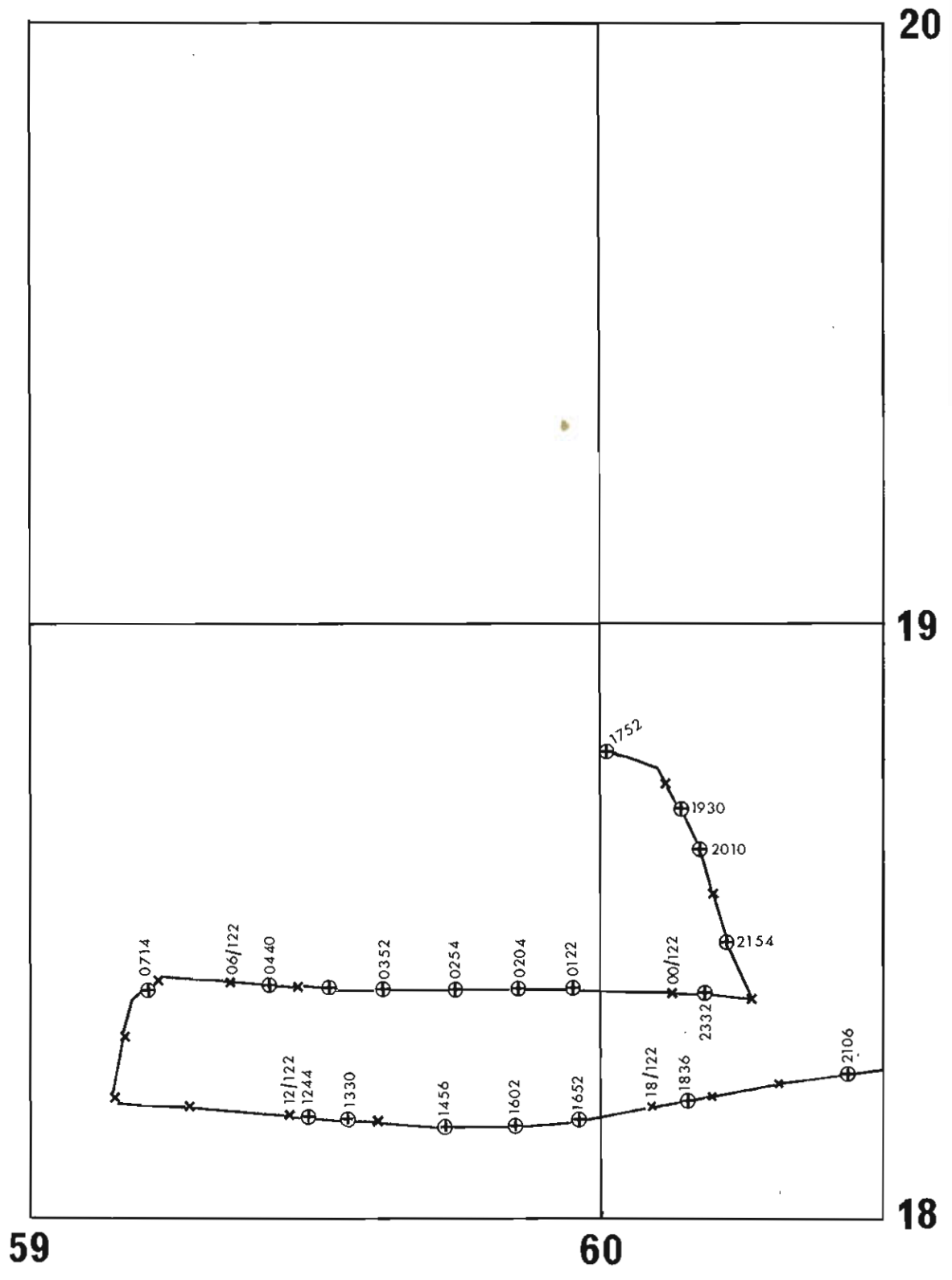


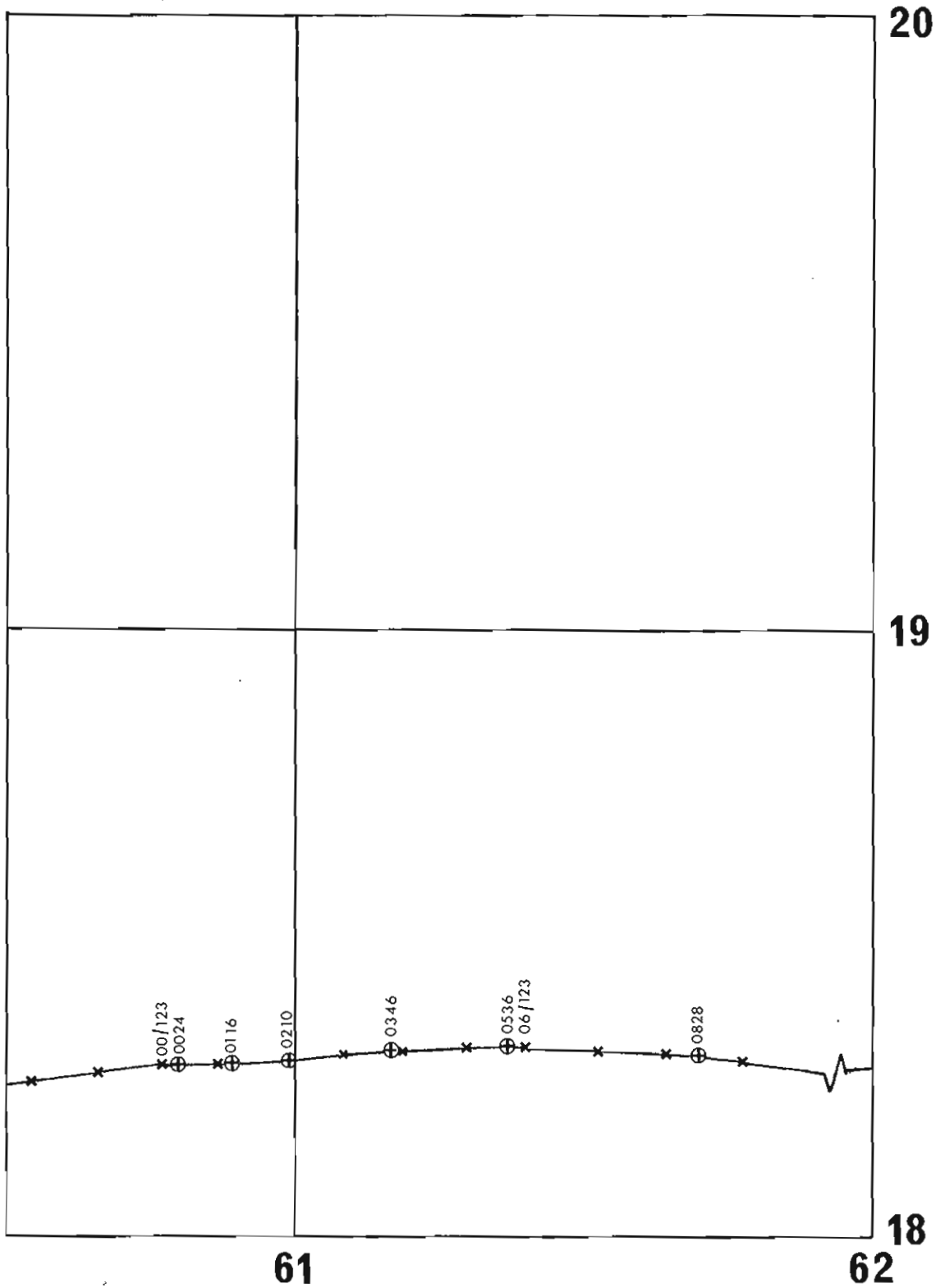
19

18

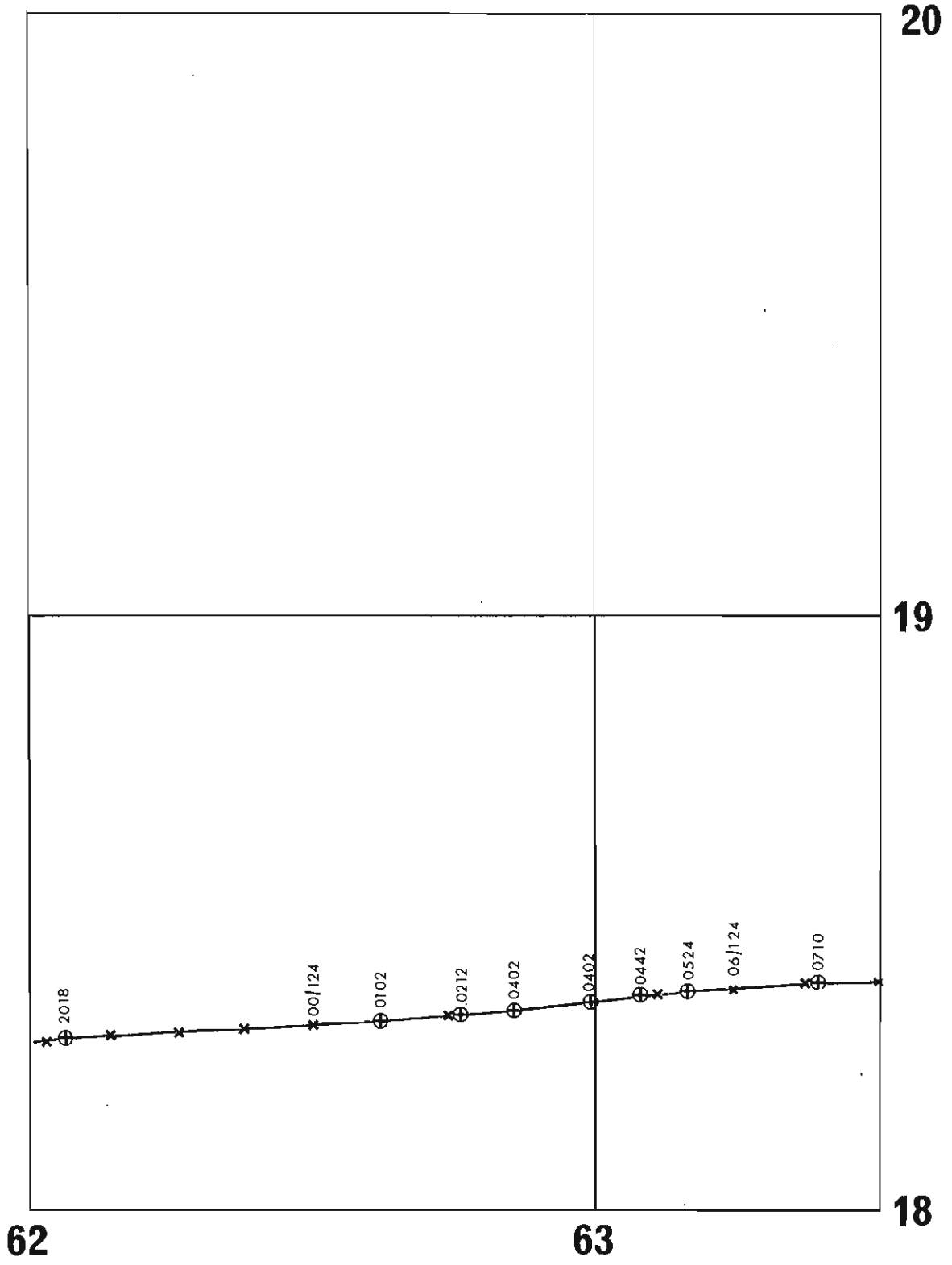
59

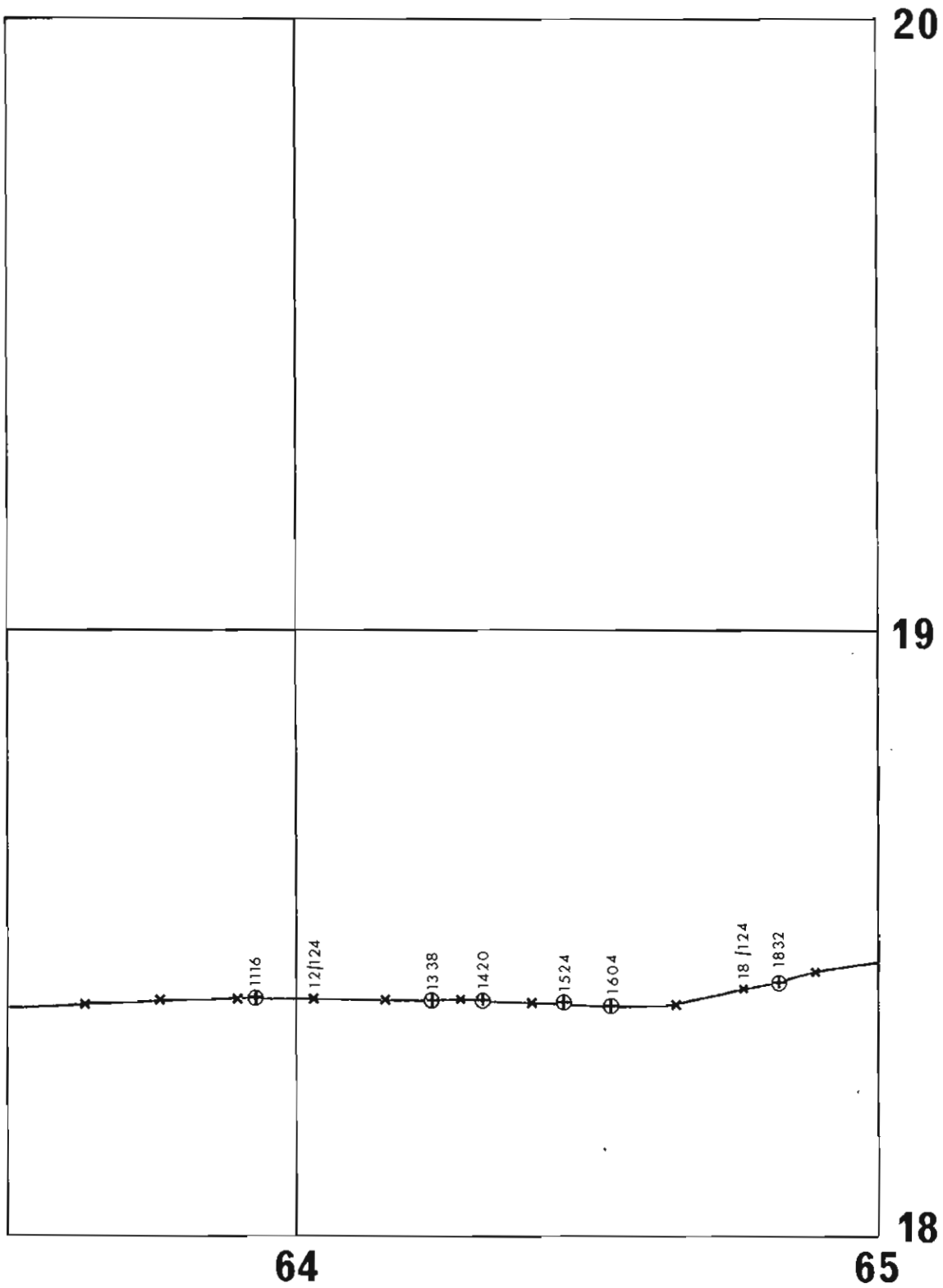
60

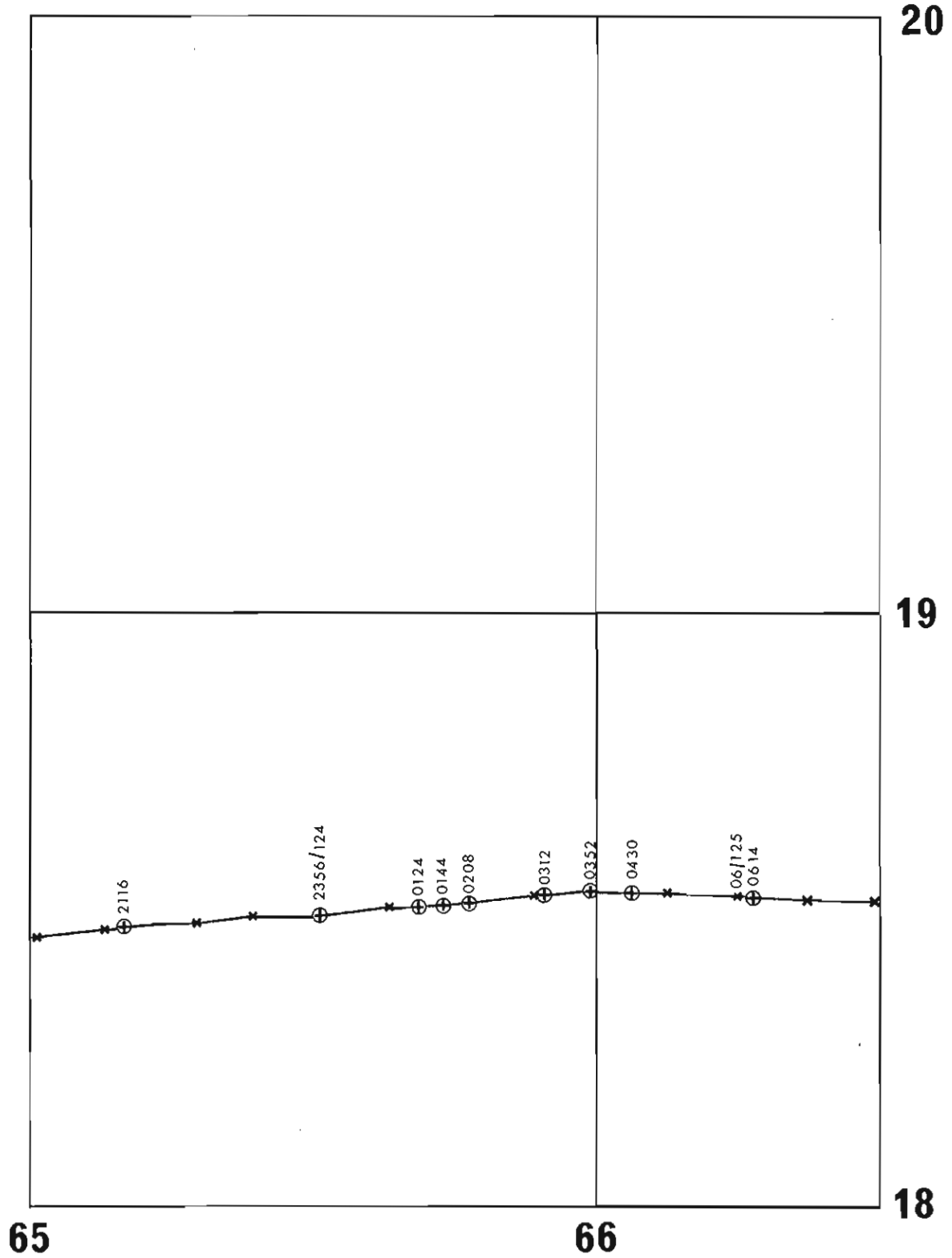


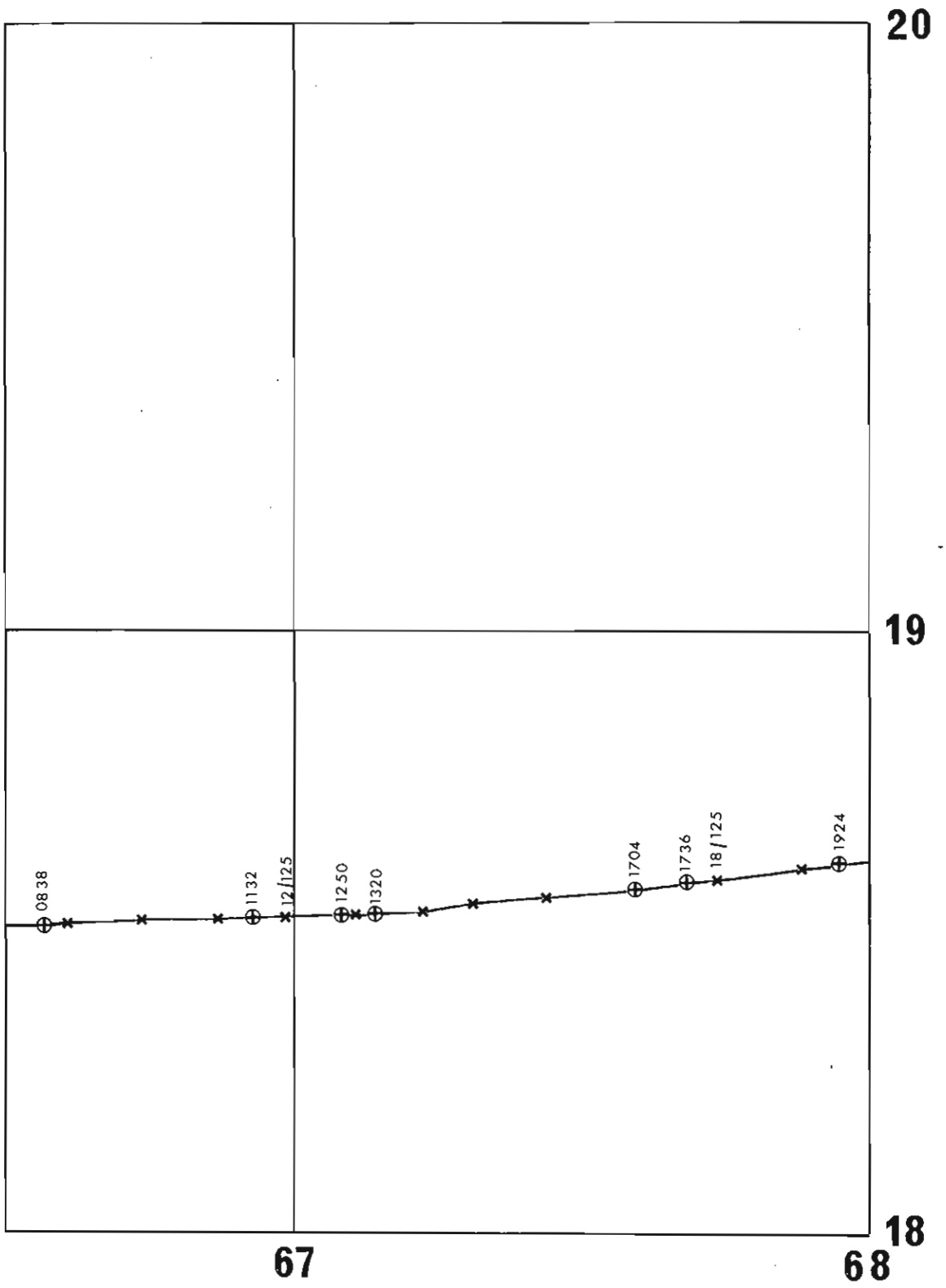


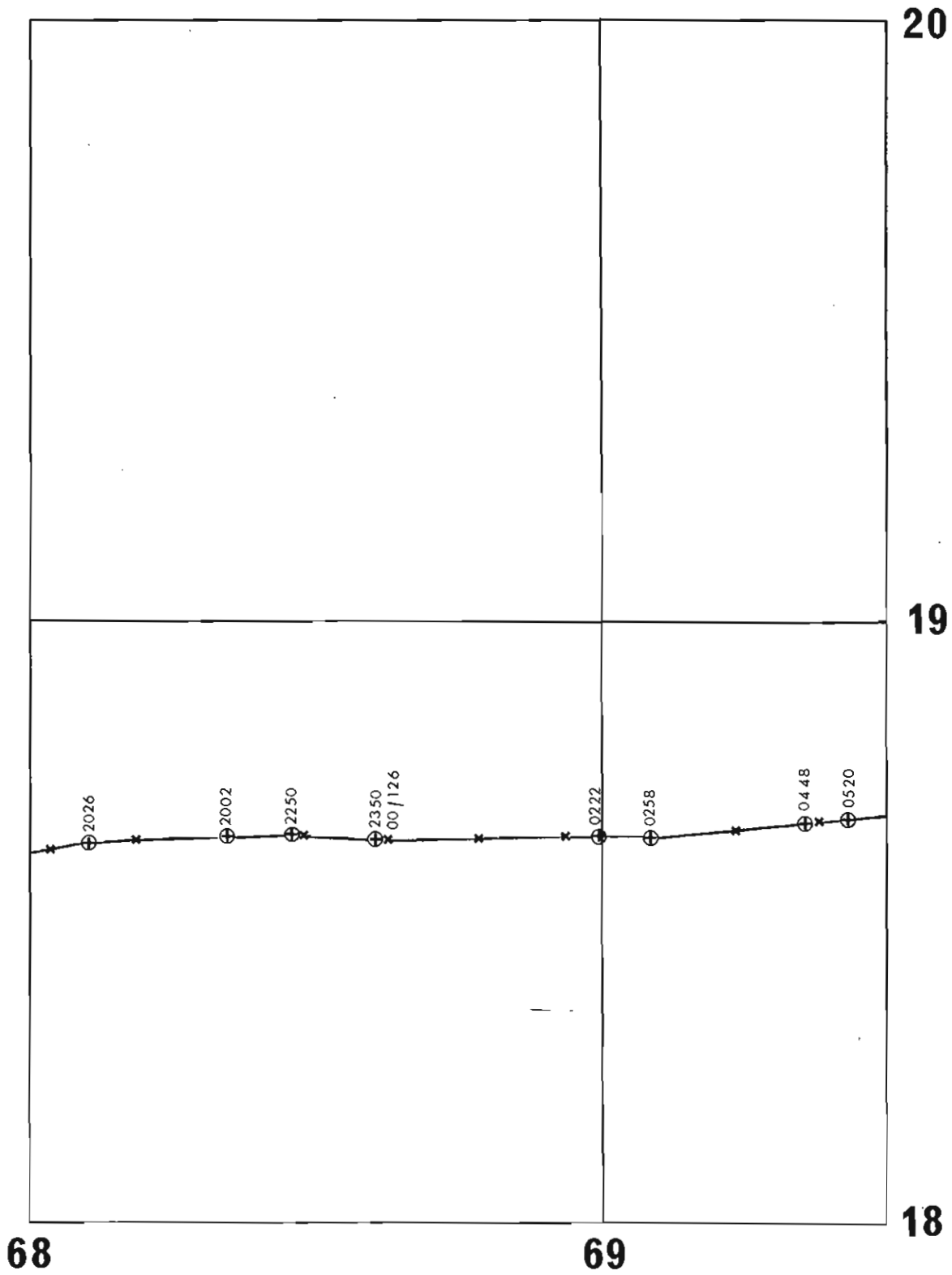
2-11

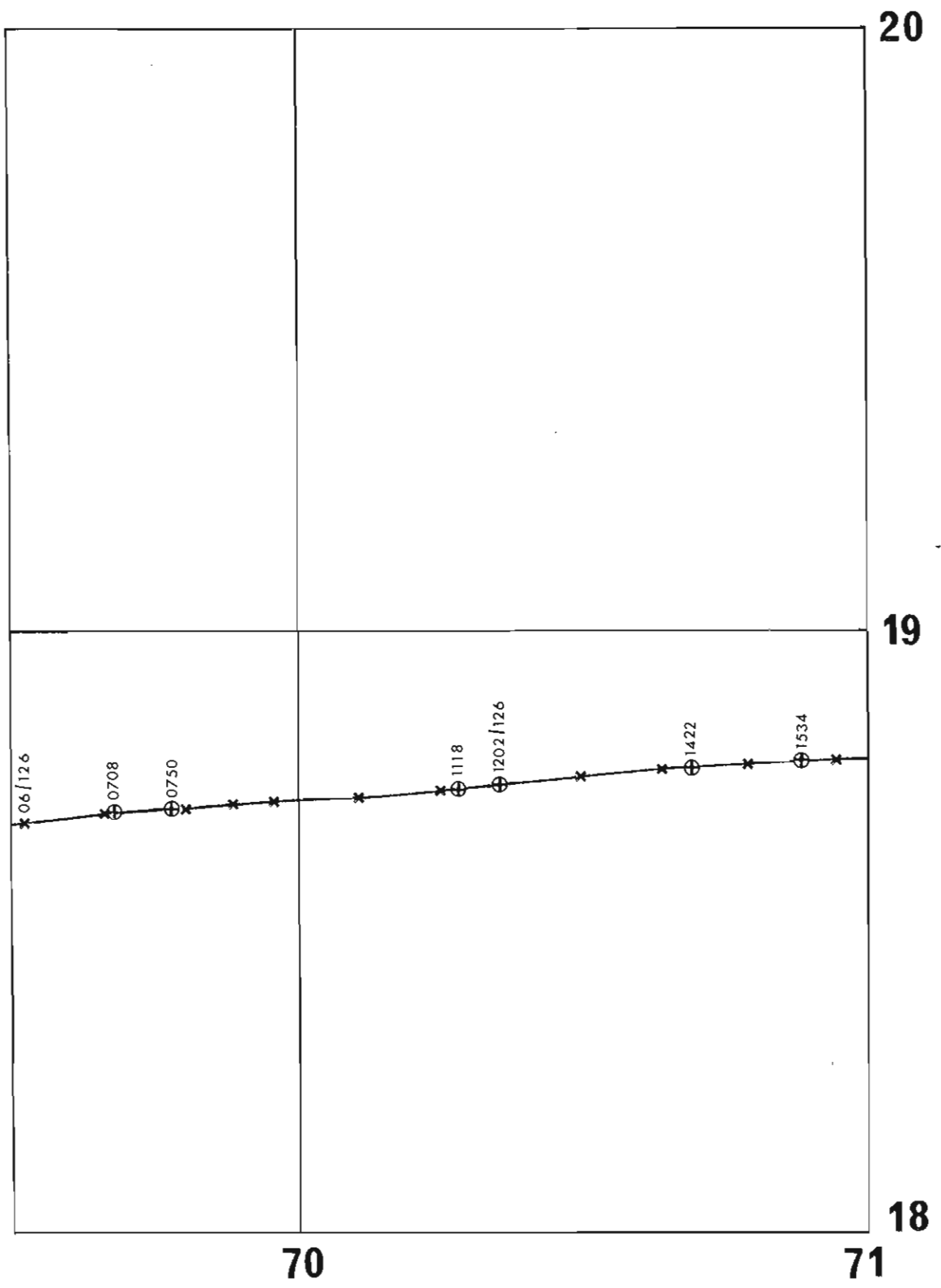


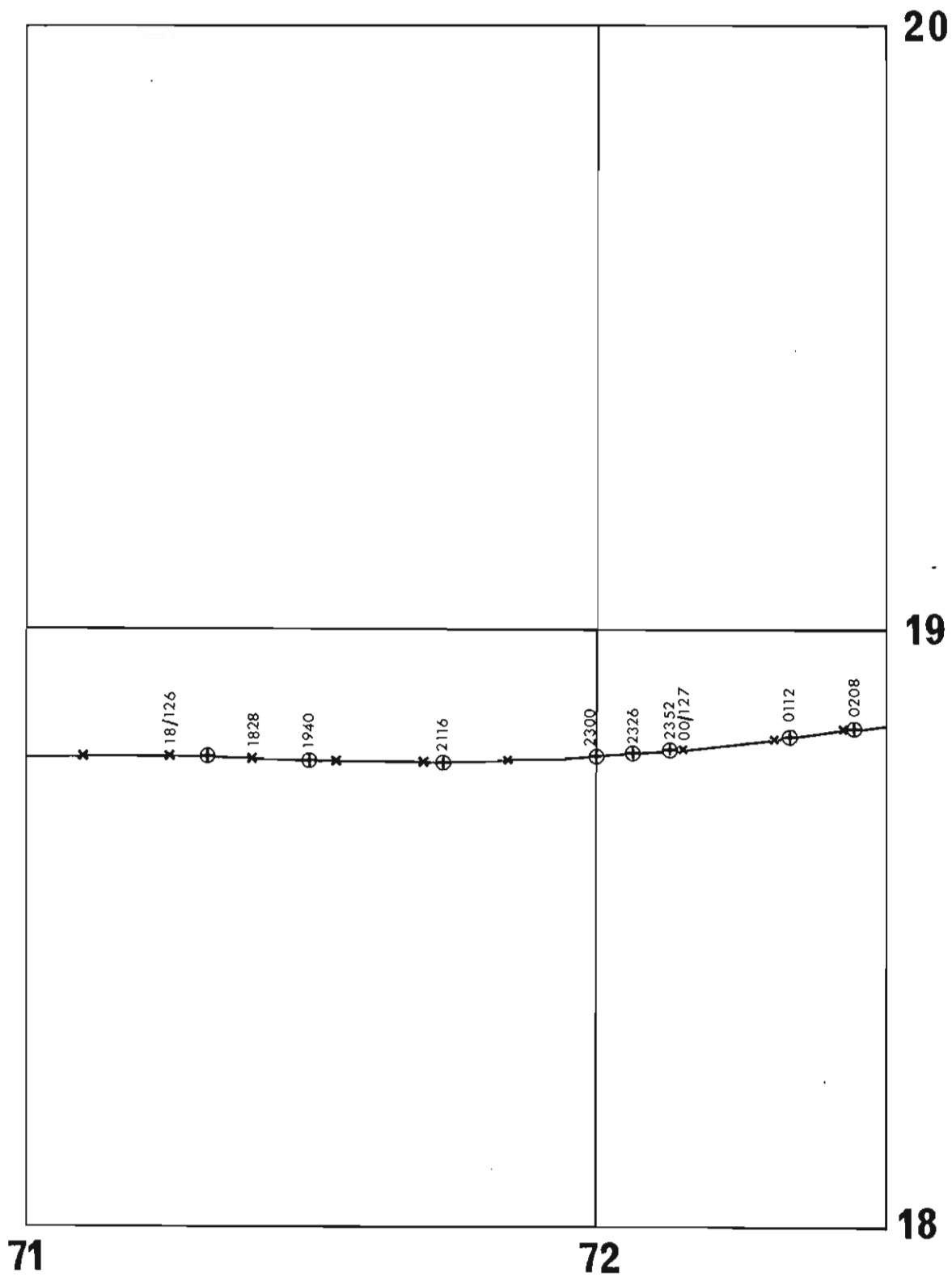


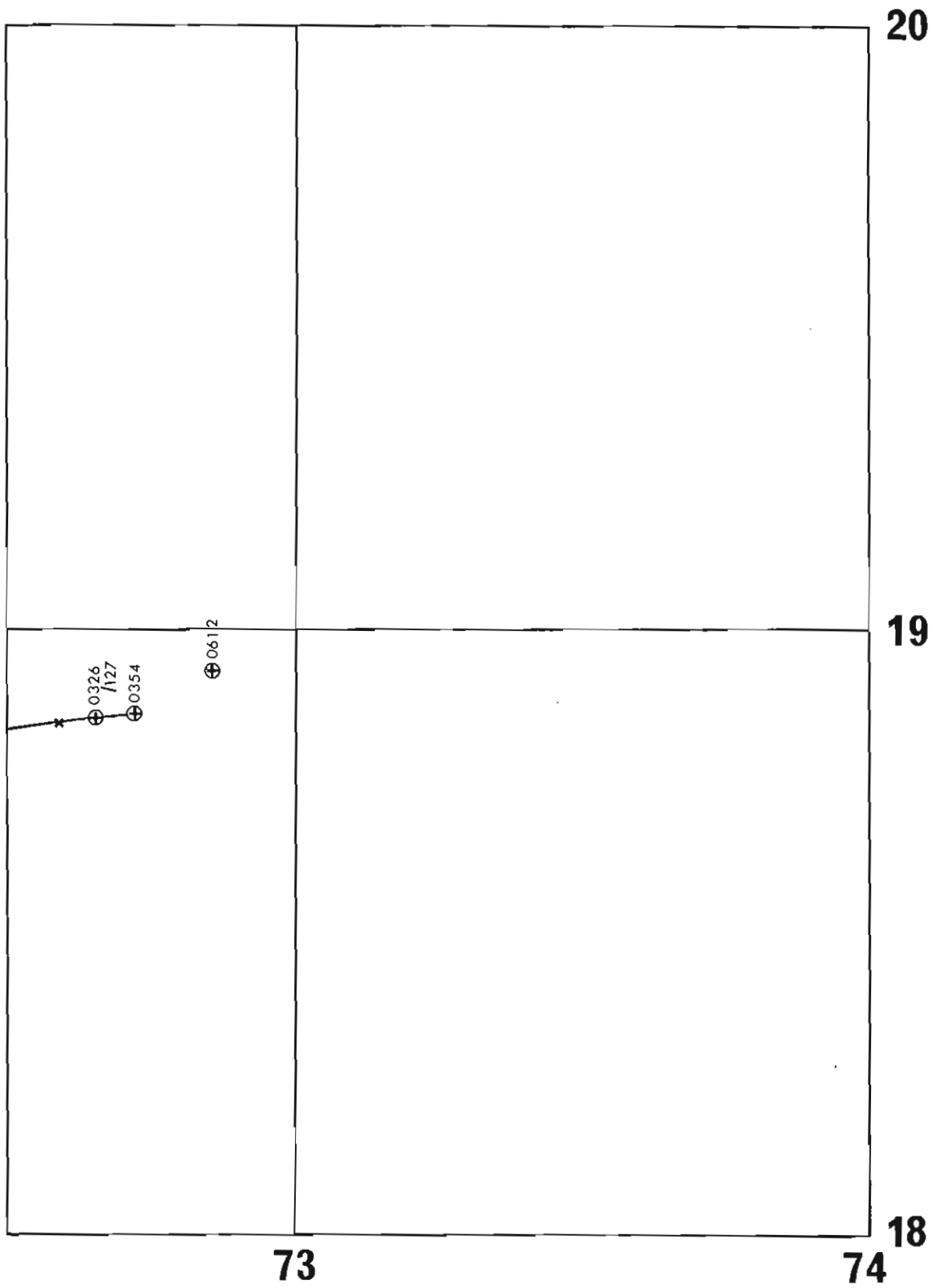












SECTION C

Data Lists

RRS SHACKLETON CRUISE 3/75
TOTAL MAGNETIC FIELD

DATE 1-4-75
(DAYNO 91)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	38605*	38539*	38545	38595*	38581	38659	39020	39437*	39393	39259
1	39387*	39364	39170	38552*	38871	38896	38913	38950	39128	39268
2	39197*	39257	39475*	39372	38946	38560	38395	38314	38387	38498*
3	38491	38451	38329*	38332	38573	38302	38365	38389*	38263	38063*
4	38156	38499	38709	38585	38460	38409*	38460	38696	39054	39299
5	39422	39470*	39463	39425	39458	39443*	39445	39460	39498	39270
6	38923	38758	38716	38608	38427	38333	38435*	38523	38319	38194
7	38336	38629	38857	39187*	38963	38726				
8										
9										
10										
11										
12										
13										
14	39180	39188	39213	39255	39306	39353	39400	39425	39204*	39190
15	39436	39426	39419	39416	39415	39422	39427	39448	39450*	39448
16	39043	38898	38804	38763	38745	38692	38591	38469	38353	38279*
17	38289	38342	38418*	38406	38300	38153*	38175*	38173	38163	38132
18	38087	38037	38001	37985*	37988	38010	38048	38103	38163	38223
19	38275	38309	38324	38324	38321	38328*	38304	38288	38339	38454
20	38577	38619	38573	38527*	38539*	38518	38466	38412	38366	38332
21	38315*	38316	38324	38338	38354	38369	38376	38382	38391	38409
22	38436	38464	38490	38507	38530*	38463	38348	38279*	38309	38387
23	38289*	38295	38386	38516	38623	38679	38705	38773	38919	39337*

RRS SHACKLETON CRUISE 3/75
TOTAL MAGNETIC FIELD

DATE 2-4-75
(DAYNO 92)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	39400	39483	39455	39424	39426	39438	39452*	39447	39432	39406
1	39338*	39355	39400*	39394	39351	39198	38925	38636	38487	38442
2	38410*	38430	38581*	38577	38449					
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15			39152*	39053	38977*	38985*	38982	38936	38834	38717
16	38613	38501	38390	38321*	38331	38373	38418	38466	38487	38475
17	38452	38426	38409	38366	38325*	38331	38393	38566	38766	38875
18	38876	38850	38914	39074	39281	39421	39505*	39502	39452	39359
19	39239	39088*	39106	39235	39369	39435	39509	39588*	39568	39363
20	39192	39057	38907	38755	38625	38573	38608	38702	38810	38895*
21	38890	38866	38846*	38860	38928	39013	39090	39156	39192	39207*
22	39204	39193	39173	39156	39148	39164	39230*	39229	39165	39056
23	38983*	38967	39014	39057	39141	39280	39430*	39428	39382	39314

RRS SHACKLETON CRUISE 3/75
TOTAL MAGNETIC FIELD

DATE 3-4-75
(DAYNO 93)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	39247	39189	39122	39055	39000*	39001	39016	39038	39073	39149
1	39263	39363	39414*	39405	39364	39317	39285	39277	39290	39317
2	39348	39376	39401*	39391	39338	39262	39192	39142	39120	39124
3	39161	39235	39327	39417	39480	39528	39562	39572	39557	39510
4	39444	39364	39290	39207*	39210	39251	39280	39303	39333	39350
5	39366	39388	39414	39446	39477	39498	39509	39507	39492	39473
6	39433	39380	39340	39312	39281	39256*	39266	39304	39341*	39337
7	39302	39276	39256*	39258	39268	39290	39323	39356	39379	39393
8	39406	39423	39448	39466	39483	39502	39522	39531	39531	39533
9	39535	39538	39548	39562	39578	39584	39574	39565	39557	39524
10	39518	39511	39502	39488	39472	39457	39441	39423	39405	39389
11	39380	39378	39388	39408	39434	39461	39483	39498	39506	39510
12	39516	39525	39536	39550	39560	39565	39567*	39566	39569	39572
13	39575	39581	39587	39593	39602	39611	39623	39641	39664	39683
14	39697	39704	39705	39701	39693	39686	39684	39688	39699	39709
15	39718	39727	39734	39738	39740	39742	39739	39738	39734	39726
16	39717	39710	39707	39705	39707	39713	39724	39738	39753	39767
17	39783	39798	39813	39825	39835	39843	39850	39855	39858	39859
18	39855	39851	39851	39861	39880	39897	39916*	39914	39900	39873
19	39840	39809	39781	39758	39742	39733	39729	39729	39732	39734
20	39737*	39736	39738	39743	39750	39761	39776	39794	39814	39835
21	39859	39882	39903	39920	39932	39941	39951	39960	39969	39981
22	39994	40009	40021	40031	40035	40037	40035	40031	40027	40020
23	40016	39999	39989	39965	39981	39977	39980	39976	39976	39978*

PRS SHACKLETON CRUISE 3/75
 TOTAL MAGNETIC FIELD

DATE 7-4-75
 (DAYNO 97)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	43014	43019	43023	43026	43028	43026	43029	43031	43035	43040
1	43045	43051	43056	43063	43070	43072	43087	43097	43109	43118
2	43124	43136	43143	43149	43153	43154	43165	43171	43181	43192
3	43201	43214	43226	43234	43245	43252	43251	43250	43245	43239
4	43233	43227	43221	43214	43212	43206	43200	43194	43187	43179
5	43174	43170	43166	43164	43165	43168*34	43167	43168	43165	43160
6	43150	43157	43123	43112	43105	43097	43090	43078	43065	43053
7	43060	43074	43100	43116	43119	43110	43100	43090	43082	43078
8	43076	43075	43076	43075	43073	43069	43065	43061	43062	43062
9	43064	43068	43075	43084	43091	43103	43116	43130	43146	43161
10	43173	43184	43195*14							
11								42574	42572	42570*56
12	42570	42566	42564	42569	42573	42575	42577	42581	42582	42585
13	42587	42591	42593	42597	42599	42602	42605	42607	42608	42612
14	42614	42625	42634	42642	42647	42652	42657	42662	42665	42672*58
15	42671	42675	42677	42680	42682	42683	42683	42680	42681	42681
16	42682	42687	42695	42704	42714	42726	42736	42746	42754	42761
17	42767	42771	42774	42777	42782	42782	42779	42778	42779	42779
18	42779	42786*10	42785	42773	42761	42773	42791	42772	42740	42748
19	42762	42769	42777	42792	42806	42813	42818	42820	42823	42828
20	42824	42816	42803	42785	42779	42779	42793*40	42791	42797	42812
21	42822	42830	42839	42845	42855	42873	42882	42892	42894	42895
22	42846	42848	42846	42848	42900	42909	42915	42926	42937	42949
23	42963	42975	42983	42984	42996	43000	43001	43006	43006	43012*58

RRS SHACKLETON CRUISE 3/75
 UNCORRECTED DEPTH IN METRES

DATE 29- 3- 75
 (DAYNO 88)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10	1415	1413	1411	1409	1408	1408	1408	1407	1402	1399
11	1395	1390	1385	1383	1384	1386	1395*40	1394	1390*50	1396
12	1405	1397	1383	1358	1314	1260	1211	1162	1115	1066
13	1017	1116*10	1061	896	799	735	647	553	444	371
14	315	316	320	350	339	349	368	391	424	463
15	505	542	580	618	656	693	727	761	794	833
16	850	746*10	785	901	952	969	982	996	1009	1028
17	1050	1030*10	1025	1093	1107	1105	1120	1142	1187*50	1258
18	1103	1133	1159	1176	1195	1214	1218	1235	1281	1305
19	1319	1330	1351	1395	1431	1463	1485	1507	1529	1545
20	1558	1567	1575	1583	1595	1609	1638	1663	1683	1707
21	1732	1746	1758	1764	1771	1778	1784	1789	1790	1793
22	1796	1796	1795	1793	1791	1790	1790	1791	1792	1797
23	1803	1808	1815	1830	1838	1843	1855	1870	1891	1907*58

RRS SHACKLETON CRUISE 3/75
 UNCORRECTED DEPTH IN METRES

DATE 30- 3- 75
 (DAYNO 89)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	1909	1931	1948	1953	1957	1960	1956	1951	1946	1942
1	1939	1928	1917	1906	1901	1900	1878	1859	1845	1828
2	1807* 2	1816	1831	1843	1846	1845	1838*40	1839	1842	1843
3	1843	1876	1900	1907*20	1900	1889	1880	1847	1829	1820
4	1814	1801*10	1802	1803	1800	1796	1805*40	1804	1800*50	1802
5	1805	1803	1800	1797	1791	1785	1781	1775	1766	1755
6	1743	1737*10	1739	1743	1745	1745	1749	1753	1755	1767
7	1785	1802	1816	1820	1827	1836	1841	1845	1851	1859
8	1869	1870	1873	1939*22	1884*26	1891	1906	1919	1925	1932
9	1939	1942	1944	1944	1954	1970	1992	2013	2034	2042
10	2043	2055	2064	2066	2070	2076	2088*40	2080	2056	2029
11	2001	1986	1972	1956	1923	1880	1934	1979	2006	2016
12	2017									
13	2652* 4	2546	2524	2494	2478	2469	2462	2455	2446	2439
14	2432	2417	2404	2395	2361	2315	2324	2341	2385*50	2377
15	2366	2323*10	2328	2343	2363	2385	2380	2399	2395	2396
16	2396	2395	2394	2395	2396	2396	2396	2396	2357	2349
17	2191	2290*10	2281	2331*22	2341*26	2328	2336	2342	2344	2350
18	2357	2365	2372	2379	2381	2381	2376	2371	2369	2366
19	2366	2358	2348	2337	2329	2323	2319	2316	2311	2303
20	2293	2274	2257	2249	2240	2231	2220	2208	2195	2176
21	2154	2130	2108	2088	2085*28	2048	2033	2017	1999	1983
22	1968	1935	1905	1881	1857	1832	1813	1793	1773	1753
23	1734	1712	1688	1662	1640	1620	1594	1564	1527	1473*58

RRS SHACKLETON CRUISE 3/75
 UNCORRECTED DEPTH IN METRES

DATE 31- 3- 75
 (DAYNO 90)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	1463	1456	1450	1443	1440	1437	1437	1441	1454	1526
1	1628	2487*10								
2	2597	2079	1690	1626	1607	1593	1616	1646	1690	1756
3	1768	1765	1753	1722	1704	1693	2016	2236	2253*50	2238*58
4	2334	2345*10	2286*14	2366*20	2331	2279	2217	2145	2050	1940
5	1821	1710	1586	1439	1385	1379	1375*40	1382	1408*50	1392
6	1368	1454*10								
7	1865	1909	1946	1968	1975	1975	2012*40	1991	1930	1840*58
8	1939	2048*10	2024	1906*22	1912	1931	1791	1692	1672*50	2900*58
9	1620	1571	1699	1879	2085	2304	2432*40	2429	2421	2385
10	2337	2335	2287	2099*20	2140*26	2030*32	1939	2051	2092*50	2086
11	2078	2264*10	2260	2246*20	2259	2279	2275	2267	2248	2231
12	2012* 4	1960*10	2048*14	2009	1986*26	1821*32	2187*40			
13										
14	2268	2505	2229	2341*22	2213*26	2363	2670	2710	2868*50	2841
15	2402	2921	3048	3190	3265	3306	3464	3599*44	3420	3387
16	3365	2758*10	2788	2908*20	2860	2787	2789	2851	3091*50	2937
17	1682* 4	1752	1849	1929*20	1701*26	1803	2139	2385	2451	2478
18	2487	2452	2353	2052*20	2064	2000	2158	1602*46	1811*50	1795
19	1772	1829	1909*16	1887	1858	1847	1805	1778	1781	1859
20	1975	2363*10	2345	2275*20	2353	2469	2633*40	2623	2593	2578
21	2571	2433	2317	2247	2212	2195	2170	2140	2055	1745
22	1939	2061	2159	2224*20	1993	2368	2493*40	2498*46	2493	2487
23	2348	2100	1741*14	2043*20	2429	2352*32	2754*40	2696	2523	2421*58

RRS SHACKLETON CRUISE 3/75
UNCORRECTED DEPTHS IN METRES

DATE 1- 4- 75
(DAYNO 91)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	2516	2480*10	2519	2476*20	2516*26	2612	2780*38	2209*44	2368	2527
1	2487*4	2516	2504	2644	2659	2747*34	2721	2644	2563	2480
2	2245	2456	2597*16	2603	2622	2695	2858	3317*44	2997	2517
3	2458*2	2524	2597*14	2540	2454	2349	2194*40	2368	2572	2417
4	2427	2714	3010	3109	3109	2944	2761	2542	2396	2206
5	2464*4	2451	2377*14	2414	2469	2579	2758	2500	2067*50	2505
6	2679	3150	3219	2981	2707	2816*34	2711	2487*44	2437	2363
7	2703*4	2615	2541*14	2743*20	2736	2355*34	2385	2473	2507	2558
8	2515	2517	2520	2522	2525	2527	2745	2890	2890	2388
9	2379	2946	2984	2993	3002	3011	3021	3030	3039	304
10	3057	3072*10	2999	2780	2085*28	2090	2394	2603	2626*50	2617
11	2604	2584	2571	2554	2537	2521	2504	2487	2465*50	2474
12	2467	2304*10	2352	2494	2587	2655	2732*40	2700	2603	2253*58
13	2195*4	2275*8	2319	2418*20	2347	2242	2242	2337	2343	2373
14	2429	2454*10	2451	2443	2424	2399	2354	2249	2326	2488
15	2312*4	2385	2537	2560*20	2451	2487	2670*40	2701	2768*50	2629
16	2414	2158*10	2237	2474	2586*26	2630	2961	3187	3208*50	3044
17	2798	2827	2846	2847	2834	2813	2505*40	2504	2501	2495
18	2487	2633	2549	2401*20	2412	2498	2603	2674	2677	2659
19	2626	2719*10	2697	2630	2560	2630	2670*40	2641	2553	236
20	2465	2370	2432	2606*20	2575	2633	2699*40	2697	2661	2637
21	2655	2660	2708	2844	2963	3072	3072	3076	3091*50	3083
22	3072	2999*10	3012	3052	3113	3186	3151	2751*44	2853*50	3019
23	2897	2861	2732*14	2837	3219*26	3124	2981	2839	2697	2555

RRS SHACKLETON CRUISE 3/75
UNCORRECTED DEPTHS IN METRES

DATE 2- 4- 75
(DAYNO 92)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	2271	2533	2765*16	2652	2511	2469	2341*40	2465*46	2436	2257*58
1	2308	2273	2214	2074*20	2195	2377	2838*38	2794	2948	3001
2	3003	2935	2633*16	2676						
3							2516*40	2493	2399*50	255
4	2791	2762								
5										
6										
7										
8										
9										
10										
11										
12	2692	2690	2682	2662	2652	2648	2608*40	2565	2392*50	2627
13	2246	2402	2561	2783*20	2606	2341	2286*40	2304	2359	2477
14	2619	2615*10	2618	2630*20	2598	2549	2630*40	2594	2451*50	2486
15	2476	2327	2377	2377	2625	2696	2922	3076	3087	2486
16	3109	2944	2832	2820*20	2921	3072	2670*40	2758*46	2502*50	2574
17	2692	2719*10	2662	2432*20	2486	2568	2668*40	2652	2588*50	2723
18	2926	2656	2358	2002	1807	1840	1917	2019	2173	228
19	2374	2385*8	2134	2173	2214	2257	1457	2040	2308*50	230
20	2165	2337*10	2321	2257*20	2309	2388	2677*38	2550	2525	2498
21	2619	2944*10	2633	2955*20	2840	2666	2669	2717	2857	2909
22	2915	2637*10	2683	2821	2935	3036	2436*40	2499	2688	2809
23	2897	3065*10	3005	2925	2508	2323	2476	2666	2930	3117

RRS SHACKLETON CRUISE 3/75
UNCORRECTED DEPTHS IN METRES

DATE 3- 4- 75
(DAYNO 93)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3138	3211	3290	3382	3426	3445	3449	3979	3576	2747*58
1	2769	3078	3331	3471	3392					
2					2747					
3	3391	3415	3438	3467*20	3453	3109	3260	3370	3405*50	339
4	2941	3036*10	3029	3003*20	3015	3032	3040*40	3022	2926*50	2932
5	2933	3137	3276	3285*20	3280	3274	3263	3238	3069*50	3015
6	3109	3127*10	3121	3080*22	3098	3153	3157*40	3142	3188	3146
7	2868	3226	3242	3279	3293	3295	3256	3142	3098	2999
8	3237	3220	3255	3849	3887	3897	3903*40	3191	3036*50	3117
9	3745*4	3776*10	3754	3665*20	3728	3669*34	3774	3907	3904	3889
10	3990	3992	3993	3994	3994	3994	3994	3986	3986	3980
11	3990	3990	3990	3990	3989	3987	3989	3990	3990	3980
12	3987	3985	3982	3980	3978	3976	3969	3959	3936*50	395
13	3972	3980	3985	3986	3987	3987	3986	3982	3975	3966
14	3961	3941	3915	3877	3836	3793	3767	3728	3664	3561
15	3438	3639	3678	3680	3715	3729	3736	3741	3744	3744
16	3745	3717	3668	3578	3492	3407	3392*40	3438*46	3397	3259
17	3357*4	3085*10	3110	3188	3210	3208	3277*40	3153	2780	333
18	3357	3372*0				3358	3369	3384	3414	342
19	3020	3029	3042	3073	3084	3500*32	3500*40	3505	3499	3481
20	3056	3505	3505	3508	3508	3508	3508	3508	3508	3499
21	3086	3083	3082	3083	3089	3497	3514	3526	3524	3524
22	3524	3531	3530	3545	3550	3570	3581	3590	3594	3597
23	3505	3507	3506	3511	3513	3614	3616	3617	3617	3617

KRS SCHEDULE GUISE 3/75
 UNCORRECTED FEET - FIRES

DATE 7-4-75
 (DAYNO 97)

HOURS	00	06	12	18	24	30	36	42	48	54
0	3076	3079	3082	3083	3060	3025	3008	2995	2987	2969
1	2944	2915	2892	2865	2848	2835	2835	2835	2835	2833
2	2831	2800	2853	2802*20	2875	2864	2862	2855	2855*50	2838
3	2842	2785*10	2789	2805*20	2792	2772	2789*40	2785	2767*50	2776
4	2791	2774*10	2775	2779	2780	2780	2776*40	2777	2780*50	2774
5	2765	2762	2757	2749	2745	2743	2743	2745	2749	2755
6	2701	2770	2777	2782*20	2769	2751	2698	2608	2443	2371
7	2345	2304	2381	2391	2519	2707	2944	3112	3144	3163
8	3177	3191	3204	3215	3227	3241	3245	3248	3248	3248
9	3243	3248	3248	3248	3248	3248	3248	3248	3248	3248
10	3248	3248	3248	3248						
11										
12	3157	3146	3137	3132	3126	3118	3096*38	3176	3163	3158
13	3098	3083*8	3085	3105	3098	3087	3085	3102*46	3074	3076
14	3082	3082	3080	3077	3074	3071	3068	3063	3083	3083
15	3054	3018	3054*16	3028	3047	3023	3025	3067	3065	3061
16	3032	3036*10	3035	3033	3026	3018	3004	2989	3027	3029
17	2958	2800	2761	2760	2756	2751	2674	2989	2969	2921
18	1891	1753	1627	1525	1453	1394	1253*38	2602	2425	2150
19	1873	1870*8	1873	1867	1843	1879	1879	1251	1415	1697
20	1453	2208	2247	2285	2332	2385	2405	1887	1906	1929
21	2533	2493*8	2501	2554	2588	2632	2911	2422	2437	2466
22	3897	3927	3951	3967	3937	3892	3903*40	3203	3516	3731
23	3445	3400	3470	3471	3394	3277	3216	3880	3812	3652
								3164	3132	3085*58

HRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

HOURS	00	06	12	18	24 MINUTES	30	36	42	48	54
0										
1	73*4	71	89	121	143*28	140	117	93	94	106
2	107	100	99	95*20	98	116	131	137	134	128*56
3	130	140*8	137	129	103*28	104	119*40	110*44	105	101
4	95	95	98	101	108	114	119	121	120	114
5	134*2	111	116	121	123	125	130	136	147*52	146
6	153*9	154*10	153	152	147	137	129	124	115	113
7	118	111	107	103	101*26	99*32	100*40	99	100	98
8	99	102	123	153	175*26	171	170	171	176	185*56
9	182	167	193	118*22	119	132	155	162	159	156
10	153	166	174*16	173	179*26	178	181	183	175*52	177
11	161	143	115	86	66	51	62	135*46	134	104
12	87	95	107	121	126	126	125	129	144	168
13	195	213	214	202	189	178	176	177	172	158
14	140	157	136	140	134	123	114*40	115	115	128*58

HRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

HOURS	00	06	12	18	24 MINUTES	30	36	42	48	54
0	130	137	144	151	159	170	177	180	178	171
1	159	147	136	122	113	112	116	118	124	129
2	126	120	116	117	124	129*32	127	123	117	108
3	101	97	98	105	109	110	111*40	112	112	94
4	61	20	7	13	40	67	81*38	84	106	126
5	138	143	159	129	121*26	119	131	143	161	188
6	234	291	325	337	346*26	339	284	182	92	32*58
7	33	69	127	166	185	188	176	159	137*52	138
8	143	150*8	145	128	115	113	115	104	88	60*58
9	63	42	114	143	146	131	113	88	57*52	58
10	73	91	120	154	173*26	169	159	140	121	130
11	141*2	132	105	94	92	88	90	102	102	117
12	122	99	66	51*20	55	58	74	101	112	117
13	175	181	173	141	99	81	113	173	211	172
14	84	32*8	39	54	110	197	245	220	167	143
15	130	121	93	35	-15*26	-7	29	77	132	149
16	133	119	126	148	166	163	115	31	-31	-44
17	-44	-43	-41	-27	-15	-26	-51*40	-49	-29	6
18	33	51	85	78	87	93	97	104	114	122
19	127	132	128	122	114	108	101	98	95	82
20	65	56	50	41	24	11	4	4	8	20
21	29	33	16	13	21	29	34	47	53	59
22	60	56	47	45	45	50	55	63	69	73
23	75	76	76	72	70	62	56	49	36	14*58

HRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

HOURS	00	06	12	18	24 MINUTES	30	36	42	48	54
0	11	7	3	2	3	14	34	55	67	69
1	69	68	73	75	70	81*34	80*38	79	78	75
2	69	52	47	46	62	45*32	81	78	64	33
3	15	-13	4	54	108	134	111	70	37*52	39
4	72	129	206	281	331	384	432	472	499	510
5	486	405	310	221	167	135	71	-6	-97	-187
6	-257	-279	-292	-356	-467	-551	-611	-664	-637	-439
7	-161	-16	63	122	161	173	178	186	207	225
8	254	307	358	381	348	266*32	274	311	335	333
9	318	300*8	325	332	300	276	253	249	259	276
10	297	291	218*16	225	302	355	427*40	426	374	243
11	137	117	122	110	84	70	79	85	100	129*58
12	127	113	59	1	-14	-46	-55	-77	-107	-143
13	-177	-216	-245	-260	-256	-233	-184	-131	-79	-42*56
14	-61	-120	-186	-255*22	-249	-236	-254	-285	-307	-338
15	-372	-396	-386	-372	-373	-387	-421	-447*46	-446	-441*58
16	-442	-455	-456	-433	-420	-437	-461*40	-476	-418	-331
17	-250*2	-294	-406*10	-403	-353	-221*52	-230	-317	-399	-444*58
18	-163	-424	-402	-374*22	-341*25	-384	-340	-265	-156	-83
19	-125*2	-112	-67	-21	32	99	106	157	218	256
20	277*2	201	299	194	228	310*34	307	256	207	163
21	157	140	155	162*20	176	191	234	263	261	284
22	352	300*14	350	395	293	132	26	26	-6	4
23	67	71*10	500	325	75	-250	-448	-656*40	-653	-482

RRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY

DATE 1- 4- 75
(DAYNO 91)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	-224*2	-282*10	-274	-217*20	-227	-144	223	646*44	606	478
1	615*4	614	406	93*20	114	134	150	186	358	492
2	413*2	470	679*14	572	141	-251	-422	-509	-441	-340*58
3	-349	-395	-526*16	-525	-488	-501	-500	-478*44	-600	-793*58
4	-696	-348	-132	-250	-370	-413*52	-358	-116	248	499
5	627	675	680	644	675	656*34	658	669	701	468
6	115	-56	-104	-218	-405	-506	-315*40	-329	-540	-672
7	-535	-251	-29	299*20	79	-152				
8										
9										
10										
11										
12										
13									422*50	408
14	397	405	430	472	522	569	616	641	666*52	664
15	652	642	631*16	632	630	635	639	656	615	447
16	240	91	-7	-51	-73	-130	-234	-360	-480	-559*58
17	-551	-501	-431*14	-445	-554	-708*34	-699	-689	-699	-730
18	-775	-825	-860	-876*20	-873	-850	-812	-757	-697	-636
19	-584	-550	-534	-534	-537	-527*32	-362*40	-561	-505	-386
20	-259	-213	-254	-295*20	-279*26	-300	-353	-407	-454	-488
21	-506*4	-505	-497	-484	-468	-454	-447	-442	-433	-415
22	-389	-361	-336	-319	-297*26	-367	-486	-561*44	-534	-457
23	-548*4	-541	-446	-312	-201	-141	-111	-38	112	535*58

RRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

DATE 2- 4- 75
(DAYNO 92)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	600	687	663	633	636	648	663*38	659	644	619
1	566	566	602	598	550	392	114	-181	-335	-386
2	-425*2	-408	-266*16	-272	-405					
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15			350*14	249	168*28	170	169	120	15	-105
16	-212	-327	-441	-514*20	-505	-466	-424	-379	-361	-377
17	-403	-432	-452	-499	-544*26	-541	-482	-312	-115	-2*56
18	-12	-41	20	177	381	517	598*40	555	543	449
19	318	171*10	188	313	444	507	579	654*44	631	423
20	249	111	-42	-197	-331	-386	-355	-265	-162	-83*58
21	-90	-117	-142*14	-130	-65	16	90	153	185	196*56
22	191	176	153	133	121	134	194*40	192	124	12
23	-68*4	-65	-42	-3	78	213	357*40	353	304	232

RRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

DATE 3- 4- 75
(DAYNO 93)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	161	99	28	-43	-93	-105	-93	-75	-44	28
1	139	235	281*14	269	224	173	137	125	134	157
2	184	208	228*14	215	158	78	4	-50	-79*52	-76
3	-45	27	115	201	261	306	345*40	344	326	277
4	208	125	49	-41*22	-39	-3	23	44	70	84
5	98	118	142	171	200	219	228	224	206	185
6	142	84	40	7	-28	-56	-52	-18	12*50	6
7	-33	-64	-91*16	-90	-84	-66	-37	-8	12	25
8	36	51	69	89	103	120	137	143	141*50	137*58
9	138	137	144	154	171*28	169	156	134	112	95
10	86	76	63	46	26	7	-13	-35	-56	-76
11	-89	-94	-88	-72	-49	-26	-8	4	8	9
12	11	16	24	34	40	42	34	36	36	36*58
13	35	37	40	42	47	53	61	75	94	109
14	119	122	119	111	99	88	82	82	89	95
15	100	105	109	109	107	106	99	94	86	75
16	62	51	45	36*22	37	39	47	57	68	78
17	91	102	113	121	128	132	136*38	136	135	132
18	125	117	113	119	134	147	161*38	157	136	108
19	71	37	5	-22	-42	-55	-62	-66	-67	-89
20	-71	-75	-77	-76	-72	-65	-54	-40	-24	-7
21	13	32	49	62	70	75	41	86	91	99
22	108	110	127	133	133	131	123	117	109	98
23	86	64	55	47	38	31	50	22	18	14

RRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY

DATE 4-4-75
(DAYNO 94)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	11	11	12*16	11	13	16	20	25	29	36
1	42	47	51	51*22	51*26	49	46	44	40	40
2	41	38	33	28	27	25	24	26	28	33
3	37	40	46	51	59	71	82	89	95*50	94
4	91	87	85	81*22	80	78	77	73	70	68*58
5	68*2	67	65	60	55	50	47*40	48	52	59
6	70	82	100	122	150	173	189	195*46	193	189
7	190	190	191	193	192	186	178	167	159	153
8	140	141	134	128	121	110	92	74	55	41
9	35	31*10	30	32*22	31	37	44	51	52	50
10	46	35	31	30*22	31*28	30	27	25	21	19*56
11	16	14	9	4	0	0	2	4*46	3	0
12	-8	-14	-17	-20	-16*28	-17	-15	-14	-12	-7
13	5	20	43	63	81*28	80	74	62	47*52	48
14	55	76	102	121	135*26	134	128	124	119	115*58
15	115	112*8	114	113	120	128	143	134	108	67
16	15	-38	-77	-101	-106	-96	-74	-42	-11	23
17	48	68	73	73	75	81	86	89	86	81
18	72	64	54	45	37	33	33	36	41	47
19	52	57	60	62	62*26	61*34	61*38	62	63	71*58
20	70	77	83	89	94	102	111	123	135	145
21	152	153	158	161	165*26	164	157	144	134	118
22	107	95	86	84	84	79	72	58	37	14
23	-6	-18	-24	-26	-22	-16	-7	2	15	25

RRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

DATE 5-4-75
(DAYNO 95)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	39	51	62	67	65	54	41	30	22	12
1	4	-3	-11	-15	-17	-15	-15	-14*46	-14*50	-16
2	-16	-15	-11	-3	6	14	17	16	12	9
3	7	7	7	6	2	-2	-5	-9*44	-7	-3
4	5	19	30	54	74	95	109	117	119	109
5	98	85	74	63*22	64	66	71	82*46	81	81
6	81	81	85	93	102	114	125	129*46	128	130*56
7	129	125	116	107	94	85	76	65	54	46
8	40	40*10	41*14	43*22	44*26	43	46	52	56	61
9	64	67*10	66	62	57	52	47	37	26	12
10	-5	-21	-34	-45	-55	-65	-73*40	-72	-69	-62
11	-53	-45	-38*16	-39	-38*26	-36	-37	-39	-37	-36
12	-34	-31	-29	-25	-22	-16	-10	-5	-2	-1
13	1	2	2	2	3*28	2	3	1*46	2	-2
14	-5	-7*10	-8	-10	-13*26	-16	-17	-21	-24	-27
15	-36*4	-37*10	-36	-36	-37*26	-38	-36	-36	-37	-37
16	-37	-35*8	-36	-33*20	-30*26	-28*34	-29	-29	-31	-32
17	-32	-33	-37	-40*22	-39	-40	-44	-52	-57	-60
18	-66	-67*10	-69	-68	-67	-67	-62*40	-63	-60*50	-57*51
19	-58	-58	-55	-50	-42	-33	-20	-7	9	24
20	39	49	53	56	61	67	74	79	79	77*51
21	75	67	62	63	67	75	91	112	132	144
22	162	197	226	238	225	201	193	209	235*50	227
23	199	172	159	140	120	111	84	192	305*50	293*51

RRS SHACKLETON CRUISE 3/75
MAGNETIC ANOMALY AFTER REMOVAL OF THE IGRF IN GAMMAS

DATE 6-4-75
(DAYNO 96)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	320	269	136	48	-19	-78*32	-66*40	-68	-99*50	-88
1	-43	-14	-7	8	45	84	101	97	87*52	88
2	96*2	94	92	87	83*28	84	83	85	86	88
3	89	91	95*16	94	94	97	102	105	107	109
4	111	114	116	120*20	120	126	128	131	134	137
5	139*4	138	142	146*22	146*26	144	144	141	137	133
6	128	122	119	114	110	108	104	100	97	95*5
7	93	92	88*14	87	89*28	88	85	85	86	85
8	84	85*10	85*16	84	85	84	81	79*44	82	85
9	87	88	90	92	92	94	98*38	98	99*50	98
10	97*4	96	95	91	88	83	78	72	70	67
11	65	63	61	59	58	58*34	57	54	49	45
12	41	35	34	31	32	31	31*38	30	28	27
13	26	27	26	27	25	25	25	24	22	26*5
14	25	20	35	39	41	43	48*40	47	47	48
15	47*2	49	48	44	47	43	37	30	26	23
16	22	23	23	33	40	48	55	61	66	69
17	72	72	72	71	72	72	62	58	55	51
18	48	48	47	31	15	24	38	16	-21*50	-16
19	-5	-2	3	14	29*28	28	30	28	28	29
20	21	10	-7	-28	-38	-42	-36	-38*44	-35	-23
21	-17	-12	-7	-8	3	3	25	33	32	30
22	27*4	26	28*10	16*22	16	23	26	34	42	50
23	61	70	75	76	81	82	84	81*44	78	78

IRS SHAC-LEFT CHOISE 3/75
MAGNETIC ANOMALY

DATE 7-4-75
(DAYNO 97)

HOURS	00	06	12	18	24	30	36	42	48	54
0	89	82	82	82	81	76	75	74	77*52	76
1	76	81	83	87	91	96	103	110	119	125
2	132	138	142	144*20	146	148	152	155	162	170
3	176	187	196	205	210	214	210	206	199	190
4	181	173	164	155	150	141	133	124	114	104
5	96	89	82	78	76	74	73*38	71	65	57
6	44	28	11	-2	-12	-23	-33	-48	-64	-79*56
7	-74	-59	-44	-27	-27	-38	-51	-64	-75	-83
8	-88	-92	-94	-99	-104	-111	-119	-126	-128	-132*58
9	-133	-132	-129	-124	-121	-113	-104	-94	-82	-71
10	-63	-56	-52							
11								54	49	45
12	41	35	34	31	32	31	31	30	28	27
13	26	27	26	27	25	25	25	24	22	20
14	25	29	35	39	41	43	48*40	47	47	48*58
15	47	49	48	48	47	43	37	30	26	23
16	22	23	28	33	40	48	55	61	66	69
17	72	72	72	71	72	69	62	58	55	51
18	48	48	47	31	15	24	38	16	-21	-16
19	-5	-2	3	14	29*28	28	30	28	-28	-29
20	21	10	-7	-28	-38	-42	-34*40	-38	-35	-23
21	-17	-12	-7	-4	3	21	25	33	32	30
22	27*4	26	20*16	18*20	18	23	26	34	42	50
23	61	70	75	76	81	82	80	81	78	79*58

CALCULATED DEPTHS
IN CORRECTED METRES

DATE 29- 3- 75
(DAYNO 88)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10	1457	1455	1452	1450	1449	1449	1449	1448	1443	1440
11	1436	1431	1426	1423*20	1425	1427	1436*40	1435	1431*50	1437
12	1446	1433	1424	1398	1353	1298	1247	1197	1149	1099
13	1048	1150*10	1093	925	825	760	669	572	461	385
14	327	329	333	343	353	363	382	406	440	480
15	523	561	600	630	678	716	751	786	820	850
16	878	771*10	811	936	982	1009	1013	1027	1040	1060
17	1082	1062*10	1078	1142*20	1141	1135	1154	1176	1223*50	1188
18	1137	1168	1195	1211	1231	1251	1254	1277	1319	1344
19	1358	1369	1391	1436	1473	1506	1528	1551	1573	1589
20	1603	1612	1621	1628	1641	1655	1685	1711	1731	1755
21	1781	1796	1807	1814	1821	1828	1834	1839	1840	1843
22	1846	1846	1846	1843	1842	1841	1841	1841	1842	1847
23	1854	1858	1666	1881	1890	1895	1908	1923	1944	1960*58

RMS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 30- 3- 75
(DAYNO 89)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10	1963	1985	2002	2008	2012	2015	2011	2006	2000	1996
11	1993	1981	1970	1950	1954	1953	1931	1911	1896	1879
12	1858	1867	1882	1895	1898	1897	1890*40	1891	1894	1895
13	1895	1929	1953	1961*20	1953	1939	1933	1899	1881	1871
14	1865	1857	1852	1854	1851	1846	1856*40	1855	1850*50	1852
15	1856	1854	1851	1848	1842	1835	1831	1825	1816	1804
16	1792	1787*10	1788	1793	1794	1794	1799	1802	1804	1817
17	1835	1853	1867	1871	1879	1888	1892	1897	1903	1911
18	1921	1923	1923	1993*22	1936*26	1944	1960	1972	1979	1986
19	1993	1996	1998	1998	2009	2024	2047	2069	2090	2098
20	2099	2112	2121	2123	2128	2133	2136*40	2138	2113	2086
21	2056	2042	2027	2011	1976	1933	1986	2034	2062	2072
22	2073									
23	2724*4	2615	2594	2562	2546	2537	2530	2522	2513	2506
14	2490	2483	2470	2461	2426	2379	2388	2405	2450*50	2443
15	2431	2386*10	2392	2407	2428	2450	2455	2458	2461	2461
16	2461	2460	2460	2461	2461	2461	2421	2375	2319	2281
17	2251	2353*10	2344	2293*22	2405*26	2392	2400	2406	2408	2414
18	2422	2430	2437	2444	2446	2446	2441	2436	2433	2431
19	2431	2422	2413	2401	2393	2386	2383	2379	2375	2366
20	2356	2336	2320	2311	2302	2293	2281	2269	2256	2236
21	2214	2189	2166	2146	2143*28	2105	2089	2073	2055	2038
22	2023	1989	1958	1933	1909	1884	1864	1843	1823	1803
23	1783	1760	1736	1709	1687	1667	1640	1609	1571	1516*58

RMS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 31- 3- 75
(DAYNO 90)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10	1506	1499	1492	1485	1482	1479	1479	1483	1496	1570
11	1674	2555*10								
12	2668	2137	1736	1673	1653	1639	1662	1693	1730	1805
13	1818	1815	1802	1771	1753	1742	2072	2297	2312*50	2300*58
14	2398	2409*10	2349*14	2431*20	2395	2341	2278	2204	2107	1994
15	1873	1758	1631	1481	1426	1419	1417	1422	1449*50	1433
16	1408	1496*10								
17	1918	1963	2000	2023	2030	2030	2068*40	2047	1984	1887*58
18	1988	2100*10	2075	1950*22	1981	1980	1836	1735	1714*50	2975*58
19	1662	1612	1742	1926	2137	2362	2494*40	2491	2482	2446
20	2396	2394	2344	2148*20	2194*26	2081*32	1988	2103	2145*50	2139
21	2130	2321*10	2317	2302*20	2316	2336	2333	2324	2305	2287
22	2063*4	2010*10	2100*14	2060	2036*26	1868*32	2242*40			
23	2320	2569	2285	2400*22	2269*26	2422	2738	2778	2941*50	2914
14	2873	2994	3127	3273	3360	3393	3557	3696*44	3511	3477
15	3459	2826*10	2859	2782*26	2933	2858	2860	2924	3171*50	3013
16	1726*4	1797	1947	1978*20	1744*28	1849	2193	2445	2512	2541
17	2550	2514	2413	2104*20	2116	2255	2212	1643*46	1857*50	1841
18	1817	1876	1958*10	1935	1905	1894	1823*40	1824	1826	1906
19	2125	2422*10	2404	2332*20	2412	2527	2700*40	2690	2658	2643
20	2030	2094	2376	2304	2264	2250	2234	2194	2107	1789
21	2113	2113	2216	2200*20	2244	2424	2555*40	2561*46	2556	2550
22	2107	2153	1700*14	2505*20	2490	2411*32	2420*40	2765	2587	2482*58

RRS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 1- 4- 75
(DAYNO 91)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	2575	2542*10	2583	2743*20	2580*20	2678	2850*38	2265*44	2427	2591
1	2555*4	2580	2670	2711	2726	2817*34	2796	2711	2628	2542
2	2502	2107	2663*16	2669	2689	2763	2931	3405*44	3075	2580
3	2520*2	2587	2663*14	2604	2536	2399	2254*40	2637	2637	2464*58
4	2488	2783	3088	3190	3190	3020	2832	2606	2456	2557*58
5	2531*4	2512	2437*14	2475	2531	2644	2528	2563	2114*50	2569
6	2552	3232	3303	3059	2775	2884*34	2780	2550*44	2494	2422
7	2513*4	2661	2400*14	2813*20	2805	2415*30	2445	2635	2570	2580*58
8	2573	2577	2581	2584	2584	2591	2815	2803	2963	2959
9	2552	3015	3021	3076	3080	3089	3098	3108	3117	3127
10	3136	3152*10	3076	2851	2137*28	2143	2455	2669	2693*50	2684
11	2476	2653	2634	2619	2602	2584	2567	2550	2527*50	2536
12	2554	2362*10	2411	2557	2653	2723	2802*40	2790	2669	2510*58
13	2250*4	2332*8	2377	2479*20	2407	2290	2299	2299	2402	2438
14	2499	2516*10	2513	2504	2485	2460	2414	2306	2385	2550
15	2474*4	2445	2601	2625*20	2512	2550	2738*40	2769	2835*50	2691
16	2475	2212*10	2293	2536	2651*26	2696	3038	3270	3291*50	3123
17	2469	2899	2919	2926	2906	2884	2569*40	2568	2564	2558
18	2550	2706	2614	2462*20	2473	2561	2669	2742	2745*50	2724
19	2493	2788*10	2766	2697	2625	2696	2738*40	2708	2617	2422*56
20	2527	2430	2493	2672*20	2640	2700	2768*40	2766	2759	2743
21	2523	2727	2777	2917	3039	3152	3192	3196	3171*50	3163
22	2522	3076*10	3090	3131	3194	3265	3255	3220*44	3226*50	32070
23	2971	2955	2802*14	2909	3303*26	3205	3058	2912	2766	2620

RRS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 2- 4- 75
(DAYNO 92)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	2524	2595	2835*16	2719	2574	2531	2800*40	2527*46	2497	2314*58
1	2366	2330	2270	2126*20	2251	2437	2911*38	2866	3024	3078
2	3080	3010	2700*16	2743						
3							2575*40	2552	2460*50	2621
4	2862	2832								
5										
6										
7										
8										
9										
10										
11										
12	2756	2756	2750	2729	2720	2715	2674*40	2630	2452*50	2669*56
13	2502	2462	2626	2854*20	2672	2400	2344*40	2362	2419	2536
14	2885	2681*10	2684	2696*20	2663	2614	2696*40	2660	2512*50	2523
15	2539	3086	2231*16	2437	2692	2764	2497	3156	3167	3178
16	3190	3020	2904	2892*20	2996	3152	2738*40	2628*46	2565*50	2643
17	2760	2788*10	2729	2494*20	2549	2632	2736*40	2719	2653*50	2792
18	3001	2724	2417	2053	1853	1887	1965	2070	2227	2341
19	2434	2445*8	2188	2227	2270	2314	2006	2092	2366*50	2359
20	2220	2396*10	2380	2314*20	2368	2449	2745*38	2614	2589	2561
21	2685	3020*10	2700	3031*20	2912	2734	2736	2786	2930	2983
22	2990	3270*10	2751	2893	3010	3114	2497*40	2562	2756	2881
23	2971	3144*10	3082	2897	2654	2381	2539	2734	3005	3195*58

RRS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 3- 4- 75
(DAYNO 93)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	3215	3293	3376	3471	3517	3537	3541	4092	3673	2817*58
1	2839	3158	3419	3564	3482					
2					2814	3190	3346	3459	3496*50	3489
3	3480	3505	3530	3560*20	3545	3522	3497	3385	3001*50	3007
4	3016	3114*10	3107	3080*20	3092	3110	3088*40	3100	3148*50	3092
5	3109	3219	3362	3371*20	3366	3359	3348	3323	3271	3228
6	3198	3208*10	3202	3159*22	3178	3235	3239*40	3223	3178	3074
7	2941	3310	3327	3365	3380	3382	3341	3274	3114*50	3197
8	3322	3624	3856	3956	3996	4006	4017*40	4016	4013	4001
9	3048*4	3880*10	3857	3765*20	3830	3768*34	3878	4098	4100	4102
10	4103	4104	4105	4106	4107	4107	4107	4106	4104	4103
11	4103	4103	4103	4103	4101	4099	4101	4103	4103	4101
12	4099	4097	4095	4092	4090	4088	4081	4070	4046*50	4061
13	4084	4092	4098	4099	4099	4099	4094	4095	4087	4079
14	4073	4052	4025	3985	3942	3897	3870	3850	3764	3657
15	3539	3738	3778	3780	3816	3931	3938	3844	3847	3848
16	3848	3818	3768	3674	3585	3497	3482*40	3530*46	3487	3345
17	3048*4	3165*10	3191	3295*20	3294	3291	3363*40	3235	2850	3421
18	3448	3461*8			3442	3442	3456	3474	3505	3519
19	3519	3520	3554	3566	3577	3594*32	3602*40	3599	3592	3574
20	3549	3596	3632	3602	3602	3602	3602	3602	3602	3592
21	3579	3577	3575	3577	3582	3590	3603	3620	3619	3619
22	3619	3625	3633	3644	3655	3666	3677	3686	3691	3696
23	3702	3704	3707	3709	3710	3711	3714	3715	3715	3717*58

DATE 4-4-75
(DAYNO 94)

DEPTH IN CORRECTED METRES

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3717	3716	3715	3715	3715	3715	3715	3715	3715	3714
1	3711	3711	3711	3708	3705	3700	3700	3699	3696	3693
2	3691	3688	3686	3685	3684	3683	3682	3680	3678	3676
3	3674	3674	3674	3674	3674	3674	3672	3670	3662*50	3667
4	3675	3667	3662	3662	3664	3666	3668*40	3667	3663	3661
5	3660	3659	3655	3657	3656	3656	3655	3654	3653	3653
6	3653	3652	3650	3648	3647	3647	3645	3643	3643	3642
7	3639	3639	3639	3637	3635	3634	3633	3633	3630	3629
8	3628	3627	3626	3625	3624	3622	3621	3621	3625*50	3623
9	3619	3616	3613	3611	3609	3608	3607	3606	3605	3604
10	3604	3604	3604	3604	3604	3604	3605	3606	3608	3609
11	3610	3611	3612	3612	3613	3616	3617	3617	3617	3618
12	3619	3620	3622	3623	3623	3623	3623	3623	3623	3622
13	3621	3621	3621	3621	3620	3619	3618	3617	3616	3614
14	3612	3609	3607	3605	3604	3604	3603	3602	3601	3600
15	3600	3599	3598	3598	3598	3597	3598	3599	3600	3598
16	3595	3585*10	3586	3588	3590	3593	3594	3595	3595	3594
17	3593	3593	3592	3591	3590	3589	3588	3587	3586	3584
18	3579	3579	3576	3573	3570	3566	3564	3562	3561	3558
19	3555	3553	3550	3548	3546	3543	3545	3546	3547	3547
20	3547	3547	3547	3546	3543	3540	3539	3538	3537	3534
21	3506	3501	3496	3490*20	3492	3494	3492	3489	3488	3481
22	3479	3479	3478	3473	3471	3471	3469	3468	3468	3466
23	3464	3461	3458	3458	3457	3454	3456	3457	3458	3459

RRS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 5-4-75
(DAYNO 95)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3469	3458	3456	3456	3456	3456	3456	3456	3456	3458
1	3469	3460	3461	3462	3463	3464	3466*40	3465	3464	3465
2	3466	3467	3468	3468	3468	3468	3468	3468	3469	3470
3	3471	3471	3471	3471	3471	3471	3471	3471	3471	3471
4	3471	3471	3471	3471	3471	3470	3470	3469	3468	3468
5	3468	3468	3468	3468	3469	3471	3473	3473	3473	3473
6	3473	3473	3473	3472	3471	3471	3470	3469	3468	3467
7	3466	3465	3464	3462	3461	3460	3460	3459	3457	3456
8	3456	3454	3453	3453	3452	3451	3450	3448	3447	3446
9	3445	3444	3443	3442	3440	3437	3436	3435	3434	3434
10	3434	3432	3431	3430	3428	3426	3425	3424	3423	3422
11	3420	3419	3418	3417	3415	3413	3412	3410	3408	3406
12	3403	3401	3399	3397	3394	3392	3390	3388	3387	3386
13	3377	3375	3372	3369	3364	3360	3358	3356	3350*50	3356
14	3366	3347	3335	3332	3330	3328	3325	3322	3318	3316
15	3333	3314	3314	3314	3314	3314	3316	3316	3316	3316
16	3314	3313	3311	3305	3296	3286	3277	3270	3268	3267
17	3267	3275*10	3270	3257	3243	3229	3227	3226	3226	3225
18	3224	3207	3183	3144	2928	2623	2620*40	2566	2413*50	2353*56
19	2371	2405*8	2347	2320	2298	2278	2184*38	2118*46	2215	2059
20	1974	1939	1904	1869	1828	1783	1742	1700	1655	1597
21	1532	1490	1431	1335	1243	1153	872	649	681*50	493
22	508	591	681*14	621*22	661	887*32	542*40	643*46	470*50	473
23	478	554*10	726*14	609*20	756	474*34	431	345	342	455

RRS SHACKLETON CRUISE 3/75
DEPTH IN CORRECTED METRES

DATE 6-4-75
(DAYNO 96)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	692	838	949	987	1001	1003	973*40	995	1060	1109
1	1146	1157	1219	1327	1564	1865	2099	2296	2420	2681
2	3011	3076	3143	3211	3328*26	3324	3310	3291	3260	3233*56
3	3275	3441*10	3440	3437	3423	3403	3394	3382	3364	3358
4	3354	3367	3378	3394	3400	3400	3379	3379	3344	3325
5	3302	3252	3305	3313*20	3305	3294	3305	3330	3382	3415
6	3437	3439	3437	3432	3425	3418	3394*40	3430*46	3400*50	3403
7	3407	3408	3409	3411	3408	3403	3401	3399	3397	3394
8	3392	3390	3387	3384	3379	3373	3373	3372	3370	3365
9	3358	3349	3343	3344	3345	3345	3337	3337	3319	3307
10	3294	3305*10	3304	3297*20	3299	3301	3275*40	3276	3281	3281
11	3279	3279	3276	3269	3268	3269	3269	3265	3251	3246
12	3245	3233	3224	3220	3213	3205	3173*40	3178	3178	3161
13	3184	3165*10	3171	3192*20	3184	3173	3171	3169	3169	3168
14	3167	3167	3166	3163	3159	3156	3154	3152	3151	3146
15	3136	3131*8	3139*16	3112*20	3113*26	3107	3109	3111	3111	3113
16	3116	3120*10	3119	3117	3110	3101	3088	3072	3051	3002
17	2837	2877	2837	2836	2832	2826	2747	2671	2492	2189
18	1944	1802	1673	1570	1495	1431	1232*40	1288	1457	1745
19	1925*2	1921*10	1925	1940*20	1936	1929	1931	1939	1960	1983
20	2304	2269	2309	2347	2396	2450	2470	2489	2503	2533
21	2602	2552*10	2570	2624	2659	2704	2802	2892	3617	3841
22	4033	4060	4060	4085*20	4054	4007	4019*40	3995	3924	3758
23	3543	3558	3568	3570	3490	3369	3306	3252	3220	3190

RPS SHACKLETON CRUISE 3/75
 DEPTH IN CORRECTED METRES

DATE 7-4-75
 (DAYNO 97)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	3161	3165	3168	3169	3145	3109	3092	3078	3070	3051
1	3026	2999	2971	2944	2926	2913	2913	2913	2913	2911
2	2909	2918	2931	2962*20	2954	2943	2941	2934	2913*50	2916
3	2920	2862*10	2866	2882*20	2869	2849	2866*40	2861	2843*50	2893
4	2867	2851*10	2852	2852	2856	2856	2852*40	2853	2856*50	2850
5	2841	2838	2833	2833	2821	2819	2819	2820	2825	2831
6	2837	2846	2854	2858*20	2845	2826	2772	2679	2510	2436
7	2409	2429	2446	2456	2588	2781	3025	3199	3232	3252
8	3265	3286	3294	3305	3318	3331	3336	3339	3339	3339
9	3339	3339	3339	3339	3339	3339	3339	3339	3339	3339
10	3339	3339	3339	3339	3339	3339	3339	3339	3339	3339
11										
12	3245	3233	3224	3220	3213	3205	3182*38	3265	3251	3246
13	3184	3169*8	3171	3192	3184	3173	3171	3178	3192	3161
14	3167	3167	3166	3163	3159	3156	3154	3169	3169	3168
15	3136	3101	3139*16	3112	3131	3107	3109	3152	3151	3146
16	3116	3120*10	3119	3117	3110	3101	3088	3111	3111	3113
17	2937	2877	2837	2836	2832	2826	2747	3072	3051	3002
18	1944	1802	1673	1570	1495	1431	1291*38	2671	2492	2189
19	1925	1922*8	1925	1940	1936	1929	1931	1288	1457	1745
20	2004	2269	2309	2347	2349	2450	2479	1939	1960	1983
21	2602	2562*8	2570	2624	2659	2704	2992	4489	2503	2533
22	4013	4044	4069	4085	4054	4007	4019*40	3292	3617	3841
23	3543	3558	3568	3570	3490	3369	3306	3995	3924	3758
								3252	3220	3171*58

RRS SHACKLETON CRUISE 3/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 4- 4- 75
(DAYNO 95)

Table with columns: HOURS, 00, 06, 12, 18, MINUTES (24, 30, 36, 42, 48, 54), and values ranging from 104 to 320. Includes a column for 'MINUTES' with sub-columns for 24, 30, 36, 42, 48, and 54. Values include asterisks indicating specific data points.

RRS SHACKLETON CRUISE 3/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 5- 4- 75
(DAYNO 95)

Table with columns: HOURS, 00, 06, 12, 18, MINUTES (24, 30, 36, 42, 48, 54), and values ranging from -107 to 317. Includes a column for 'MINUTES' with sub-columns for 24, 30, 36, 42, 48, and 54. Values include asterisks indicating specific data points.

RRS SHACKLETON CRUISE 3/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 6- 4- 75
(DAYNO 96)

Table with columns: HOURS, 00, 06, 12, 18, MINUTES (24, 30, 36, 42, 48, 54), and values ranging from -472 to 2501. Includes a column for 'MINUTES' with sub-columns for 24, 30, 36, 42, 48, and 54. Values include asterisks indicating specific data points.

RPS SHACKLETON CRUISE 3/75
 FREE AIR GRAVITY ANOMALY IN MGALS

DATE 7-4-75
 (DAYNO 97)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	-489	-445	-405	-376*20	-356	-324	-296	-258	-230	-208
1	-179	-160	-138	-92*22	-87	-73*32	-57*38	-58*44	-47*52	-50*58
2	-52	-60*10	-44*16	-49	-48	-58*32	-61	-75*46	-76	-118
3	-119	-125	-139	-152*20	-162	-176	-200	-223	-237	-258
4	-280	-303	-324	-347	-363	-384	-402	-426	-441	-457
5	-449*2	-480*10	-474*14	-471*20	-477*26	-470*32	-476	-471*44	-490	-479*56
6	-484	-470*10	-474*14	-469	-451	-435	-403	-371	-330	-287*58
7	-288	-281*8	-322	-351	-382	-425	-499*38	-477	-566	-580*56
8	-586*4	-589	-598	-594	-600	-587*32	-571	-553	-540	-525
9	-548*2	-523	-438*16	-494*22	-484	-451	-433	-404	-392	-362
10	-344	-326*8	-312	-295	-207*28	-257*34	-236*40	-245*44	-231	-243
11	-229	-52*8	-232*14	-99*20	-240*26			240	261*50	269*56
12	292*4	268	295	310	319*28	354*34	265	337	330	352
13	345*2	347	354	352	340*26	345	341	340	335*50	329
14	359	373	377	367	370	376	381	391	390	403
15	404	432	448*16	444	346	283	241	399*46	375*52	368
16	405	394	407*14	414	417	419	428	445	464	489
17	509	531	566	606	646	694	767	830	904	1004
18	1113	1217	1324	1413	1468	1502	1539	1598	1587	1503
19	1427	1351	1281	1220	1159	1107	1054	991	923	855
20	771	703	597	514	427	334	253	175	108	42
21	-31	-85	-136	-222*22	-242	-404	-456	-662*46	-641	-697
22	-818	-888	-940	-1010*20	-1014	-1046*32	-1059	-1054	-1038	-1003
23	-972	-917	-873	-826	-771	-723	-661	-614	-575	-502*58

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 18- 4- 75
(DAYNO 108)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 19- 4- 75
(DAYNO 109)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3	43608	43607* 8	43628*14	43623	43618	43615	43612	43611	43610	43609*58
4	43609	43607	43606	43604	43604	43602	43603	43602	43606	43610*56
5	43504	43491	43477	43465	43453	43439	43433	43425	43420	43414
6	43411	43408	43405	43400	43392	43384	43374	43362	43347	43330
7	43316	43302	43281	43267	43254	43245	43238	43231	43227	43224
8	43213	43224	43228	43233	43239	43241	43236	43225	43209	43191
9	43176	43169* 8	43171	43178	43187	43191	43193	43193	43196	43201
10	43211	43221	43227	43258	43284	43315	43345	43371	43392	43407
11	43418	43430	43438	43449	43458	43463	43466	43469	43469	43465
12	43461	43451	43442	43430	43415	43400	43387	43371	43356	43341
13	43326	43310	43291	43273	43254	43233	43211	43191	43176	43162
14	43152	43150	43149	43152	43160	43172	43189	43211	43237	43264
15	43286	43293	43287	43275	43261	43241	43226	43222	43218	43217
16	43214	43220*10	43218	43216	43212	43207	43205	43205*46	43204	43199
17	43190	43179	43168	43163*20	43159	43151	43149*38	43146	43143	43142
18	43140	43137	43134	43132	43134*26	43132	43132	43132	43132	43131
19	43132	43128	43129	43129	43125	43121	43114	43108	43101	43094
20	43085	43079	43072	43064	43056	43050	43043	43038	43031	43023
21	43016	43009	43007	43004	43000	42996	42993	42989	42985	42982
22	42978	42973	42968	42963	42958	42952	42948	42943	42940	42935
23	42930	42926	42920	42916	42911	42908	42903	42899	42894	42888

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 20- 4- 75
(DAYNO 110)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	42884	42880	42876	42873	42869	42863	42858	42852	42848	42842
1	42836	42831	42825	42819	42815	42812	42809	42805	42802	42798
2	42796	42795*10	42795*14	42795	42799*28	42798	42802	42801*46	42802	42801
3	42800	42798	42799	42800	42801*26	42803	42804	42807	42809	42809
4	42809	42810	42809	42807	42806	42804	42802	42800	42798	42795
5	42792	42787	42784	42779	42775	42771	42763*40	42761*46	42765*50	42762
6	42760	42761	42763*14	42762	42764*26	42766	42768	42771	42773	42775
7	42775	42776	42779	42781	42782	42784	42784	42783	42781	42781
8	42780	42778	42776	42770	42765	42758	42750	42742	42733	42723
9	42718	42710	42703	42695	42685	42677	42669	42661	42648	42636
10	42622	42608	42597	42587	42582	42579	42581	42586	42592	42594
11	42597	42597	42595*16	42594	42597	42601*32	42600	42599	42593*52	42596*56
12	42593	42595	42602	42607	42615	42620	42628	42637	42651	42670
13	42692	42713	42729	42738	42732	42717	42698	42676	42653	42631
14	42812	42595	42579	42563	42549	42536	42521	42506	42491	42480
15	42470	42465	42462	42463*20	42465	42468	42469*40	42468	42467	42464
16	42461	42463	42458	42458*22	42455*28	42455*32	42460	42460	42454	42443
17	42411* 4	42412	42416	42412	42404	42397	42388	42399	42387	42373*56
18	42375	42365	42324	42317	42307	42299	42297	42289	42283*50	42284
19	42261	42257	42253	42251	42245*28	42247	42243	42249	42249	42248*58
20	42249	42243	42230	42232	42221	42212	42201	42193	42188	42185
21	42170	42160	42146	42121	42099	42077	42052	42032	42019	42006
22	41997	41990	41907	41908	41908	41904	42003*40	42002	42001	42008
23	42014* 2	42019	42027*16	42025	42022	42021*34	42020	42015	42009	42001*58

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE (DAYNO 115)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	4160H	41615	41625	41635	41647	41658	41666	41674	41679	41684
1	41684	41682	41681	41680	41680	41680	41681	41682	41685	41690
2	41695	41704	41952*14	41720	41729	41737	41741	41747*44	41748*52	41747
3	41743*4	41741	41742	41742	41747	41750	41752	41756*46	41755	41754
4	41748	41740	41730	41718	41708	41695	41687	41681	41677	41677
5	41679	41686	41697	41711	41724	41737	41751	41766	41782	41799
6	41818	41832	41847	41853	41856*28	41854	41846	41838	41831	41821
7	41818	41816*8	41815	41821	41828	41837	41845	41857*46	41856	41861
8	41863	41868*8	41868*14	41871*22	41870	41870	41872	41873	41870	41865
9	41863	41858	41853	41847	41842	41839	41834	41831	41829	41826
10	41822	41820*10	41821*14	41822	41825	41830	41838	41845	41854*52	41853
11	41851	41848	41843	41839	41830	41826*32	41823	41821	41819*52	41812*50
12	41813	41813	41817	41821	41826	41834	41844	41856	41873*52	41872
13	41874	41866	41844	41818	41794	41787	41794	41807	41826	41845
14	41859	41873	41885	41894	41899	41905	41910	41918	41924	41926
15	41925	41916	41903	41894	41915	41931	41933	41923	41907	41887
16	41866	41843	41820	41792	41775	41769*32	41764	41739	41708*50	41726
17	41761	41772	41787*16	41782	41756	41736	41715	41713	41738*50	41732*50
18	41733	41739	41744	41740	41747	41758	41762	41766*44	41765	41765
19	41763	41758	41754	41746	41733	41717	41703	41695	41685	41679
20	41675	41671*10	41670	41667	41663	41658	41652	41649	41643	41637
21	41631	41630	41634	41635	41637	41643	41651	41663	41675*52	41674
22	41662	41637	41610	41597*20	41602	41623	41651	41653	41633	41616
23	41608	41607	41606	41608	41611	41614	41618	41627	41638	41656*58

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 25-4-75
(DAYNO 115)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	41660	41668*10	41666	41660	41650	41638	41624	41613	41607	41606
1	41609	41614	41610	41622*20	41631	41621	41622	41624	41629	41635
2	41644	41652	41657	41659*22	41658	41652	41638	41624	41610	41602
3	41601	41604*8	41602	41590	41575	41560	41542	41528	41518	41509
4	41501	41492*10	41493	41491*20	41493	41495	41500	41506	41512	41517
5	41522	41527	41533	41539	41542	41542	41537	41534	41534	41533
6	41533	41530	41528	41525	41522	41519	41513	41508	41504	41500
7	41496	41494	41492	41490	41488	41487	41485	41483	41482	41477
8	41471*4	41470	41461*16	41459	41453	41446	41438	41426	41423	41413
9	41405	41399	41392	41388	41387	41386	41386*38	41385*44	41386*52	41385
10	41384	41381	41382	41380	41381	41384	41391	41400	41406	41409
11	41410	41408	41409	41408	41411*26	41409	41410	41411*44	41410	41408
12	41404	41399	41397	41397*22	41396	41399	41402	41409	41412	41419
13	41425*4	41424*10	41422	41418	41412	41402	41393	41387	41377	41367
14	41361	41357	41353	41350	41346	41340	41334	41326	41323*50	41322
15	41323	41327	41333	41336	41338	41339	41341*38	41342*44	41341*52	41339
16	41341	41341*8	41336	41334	41328	41328	41328	41326	41325	41324
17	41326	41325	41320	41310	41301	41288	41278	41266	41253	41244
18	41241	41238*10	41236	41237	41236	41233	41231	41230	41228*50	41230
19	41233	41237	41244	41253	41261	41270	41276	41280	41283	41281
20	41274	41259	41238	41213	41191	41171	41150	41131	41115	41103
21	41094	41089	41091	41085	41082	41077	41072	41067	41059	41053
22	41047	41045	41045	41048	41054	41063	41072	41079	41085	41094*58
23	41093	41094	41087	41079	41073	41067	41062*40	41060	41058	41058

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 26-4-75
(DAYNO 116)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	41061	41073	41083	41091	41094	41096	41098	41099	41094	41091
1	41088	41085	41082	41080	41075	41068	41058	41049	41045	41038
2	41031	41023	41013	41002	40988	40972	40958	40948	40945	40946
3	40953	40960	40958	40953	40942	40937	40933	40929	40919	40911
4	40907	40912	40927	40941	40958*28					
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 27- 4- 75
(DAYNO 117)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	40965	40960	40954	40948	40943	40937	40929	40985	40974	40970
21	40877	40864	40854	40845	40838	40828	40814	40800	40787	40894
22	40778* 2	40762	40750	40744	40747	40753	40760	40765	40769	40774
23	40779	40785	40793	40800	40802	40779*34	40788	40807	40812	40809

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 28- 4- 75
(DAYNO 118)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	40801* 4	40802	40803	40810	40822	40834	40847	40861	40874	40887
1	40896	40903	40912	40920	40927	40940	40951	40958	40967	40977
2	40990	41001	41008	41006	40996	40990	40992	41002	41016	41025
3	41036* 2	41043	41053	41064	41074	41087*34	41094*38	41092	41087	41080
4	41070	41063	41059	41053	41047	41043	41039	41036	41033	41032
5	41030	41028	41026	41021	41016	41011	41003	40997	40992	40990
6	40986	40981	40979	40975	40969	40959	40947	40931	40912	40893
7	40876	40864	40856	40855	40859	40863	40857	40829	40795	40771
8	40763	40764	40762	40755	40747	40749	40762	40790	40818	40823
9	40811	40800	40793*14	40797	40810	40829	40857	40884	40907	40923
10	40927	40916	40890	40853	40805	40761	40740*38	40749	40777	40808
11	40838	40869	40896	40906	40892	40867	40842	40829	40824	40827
12	40836	40849	40866	40884	40903	40920	40936	40955	40971	40984
13	40988	40992	41005	41027	41052	41074	41095	41084	41075	41062
14	41056	41061	41076	41094	41112	41129	41138	41138	41143	41146
15	41144	41138	41128	41117	41109	41101*34	41102	41110	41130*50	41119*5
16	41121	41134	41162	41190	41207	41206	41192	41171	41147	41127
17	41110	41102	41098	41098	41096	41094	41089	41083	41073	41062
18	41054	41048	41044	41037	41028	41018	41009	41001	40992	40983
19	40971	40960	40949	40939	40931	40925	40918	40916	40912	40909
20	40904	40899	40891	40879	40866	40856	40847	40838	40828	40820
21	40815	40810	40803	40796	40790	40786	40787	40791*46	40790	40790
22	40786	40781	40773	40766	40762	40763	40763	40760	40747*50	40751
23	40754	40751	40736	40719	40703	40695	40694	40703	40720	40742

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 29- 4- 75
(DAYNO 119)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	40777* 4	40776	40767	40758	40754	40750	40739	40726	40710*52	40712
1	40728	40752	40775	40791	40801	40804	40798	40785	40766	40749
2	40742	40737	40737	40748	40766	40789	40811	40830	40847	40859
3	40871	40880	40888	40889	40888	40895	40884	40884	40889	40900
4	40917	40941	40974	41011	41046	41069	41080*38	41077	41066	41048
5	41025	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	41030	41025	41023
8	41022	41018	41019	41017	41018*28	41017	41019	41020*44	41020	41022
9	41023* 2	41022	41025*16	41026*20	41026	41026	41027	41027*46	41026	41027
10	41023* 4	41024	41025*16	41024	41023	41023	41025	41025	41025	41026
11	41025	41026	41028	41028	41027	41028	41027	41025	41025	41023*56
12	41028	41039	41051	41065	41077	41086	41092	41098*46	41098*50	41093*56
13	41090	41092	41109	41141	41172	41188	41187	41188	41197	41223
14	41253	41281	41303	41319	41325	41323*32	41333	41336	41331	41320
15	41308	41295	41281	41270	41261	41254	41246	41240*46	41239	41225
16	41208	41188	41169	41154	41142	41133	41120	41108	41094	41085
17	41080	41080	41081	41079	41070	41060	41051	41045	41043*52	41041
18	41042	41044	41047	41055	41066	41078	41090	41100	41107	41113*56
19	41112	41106	41090	41070	41052	41042	41035	41029	41023	41010
20	40995	40977	40957	40939	40925	40915	40909	40906	40903	40900
21	40992* 4	40993	40987	40979	40972	40966	40962	40955	40951	40945
22	40959	40936	40935	40938	40938	40937	40930	40924	40916	40906
23	40795	40782	40769	40753	40736	40719	40708*49	40705	40714	40729

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 30-4-75
(DAYNO 120)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	40746	40759	40770	40781	40796	40811	40825	40835	40841	40843
1	40837*4	40839	40835	40834	40832	40823	40806	40791	40779	40772
2	40764	40753	40739	40729*20	40733	40749	40774	40801	40824	40846
3	40862	40880	40898	40911*22	40909	40901	40894	40889	40889*50	40888
4	40888	40889	40890	40891	40893	40896	40899	40897	40899	40903
5	40917	40937	40961	40985	41005	41023	41039	41054	41066	41073
6	41079	41083	41089	41097	41106	41112	41116	41120	41127	41134
7	41144	41156	41168	41177	41185	41188	41188	41176	41163	41153
8	41148	41143	41141*16	41137	41133	41121*34	41122	41125*46	41124	41127
9	41130*	41129	41124*16	41125	41129	41130*32	41129	41133	41125	41116
10	41111*	41116	41138	41165	41186	41208	41223	41228	41223	41209
11	41189	41168	41150	41136	41126	41117	41111	41104	41095	41087
12	41076	41067	41057	41049	41043	41036	41028	41020	41011	41002
13	40992	40979	40966	40956	40945	40939	40938	40939	40945	40964*56
14	40958	40943	40931	40925	40924	40926	40932	40941	40950	
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 1-5-75
(DAYNO 121)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15					40941	40941*34	40941*40	40941*44	40940	40942
16	40943	40947	40953	40958	40963	40966	40969	40971	40976	40983
17	40991	41000	41009	41018	41028	41036	41043	41047	41046	41041
18	41031	41018	41009	41000	40995	40991	40990*38	40990	40992	40985
19	40976	40964	40949	40935	40918	40904	40896	40892	40894	40898
20	40905	40913	40917	40915	40908	40900	40889	40876	40862	40851
21	40841	40836	40834	40836	40841	40845	40846	40846	40842	40836
22	40830	40826	40824	40826	40830	40831	40831	40826	40817	40810
23	40803	40798	40790	40782	40773	40767	40764	40762	40762	40762

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 2-5-75
(DAYNO 122)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	40760	40763	40768	40772	40774	40778	40781	40782*46	40780	40777
1	40774	40766	40753	40744	40732	40720	40708	40695	40685	40678
2	40674	40674	40674	40676	40681	40687	40694	40701	40702	40705
3	40714*4	0	40730	40746	40760	40775	40784	40791	40790	40789
4	40790	40789	40792	40798	40809	40819*32	40820*40	40817	40814*50	40809
5	40806	40807*10	40809*14	40809	40818	40826	40830	40833	40832	40832
6	40831	40825	40822	40818	40815	40815	40816*38	40816	40816	40812
7	40815*2	40812	40799	40781	40766	40756	40755	40757*46	40755	40743
8	40726	40714	40700	40693	40677	40666	40659	40655	40649	40645
9	40644*2	40644	40631*14	40634	40638*28	40636	40633	40631*44	40633	40629
10	40620	40609	40605	40618	40632	40644	40650	40655	40661*50	0
11	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0
13	40585	40590	40596	40598	40588	40568	40548	40535	40535*52	0
14	0	0	40574	40574	40577	40567	40548	40528	40513	40503*56
15	40506	40513	40519	40529	40535	40542	40548	40556	40565	40579
16	40592	40607	40620	40631	40643	40652	40659	40665	40666	40666
17	40666	40665	40665	40666	40666	40665	40664	40663	40666	40669
18	40671	40673*8	0	0	0	40690	40701	40707	40714	40724
19	40732	40743*10	40742	40740	40733	40726	40717	40717*44	40719	40724
20	40727	40727	40722*16	40723	40725	40725	40726*38	40729	40727	40729
21	40734*2	40733	40730	40738	40738	40738	40731	40743	40746	40748
22	40752	40756	40758	40759	40760	40751*32	40750	40765	40768	40772*56
23	40772	40772	40770	40782	40783	40782	40784	40804	40807	40811*58

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 3-5-75
(DAYNO 123)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	40812	40812	40814	40812	40813	40814	40814	40816	40817	40820
1	40823	40829	40831	40835	40838	40841	40843	40846	40848	40849
2	40852	40854	40855	40857	40859	40861	40862	40863	40865	40867
3	40869	40871* 8	40871	40875	40877	40877	40880*40	40879	40879	40879
4	40879	40880	40881*16	40880	40883*28	40882	40883	40887	40887	40888
5	40887	40891* 8	40893*15	40892	40891	40893	40896	40897	40898	40902
6	40905* 2	40905	40909*14	40910	40913*26	40913	40915	40916*46	40915	40916
7	40913	40911	40910	40909	40909	40909	40909	40909	40911*50	40910
8	40913	40916	40919	40924	40929	40936	40941	40947	40954	40959
9	40964	40969	40972	40973	40976	40979	40985	40993	41002	41011
10	41020	41029	41034	41038	41040					
11										
12										
13										
14										
15										
16										
17										
18										
19	41016	41017* 8	41018	41019	41023	41023*32	41021	41019	41012	41016
20	41006	40992	40985	40976	40969	40963*34	40961	40958*46	40959	40958
21	40958	40957	40959	40963	40966	40971	40975	40980	40983	40987
22	40991	40994	40998	41004	41012	41014	41012	41015	41019*52	41017
23	41017	41017	41014	41011	41005	41002	41001	41001	40998	40993

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 4-5-75
(DAYNO 124)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	40990	40990* 8	40989	40989	40992	40989	40992	40991	40992	40992*58
1	40991	40990	40987*14	40985	40981	40976	40971	40966	40966	40948
2	40938	40927	40918	40910	40899	40891	40884	40880	40877	40875*58
3	40874	40876	40881	40888	40899	40913	40930	40949	40975	41002
4	41028	41057	41082	41107	41127	41143	41155	41164	41171	41178*56
5	41177	41178	41180	41181	41182	41186	41190	41195	41200	41207
6	41211	41217	41223	41230	41230	41231	41231	41234	41234	41235
7	41237	41239	41241	41244	41247	41246	41243	41238	41232	41230
8	41230	41227	41228	41230	41230	41232	41235	41238	41243	41246
9	41251	41256	41267	41269	41274	41279	41282	41284	41284	41288*58
10	41287	41288* 8	41290	41292	41292	41295*34	41294	41294*46	41293	41294
11	41295	41297	41302	41305	41307	41312	41314	41318	41320	41325
12	41328	41330	41333	41335	41337	41340	41342	41344	41347	41349
13	41350	41345	41344	41340	41339	41337	41336	41337*44	41337	41337
14	41338	41340* 8	41340	41340*22	41339	41341	41342	41346*46	41345	41346
15	41348	41353	41352	41353	41352	41350	41344	41339	41335	41332
16	41329	41325	41322	41318	41315	41311	41307	41302	41298	41291
17	41284	41277	41268	41259	41245	41229	41214	41198	41181	41163
18	41147	41133	41123	41115	41109	41104	41100	41102*44	41101	41095
19	41089	41080	41074	41066	41061	41058	41056	41053	41051	41048
20	41045	41043	41040	41038	41038	41037	41037	41039	41041	41044
21	41048	41055	41061	41069	41079	41091	41104	41115	41129	41143
22	41158	41174	41188	41202	41214	41224	41232	41240	41249	41259
23	41266	41270	41272	41267	41267	41273	41271	41266	41265	41260*56

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 5-5-75
(DAYNO 125)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	41256* 2	41256	41264	41279	41308	41344	41377	41411	41442	41464
1	41481	41491	41506	41527	41552	41579	41601	41621	41644	41656
2	41668	41678	41689	41701	41712	41718	41719	41711	41698	41688
3	41683	41686	41699	41711	41719	41729	41736	41739*44	41739*52	41738
4	41728	41716	41698	41680	41661	41649	41642	41642	41650	41665
5	41681	41699	41716	41736*22	41735*28	41732	41728*38	41725	41715	41706
6	41696* 4	41691*10	41693	41701	41714	41734	41755	41775	41794	41806
7	41814	41821	41825	41827	41819	41816	41813	41808	41796	41780
8	41762	41747	41733	41717	41698	41673	41645	41619	41603	41590
9	41578	41567	41558	41549	41554	41570	41589	41605	41618*50	41615
10	41604	41590	41573	41561	41552	41544	41537	41533	41533	41534*58
11	41533	41527	41515	41499	41478	41455	41431	41409	41387	41375
12	41375	41371* 8	41379	41392	41404	41415	41418	41422	41426	41429
13	41433	41445	41456	41463	41466	41466*32	41463	41457	41460	41453
14	41446* 4	41452*10	41451	41448	41449	41443	41441	41445	41451	41453
15	41457* 4	41459*10	41458*16	41457	41452	41446	41441	41442*46	41439	41429
16	41413* 4	41414	41428	41436	41455	41472	41491	41512	41539	41561
17	41592	41629	41675	41719	41757	41776	41784	41779	41775	41769
18	41765	41757	41743	41718	41698	41682	41672	41661	41661	41668
19	41674	41683	41693	41705	41716	41731	41746*40	41745	41749	41751
20	41759	41759	41768	41771	41782	41786	41786	41777	41763	41756
21	41744	41740	41742	41687	41678	41671	41672	41676	41681	41687
22	41689	41693* 8	41691	41697	41705	41711	41716	41718	41712	41704
23	41682* 4	41686	41682*16	41681	41677	41672*52	41670	41668	41670	41693*56

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 0- 3- 75
(DAYNO 126)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	41706	41720	41732	41732	41723	41725	41740	41761	41784	41806
1	41822	41837*10	41836	41834	41818	41802	41781*40	41783*44	41785	41801
2	41824	41844	41851	41846	41836	41825	41817	41815*44	41816	41821*56
3	41820	41825	41825	41814	41808	41789	41780	41765*46	41767	41772
4	41774	41772	41774*14	41774	41773*26	41775	41774	41778	41782	41784
5	41791	41795	41807	41822	41841	41859	41873	41879	41880	41876
6	41862	41843	41825	41807	41790	41776	41768	41762	41759	41762
7	41768	41776	41784	41791	41801	41810	41818	41827	41836	41845
8	41855	41867	41877	41885	41887	41885	41881	41877	41865	41848
9	41829	41809	41792	41774	41764	41761*34	41759	41762	41766	41774
10	41785	41801	41816	41831	41843	41847	41835	41832	41835	41836
11	41836									
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
TOTAL MAGNETIC FIELD

DATE 7- 5- 75
(DAYNO 127)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5	41791	41795	41807	41822	41841	41859	41873	41879	41880	41876
6	41862	41843	41825	41807	41790	41776	41768	41762	41759	41762
7	41768	41776	41784	41791	41801	41810	41818	41827	41836	41845
8	41855	41867	41877	41885	41887	41885	41881	41877	41865	41848
9	41829	41809	41792	41774	41760*28	41761*34	41759	41762	41766	41774
10	41785	41801	41816	41831	41843	41847	41835	41832	41835	41836
11	41836									
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 18- 4- 75
(DAYNO 108)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 19- 4- 75
(DAYNO 109)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1										
2		457*10	442	396	380	380	402	423	440	461
3	483	518	558	609	630	636	636	674	789	841
4	863	882	902	925	949	973	987	1001	1016	1029
5	1042	1009*10	1022	1059	1110	1169	1148*40	1154	1169	1190
6	1214	1199	1186	1178	1174	1170	1225	1264	1275*50	1261
7	1240	1431	1559	1516	1539	1503	1609*40	1591	1518*50	1543
8	1580	1563	1542	1516	1459	1386	1500*40	1473	1394	1354
9	1533	1332	1377	1516	1641	1759	1804	1846	1883	1950
10	2034	1118	2213	2330	2504	2707	2635	2567	2552	2527
11	2496	743*10	2728	2666*20	2697	2743	2751	2707	2552	2527
12	2835	977	3088	3134	3152	3157	3157	3157	3157	3157
13	3157	155	3156	3159	3160	3160	3169	3177	3185	3191
14	3195	199	3203	3207	3210	3213	3216	3220	3235	3225
15	3226	228	3230	3231	3232	3233	3234	3235	3235	3236
16	3237	237	3236	3233*20	3235	3237	3238	3239	3239	3239
17	3239	241*10	3240	3238	3237	3237	3237	3237	3238	3240
18	3241	240	3239	3240	3241	3241	3241	3241	3241	3241
19	3241	241	3241	3241	3241	3241	3241	3241	3241	3241
20	3242	242	3241	3241	3241	3241	3241	3241	3241	3241
21	3239	239	3238	3237	3237	3237	3237	3237	3237	3237
22	3224	223	3224	3223	3223	3223	3223	3223	3223	3224
23	3235	232	3228	3222	3220	3219	3219	3218	3216	3208

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 20- 4- 75
(DAYNO 110)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 21-4-75
(DAYNO 111)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3226	3226	3226	3226	3226	3226	3226	3226	3226	3226
1	3226	3226	3226	3227	3229	3230	3230	3229	3226	3226
2	3222	3219	3216	3215	3214	3211	3209	3207	3206	3204
3	3202	3199	3196	3194	3192	3189	3187	3185	3183	3181
4	3178	3174	3170	3168	3165	3160	3157	3154	3153	3151
5	3147	3145	3143	3139	3137	3135	3130	3126	3121	3117
6	3113	3110	3107	3103	3100	3099	3071	3066	3067	3055
7	3065	3065	3066	3068	3070	3072	3069	3069	3063	3058
8	3054	3054	3052	3051	3049	3003	2994	2994	2978	2968
9	2957	2949	2941	2930	2926	2926	2915	2915	2898	2891
10	2886	2876	2871	2859	2852	2846	2837	2831	2831	2821
11	2807	2681	2660	2651	2647	2388	2518*40	2432	2172	2093
12	1935	1915	1898	1751	1667	1598	1565	1537	1527	1528
13	1573	1654	1608	1556	1388	1170	1124	1025	934	862
14	805	827	821	988*20	977	962	924*40	954	1045	1166
15	1302	1504	1650	1682	1762	1865	1463*40	1504	1627	1716
16	1789	1932	2076	2191	2360	2501	2602	2663	2107	2121
17	2121	2232	2376	2522*20	2645	2834	2975	2843	2444	2470
18	2494	2534	2580	2659*20	2822	2968	2965	2564	2564	2580
19	2600	2597	2597	2597	2597	2597	2600	2603	2605	2610
20	2615	2618	2622	2621	2626	2633	2644	2653	2656	2667
21	2633	2633	2633	2631	2635	2639	2644	2653	2654	2661
22	2753	2758	2763	2771	2765	2760	2779	2796	2804	2744
23	2444	2855	2868	2884	2897	2908	2919	2932	2948	2961

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 22-4-75
(DAYNO 112)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	2972	2990*10	2983	2955*20	2958	2963	2970	2977	2983	2989
1	2496	3002	3009	3015	3022	3028	3035	3042	3048	3055
2	3061	3066	3070	3075	3080	3087	3105*40	3104	3100*50	3103
3	3109	3116	3122	3127	3133	3138	3143*40	3147	3151	3154
4	3157	3160	3162	3166	3169	3179	3169	3170	3171	3174
5	3171	3173	3177	3176	3179	3182	3184	3187	3191	3195
6	3199	3204	3207	3208	3210	3213	3213	3214	3215	3216
7	3219	3221	3222	3221	3220	3219	3210	3201	3191	3186
8	3184	3184	3183	3180	3174	3167	3175*40	3169	3151	3138
9	3127	3122	2946	2628	2372	2173	2090*40	2096	2112	2133
10	2131	2194	2274	2384	2449	2491	2473*40	2508	2613	2685
11	2740	2747	2755	2763	2767	2771	2778	2788	2801	2814
12	2827	2832	2838	2846	2854	2862	2865	2870	2880*50	2877
13	2671	2895*10	2899	2876	2857	2835	2783*40	2841	2880	2890
14	3116	3244*10	3240	3277	3317	3391	3338	3181	3019	3014
15	3241	3204*10	3211	3230	3241	3248	3269	3288	3305	3314
16	3319	3315	3310	3303	3299	3295	3295	3295	3295	3295
17	3295	3295	3295	3295	3293	3288	3293	3297	3300	3302
18	3303	3296	3289	3288*20	3280	3288	3287	3285	3280	3276
19	3272	3274	3276	3288	3280	3281	3281	3279	3274*50	3319
20	3387	3397*10	3405	3400	3401	3402	3408	3413	3414	3411
21	3441	3396*10	3391	3390	3440	3469	3526	3604	3725	3784
22	2813	3244*10	3240	3230	3230	3268	3291	3291	2898	2885
23	2873	2927	2970	2992	3077	3193	3136	3095	3083*50	3195*58

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 23-4-75
(DAYNO 113)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3222	3169	3133	3133	3155	3189	3219*40	3208	3178	3118
1	3043	2922	2813	2726	2606	2469	2276	2266	2019*50	2028
2	2041	2107	2205	2267	2373	2502	2611	2707	3113	3172
3	3211	3216	3231	3232	3234	3241	3239*40	3238	3237	3236
4	3233	3236	3238	3239	3244	3246	3249	3252	3255	3258
5	3263	3264	3266	3269	3271	3274	3276	3279	3283	3287
6	3292	3296	3300	3302	3304	3305	3307	3309	3310	3310
7	3310	3309	3308	3307	3306	3306	3305	3304	3303	3301
8	3297	3292	3282	3272	3257	3234	3234	3322	3331	3335
9	3338	3341	3344	3346	3348	3350	3353	3355	3357	3358
10	3358	3360	3362	3363	3364	3365	3365	3366	3369*50	3368
11	3367	3369*10	3368	3369	3364	3363	3364	3364	3362	3361
12	3361	3365	3365	3365	3363	3363	3363	3391	3402	3415
13	3431	3455	3489	3507*20	3576	3632	3623	3603	3562	3505
14	3442	3473	3503	3531	3548	3559	3552	3547	3545	3541
15	3537	3537	3537	3537	3537	3537	3529	3524	3526	3526
16	3526	3543	3565	3596	3655	3727	3731*40	3712	3655	3636
17	3637	3599*10	3602	3611	3671	3756	3835	3891	3901	3908
18	3914	3915	3914	3910	3905	3901	3894	3887	3878	3861
19	3440	3436	3435	3430	3467	3456	3450	3443	3437	3432
20	3427	3423	3422	3418	3416	3416	3416	3415	3413	3411
21	3409	3413	3411	3408	3408	3409	3420*40	3419	3418	3422
22	3427	3427	3427	3430	3431	3431	3431	3426	3409*50	3415
23	3424	3424	3423	3421	3418	3416	3413	3410	3406	3404

RRS SHACKLETON CRUISE 4/75
 UNCORRECTED METRES

DATE 24-4-75
 (DAYNO 114)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3403	3402	3400	3396	3394	3392	3391	3389	3385	3383
1	3381	3379	3377	3376	3376	3376	3375	3373	3370	3367
2	3365	3364	3360*16	3359	3355	3352	3351	3350	3350	3350
3	3350	3350	3350	3349	3348	3347	3347	3347	3347	3346
4	3345	3345	3345	3345	3345	3345	3345	3345	3345	3344
5	3345	3344	3343	3343	3343	3343	3343	3343	3343	3340
6	3338	3335	3334	3332	3331	3330	3329	3329	3329	3329
7	3317	3315	3312	3308	3305	3303	3301	3301	3301	3301
8	3288	3284	3281	3278	3276	3275	3274	3274	3273	3273
9	3266	3264	3262	3260	3258	3256	3254	3252	3251	3250
10	2242	2237	2231	2237	2246	2257	2260	2260	2260	2260
11	2259	2258	2257	2257	2257	2254	2253	2253	2253	2253
12	2249	2248	2248	2481	2464	2440	2418	2392	2392	2392
13	2234	2230	2207	1930	1761	1646	1595	1552	1552	1550
14	1417	1365	1313	1261	1188	1105	1026	959	901	883
15	823	873	913	953	515	388	373	358	339	306
16	2206	2254	2245	238	232	225	219	214	210	207
17	2205	201*10	2002	203	205	208	222	301	511	839
18	1225	1390	1551	1704	1775	1803	2050	2221	240	255
19	2229	2220	2235	2403	2428	2441	2449	2457	2466	2474
20	2248	2289	2249	2503	2508	2511	2516	2522	2529	2532
21	2533	2533	2533	2535*20	2532	2527	2488	2469	2461	2467
22	1745	1655*10	1662	1681	1759	1865	1982	2195	2401	2677
23	3285	3306	3325	3327	3331	3336	3341	3346	3349	3350

RRS SHACKLETON CRUISE 4/75
 UNCORRECTED METRES

DATE 25-4-75
 (DAYNO 115)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3350	3350	3351	3355	3357	3358	3361	3364	3365	3365
1	3365	3365	3365	3365	3366	3369	3369	3369	3369	3369
2	3370	3370	3370	3370	3371	3372	3372	3373	3374	3375
3	3376	3377	3378	3378	3379	3380	3380	3380	3381	3381
4	3381	3383	3383	3383	3383	3383	3384	3385	3387	3387
5	3387	3387	3387	3387	3387	3387	3387	3387	3387	3387
6	3387	3387	3387	3387	3387	3387	3387	3387	3387	3387
7	3387	3387	3387	3385	3385	3385	3384	3383	3383	3380
8	3380	3377	3376	3376	3376	3376	3376	3376	3376	3376
9	3376	3376	3376	3376	3375	3374	3374	3374	3373	3373
10	3374	3373	3372	3371	3370	3369	3369	3365	3365	3364
11	3361	3359	3357	3353	3350	3347	3343	3340	3338	3335
12	3332	3330	3326	3320	3316	3314	3308	3303	3303	3293
13	3308	3286	3283	3279	3274	3268	3258	3250	3240	3245
14	3341	2234	2227	3221	3216	3211	3209	3207	3205	3201
15	3319	192	3189	3188	3188	3189	3189	3189	3186	3186
16	3186	3160*10	3161	3163	3168	3175	3163	3150	3134	3115
17	3094	3086	3080	3083	3082	3080	3060	3042	3029	3027
18	2780	2835*10	2818	2769	2746	2736	2749	2779	2843	2881
19	2908					3027	2944	2853	2743	2683
20	2648	2667	2699	2760	2824	2890	2840*40	2851	2877*50	2896
21	2895	2866	2847	2847	2860	2879	2918	2944	2944	2944
22	2944	2952*10	2950	2946	2941	2937	2918	2889	2871*50	2876
23	2882	2898	2914	2951	2941	2948	2961	2973	2982	2988

RRS SHACKLETON CRUISE 4/75
 UNCORRECTED METRES

DATE 26-4-75
 (DAYNO 116)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3007	3015	3024	3033	3042	3050	3061	3072	3083	3087
1	3087	3078	3072	3072	3070	3067	3064	3059	3053	3033
2	3007	2948*10	2959	2993	3014	3028	3018	3009	3000	32766
3	32766	32766	32766	32766	2699	2524	2383	2192	1900	1641
4	1397	1261	1145	1068	1007	953	936	921	908	899
5	892	881	866	842	805	761	797*40			
6					803	856	922*40			
7	980	1094	1233	1419	1679	1975	2099*40	918	902*50	933
8		0	0	0	0	0	0	2093	2073	
9	2023	2027	2107	2337	2641	2981	3003	2012	2012	2016
10	3091	3088						3034	3102*50	3097
11										
12	32766	32766	32766	32766	32766	32766	32766	32766	32766	32766
13	32766	32766	32766	32766	32766	32766	32766	32766	32766	32766
14	32766	32766	32766	32766	32766	32766	32766	32766	32766	32766
15	32766	32766	32766	32766	32766	32766	32766	32766	32766	32766
16	3091	3087	3083	3080	3076	3072	3072	3072	3072	3072
17	3072	3073	3074	3075	3075	3076	3076	3076	3076	3076
18	0	0	0	0	0	0	0	0	0	0
19	3091	3072*10	3076	3091*20	3085	3076	3043*40	3045	3105*50	3099
20	2999								3054*50	3032
21										
22										
23		32766	32766	32766	32766	32766	32766	32766	32766	32766

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 27- 4- 75
(DAYNO 117)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	2977	2986	3007	3050	3072	3083	3086	3088	3090	3094
1	3094	3099	3100	3102*20	3099	3094	3088	3080	3069	3061
2	3054	3048	3039	3026	3014	3003	2996	2989	2980	2971
3	2963	2949	2941	2944	2931	2911	2909	2911	2922	2955
4	2799	2799	3003	3018*20	3006	2988	2971	2934	2933*50	2938
5	2842	2879	3016	2951	2988	3025	3020	3014	3003	2977
6	2944	2927	3015	2915	2924	2937	2952	2968	2983	2996
7	3007	3028	3047	3054	3073	3087	3102*40	3100	3096	3091
8	3087	3080	3076	3075	3073	3072	3050	3027	3001	2979
9	2950	3049*10	3048	3047	3048	3050	3046	3041	3034	3032
10	3032	3010*10	3013	3022	3028	3032	3050	3067	3087*50	3083
11	3076	3091	3091	3091	3094	3098	3102*40	3100	3096	3091
12	3087	3089	3091	3092	3093	3094	3093	3094	3097	3104
13	3113	3110	3110	3115	3115	3113	3113	3113	3113	3105
14	3094	3094	3094	3091	3095	3102				
15										
16										
17										
18										
19								3065	3071	3080
20	3091	3095	3098	3098	3094	3089	3091	3092	3092	3098
21	3105	3116*10	3115	3109*20	3112	3116	3117	3119	3122*50	3121
22	3126	3131	3143	3154	3170	3180	3189	3197	3202	3208
23	3215	3217	3219	3219	3219	3221	3219	3218	3216	3214

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 28- 4- 75
(DAYNO 118)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3211	3207	3202	3195	3192	3191	3190	3192	3204*50	3201
1	3197	3187	3178	3170	3154	3133	3121	3110	3101	3098
2	3098	3085	3069	3039*20	3047	3058	3072*40	3054	2981*50	3006
3	3043	3061	3073	3074	3073	3072	3070	3071	3078	3083
4	3087	3091*10	3086	3070	3048	3023	3072	3110	3131*50	3129
5	3127	3109*10	3116	3138	3150	3157	3163	3170	3178	3185
6	3191	3199	3207	3216	3225	3233	3238	3242	3248*50	3246
7	3244	3237*10	3238	3241*20	3236	3228	3230*40	3229	3225	3218
8	3203	3192	3182	3184	3183	3182	3204*40	3207	3200	3196
9	3221	3231	3234	3238	3245	3254	3256	3258	3261	3263
10	3365	3364	3362	3357	3357	3360	3323*40	3327	3340	3347
11	3350	3344	3338	3335	3330	3325	3323	3320	3317	3319
12	3299	3297	3294	3290	3284	3277	3273	3268	3264	3258
13	3252	3236	3224	3217	3211	3204	3208*40	3204	3193	3182
14	3171	3161	3150	3136	3113	3087	2981*40	2990	3025*50	3022
15	3018	2973	2950	2948*20	2950	2601	2862	3054	3109	3126
16	3124	3126	3123	3128	3131	3135	3141	3146	3144	3155
17	3164	3173	3182	3195	3202	3208	3215	3220	3228	3235
18	3244	3251	3257	3263	3269	3275	3281	3297	3305	3314
19	3303	3307	3312	3319	3325	3332	3336	3340	3344	3349
20	3354	3358	3364	3370	3374	3378	3383	3388	3390	3391
21	3391	3391	3391	3394	3396	3400	3401	3403	3409	3413
22	3416	3412	3408	3404	3404	3405	3412	3418	3422	3426
23	3431	3433	3436	3439	3444	3449	3452	3456	3459	3466*58

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 29- 4- 75
(DAYNO 119)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3467	3465	3462	3458	3454	3449	3443	3438	3437	3436
1	3436	3447*10	3446	3443	3442	3442	3442	3441	3439	3438
2	3438	3436	3433	3429	3424	3420	3418	3415	3410	3408
3	3391	3384	3378	3374	3368	3361	3359	3357	3353	3349
4	3345	3340	3336	3330	3325	3321	3316	3310	3305	3298
5	3292	3292								
6										
7										
8										
9										
10										
11										
12	3281	3276	3274	3274	3261	3283	3283	3283	3283	3282
13	3186	3188*10	3187	3186	3187	3242	3228	3216	3207	3197
14	3189	3183	3176	3167	3156	3189	3189	3190	3191	3191
15	3142	3153	3163	3172	3177	3144	3132	3116	3097*50	3109
16	3204	3206	3209	3214	3216	3219	3220	3222	3225	3236
17	3252	3257	3264	3268	3289	3317	3315	3313	3314	3316
18	3321	3325	3329	3330	3332	3336	3340	3345	3349	3353
19	3354	3360	3363	3369	3373	3376	3380	3384	3388	3391
20	3394	3396	3400	3407	3410	3411	3412	3413	3413	3413
21	3418	3415	3414	3417	3419	3420	3423	3426	3427	3429
22	3431	3431	3432	3434	3435	3436	3442	3445	3445	3448
23	3453	3461	3471	3473	3474	3475	3476	3477	3478	3481*58

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 30-4-75
(DAYNO 120)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3482	3478	3474	3471*20	3473	3475	3475	3475	3478	3480
1	3482	3482	3482	3482	3481	3478	3481	3480	3483	3485
2	3486	3486	3486	3486	3485	3484	3481	3481	3483	3473
3	3469	3473	3475	3475	3475	3475	3475	3475	3475	3473
4	3471	3469	3467	3464	3462	3460	3458	3458	3455	3448
5	3445	3383*10	3393	3431*20	3428	3424	3424	3424	3415	3411
6	3409	3404	3400	3396	3391	3385	3380	3379	3374	3365
7	3365	3362	3358	3352	3349	3347	3344	3343	3340	3332
8	3327	3322	3318	3313	3308	3305	3303	3302	3300	3295
9	3310	3315	3319	3323	3325	3327	3327	3329	3334	3342
10	3352	3359	3365	3369	3373	3376	3377	3387	3394	3393
11	3394	3401	3406	3410	3414	3413	3422	3422	3430	3434
12	3438	3437	3436	3435	3434	3434	3436	3436	3439	3449
13	3451	3454	3458	3461	3463	3466	3466	3469	3478	3481
14	3482	3479	3475	3471	3468	3466	3465	3466	3469	3454
15	3449	3451	3453	3453	3454	3455	3455	3459	3459	3460
16	3460	3460	3460	3460	3460	3460	3460	3460	3460	3460
17	3460	3460	3460	3460	3461	3462	3463	3463	3464	3466
18	3467	3471	3473	3474	3476	3478	3479	3481	3482	3483
19	3484	3485	3486	3487	3488	3489	3490	3491	3490	3489
20	3489	3489	3489	3489	3489	3489	3487	3487	3483	3483
21	3484	3490	3495	3495	3494	3493	3493	3493	3493	3493
22	3493	3493	3493	3494	3496	3497	3499	3499	3503	3505
23	3508	3511	3513	3515	3513	3509	3507	3505	3503	3501

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 1-5-75
(DAYNO 121)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3500	3499	3498	3497	3497	3497	3496	3495	3495	3495
1	3495	3497*10	3496	3494	3489	3484	3486	3489	3492	3493
2	3493	3493	3493	3492	3490	3489	3488	3486	3483	3481
3	3480	3479	3478	3478	3478	3478	3476	3474	3473	3471
4	3467	3465	3463	3461	3459	3456	3456	3456	3456	3454
5	3449	3447	3445	3443	3440	3438	3440	3442	3443	3444
6	3445	3443	3442	3442	3440	3438	3427*40	3428	3428	3432
7	3431	3427*10	3425	3422	3420	3415	3415	3415	3415	3414
8	3442	3438*10	3439	3441	3442	3445	3449	3447	3446	3444
9	3449	3449	3449	3449	3449	3449	3451	3453	3453	3451
10	3451	3452	3453	3453	3453	3453	3449	3449	3451	3451
11	3453	3453	3453	3453	3453	3453	3453	3453	3453	3453
12	3449	3449	3449	3452	3454	3456	3456	3457	3457	3449
13	3460	3458	3456	3456	3456	3456	3460*40	3459	3459	3460
14	3456	3458	3459	3460	3461	3462	3462	3460	3460	3460
15	3460	3461	3462	3463	3464	3464	3465	3466	3467	3470
16	3473	3476	3480	3484	3486	3488	3489	3490	3491	3492
17	3493	3493	3494	3497	3501	3504	3504	3506	3506	3515
18	3519	3520	3520	3519	3522	3526	3528	3529	3531	3536
19	3537	3541	3545	3547	3548	3548	3548	3548	3548	3554
20	3555	3555	3556	3561*20	3560	3559	3559	3559	3559	3565
21	3566	3566	3566	3562	3531	3531	3486	3486	3486	3531
22	3538	3511	3507	3503	2987	2987	2988	2988	3021	3023
23	3288	3446	3565	3606	3623	3628	3625	3621	3617	3613

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 2-5-75
(DAYNO 122)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3610	3606	3601	3594	3590	3588	3587	3587	3591	3592
1	3592	3581	3572	3568	3565	3562	3562	3562	3560	3559
2	3559	3557	3554	3549	3546	3544	3542	3540	3539	3537
3	3533	3529	3529	3527	3524	3522	3520	3518	3516	3513
4	3511	3509	3507	3506	3505	3504	3503	3501	3499	3498
5	3497	3494	3492	3490	3487	3484	3483	3481	3479	3477
6	3475	3473	3470	3465	3462	3460	3458	3456	3454	3453
7	3453	3456	3459	3460	3461	3462	3464	3464	3467	3470
8	3473	3475	3477	3478	3479	3480	3481	3481	3482	3482
9	3482	3482	3483	3486	3490	3495	3496	3496	3498	3501
10	3504	3505	3507	3509	3512	3515	3516	3517	3518	3519
11	3520	3528*10	3526	3522	3522	3520	3520	3520	3520	3520
12	3520	3520	3520	3520	3521	3522	3522	3522	3522	3520
13	3526	3528	3530	3530	3531	3533	3533	3535	3537	3538
14	3541	3542	3543	3544	3546	3548	3550	3550	3550	3554
15	3555	3557	3560	3562	3563	3564	3566	3566	3568	3568
16	3579	3578	3577	3579	3580	3580	3583	3583	3587	3591
17	3595	3599	3602	3604	3606	3608	3610	3612	3613	3617
18	3621	3636*10	3633	3627	3622	3617	3610*40	3611	3613	3617
19	3621	3548*10	3568	3630	3650	3650	3655	3659	3663	3678
20	3698	3707	3712	3711	3711	3712	3712	3712	3712	3714
21	3716	3717	3718	3719	3721	3722	3723	3723	3723	3725
22	3727	3727	3727	3729	3730	3731	3731	3731	3732	3733
23	3734	3734	3735	3736	3736	3734	3734	3734	3734	3734

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 3-5-75
(DAYNO 123)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3734	3733	3732	3731	3731	3731	3731	3731	3731	3730
1	3729	3728	3726	3724	3723	3722	3721	3719	3717	3715
2	3712	3710	3708	3706	3704	3701	3701	3701	3699	3696
3	3694	3692	3690	3688	3685	3683	3679	3676	3674	3674
4	3674	3675	3676	3676	3676	3676	3674	3671	3669	3666
5	3663	3660	3658	3658	3658	3658	3658	3657	3656	3654
6	3650	3648	3647	3647	3646	3645	3644	3643	3642	3640
7	3634	3637	3636	3636	3636	3636	3633	3632	3631	3630
8	3630	3630	3630	3629	3627	3625	3622	3621	3621	3620
9	3619	3618	3617	3616	3615	3614	3612	3613	3609	3605
10	3601	3603*10	3602	3600	3599	3599	3601	3603	3603	3601
11	3599	3602	3612	3639*20	3623	3599	3599	3599	3601	
12										
13										
14										
15										
16										
17										
18										
19	3599	3599	3600	3603*20	3598	3603	3603	3601	3595*50	3597
20	3608	3610	3613	3618	3619	3619	3619	3620	3621	3620
21	3619	3623	3621	3620	3617	3614	3606	3599	3594	3590
22	3588	3587	3586	3585	3584	3584	3583	3583	3583	3582
23	3581	3580	3579	3577	3575	3572	3568	3565	3562	3555*50

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 4-5-75
(DAYNO 124)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3553	3548	3542	3535	3533	3533	3533	3537	3548	3553
1	3555	3555	3554	3552	3550	3549	3548	3546	3544	3543
2	3530	3527	3527	3529	3534	3541	3543	3545	3547	3548
3	3548	3547	3543	3544	3545	3545	3542	3542	3542	3542
4	3526	3524	3521	3515*20	3522	3522	3520	3521	3521	3525
5	3497	3486*10	3490	3490	3491	3491	3491	3491	3491	3485
6	3520	3519	3519	3519	3519	3519	3518	3516	3515	3520
7	3513	3512	3511	3511	3509	3506	3505	3503	3501	3499
8	3497	3494	3492	3490	3488	3486	3485	3483	3482	3481
9	3470	3476	3474	3470	3468	3467	3465	3463	3460*50	3473
10	3493	3480	3480	3458	3454	3453	3452	3451	3449	3449
11	3449	3449	3449	3448	3447	3445	3444	3443	3442	3440
12	3438	3437	3436	3433	3432	3431	3430	3429	3428	3426
13	3425	3423	3421	3417	3415	3414	3413	3412	3410	3408
14	3407	3406	3404	3402	3401	3400	3399	3398	3388	3378
15	3376	3375	3374	3374	3375	3376	3383	3387	3388	3391
16	3394	3394	3395	3397	3399	3400	3396	3394	3394	3393
17	3391	3388	3386	3384	3384	3369	3362	3354	3339*50	3343
18	3349	3350	3350	3349	3348	3347	3345	3343	3343	3345
19	3347	3347	3345	3341	3341	3328	3322	3316	3312	3308
20	3305	3307	3306	3301	3301	3299	3297	3294	3288*50	3294
21	3303	3307	3310	3310	3309	3308	3307	3305	3302	3299
22	3295	3290	3284	3276	3266	3255	3254	3250	3240	3238
23	3241	3235	3231	3230	3228	3226	3225	3224	3223	3219*50

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 5-5-75
(DAYNO 125)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3219	3216	3214	3212	3210	3208	3206	3203	3201	3199
1	3197	3196	3194	3191	3185	3178	3174	3170	3167	3162
2	3157	3150	3142	3131	3118	3105	3099	3091	3080	3065
3	3049	3058*10	3056	3049	3041	3032	3027	3017	3025*50	3039
4	3061	3079	3091	3091	3092	3094	3092	3087	3076	3061
5	3043	3039	3036	3036	3043	3058	3050*40	3052	3056	3086
6	3127	3138	3142	3157	3163	3167	3171	3173	3174	3176
7	3177	3181	3186	3191	3192	3191	3208*40	3206	3197*50	3201
8	3206	3213	3217	3217	3215	3213	3214	3211	3197*50	3203
9	3211	3222	3230	3233	3236	3239	3242	3246	3250	3254
10	3257	3260	3263	3264	3265	3266	3271	3274	3276	3279
11	3281	3281	3280	3279	3278	3275	3273	3271	3270	3268
12	3266	3266	3267	3268	3269	3270	3270	3272	3279	3282
13	3283	3290	3295	3298	3299	3303	3303	3289	3280	3277
14	3277	3275	3274	3275*20	3277	3271	3263	3257	3250	3245
15	3241	3233*10	3234	3235	3234	3231	3230	3230	3230	3228
16	3226	3214	3206	3206	3198	3186	3180*40	3188	3210	3223
17	3231	3235	3238	3240	3241	3242	3244	3244	3244	3245
18	3246	3246	3246	3246	3245	3245	3243	3242	3242	3241
19	3230	3237	3233	3228	3229	3227	3200*40	3205	3218	3234
20	3252	3260	3267	3268	3269	3270	3271	3272	3272	3271
21	3270	3272*10	3271	3270	3268	3266	3264	3261	3257	3255
22	3253	3250	3247	3245	3243	3241	3241	3240	3238	3236
23	3235	3233	3233	3230	3229	3228	3227	3226	3226	3226

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 6-5-75
(DAYNO 126)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3226	3224	3222	3221	3220	3219	3219	3219	3219	3219
1	3219	3218	3216	3215	3214	3213	3212	3210	3207	3205
2	3204	3202	3200	3199	3196	3193	3191	3188	3184	3181
3	3178	3167	3159	3154	3150	3146	3141	3136	3131	3124
4	3116	3105	3098	3098	3083	3061	3018	2975	2936	2912
5	2897	2875	2857	2842*20	2851	2866	2823	2785	2756	2731
6	2707	2674	2641	2608	2572	2535	2501	2468	2439	2404
7	2366	2325	2286	2253	2222	2191	2147	2116	2109	2051
8	1968	1923	1879	1836	1785	1730	1681*40	1686	1703	1721
9	1741	1692	1642	1573*20	1583	1598	1500*40	1522	1613*50	1590
10	1554	1306*10	1309	1320	1333	1346	1224*40	1119	1024*50	1042
11	1068	1026	969	879	816	768	751	712	604*50	659
12	742									
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
UNCORRECTED METRES

DATE 7-5-75
(DAYNO 127)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										2902*58
1										2731
2										2404
3										2051
4										1721
5	2897	2875	2857	2842	2851	2866	2823	2785	2756	2731
6	2707	2674	2641	2608	2572	2535	2501	2468	2439	2404
7	2366	2325	2286	2253	2222	2191	2147	2116	2109	2051
8	1968	1923	1879	1836	1785	1730	1691*38	1686	1703	1721
9	1741	1692	1642	1573	1583	1598	1519*38	1522	1613	1590
10	1554	1356*8	1309	1320	1333	1346	1224	1119	1024	1042
11	1068	1026	969	879	816	768	751	712	604	659
12	742									
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 18- 4- 75
(DAYNO 108)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 19- 4- 75
(DAYNO 109)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4	45	47	32*14	30	30*26	31	32	35	39	42
5	33	44	51	34	56	54	60*38	65	72	78
6	15	6	37	38	79	72	61	50	38	26
7	-19	28	-37	-13	-21	-17	-33	-38	-38	-40
8	-94	-104	-121	-131	-140	-145	-148	-152	-152	-151
9	-148	-143	-135	-127	-117	-111	-112	-119	-132	-146
10	-157	-160	-156	-146	-134	-127	-123	-120	-114	-106
11	-94	-81	-62	-38	-10	24	57	86	109	127
12	141	156	166	180	192	200	205	211	214	213
13	211	204	198	189	176	164	154	141	128	116
14	104	91	75	60	44	27	8	-8	-20	-31
15	-38* 2	-36	-33	-27	-15	1	21	46	75	105
16	129	139	136	127	115	98	86*40	85	85*50	87*58
17	85	96*10	95	74	95	93	86	95	100	99
18	93	86	79*14	75*20	73	68	70*38	69	69	71
19	72	72	73	74	79	82	85	89	93	96
20	101* 2	100	105	109	110*26	109	106	104	101	98
21	93	91	88	84	80	78	75	74	67*52	68
22	64	59	60	60*20	58	56	56	54	52	52
23	50	48	45	43	40	36	35	33*44	32	29
24	26	25	21	16*22	17	17*32	14	12	10	6

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 20- 4- 75
(DAYNO 110)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1	5	4*10	2*16	1	-1	-4	-7	-11	-12	-16
2	-19	-21	-25	-28	-30	-31	-31	-32*44	-34	-34*56
3	-35	-35	-30*14	-29	-24	-21	-15	-11	-10	-9
4	-7	-8	-6	-3	0	3	6	10	14	15
5	17	20* 8	20	20	20	17*34	18	18*46	15*52	13*58
6	12	8*10	7	3	0	-2	-7	-8*46	-3*50	-5
7	25	3	1*14	1	5	8	11	16	19	23
8	23	27	31	35	37	41	42	41*46	42	43
9	44* 4	43	43	40	38	35	30	25	20	13
10	11	6	3	-2	-9	-13	-18	-23	-32	-41
11	-51	-62	-69	-78*22	-78*26	-76	-70	-62	-54	-49
12	-43	-40	-39	-37	-31	-25	-22	-19*46	-22*52	-16*56
13	-17	-11	0	9	20	28	40	52	70	92
14	113	142	162	174	171	160	144	126	106	87
15	72	58	45	33	22	13	1	-11	-22	-30
16	-36	-38	-38	-32	-28	-24	-18	-15	-10*52	-12*56
17	-19	-8	-6	-4	0	2	9	13	10	3
18	-24* 4	-21	-13*14	-11	-13	-14*32	-18	-22	-19*52	-15*56
19	-8* 2	-19	-50	-51	-56	-58	-58*40	-50*46	-58	-50
20	-79* 2	-64	-64	-61	-57	-53	-47	-40	-34	-28
21	-25	-24	-31	-23	-34*28	-32	-33	-40	-39	-30*56
22	-47	-51	-58	-79	-96	-113	-132	-147	-154	-162
23	-155	-153	-155	-152	-143	-138	-129	-123	-118	-116
24	-34* 2	-34	-75	-65	-65	-61	-57	-55	-55*50	-56*56

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 21-4-75
(DAYNO 111)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	-56*	-53	-53	-49*22	-49*26	-44*34	-45	-43	-40	-37
1	-37	-39	-41	-43*20	-43	-49*34	-48	-50	-51	-52*56
2	-53*	-58	-45	-36	-27	-15	-1	-10	-19	-20*56
3	35*	35	35	32	32	32	31	32	28	28*56
4	16	10	10	7*20	9	14	22	23	23	23*56
5	55	61	67	72	80	87	89	92	95	95*56
6	84	83*10	86	82	71*28	71*32	74	86	98	108
7	117	125*8	121	115	99	90	75	61	67	80
8	101	116	124*14	120	116*26	111	100	88	70	52
9	36	20	3	-8	-20	-27	-29	-25	-18	-10
10	0	11	10	36	46	51	55	59	57*50	-10
11	53	49	44	38	23	17*32	22*38	22	27	35
12	23	57*10	52	55*22	57	42	47	55	63	71
13	7*	60	52	29	5*28	6	13	26	35	44
14	0	-18	-30	-32	-29	-33*34	-32	-26	-25	-24
15	-16	-2	10	34*20	29	10	-10	-18	-20	-15
16	-5	3	5	20*22	19*28	17	16	17	21*50	21
17	31	34	41	43*22	44	42*32	47*40	43*46	44	47
18	48	39	29	19	13	9	5	3*44	1	*56
19	0	3	3	5	4	10	17*40	16	14	13
20	11	4*10	5*16	5	7*28	6	14*40	13	17	13
21	21	5*10	20	33	35	36*34	34	31	25	20
22	11	1	-2	-8	-14	-20	-24	-27	-30	-32
23	-55	-55	-54	-29	-20	-9	3	19	30	51*58

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 22-4-75
(DAYNO 112)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	55	72	91	113	132	144	144	148	147	140
1	132	126	123	125	133	142	154	167	176	178
2	171	161	148	135	124	116	113*40	111	114	118
3	122	126	130	131	128	123	117	108	95	84
4	75	64	56	46	42*28	39*34	37	29*46	30	27
5	19	18	14	6	-6	-8	-11	-18	-25	-30*58
6	-31	-35	-38	-41	-44	-50	-55*40	-58	-59*50	-55*56
7	-54*	-62	-69	-61*20	-65	-69	-63*40	-62*44	-64	-62
8	-56*	-44	-38*16	-39	-34	-32	-34	-36	-39	-38
9	-39	-38	-37*14	-32	-24	-18	-1	-22	39	53
10	65	74	79	81*20	84	91	103	113	118	118
11	114	113	111	109	106*28	105	109*38	109	114*50	114
12	112	105	97	88	82	78*34	80	79	75	68
13	54	38	24	14	7	3	4	8	15*50	17*58
14	16	15	17	22	32	43	54	60	66	68
15	71*	70	67	65	62	55	49	41	37	34
16	33	31	33	34	33	31	30	26*46	27	25
17	22	18	11*16	12	0	9	4	4*44	1	-1
18	-1*	-2	-2	5	13	22	31*40	30	32	36*56
19	34	29	24	20	18	16	13	12	9	9
20	3	3*8	0	12	22	38	58	78	97*52	92
21	84	67	53	39	23	5	-15	-28	-32	-25
22	-6	10	26	39	55	76	101	127	151	169
23	185	195	197	196	189	185	172	160	153	144

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 23-4-75
(DAYNO 113)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	136	129	121	113	105	99	92	88	85	83
1	83	84	93	101	106	111	106	97	84	68
2	51	27	5	-15	-26	-32	-30	-26	-22	-19
3	-15*	-16	-14	-19*20	-13*26	-9	-6*38	-4*46	-5*52	-7
4	-5	-7	-3	4	10	11	13	15	20*52	21*56
5	18	20*8	18	17	17	17	20*40	18	22*50	21
6	26	17	14	8	-2	-7	-11	-13	-17	-21
7	-29	-32	-30	-27	-22	-17	-11	-6	1	11
8	22	33*10	32	27	21	15	10	13	19	27
9	38	46	49	50	47	48*32	54*40	53	58	59*56
10	57*	56	54	54	49	41	34*40	34	39	31*58
11	23	29*8	33	42	43*26	48	50*38	51	54*56	55
12	53	53	52	49*20	45	37	33	29*46	28	27*56
13	39	33	37	43	47	51	54	64	77	92
14	117	121*10	120	123*21	120	114	107*40	112	118	120*56
15	114	121	122	122	121	114*34	118*40	115*46	112	105
16	100	96*10	95	96	92	103	106	101	92	82
17	76	72*8	74*14	66	61	56	49	44	30	34
18	32	25*10	21	16	11*26	41	34	36*46	37*50	34
19	3	5*10	30	31	28	27	30*30	31	37	45
20	50	5*	51	62	65	65	61	58	56	53
21	43*	57	62	69*22	68	65	63	63	57*52	52
22	-2	-3	-3	21	12	5	-5	-10	-15	-21
23	-2	-31	-35*14	-37	-14	-17	-50	-50	-51	-40

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 24-4-75
(DAYNO 114)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	-44	-39	-31	-23	-13	-4	2	8*44	12	15
1	13	10	7	4	2*28	-1*34	1	0	2	5
2	9	16	-2*14	29	36	46*34	4A*40	49*44	48*52	46
3	49*4	37	36	35	38	40	40	42*46	40	37
4	30	20	9	-5	-16	-31	-40	-4A	-53	1
5	-54	-49	-39	-27	-15	-4	9	22	37	55
6	71	84	98	103	105*28	102	94	85	77	53
7	63	60*8	58	63	70	78	85	96*46	95	66
8	100	104*8	103*14	105*22	104	103	105	105	101	99
9	93	87	81	75	69	65	59	5	53	95
10	45	42*10	42*14	43	45	49	56	63	71*52	49
11	67	63	57	53	43	38*32	35	32	29*52	69
12	29*4	21	24	28	32	39	49	60	76*52	58
13	76	67	45	18	-7	-15	-9	4	22	40
14	53	66	77	84	88	93	99	108	117	121*56
15	125	120	111*14	116	123	133	160	154	143	127
16	111	92	74	51	38	35	36	16	-10	11
17	51	66	89*16	85	64	48	32	34	65*50	62
18	63	71	74*16	75	84	96	102	107	108	110
19	109	105	103	96	84	69	57	50	41	36
20	34	32*10	31	29	27	23	18	16	11	5
21	0	1	7*14	9	12	20	30	43	55	58
22	47	24	-1	-13*20	-7	16	45	49	30	15
23	9*2	10*10	9	13	17	22	27	38	51	71*58

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 25-4-75
(DAYNO 115)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	76	86*10	85	81	72	62	49	40	35	36
1	40	47	52	57	58	60	62	66	72	79
2	90	99	105	111	109	104	91	79	67	60*56
3	63	67	68	58	45	32	16	4	-4	-12
4	-18	-22	-25*16	-22*20	-19	-17	-11	-4	3	9
5	15	21	28	36	42	46	44	44	47	49
6	52	53	53	53	54	54	51	49	47	46
7	44	45	46*16	45	47*26	47	46*38	46*44	49	47
8	45*4	44	39*16	38	35	30	24	15*44	14	6
9	0	-4	-9	-11	-10	-10*32	-8	-7	-2*52	-3
10	-2	-3	0	-1	1	6	14	25	32	37
11	40*2	39	41	41	45	45	48	51*44	51*50	50
12	48*4	43	42	43	44	44	53	61	65	74
13	82*4	82*10	80	78	73	65	58	54	46	38
14	33	30*10	29*14	27	25	20	16	9	7	9
15	11	17	25	30	33	36	39	41	45*52	43
16	47	49*8	46	46*20	44	43	45*40	44	45	46
17	49	50	47	39	32	21	13	3	-8	-15
18	-16	-15*10	-16	-12	-11	-10*32	-11	-9	-8*50	-4
19	2	9	18	30	41	53	61	68	74	75
20	71	59	41	19	-1	-18	-36	-52	-65	-74
21	-83	-82	-78*16	-77	-76	-76	-77	-77	-81	-82
22	-84	-81	-77	-69	-59	-45	-32	-21	-10	0
23	7	12	10	7*20	5	3*34	5*40	4	7	16*58

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 26-4-75
(DAYNO 116)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	18	34	50	61	68	74	80	86*46	85	86
1	86*2	88	89	91	89	86	80	75	75*50	71
2	68	64	57	50	40	28	17	11	12	17
3	27	38	38	34	22	15	10	4	-7	-17
4	-23	-19	-6	7	21*28					
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 27-4-75
(DAYNO 117)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	105	105	104	103	101	103	100	109	103*50	105
21	68	60	55	51	49	44	35	95	88	80
22	22*2	6	-4	-9	-5	3	11	24	17	15
23	35	42	52	60	63	40*34	48	17	22	29
								62*44	59	50

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 28-4-75
(DAYNO 118)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	45	34	27	26	30	34	39	45	51	57
1	59	59	64*16	63	67	77	84	88	91	95
2	100	106*10	104	95	78	66	63	67	76	79
3	83*2	86	91	96	100	103	107	117	118*50	115
4	110	108	108	108*20	108*28	107	108	109	111	115
5	118	121	124	124*22	123	122	119	119	119	123
6	124	125	128	130	129	124	118	107	93	80
7	68	62	59	64	73	85*34	82	60	32	9*58
8	11	18	24*14	21	19	27	45	76	105	112
9	103	93*10	93*14	100	117	139	171	202	228	248
10	248	230	197	153	98	48	17*38	22	43	67
11	89	114	138*16	137	116	84	52	32	20	16
12	18	24	34	45	57	67	76	88	97	102
13	99	96	102	117	134	149	153	145	129	108
14	95	93	101	112	124	134	136	129	128	125
15	116	103	86	68	53	41	32	33	54*50	51*56
16	56	74	108	142	165	170	162	146	128	114
17	103	100*8	103	108	112	116	117*40	116	112	107
18	105	105	107*16	106	103	99	96	94	92*50	88
19	82	77	72	68	67*26	66*34	63	69	71	76*56
20	75	76	74	68	60	56	53	46*46	47	46*56
21	46	48*10	47	46	46	49	56	64	71	78
22	80	81	80	79	81	88	94	97	90*50	95
23	101	100	87	72	59	53	54	65	84	125*58

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 29-4-75
(DAYNO 119)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	142*4	139	125	110	100	90	73	54	37	29
1	39	57	74	84	88	85	73	54	29	55
2	6	-19	-25	-20	-9	8	24	37	47	53
3	59	61	63	57	50	40	33	27	25	30
4	40	58	84	115	143	164*34	156*40	157	137	110
5	80									
6										
7										
8	72	67	67	64	63*28	62	63	83	77	74
9	62*2	61	62*16	63*20	62	51	61	62	61	62
10	56	54	54*16	52	50*28	49	50	60*46	59	59
11	47	47	48	47	45	46	44	50	49	49
12	41	45	50	47	45	46	44	40*46	41	39*56
13	29*4	30	40	57	52	65*34	63	61	54	45
14	138	155	171	179*22	178	198	180	185	187	110
15	160	148	135	125	117	111	104	97*44	87	171
16	42	67	54	44	37	33	26	19	10	94
17	7	12	18	22	18	13	9	9	11	15
18	21	29	37	50	67	84	101	116	129	139
19	14	14	133	113	105	101	101*40	99*46	98	90
20	31	55	55	41	32	27	27	29	31	34
21	30*2	36*10	36	34	32	33*34	32*40	31*44	30*52	29*58
22	30	32	30	31	40	51*34	52	50*46	48	43
23	37	29	21	1	-2	-11	-21	-18	-4	16

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 30-4-75
(DAYNO 120)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	38	56	71	80	108	128	147	162	173	181
1	180	179	169	162	154	139	116	95	77	64
2	59	34	14	-4	-4	6	25	46	63	79
3	89	101	113	119	113	99	86	75	68	62
4	56	51	46	41	37	35	30	24	20	18
5	26	40	58	76	90	102	112	121	129*50	128
6	128	126	126	127	130	130	128	128*46	127	128
7	132	138	144	149*20	148	144	138	119	100	83
8	72	60	51	40	30	16	5	-3	5	12
9	17	20*10	19	19	25	28*32	28	37	35	30*56
10	33	42	70	102	129	156	177	189*46	188	180
11	165	150	138	129	125	122	122	120	117	115
12	110	108	104	103	103	103	101	100	97	95
13	91	85	78	75	70	71	76	83	96	123*56
14	113	92	73	61	53	47*34	48	51	53	
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 1-5-75
(DAYNO 121)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15					54	53*34	52*40	52*44	51	52
16	53	56	61	65	69	72	75*38	75	79	86
17	93	101	109	118	127	134	140	144	142	137
18	127	114	105	96	91	88	88*38	88	93	89
19	85	74	63	52	38	27	20	22	28	36
20	47	58	66	67	64	59	55	48	32	24
21	18	16	18	23	31	39	45	48*44	46	43
22	41	42	44	50	58	63	68	67	62	56
23	50	45	38	30	21	15	13	12	13	15

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 2-5-75
(DAYNO 122)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	14	18	24	29	32	37	42	44*46	43	41
1	39	32	20	12	2	-9	-19	-31	-40	-45
2	-48	-48*10	-45	-41	-35	-27	-19	-10	-8	-3
3	6*4	0	26	43	59	75	88	94	94	94
4	97	97	102	109	121	132*32	135*40	132	130*50	126
5	124	127*10	126	130	140	149	154	158	158	159
6	155	153	151	148	146	146*32	149*38	150	151	148
7	156*2	156	147	133	122	116	121	127	132*50	124
8	113	106	97	96	85	80*32	77	77	74	73
9	75*2	76	65*14	70*20	69*28	66	62	60	60	55
10	44	32	27	39	51	62	67	71	75*50	0
11	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	17*34	16	6	2	-5*58
13	-5*2	-3	4*14	3	-8	-29	-50	-63	-67	0
14	6	6	-29	-24	-23	-38	-58	-79	-95	-106*56
15	-104	-93	-94	-85	-80	-71	-70	-63	-55	-43
16	-31	-17	-6	3	13	21	26	30	29	27*56
17	24	21	26*14	18	16	13	10	7	9*50	9
18	9	13*8	0	0	0	24	28	32	37	44
19	50	56	56	51	42	33	19*40	21	20	23
20	25	23	18	15	15	13	14*38	14	16	12*56
21	13*2	10	11*14	11*22	10*28	9	10*38	10*44	11	14*56
22	15	15*10	15*14	15*20	15*28	12	11	13	14	15
23	1*4	13	17	21	22	31*31	30	35	36*52	35

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 3-5-75
(DAYNO 123)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	38	39* 8	39	36	37	36*34	35	36	35*50	39*56
1	39	44	44	47	48*26	51*32	51	53*44	53*52	52
2	54	54	54	54	56*28	55	55	55*44	55	56
3	56	56* 8	55	59*22	58	57	57*40	56	54	53
4	52* 2	51	50*16	48	48	48	51*40	52*44	49	49
5	48* 4	49* 8	48	48	47*28	47*32	49*38	48	48	52*56
6	53* 2	54* 8	55*14	56*20	57*26	56	57	57	57*50	55
7	51	48	43*16	44	43	42	41	40	41*50	40*56
8	41	44* 8	45	49	53	59	63	69	75	79
9	83	87* 8	90	90	92*26	95	100	107	116	124
10	132	141	145	149	150					
11										
12										
13										
14										
15										
16										
17										
18										
19	128* 2	126	127*16	126	129	126	123	119	125	129*56
20	95	86	77	66	58	50	47	41*46	113	104
21	38	36	36	39	40	47*32	47	52*44	42	39*58
22	56* 2	59	61	66	72	73	69	71	73*52	54
23	69	67	63	58	51	47	42*40	43	38	71*56
24										32
25										

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 4-5-75
(DAYNO 124)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	27	26* 8	23*16	23*20	24	19	21	19*44	18	16*58
1	14	12	6	3	-2	-9	-16	-22	-32	-44
2	-55	-68	-78	-88	-101	-111	-119	-125	-130	-135
3	-136	-136	-133	-128	-119	-106	-91	-74	-50	-24
4	0	27	50	73	91	105	115	123	128	133*56
5	132* 2	130	130	130*22	129	131	134	137	140	146
6	148	153	157	159	161*28	160	158	160	159*50	158
7	159* 4	160* 8	161*16	160	162	159	155	148	141	138
8	136	132*10	131	132	130	131	132	133*44	139*50	139
9	142	146	155	156	159	165*34	164	165	164*50	165*58
10	165* 4	164	164	164	163	164	162	159	158	157
11	157	158	161	163	164	167	172*40	171	172	176
12	178	179	180	181	182	183*32	186*40	185	187	189*56
13	188	182	179	175*20	172	169	167*38	166*44	165	164
14	164	164	163*16	162*22	162*28	162*34	161	164*46	162	164*58
15	163	167	165	165	163	160	154	148	143	139
16	135	130	125	120	116	111	105	99	94	85
17	76	67	56	44	28	10	-7	-25	-44	-64
18	-82	-98	-110	-121	-129	-136	-142	-144	-146	-155
19	-163	-175	-183	-194	-201	-206	-209	-214	-218	-223
20	-228	-231	-236	-240	-241	-244	-246	-246	-245	-244
21	-242	-237	-232	-226	-218	-207	-196	-186	-174	-161
22	-148	-134	-121	-109	-98	-90	-83	-77	-69	-61
23	-56	-53	-53	-59	-61	-56	-60	-70*46	-69	-76*56

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 5-5-75
(DAYNO 125)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	-82	-83	-77	-63	-36	-1	30	62	92	112
1	127	136	149	169	192	217	238	256	277	288
2	298	306	316	326	335	340*34	339	329	315	303
3	296	298	309	320	326	334	339*38	341	340*52	338
4	327	314	295	277	257	244	236	235	242	256
5	271	288	304	319	321*28	317	312*38	308	297	287
6	276* 4	270*10	271	278	290	310	336	349	367	378
7	385	391	395	396	387	383	379	373	359	342
8	323	307	292	275	254	223	199	172	155	141
9	127	115	105	94	84	113	130	145	156	152
10	140	124	106	93	82	73	65	60	58	59
11	56	44	35	14	-5	-29	-54	-78	-101	-114
12	-115	-121* 8	-114	-102	-91	-82	-80	-77	-75	-73
13	-70	-60	-50	-42*22	-43	-44*32	-48	-56	-54	-63
14	-72* 4	-67*10	-69	-73	-74	-81	-84	-81	-77	-78*58
15	-74* 4	-76	-76*16	-78	-84	-92	-101*40	-100	-104	-116
16	-130	-135	-131	-116	-99	-84	-66	-47	-22	-2
17	27	63	106	148	184	201	207	200	194	186
18	179	169	153	126	104	86	74	64	58*50	68*58
19	67	74	82	92	101	114	125*40	123	125	124*56
20	131	128	131	136	145	147	145	134	119	110
21	92	70	51	35	24	16*32	15	17	21	25
22	27* 2	27	24	29	34*26	44	45*38	44	36	27
23	4* 4	7	2*16	:	-5	-11*32	-14	-17	-16	5*58

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 6-5-75
(DAYNO 126)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	11	30	40	39	28	29	43	62	84	104
1	119	131*10	130	126	109	91	77	69*44	70	84
2	105	129	130	123	112	100	90	86*44	86	89
3	87	91	89	77	69	49	38	20*46	23*50	25
4	25	21	21*14	19	18	13*34	82	16	18	18
5	23	25	36	49	66	82	94	101*44	97	92
6	76	55	35	15	-4	-20	-30	-37	-40*52	-41
7	-37	-30	-34	-18	-10	-3	3	11	18	25
8	34	44	22	59*20	59	55	49	44	30	11
9	-10	-31	-30	-70	-81	-87	-89	-88	-86	-79
10	-70	-56	-42	-29	-13*26	-16	-30	-35	-35*52	-35*58
11	-36									
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
MAGNETIC ANOMALY

DATE 7-5-75
(DAYNO 127)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	23	25	36	49	66	82	94	101	97	92
6	76	55	35	15	-4	-20	-30	-37	-40*52	-41
7	-37	-30	-34	-18	-10	-3	3	11	18	25
8	34	44	22	59	59	55	49	44	30	11
9	-10	-31	-30	-70	-81	-87	-89	-88	-86	-79
10	-70	-56	-42	-29	-13	-16	-30	-35	-34*50	-35*58
11	-36									
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RPS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 18- 4- 75
(DAYNO 108)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RPS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 19- 4- 75
(DAYNO 109)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1										
2										
3										
4	500	474*10	458	411	395	395	418	439	457	478
5	891	536	578	630	651	658	658	697	814	868
6	1075	916	931	954	979	1003	1018	1033	1047	1061
7	1251	1041*10	1054	1092	1144	1204	1183*40	1189	1204	1226
8	1277	1473	1604	1609	1584	1547	1655*40	1637	1562*50	1587
9	1625	1607	1586	1560	1561	1427	1543*40	1515	1435	1394
10	1373	1371	1418	1560	1680	1809	1855	1898	1935	2005
11	2090	2177	2274	2394	2572	2741	2855	2857	2622	2596
12	2565	2819*10	2803	2746*21	2771	2819	2781*40	2782	2784	2836
13	2913	3060	3174	3221	3246	3245	3245	3245	3245	3245
14	3245	3243	3244	3247	3248	3248	3257	3266	3274	3280
15	3284	3289	3293	3296	3300	3303	3307	3310	3313	3315
16	3316	3319	3321	3322	3323	3324	3325	3326	3326	3327
17	3328	3326	3327	3325	3325	3328	3329	3326	3326	3327
18	3330	3331	3331	3328	3328	3328	3328	3328	3328	3328
19	3331	3330	3330	3331	3331	3331	3331	3331	3331	3331
20	3331	3331	3331	3331	3332	3333	3333	3332	3333	3333
21	3333	3333	3333	3332	3332	3333	3333	3333	3333	3333
22	3330	3330	3329	3332	3331	3331	3331	3331	3331	3331
23	3331	3313	3314	3320	3322	3323	3323	3323	3323	3325
24	3326	3322	3318	3313	3310	3309	3309	3308	3306	3308

RPS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 20- 4- 75
(DAYNO 110)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										
1	3263	3256	3249	3244	3243	3245	3254*40	3250	3239	3236
2	3237	3237	3237	3237	3239	3241	3241	3245	3245	3244
3	3243	3237	3232	3227	3226	3228	3228	3222	3222	3225
4	3229	3224*10	3226	3227	3226	3226	3226	3222	3216	3206
5	3194	3186	3184	3180	3182	3182	3184	3195	3201	3205
6	3209	3209	3211	3218	3219	3218	3219	3224	3222	3221
7	3229	3217	3215	3217	3217	3218	3218	3219	3221	3223
8	3220	3223	3226	3226	3226	3228	3225	3224	3224	3224
9	3224	3223	3222	3224	3223	3223	3223	3221	3226*50	3209
10	3184	3184	3184	3183	3182	3182	3181	3180	3179	3178
11	3177	3173	3174	3168	3165	3165	3167	3161	3161	3161
12	3169	3166	3158	3155	3152	3150	3150	3150	3150	3150
13	3159	3152	3154	3154	3154	3156	3158	3160	3161	3162
14	3163	3165	3165	3165	3165	3165	3165	3166	3167	3167
15	3167	3167	3167	3167	3167	3167	3165	3169	3171	3171
16	3171	3171	3171	3171	3172	3173	3172	3171	3172	3173
17	3173	3173	3173	3174	3175	3177	3177	3177	3177	3176
18	3175	3176	3177	3177	3177	3177	3177	3177	3177	3177
19	3177	3177	3177	3177	3177	3177	3177	3177	3177	3177
20	3194	3174	3195	3194	3202	3207	3210	3215	3218	3220
21	3229	3223	3225	3224	3224	3225	3225	3229	3243	3245
22	3246	3251	3252	3253	3254	3254	3254	3254	3264	3271
23	3275	3274	3283	3285	3285	3284	3284	3288	3300	3304
24	3307	3311	3313	3311	3310	3311	3316	3316	3316	3316

RRS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 27- 4- 75
(DAYNO 117)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	3066	3069	3090	3135	3158	3169	3171	3174	3176	3180
1	3184	185	3186	3188	3185	3180	3174	3165	3154	3146
2	3139	132	3123	3109	3097	3086	3079	3072	3063	3054
3	3045	022*10	3023	3026*20	3012	2992	2989	2992	3003	3037
4	3082	082	3086	3101*20	3089	3071	3053	3015	2913*50	2916
5	3020	259	3096	3032	3070	3109	3104	3097	3086	3060
6	3026	008	3096	3096	3005	3018	3034	3050	3066	3078
7	3090	112	3132	3144	3158	3173	3188*40	3186	3182	3177
8	3073	166	3161	3160	3159	3158	3135	3111	3084	3061
9	3041	096	3133	3131*20	3133	3135	3131	3125	3118	3116
10	3116	094*10	3097	3106	3112	3116	3134	3152	3173*50	3168
11	3161	171	3177	3177	3180	3184	3188*40	3186	3182	3177
12	3173	175	3177	3178	3179	3180	3179	3180	3183	3190
13	3199	195*10	3197	2203*20	3201	3199	3199	3199	3199	3192
14	3180	3180	3180	3177	3181	3188				
15										
16										
17										
18										
19								3150	3156	3165
20	3177	3181	3184	3184	3180	3175	3177	3178	3178	3184
21	3192	203*10	201	3195*20	3198	3203	3204	3206	3209*50	3208
22	3207	218	231	247	259	269	278	286	292	298
23	3305	3307	3309	3309	3310	3311	3310	3308	3306	3304

RRS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 28- 4- 75
(DAYNO 118)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	3301	3297	3291	3285	3282	3280	3279	3282	3294*50	3291
1	3286	3276	3266	3259	3242	3220	3208	3196	3187	3184
2	3184	171	154	3124*20	3131	3143	3158*40	3139	3063*50	3049
3	3128	146	158	3160*20	3159	3158	3155	3156	3163	3168
4	3173	177*10	171	155	3133	3107	3158	3197	3218*50	3217
5	3144	195*10	203	206	238	245	251	259	266	274
6	3080	288	297	306	315	324	330	339	346	338
7	3055	331	328	331	332	331	331	333	331*50	3308
8	3297	282	271	273	272	271	274	277	283	3410
9	3422	425	428	432	440	449	451	453	456	458
10	3460	459	457	452	452	454	441*40	421	435	442
11	3445	438	432	429	424	418	416	414	410	402
12	3392	390	387	382	376	369	365	360	356	350
13	3343	327	314	307	300	294	290	284	282	271
14	3266	249	238	233	220	217	213	207	209*50	2106
15	3210	207	200	207	200	193	194	191	195	2013
16	3209	209	210	215	218	222	229	234	236	243
17	3222	261	271	284	292	297	305	313	318	326
18	3335	342	348	354	361	367	373	379	386	391
19	3396	400	406	412	419	426	431	435	438	443
20	3449	453	459	465	473	477	479	484	486	487
21	3487	487	487	490	493	496	497	500	506	510
22	3503	509	504	501	501	502	509	519	524	524
23	3528	531	533	537	542	547	551	554	557	565*58

RRS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 29- 4- 75
(DAYNO 119)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	3356	3564	3561	3556	3552	3547	3540	3536	3534	3534
1	3534	3545*10	3544	3541	3540	3540	3540	3539	3537	3536
2	3536	3534	3531	3526	3521	3517	3515	3512	3507	3498
3	3487	3480	3474	3469	3463	3456	3454	3451	3448	3444
4	3439	3435	3430	3424	3419	3415	3409	3403	3398	3391
5	3384	3384								
6										
7										
8										
9										
10										
11										
12	3373	3369	3366	3366	3353	3375	3375	3375	3375	3374
13	3376	3377*10	3375	3375	3376	3379	3370	3370	3370	3366
14	3379	3372	3364	3355	3344	3331	3316	3303	3291	3280
15	3329	3324	3326	3326	3326	3326	3326	3326	3326	3326
16	3329	3326	3326	3326	3326	3326	3326	3326	3326	3326
17	3343	3349	3354	3360	3367	3381	3411	3449	3484	3499
18	3419	3419	3423	3424	3426	3430	3434	3434	3434	3444
19	3455	3455	3458	3464	3468	3471	3476	3480	3484	3487
20	3491	3493	3496	3503	3506	3507	3504	3509	3509	3510
21	3511	3510	3511	3514	3516	3517	3520	3523	3524	3526
22	3526	3524	3529	3531	3533	3534	3540	3540	3543	3547
23	3551	3562	3570	3572	3573	3574	3575	3576	3577	3579

RRS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 6-5-75
(DAYNO 126)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0	3316	3314	3312	3311	3310	3309	3309	3309	3309	3309
1	3309	3308	3307	3305	3304	3303	3302	3300	3297	3295
2	3294	3291	3290	3288	3286	3283	3282	3277	3273	3269
3	3267	3256	3247	3242	3238	3235	3229	3224	3218	3211
4	3203	3192	3184	3180	3169	3146	3101	3057	3017	2993
5	2977	2954	2935	2920*20	2930	2945	2901	2861	2832	2806
6	2781	2747	2713	2679	2643	2604	2569	2536	2505	2470
7	2431	2389	2349	2315	2283	2251	2206	2174	2167	2108
8	2023	1976	1931	1887	1835	1779	1728*40	1734	1751	1770
9	1790	1740	1688	1618*20	1628	1644	1543*40	1566	1659*50	1635
10	1599	1348*10	1348	1359	1372	1386	1261	1153	1056*50	1074
11	1101	1058	999	907	843	793	775	736	624*50	681
12	767									
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

RRS SHACKLETON CRUISE 4/75
CORRECTED METRES

DATE 7-5-75
(DAYNO 127)

HOURS	MINUTES									
	00	06	12	18	24	30	36	42	48	54
0										
1										
2										
3										
4										2982*58
5	2977	2954	2935	2920	2930	2945	2901	2861	2832	2806
6	2781	2747	2713	2679	2643	2604	2569	2536	2505	2470
7	2431	2389	2349	2315	2283	2251	2206	2174	2167	2108
8	2023	1976	1931	1887	1835	1779	1739*38	1734	1751	1770
9	1790	1740	1688	1618	1628	1644	1563*38	1566	1659	1635
10	1599	1395* 8	1348	1359	1372	1386	1261	1153	1056	1074
11	1101	1058	999	907	843	793	775	736	624	681
12	767									
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

GRUBB = Iw705, ACTIVITY E = 02, REPORT CODE = 03, RECORD COUNT = 000738

RRS SHACKLETON CRUISE 4/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 18-4-75
(DAYNO 108)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0										0
1										0
2										0
3										0
4										0
5										0
6										0
7										0
8										0
9										0
10	-892*4	-840*10	-875*14	-879	-872	-875*32	-882*40	-875*46	-873*52	-882*56
11	-873	-890	-875*14	-872*20	-856*26	-850*34	-854	-880	-866	-917
12	-850*4	-846*8	-843	-829	-819*28	-811*32	-796*40	-784*46	-791*50	-781*56
13	-748*4	-753*8	-733	-689	-608*28	-616*34	-626	-602	-636*52	-616*58
14	-621	-600	-533	-521	-507	-499*32	-477	-384*46	-388	-421
15	-448	-481*8	-467	-512	-420*28	-430	-428*38	-440	-354	-232*58
16	-233*4	-251*8	-99	-312	-284	-276	-236	-226	-218	-231
17	-221	-154*8	-145	-237	-427*28	-330	-235	-531*46	-182*50	-180
18	-212	-168	-134	-228	-233	-116*34	-127*38	-115	-92	-75*56
19	-60	-19	-36	-45*22	-56*26	-51*32	-43	-48*46	-65*50	-26*56
20	-21*2	-16*8	-21	-9	15	24*32	17	34	88	118
21		139	179	197	204	233	266	315*46	304	348*56
22	338	352*10	347	342	323*28	316	294	253*46	257	244
23	223	215*8	203	167*22	184*28	164*34	160*40	165*44	151	130*58

RRS SHACKLETON CRUISE 4/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 19-4-75
(DAYNO 109)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	136	149*8	142*16	141	135*28	114*34	116	105*46	108	133
1	108	81	84	71	97	43	-127*38	-89	12	132
2	238	82	-52	13	60*26	12*32	31*38	35*44	54*52	43
3	68*4	29	12	12*22	16*28	7*34	4	-8*46	-27*50	-28*56
4	-22	0*8	1	16	11	9	10*38	7	10*52	16*58
5	10	1	12	15*20	10*28	18*34	17	37*44	30*50	19
6	26	16	0	-15	-29	-39	-57	-66	-128	-155
7	-173*4	-175	-182*16	-197	-221*28	-226	-196*40	-194*44	-199	-181
8	-179*4	-175	-175*16	-165	-135	-123	-115*40	-107	-96	-88*56
9	-52*2	-81*8	-103	-155	-214	-268	-310	-339	-362	-405
10	-454	-495	-532	-609	-657	-711	-748	-785	-805	-823
11	-853	-874	-891	-913	-932	-957*34	-965	-986	-1016	-1034
12	-1052	-1075	-1107	-1127	-1129*28	-1130	-1121	-1101	-1087	-1067
13	-1036*4	-1027*8	-1056	-995	-985*26	-972	-937*40	-938	-921	-900
14	-878	-857*10	-858	-837	-821	-764*32	-764*40	-766	-762	-756
15	-753*4	-758	-778	-786	-787*28	-801*32	-783*40	-796*44	-783*52	-793*56
16	-763*2	-777	-734*16	-733*20	-731	-762	-724	-733	-752*52	-743*56
17	-759	-730*8	-744*14	-716*20	-801	-773	-761	-747	-745	-758*56
18	-801*4	-774	-693	-729	-721*26	-707*32	-708	-699*46	-692*50	-698*56
19	-681*4	-690	-667	-663	-652	-641	-634*38	-627	-603*52	-613
20	-597	-590	-555*16	-554*20	-576	-521*34	-525	-504*46	-505	-460
21	-415	-486	-466	-459	-452	-446*34	-445*40	-439*46	-440	-429*56
22	-423	-410*10	-405*16	-406	-399*28	-414*34	-413	-405*44	-400*50	-402*56
23	-405	-417*8	-412	-410	-404	-391	-384	-376*46	-377	-385*56

RRS SHACKLETON CRUISE 4/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 20-4-75
(DAYNO 110)

HOURS	00	06	12	18	MINUTES 24	30	36	42	48	54
0	-377	-365	-365	-356*22	-359	-347	-350	-365	-357*50	-361*54
1	-359	-369	-378	-386	-393*26	-399	-407	-420	-430	-436*54
2	-450	-455	-463	-476*22	-475	-472	-479	-471	-467*52	-463*56
3	-421*4	-424	-434	-422*20	-431*28	-430	-423	-433	-433*50	-448*54
4	-427	-405*10	-417*16	-369*20	-374	-351	-335*38	-317*46	-312*50	-316
5	-315*4	-303*8	-299*16	-314*20	-304*26	-280*32	-297*38	-294*44	-285*50	-265
6	-245	-235*8	-228*14	-224*20	-205*26	-221	-202	-179*46	-173*50	-178
7	-162	-139*8	-141	-86*22	-95*26	-60	-76*40	-72	-57	-24*54
8	-11*4	6*10	-21*16	-18	77*28	78*34	77	88*46	97	115*54
9	103	115*10	118*14	136*22	120*28	128	132*40	152*46	131*52	122*56
10	105*2	62*8	83	64*22	52	48	96	7	-7*50	-4*54
11	-47*2	-19*10	-27	-39*20	-48	-59*34	-56*40	-55*44	-69*50	-127*54
12	-94*4	-116*8	-68	-134*22	-115*28	-91*34	-113*38	-97*46	-100	-47*58
13	-41*4	-67*8	-36	-12*20	-9	12	24	45*44	73*52	81
14	79	105*8	119*14	166*20	180*26	166	215*40	195*44	234*50	243*54
15	228*2	253*10	253*14	285*20	264*26	303*34	217*40	262*46	239*52	256
16	255	369*8	314	326*22	322*26	319*32	323*38	326*44	311*50	307*54
17	276	217	130	47*22	60	146	159*40	138*44	156	151*54
18	149	139	145*16	126*20	150*26	133*34	140	139*46	133	187*54
19	182	158	172*14	143*22	136	131*32	108	98*44	83*52	85*56
20	33*2	57	55*16	49	32	-2*34	11*38	-15*46	-20	-33
21	-31	-45*10	-39*16	-42	-48*28	-50	-52	-65	-55*52	-60*56
22	-20*2	-24	-24*16	-23	19	-15	0	18*46	10*52	11*56
23	7	11	-1*14	3	-12	-23*32	-14	-21*46	-23	-30*56

RRS SHACKLETON CRUISE 4/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 6-5-75
(DAYNO 126)

HOURS	00	06	12	18	24	30	36	42	48	54
0	0*	11* 8	6	-32*22	-12*26	-30*34	-36	-51*44	-60	-80*58
1	-88* 4	-90	-91*16	-122*22	-118	-134*34	-152*38	-137	-163	-188*58
2	-210* 4	-204* 8	-234	-257	-296*28	-294	-328	-366*46	-363*52	-373
3	-436* 4	-469*10	-465	-488	-497*26	-524	-525	-570*46	-558*52	-565*56
4	-571* 2	-572* 8	-564*16	-575*20	-548*26	-559*34	-552*40	-551*46	-566	-572*56
5	-555* 4	-578* 8	-566	-555*22	-558*26	-545*32	-571*40	-583*46	-578*52	-583*58
6	-584* 4	-590* 8	-576*16	-578	-574*28	-572*32	-573	-543*44	-536*52	-519*58
7	-533* 2	-498*10	-501	-490	-455	-438	-420	-403	-386	-355
8	-337	-312*10	-338*14	-319	-300*26	-278	-237*40	-254	-211*50	-196*56
9	-205	-159* 8	-158*16	-159	-125*26	-62*34	-60*38	-65	-25	-26*56
10	7	-11	35	68	136*26	131	211	259*44	263*50	258*58
11	173* 4	285* 8	364*14	321*20	331*26	515*32	265*38	330*46	318	296*56
12	358* 4	360*10	343*16	309*22	314*26	327*34	295*38	323*46	322	335*56
13	300	327*10	324*16	321	343*26	344*34	322*40	320*46	318	92*56
14	450* 4	386	211*14	247	291*28	292	312*40	306	324	336*56
15	340* 4	350* 8	361*14	356*20	356*28	353	267*40	290	268*50	294*56
16	280* 4	305*10	289*14	309*20	283*26	312*34	280*38	307	304	277*56
17	271	259*10	263*16	238*22	289	299	0	220*44	208	192
18	180* 2	211	179*14	204*20	176	169*32	146*38	149*46	175*52	164
19	158	142	141*16	144	138*28	158*34	124*38	118*44	96*52	113*58
20	75* 4	94*10	91	51*22	56	33*32	51*38	42*44	34*52	18
21	1*	20* 8	-3*14	10*20	-14*26	-5*32	-29*40	-61*46	-47*50	-49*56
22	-64	-83	-59	-92*20	-69*28	-83	-95	-60	-72	-43*56
23	-48	-61	-75*16	-74	-70	-71	-66*40	-55*44	-69	8*56

RRS SHACKLETON CRUISE 4/75
FREE AIR GRAVITY ANOMALY IN MGALS

DATE 7-5-75
(DAYNO 127)

HOURS	00	06	12	18	24	30	36	42	48	54
0	-8* 4	-16	-42*16	-52	-86*28	-149*34	-148	-183	-235*50	-264*58
1	-282* 4	-285	-310	-290*22	-487*26	-315*32	-215	12	-239	-147*56
2	-167	-148* 8	-114*14	-105*20	-102	-40	-5	58	107	167*56
3	199	265	345	397	434*28	347*32	549	319	-99	-70*56
4	-59	-39	-19*14	340*22	323*26	412*34	154*40	203	533*50	-579*58
5	-555* 4	-578	-575*16	-555*22	-558	-545	-567*38	-578*44	-574*50	-571*56
6	-583* 2	-590	-576*16	-567*22	-568*26	-572	-573	-543	-544*50	-519*58
7	-533	-498*10	-501	-490	-455	-438	-420	-403	-386	-355
8	-337	-312*10	-338	-295*22	-300	-278	-237*40	-254	-211	-196
9	-205	-159*16	-158*16	-159	-125	-68*32	-60	-65	-25	-26
10	7	-11	35	68	136	131	211	259	263	258*58
11	198* 2	285	364*16	321	331	515	265	330*46	318	296
12	321* 2	360*10	343*16	315*20	314	327*34	295	323*46	322	335
13	300	327*10	324*16	321	343	344*34	322*40	320*46	318	92
14	450* 4	386	211*14	247	299*26	292	312*40	306	324	341*58
15	342* 2	350	361*14	356	356*28	353	269*38	290	268	294
16	272* 2	305*10	289*14	309	283*26	312*34	280	307	304	277
17	271	256* 8	263*16	244*20	289	299	0	220	208	192
18	180	211	179*14	204	165*28	169	164*40	152*44	175*52	152*58
19	158	142	144*14	125*22	137*26	158*34	125*40	130*46	112*50	113*58
20	82* 2	94*10	91	57*20	56	33	51	42	34*52	18
21	1	20	-3	10	-14	-5	-29*40	-53*44	-47	-49
22	-64	-83	-59	-92	-69*28	-83	-95	-60	-72	-43
23	-48	-59*10	-63*14	-74	-70	-71	-62*38	-55	-69	8

SECTION D

Station Position Tables



STATION POSITION TABLES

3/75

Station No.	Type	Time(GMT)/day no.		Lat. N	Long. E	Depths		Comments
		Start	End			CM	CF	
1285	PUBS	0812/091	1125/092	14°58.8' 14°34.8'	55°45.6' 55°43.9'	2517- 3255	1376- 1780	3 PUBS used. Aquaflex, Geophex and 1000 ins ³ airgun. To 2400 metres wire out.
1286	V	1106/097	1231/097	23°18.4'	63°16.0'	3345	1829	3 buoys used. Aquaflex and 300 ins ³ airgun.
1287	DSB	1248/097	1213/098	23°41.5' 23°34.5'	61°01' 62°03'	3345	1829	3 buoys used. Aquaflex and 300 ins ³ airgun.
1288	DSB	1922/100	1705/101	24°20.0' 24°17.5'	61°00' 61°59'	1898- 2458	1038- 1344	3 buoys used. Aquaflex and 300 ins ³ airgun.

4/75

Station No.	Type	Time(GMT)/day no.		Lat. N	Long. E	Depths		Comments
		Start	End			CM	CF	
1289	C	0530/116	0615/116	19°17.6'	58°22.6'	823	450	Core obtained.
1290	C	0738/116	0905/116	19°13.8'	58°34.6'	2292	1253	Core obtained.
1291	C	0955/116	1144/116	19°10.3'	58°40.0'	3172	1735	Core obtained.
1292	V	1526/116	1647/116	19°11.4'	58°41.3'	3176	1737	To 2200 metres wire out.
1293	PUBS	2046/116	1925/117	19°06.1' 19°36.2'	58°33.4' 59°02.6'	2911- 3202	1592- 1751	2 PUBS used. Aquaflex, Geophex and 1000 ins ³ airgun.
1294	C	0507/119	0705/119	19°02.2'	59°12.4'	3383	1850	Core obtained.
1295	PUBS	1250/120	1421/121	18°51.5' 18°12.8'	59°42.2' 59°25.2'	3555- 3544	1944- 1938	2 PUBS used. Aquaflex, Geophex and 1000 ins ³ airgun.
1296	C	1120/123	1500/123	18°16.8'	61°56.7'	3699	2023	Core obtained at second attempt.
1297	C	1640/123	1750/123	18°17'	61°54.7'	3703	2025	Core lost.

PUBS = Seismic refraction with pop-up buoys
 DSB = Seismic refraction with sonobuoys

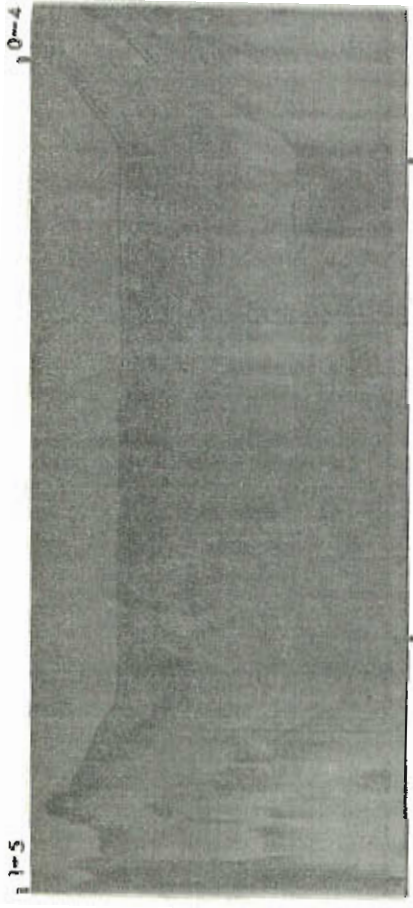
V = Velocimeter
 C = Coring

SECTION E

Seismic Reflection Records

(A)

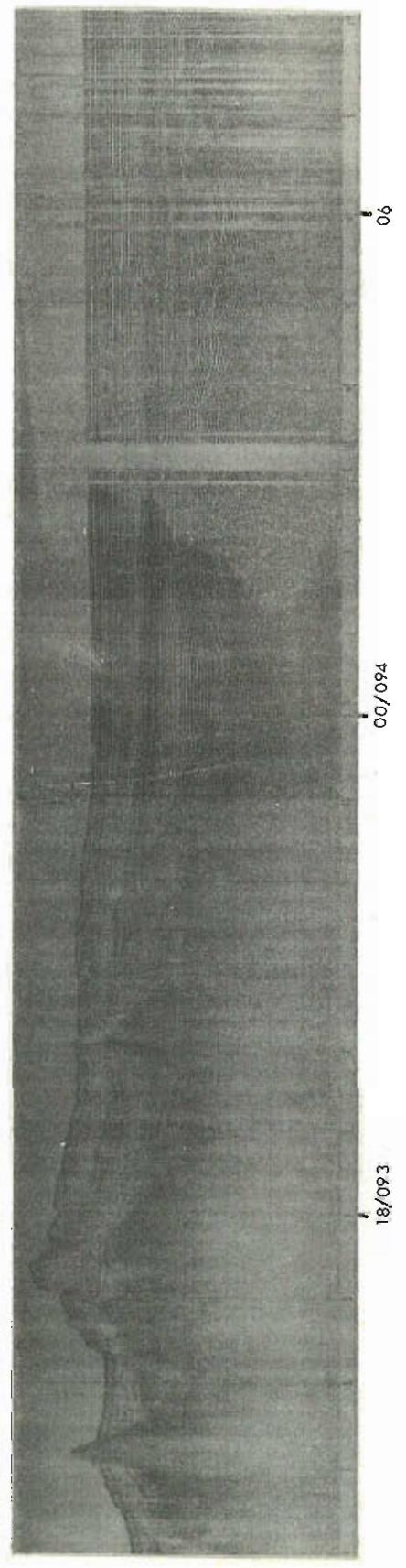
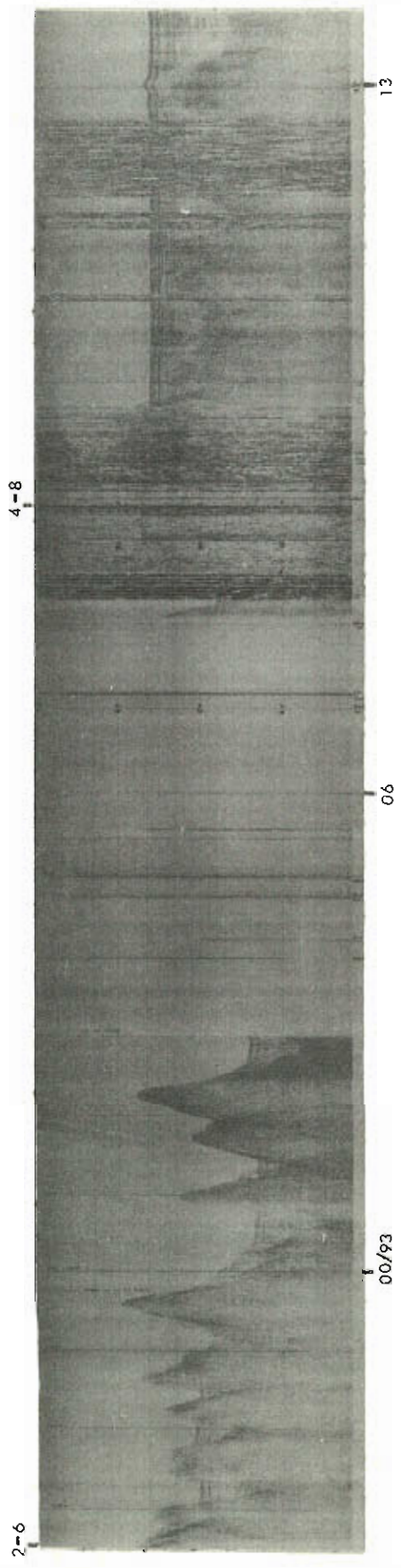
11-5



06

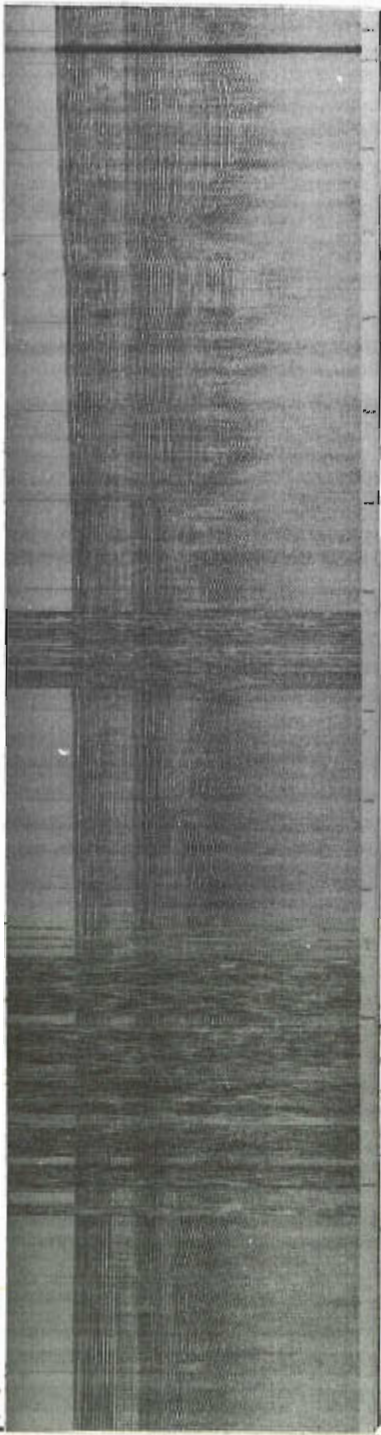
12/088

(B)



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14-8

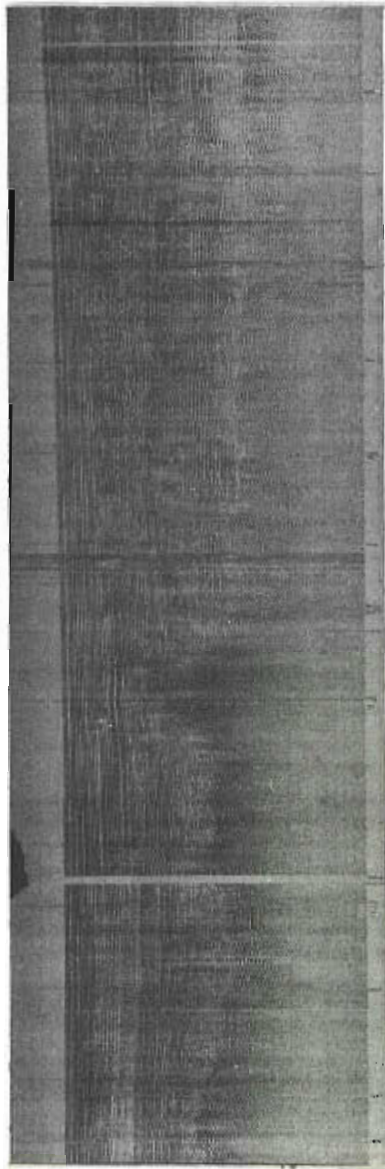


12/094

18

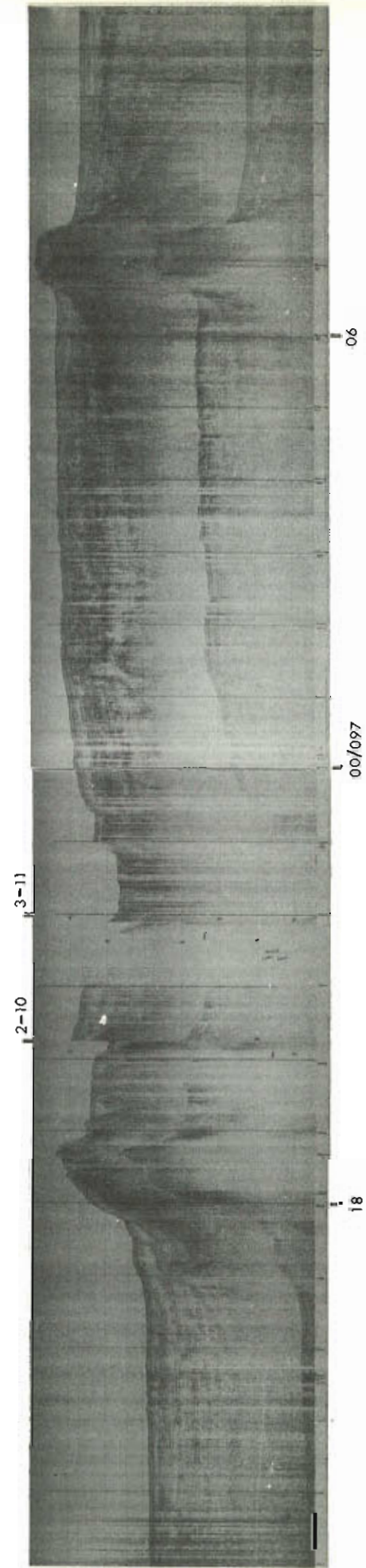
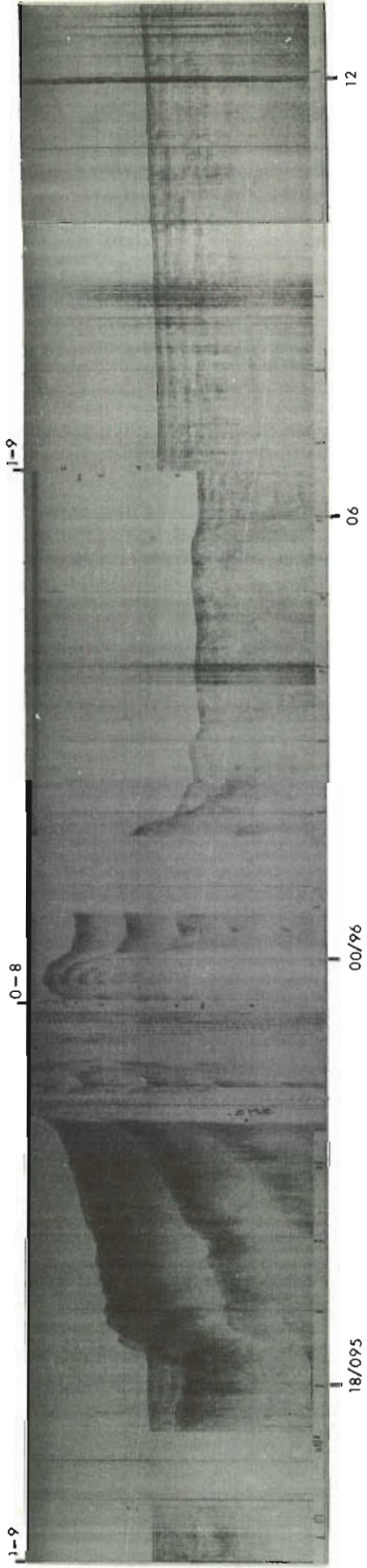
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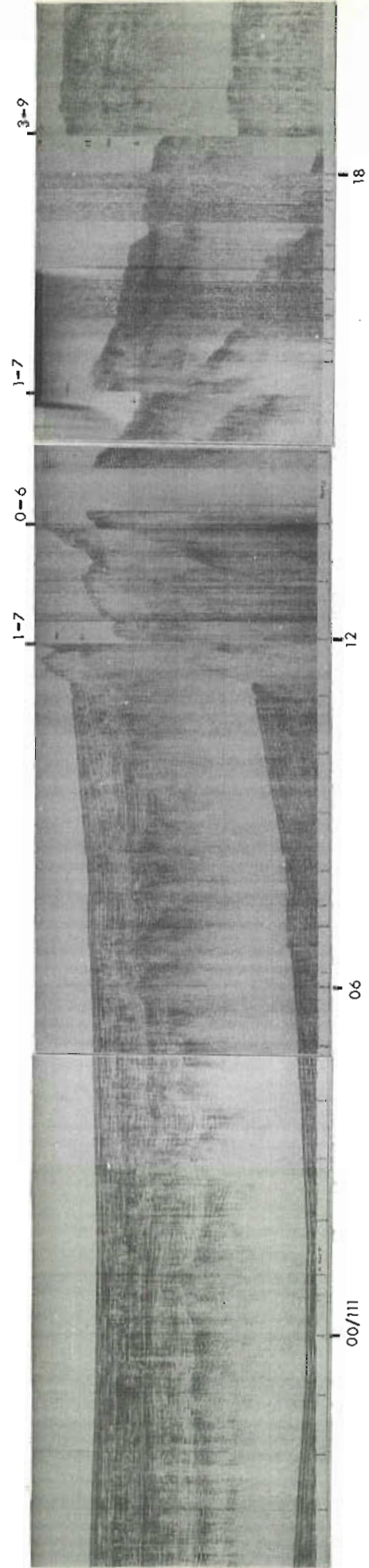
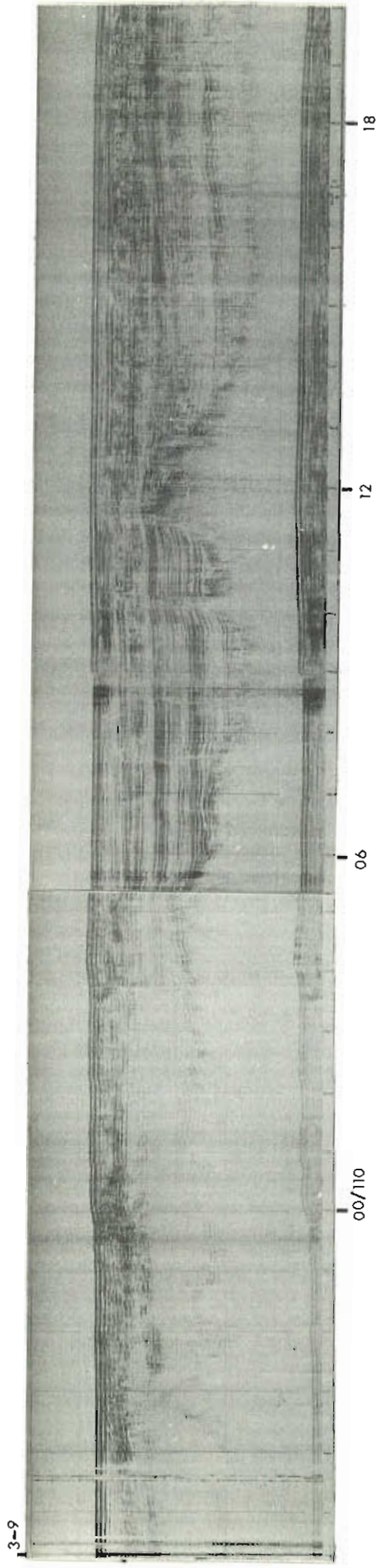


12/095

D

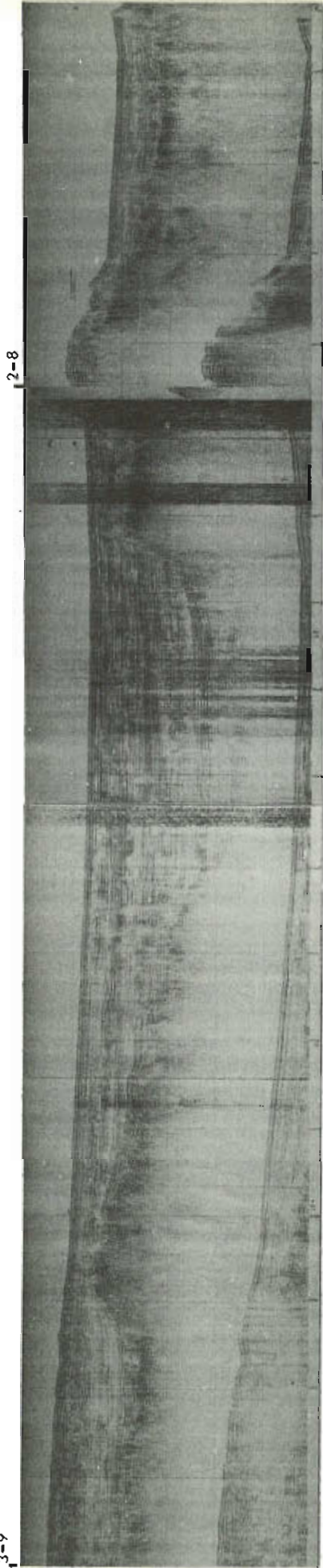


(E)



F

3-9



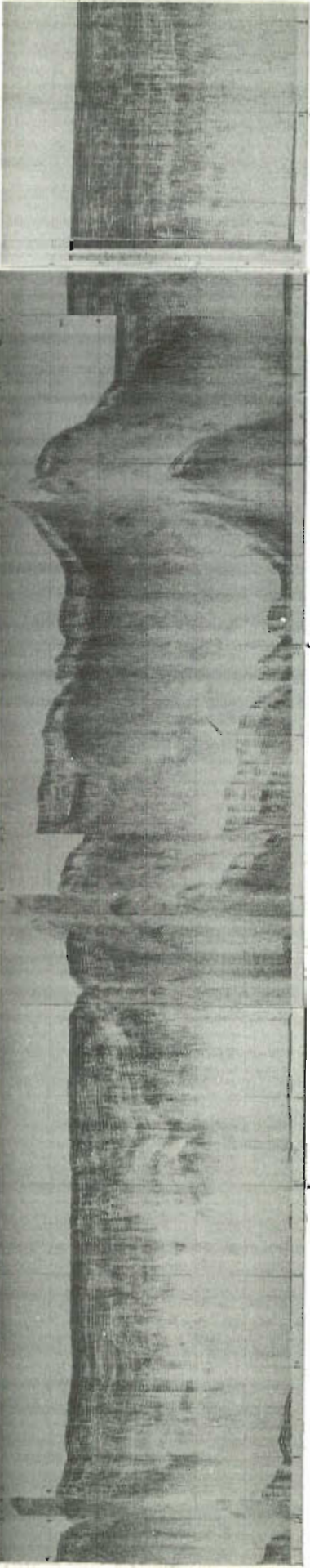
2-8

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06

12

3-9



2-8 3-9

2-8

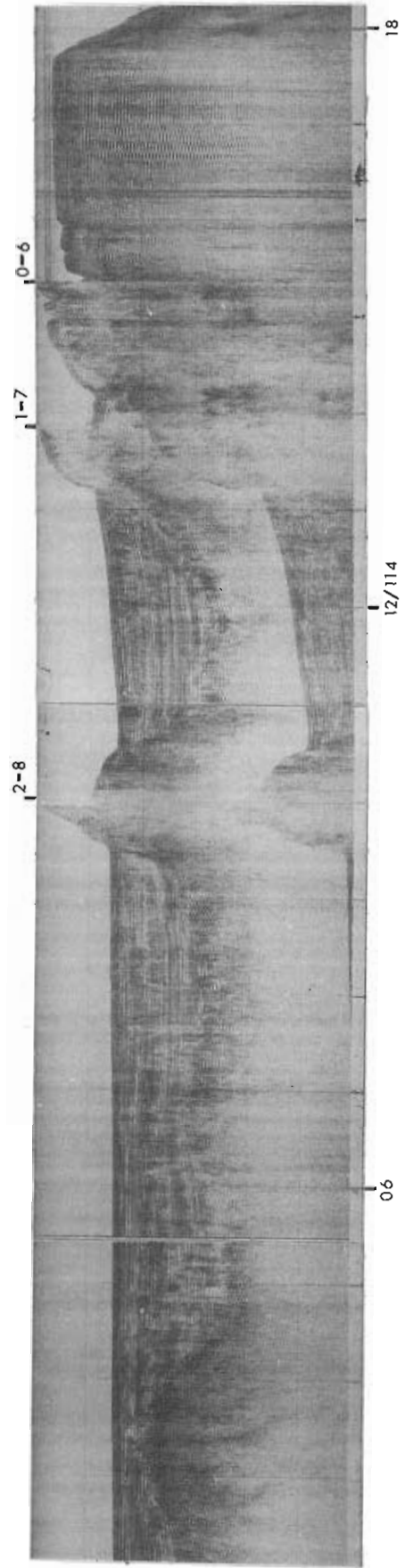
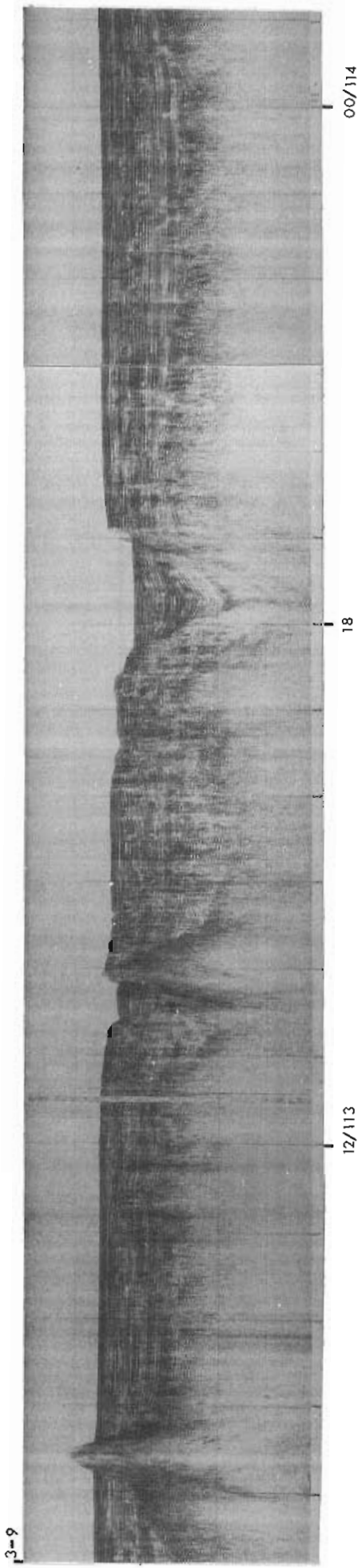
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18

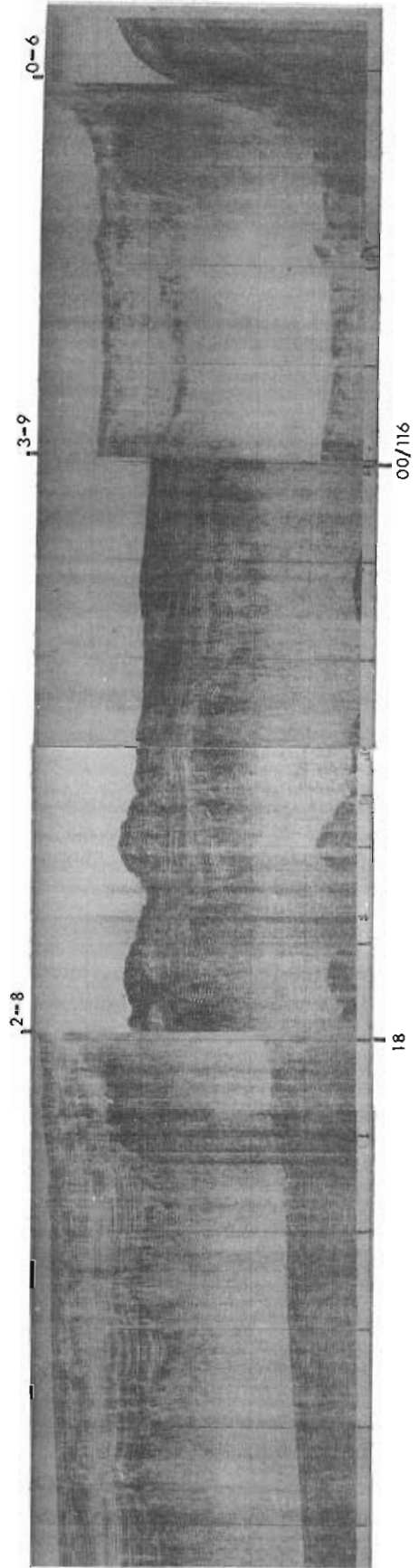
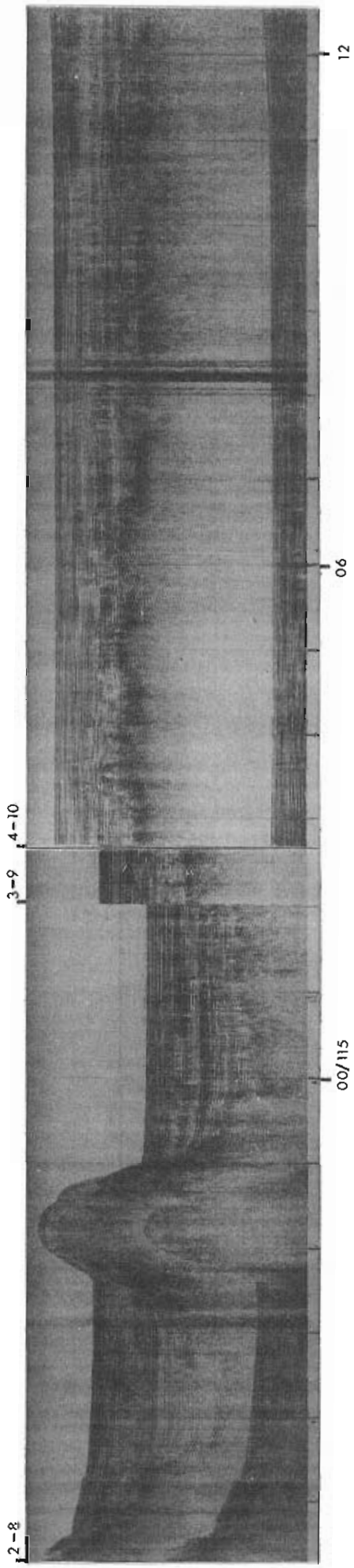
00/113

06

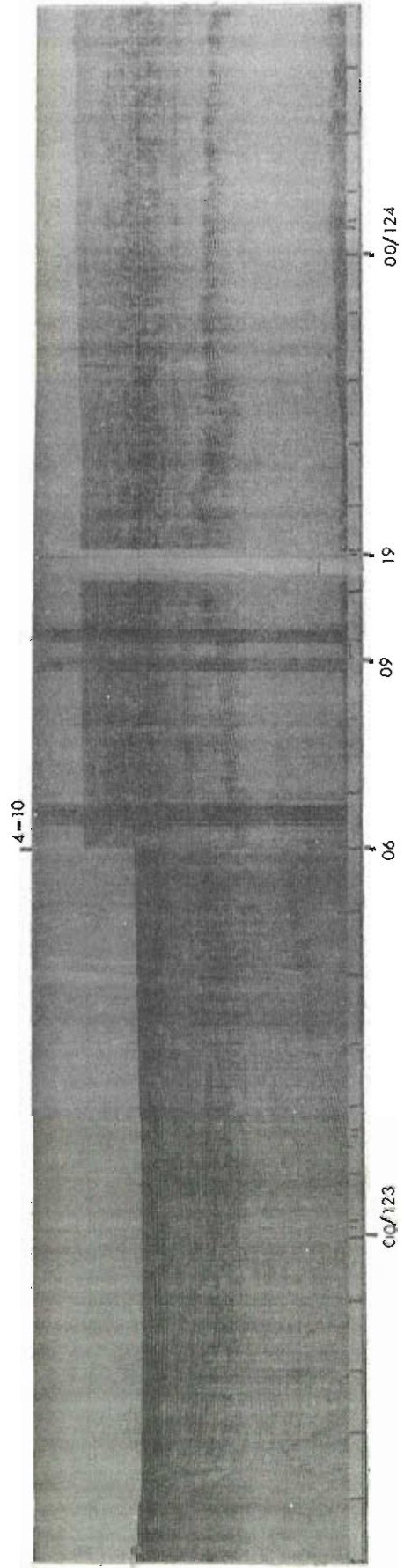
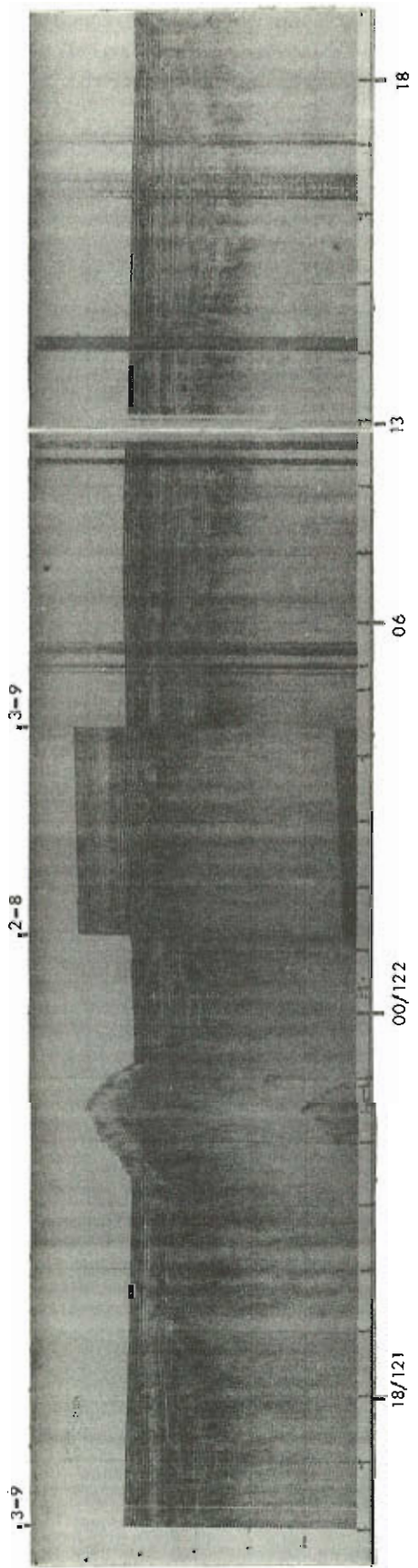
6



(H)



①



(J)

