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NATIONAL INSTITUTE OF OCEANOGRAPHY

Wormley, Godalming, Surrey

BATHYMETRIC AND MAGNETIC TRAVERSES ACROSS THE NORTH ATLANTIC:

N.C. MARCEL BAYARD, CANTAT II OCEAN SURVEY CRUISE

JUNE - AUGUST - SEPTEMBER 1971

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NIO DATA REPORT, GEOPHYSICS 2

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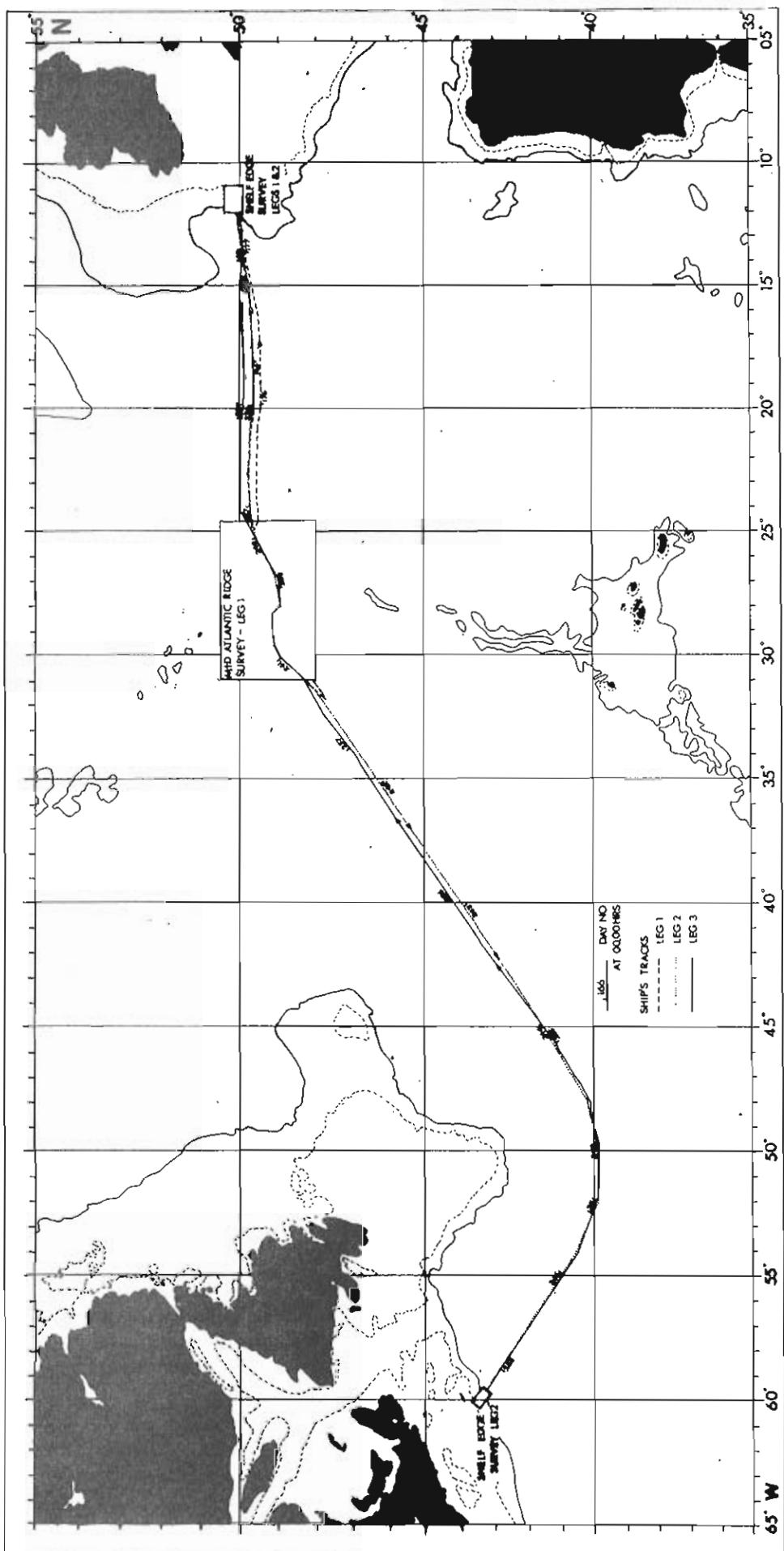
PREFACE

This document represents the second in a series of publications describing geophysical data collected by the Deep Sea Floor Group of the National Institute of Oceanography. 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 On citing this report in a bibliography the reference should be followed by the words "UNPUBLISHED MANUSCRIPT" in accordance with accepted bibliographic custom.

The present report contains magnetic and bathymetric data collected during the Cantat II Ocean Survey Cruise conducted by the British Post Office on N.C. Marcel Bayard in June/August/September 1971. Whereas the first report in this series was produced from data files stored on disk by a shipboard computer, the profiles, tables and 1:1000000 track charts presented in this report were all generated automatically from manually digitized data. A description is included of the methods used in the acquisition and preparation of the data.

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CANTAT II OCEAN SURVEY CRUISE 1971

CRUISE OBJECTIVES

The CANTAT II OCEAN SURVEY CRUISE was undertaken by the British Post Office in the summer of 1971 in order to select and survey a suitable route for the trans-Atlantic cable 'Cantat II' to be laid in 1973 between Widemouth, U.K. and Beaver Harbour, Nova Scotia. The French cable ship N.C. Marcel Bayard (built 1961; Length 400 ft; Breadth 51 ft; Displacement 7080 tons) was chartered for the survey and two scientists from the National Institute of Oceanography were invited to participate.

A provisional cable route had been selected prior to the cruise on the basis of existing charts. Because of the risk of cable breakdowns due to trawling on the Grand Banks the route was not chosen to lie on a great circle line between its shore ends. It was taken instead on a great circle line from Widemouth, U.K. to a point south of the Grand Banks at approximately 40°N, 50°W and then, after a slight deviation westwards, on a great circle line to Beaver Harbour N.S. The basic intention of the cruise was to check the suitability of this provisional route and where necessary to survey alternative route sections. From a bathymetric standpoint the suitability criteria were based on providing a route that (a) avoided slopes in excess of about 1 in 3, (b) avoided large local variations in depth, and (c) lay as deep as possible. However, due to the high cost per mile of a submarine cable these factors had to be optimised in such a manner as to provide as short a route distance as possible. Route selection was further restricted to areas at least 10n. miles from existing cable routes although, where necessary, other cables could be crossed providing

the crossing was made (a) half way between the repeaters of existing cables, and (b) with as great an angle as possible between the cables. These restrictions were particularly relevant in the region of the mid-Atlantic Ridge crossed by TAT 2 cables 1 and 2 between $48^{\circ}30'N$ and $49^{\circ}30'N$. The shallow water parts of the route (i.e. depths less than 1000 fms) had been surveyed earlier in the year by the C.S. 'J. Cabot'. On the basis of this work a final route had been selected across the continental shelves of both Nova Scotia and the United Kingdom out to roughly the 200 fm contour line i.e. to $43^{\circ}26'N$, $60^{\circ}05'W$ and $50^{\circ}12'N$, $11^{\circ}05'W$, respectively. The cruise was thus intended to fill in the route between these two positions paying particular attention to the mid-Atlantic Ridge region between $25^{\circ} - 31^{\circ}W$ at $49^{\circ}N$ and to the continental shelf edges between depths of 200 and 1000 fms. Bottom temperatures were taken during the cruise but due to the equipment and techniques used these are not considered to be reliable.

As mentioned the prime purpose of the cruise was to survey for the Cantat II cable route. However, as it provided an excellent opportunity for obtaining a cross section across a geophysically interesting part of the Atlantic Ocean, a magnetometer was installed on board and towed on all possible occasions. Furthermore, as the cruise schedule necessitated sailing between the U.K. and the mid-Atlantic Ridge on four occasions, it was decided that, once the cable route had been covered by two of these tracks, the other two were to be made 10 miles to the north and south respectively of the cable route in order to provide a suitable

section for the correlation and identification of geomagnetic anomalies. It was hoped that such a section would make a valuable contribution to our understanding of the nature and timing of the drift of North America from Europe especially in the region between the Azores-Gibraltar plate boundary and the Charlie Gibbs Fracture Zone at 52°N.

INSTRUMENTATION

Magnetics:- Except during temperature stations, shelf edge surveys and passage tracks on the continental shelves, the earth's magnetic field was logged continuously using a Varian Associates proton magnetometer towed some 200 metres astern of the ship. Some 630 hours of magnetic data were obtained during the cruise covering a total distance of 7,600 nautical miles. The data was recorded in analogue form on a chart recorder and was digitized manually at five minute intervals as well as at significant peaks and troughs. No corrections were made for either daily variation or the effect of ship's heading.

Bathymetry:- Bathymetric data was collected using a hull mounted ELAC model RGN8BK transducer with an ELAC model LAZ17DD echo-sounder operating at an assumed sound velocity of 1500 m/sec. This system was not a precision depth recorder and daily checks were made to control its accuracy. The rotating band of the recorder was timed daily (with an accuracy of the order of 0.1%) in order to obtain some control on temporal variations in relative accuracy. Such measures revealed that the system speeded up in an almost linear fashion over a range of some 2% during the cruise. Control on absolute accuracy was provided by comparing cross overs in flat areas with tracks obtained by other cruises that had used precision depth recorders in conjunction with a good navigation system. Due to the sparsity of such information in the areas of the Cantat II route, this control relied heavily on crossings in the area of the box survey undertaken by Cambridge University in

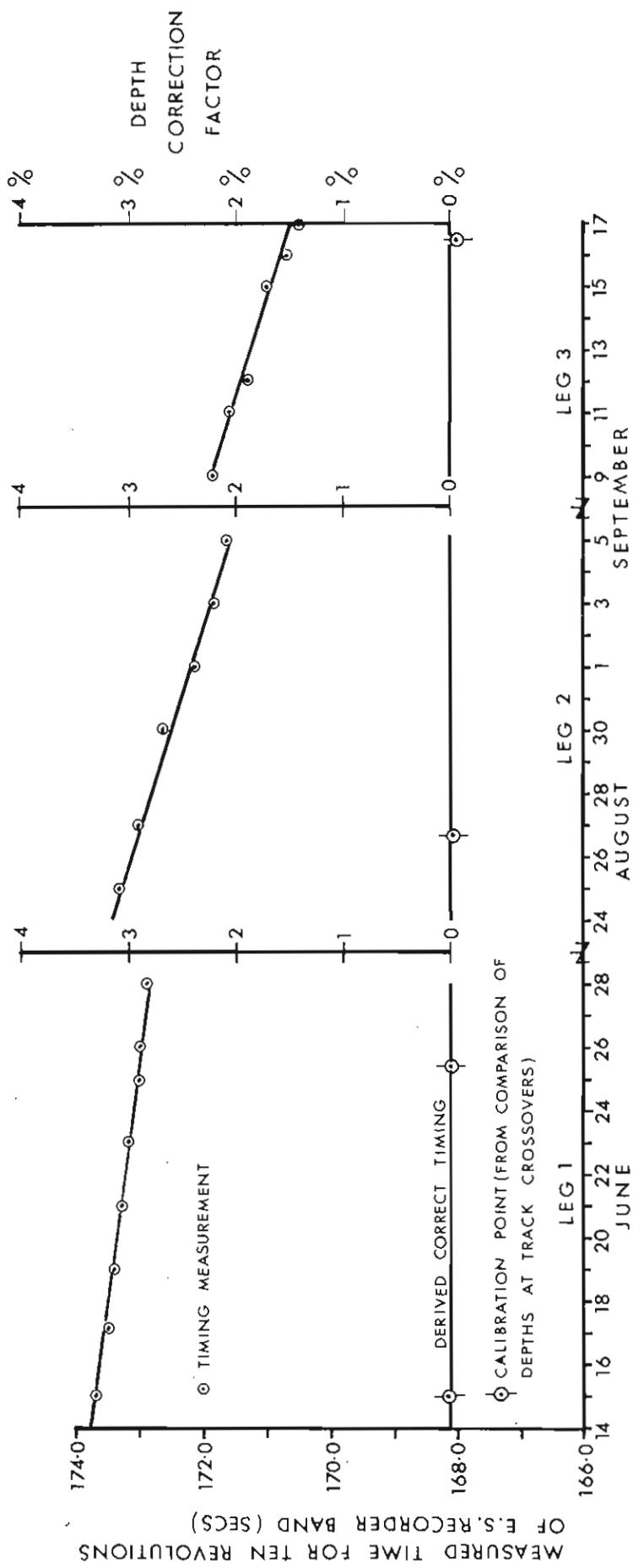


Fig (1) DERIVED ECHO-SOUNDER CALIBRATION CURVE

August 1971 using a 'John Murray' between 49-51°N., 18-22°W.

A calibration curve was thus constructed for correcting all the depths measured with the ELAC system (Fig. (1)). At the beginning of Leg 1 this correction produced a 3.4% increase in depth falling to an increase of 1.4% at the end of Leg 3. An indication of the accuracy of the depths so obtained is given below:-

<u>Depth Range (fms)</u>	<u>Reading Accuracy (fms)</u>	<u>Estimated Absolute Accuracy After Calibration (fms)</u>
0-385	±1	±(1-2)
385-770	±2	±(1-2)
770-1540	±3	±(2-5)
1540-3080	±5	±(5-10)

Depth was logged continuously during the cruise except during passage between Falmouth and the U.K. shelf edge area, and between Halifax and the Nova Scotia shelf edge survey area. The data was manually digitized at five minute intervals as well as at significant peaks and troughs.

NAVIGATION

The following navigational aids were used:-

- (a) Satellite Navigation System using an I.T.T. receiver linked with a PDP8 computer. (This system was out of action from 1600 hrs. on 14th September (257) until the end of Leg 3, i.e. last 3 days of cruise).
- (b) Loran 'C' using both the airborne and marine versions of the Decca Loran ADL21 receiver.
- (c) Omega
- (d) Decca Chains on Canadian and U.K. shelves.
- (e) Anchored danbuoys - used only during the shelf edge surveys.

Great importance was attached to the accuracy of the navigation due to the need to reoccupy the selected route during the actual laying of the cable in 1973. Except during the last 3 days of Leg 3 when the computing system developed a fault, the Satellite navigation system behaved extremely well and was used as the prime navaid. During Leg 1 an average of 16 good Satellite fixes/day was obtained with 12 fixes on the worst day. For Leg 2 the average was 21 good fixes/day with a minimum of 18/day while during the first half of Leg 3 an average of 21/day with a minimum of 19/day was achieved. Interpolation between these fixes was usually made using Loran 'C' fixes taken at quarter-hourly intervals with, whenever possible, 3 Loran chains. During Leg 1

Loran chains SL7W, X and Z were used and, except during the middle of the night when the Loran was noted to drift by the order of $\frac{1}{2}$ to 1 n. mile without losing lock, the Loran readings were usually within 0.3 n. miles of the Satellite points. The Loran behaved equally well during Legs 2 and 3 east of about 40°W , especially during daylight hours. However, at night it was often necessary to use the Satellite Navigator, or Dead Reckoning from the ship's log and gyro, for lane identification. West of 40°W Omega was used as the secondary navaid until the ship was within range of the SS7X and Y chains. The Decca chains were used for secondary navigation on both the Nova Scotia and U.K. continental shelves. Thus, by using the Satellite Navigator in conjunction with the appropriate secondary navaid and the readings of the ship's log and gyro, a high order of navigational accuracy was obtained. It is estimated to be good to within $\frac{1}{4}$ n. mile except during the last 3 days of the cruise when it was probably reduced to the order of 1 n. mile.

The navigation was digitised from smoothed tracks drawn on $\frac{1}{4}$ million plotting sheets. Navigation points were selected at all course and speed changes and at any other locations necessary so as to provide linearly interpolateable positions at all times lying within $\frac{1}{4}$ n. mile of those on the smoothed $\frac{1}{4}$ million plotting sheet tracks.

REDUCTION AND STORAGE OF DATA

The manually digitized magnetic, bathymetric and navigation data were copied onto computer coding forms on board ship and later in the laboratory were punched onto card in standard Lamont format. This format treats the data as a time series of raw data points which are allowed to be at unequal time intervals with separate decks for the magnetic, bathymetric and navigation series. Each deck consists basically of a series of day cards each followed by a series of data cards

a) Magnetics:-

Day Card: IDAY, IMON, IYR, TZ, LB, LC, JCT in the format
(I2,I3,I5,F5.0,I3,I2,I5)

where IDAY, IMON, IYR = Date as day, month, year

TZ = Time Zone in hours (set to 0.0 as time was always measured in G.M.T.)

LB = No. of magnetic data cards following this day card

LC = No. of readings on last magnetic data card following this day card

JCT = First two digits of the total field reading in gammas.

Followed by a series of Magnetic Data Cards each in the form:-

(JHR(I), JMIN(I), JG(I), I = 1,9) in the format
9(I2,I2,I3,1X)

where JHR, JMIN = Time in hours and minutes

JG = Last three digits of the total field reading in gammas.

New Day Cards are punched when either the date changes or the first two digits of total field change.

b) Bathymetry:-

Day Card: IDAY, IMON, IYR, TZ, LB, LC, NMZ in the format
(I2,I3,I5,F0.1,2X,I3,I2,I5)

where IDAY,IMON,IYR = Date as day, month, year

TZ = Time Zone in hours (set to 0.0 as
time was always measured in G.M.T.)

LB = No. of bathymetric data cards
following this day card

LC = No. of readings on last bathymetric
data card following this day card.

NMZ = Matthews Area Number relevant to
this day card

Followed by a series of Bathymetric Data Cards each in
the form:-

(JHR(I), JMIN(I), IG(I), I = 1,8) in the format
8(I2,I2,I5,1X)

where JHR, JMIN = Time in hours and minutes

IG = Depth in uncorrected fathoms
(at an assumed sound velocity
of 800 fms/sec)

New Day Cards are punched when either the date or
Matthews Area changes.

c) Navigation

Day Card: IDAY,IMON,IYR,TZ,LB in the format (I2,I3,I5,
F5.0,2X,I3)

where IDAY,IMON,IYR = Date as day, month, year
TZ = Time Zone in hours (set to
0.0 as time was always
measured in G.M.T.)

TZ = No. of navigation data cards
following this day card

Followed by a series of Navigation Data Cards each in the
form:

JHR,JMIN,LAT,AT,LONG,ONG in the format (I2,I2,I4,
F5.2,I5,F5.2)

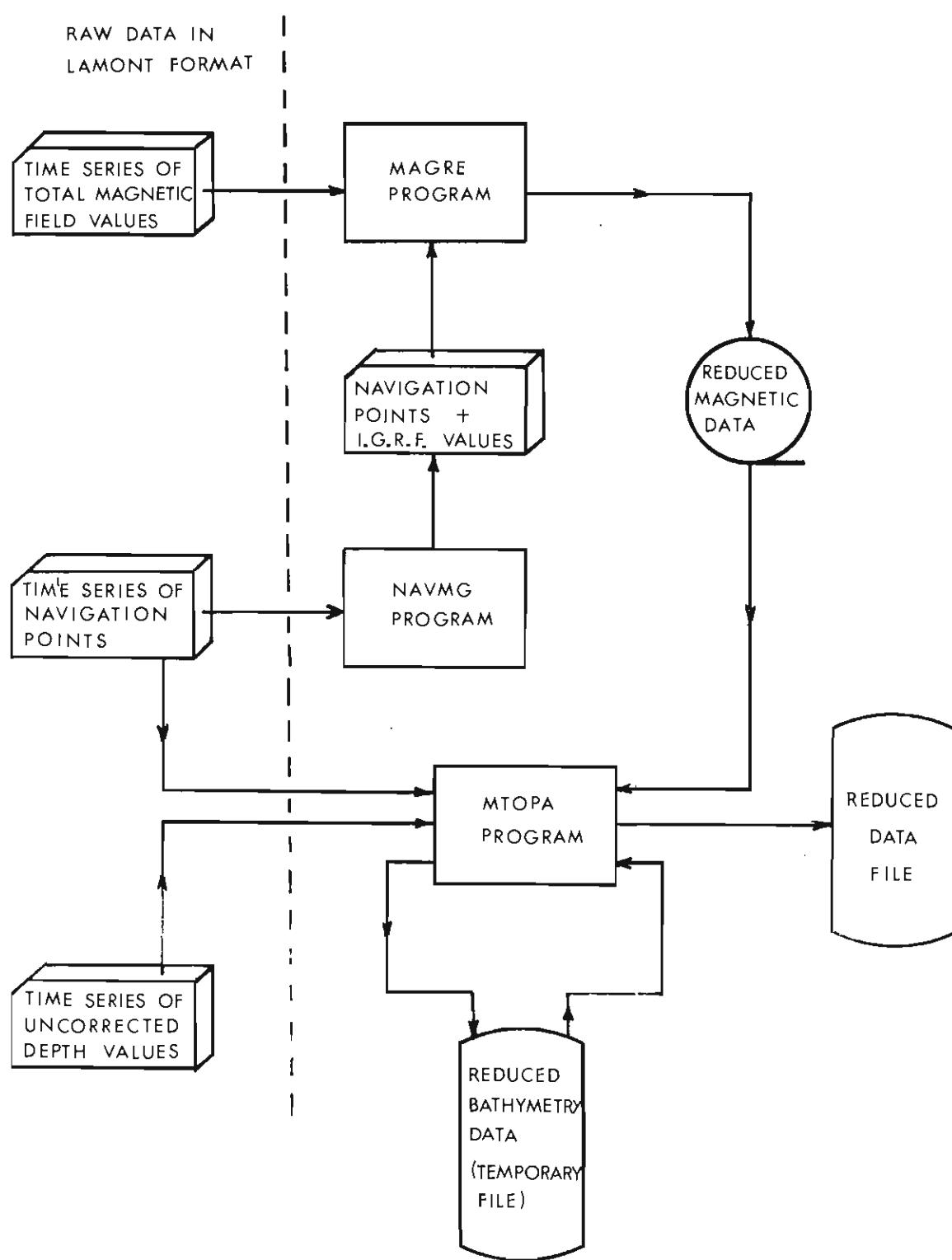
where JHR,JMIN = Time in hours and minutes
LAT,AT = Latitude in degrees and minutes
(to 0.01 min.)
North taken as positive
LONG,ONG = Longitude in degrees and minutes
(to 0.01 min)
East taken as positive

New Day Cards are punched when the date changes.

As discussed earlier the echosounder operated at an
assumed sound velocity of 1500 m/sec and required corrections
to be made for both instrumental calibration and drift. The
depth data was thus initially prepared as a time series of
depth values as read off the original echosounding trace. These

raw data values were input into the I.B.M. 1800 computer system at N.I.O. and were automatically corrected according to the correction curves of fig. (1) and converted to an assumed sound velocity of 800 fms/sec. A new bathymetry card deck was then output in the above described format.

In the data reduction process (fig. (2)) the bathymetric and magnetic data are independently merged with the navigation data. In the magnetics reduction the navigation data is first input with the NAVMG program so as to generate a new navigation card deck containing in addition the computed values of the International Geomagnetic Reference Field (Mead (1970)) at each navigation point. This deck is then run against the magnetics card deck using the magnetics reduction program MAGRE. The program computes the geographic position and I.G.R.F. at each magnetic data point by a linear interpolation in time between the relevant pair of navigation points and their associated I.G.R.F. values. It creates on magnetic tape a record for each magnetic data point containing date, time, latitude, longitude, course, speed, distance run from start of leg, total magnetic field value and magnetic anomaly value (obtained by the removal of the I.G.R.F. value from the total field value). The MTOPA program operates in two sections. In the first section the bathymetry card deck is run against the navigation deck with a link into a subroutine which applies a Matthews Area correction to each depth value. This correction is applied using computer approximated curves (Howarth (1970)) with the appropriate



Fig(2) DATA REDUCTION AND STORAGE

Matthews Area No. taken from the relevant Bathymetric Day Card. A record is then created for each bathymetry data point on a temporary disk file containing time, latitude, longitude, course, speed, distance run, depth in uncorrected fathoms and depth in corrected metres. Having produced a reduced bathymetric data file the second section of the MTOPA program merges this temporary file with the reduced magnetic data file from tape to produce a final Reduced Data File on disk. Each record on the Reduced Data File contains 16 words (each of length 16 bits) of data defined as follows:-

Word	Field	Unit
1	Day No. (G.M.T.)	-
2	Time (G.M.T.)	0.1 mins
3	Latitude - degrees	degrees
4	Latitude - minutes	0.01 mins
5	Longitude - degrees	degrees
6	Longitude - minutes	0.01 mins
7	Course made good overground	0.1 degrees
8	Speed made good overground	0.01 knots
9	Distance run from start of leg (0.01 n mile/0 -9999)	0.01 n miles
10	Distance run from start of leg (100's of n miles)	100 n miles
11	Corrected depth	metres
12	Uncorrected depth	fathoms
13	Blank	
14	Blank	

Word	Field	Unit
15	Magnetic anomaly	Gammas
16	32000 - Total magnetic field	Gammas

A separate Reduced Data File was produced for each leg of the Contat II Ocean Survey Cruise

Leg 1/File 1	1300 hrs. on 13/6/71	to 0530 hrs. on 26/6/71
Leg 2/File 2	1120 hrs on 25/8/71	to 2240 hrs. on 3/9/71
Leg 3/File 3	1945 on 9/9/71	to 0055 hrs. on 17/9/71

The bathymetric data collected during the shelf edge surveys was not reduced automatically but was manually plotted onto charts (see folder). The track charts, profiles and data tables contained in this report were produced directly from the Reduced Data Files while the raw data itself is permanently stored on card in the Lamont format Copies of these cards can be obtained by writing to:-

The British Oceanographic Data Service,
Institute of Oceanographic Sciences,
Wormley, Nr. Godalming, Surrey.

A new format for magnetic, bathymetry, gravity and navigation data has recently been proposed by the National Academy of Sciences U.S.A. which seems likely to succeed the Lamont format as a standard for data exchange. In view of this the computer programs at N.I.O. are being rewritten such that the raw data time series will in future be stored in the new unmerged format, the reduced magnetics file and the reduced

bathymetry file will be stored in the new merged format and the Reduced Data File in the merged-merged format. Copies of the Cantat II Ocean Survey Cruise data will be made available in each of these formats on request.

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 collected bathymetric and magnetic data of the Cantat II Ocean Survey Cruise. The data is presented at three levels of processing - summarized listings of raw data, summarized listings of reduced data, and profiles of the reduced data. The computing aspects of the data presentation are described in the data report for Cruise 33 of RRS Discovery (Jones (1972)). It is hoped that when used with either the 1:1,000,000 track charts or the listing of the navigation points, the data listings should satisfy the needs of those wishing either to incorporate the data into compilation charts or to perform further computer orientated calculations on the data. The 1:2,000,000 profiles are intended for those wishing to make a more direct scientific interpretation of the data and to this end the profiles are supplemented with a track chart at the same scale and overlain on a bathymetric chart.

Profile Location Sheets: These are inserted in the folder at the end of the report and are divided into two sheets; the first containing cruise tracks north of 48°N on a standard Mercator Projection at a scale of 1:2,000,000 at 57°N, while the second contains the tracks south of 48°N at a scale of 1:2,000,000 at 46°N (and not 57°N as annotated on the sheets). The sheets were manually prepared and include bathymetry from the June 1971

version of the N.I.O. bathymetric chart series on Sheet 1 and the available United States Naval Oceanographic Office charts on Sheet 2. Except for the 100 fathom contour, the contour interval was chosen as 500 fathoms so as to illustrate the prominent features of the sea floor relief and to provide 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 each is identified on the track by a circled figure representing the start of the profile. Changes in day number are also shown on the tracks by a mark at 001 hrs. on the new day which is annotated with the new day number. The tracks covered during the mid Atlantic ridge survey on Leg 1 are shown as an insert on Sheet 1 at an enlarged scale.

Section A: contains profiles of magnetic anomaly, corrected depth and course and speed made good. The parameters are each plotted against distance run along track in nautical miles from the start of a leg - the distance being scaled to a Mercator chart projection at 1:2,000,000 at 57°N for tracks north of 48°N and at 46°N for tracks south of 48°N so that the profiles can be directly overlain on the profile location sheets. The distance scale is marked every 100 n miles and annotated every 500 n miles. A time scale axis in GMT is also included so that the profiles can be related to the tabular listings of sections C and D. Magnetic anomaly is plotted at a scale of 400 γ /inch with a nominal range of from -

600 γ to 600 γ although this range is automatically adjusted when necessary. Corrected depth is plotted at a scale of 2000 fms/inch with a nominal range of 0 - 4000 fms which is automatically reduced if more space is required for the magnetic profile. The vertical exaggeration of the bathymetric profile is 13.9:1 at 57°N or 46°N. Each depth reading is marked on the profile by a small tick and successive readings are joined by a straight line. Thus gaps in data appear as straight lines without tick marks.

Section B: contains a listing of the navigation points and computer generated navigation track charts on a mercator projection. The navigation points provide a linearly interpolatable track to within $\frac{1}{4}$ n mile of the smoothed $\frac{1}{4}$ million plotting sheet tracks. The track charts are scaled at 1:1,000,000 at 57°N for tracks north of 48°N and at 46°N for tracks south of 48°N. Each hour is marked on the track and annotated with time (in hours and minutes GMT) and day no. The first position on each chart is similarly annotated. So as to provide some indication of positional control, the positions of the acceptable satellite fixes are plotted on the track charts as small circles and each is annotated by time in hours and minutes.

Section C: contains tabulated 5 minute value listings of total magnetic field and uncorrected depth (ie corrected for instrumental calibration but not for Matthews Area). If a maximum or minimum value occurs between two five minute readings it is overwritten onto the field of the nearest five minute

mark and is followed by an asterisk and the time of its occurrence (recorded only as minutes past the hour).

Section D: contains tabulated 5 minute value listings of reduced and bathymetric data. Corrected depth is given in both fathoms and metres and the magnetic anomaly (total magnetic field minus the International Geomagnetic Reference Field) in gammas.

Shelf Edge Surveys: The bathymetric data for the UK and Nova Scotia Shelf Edge Surveys is plotted out on the charts contained in the folder at the end of the volume. Soundings from the earlier C.S.J. Cabot surveys are also incorporated in these charts.

REFERENCES

Howarth R.A. (1970), 'Computer Approximations for Matthews Areas', NIO Internal Report No. N 22.

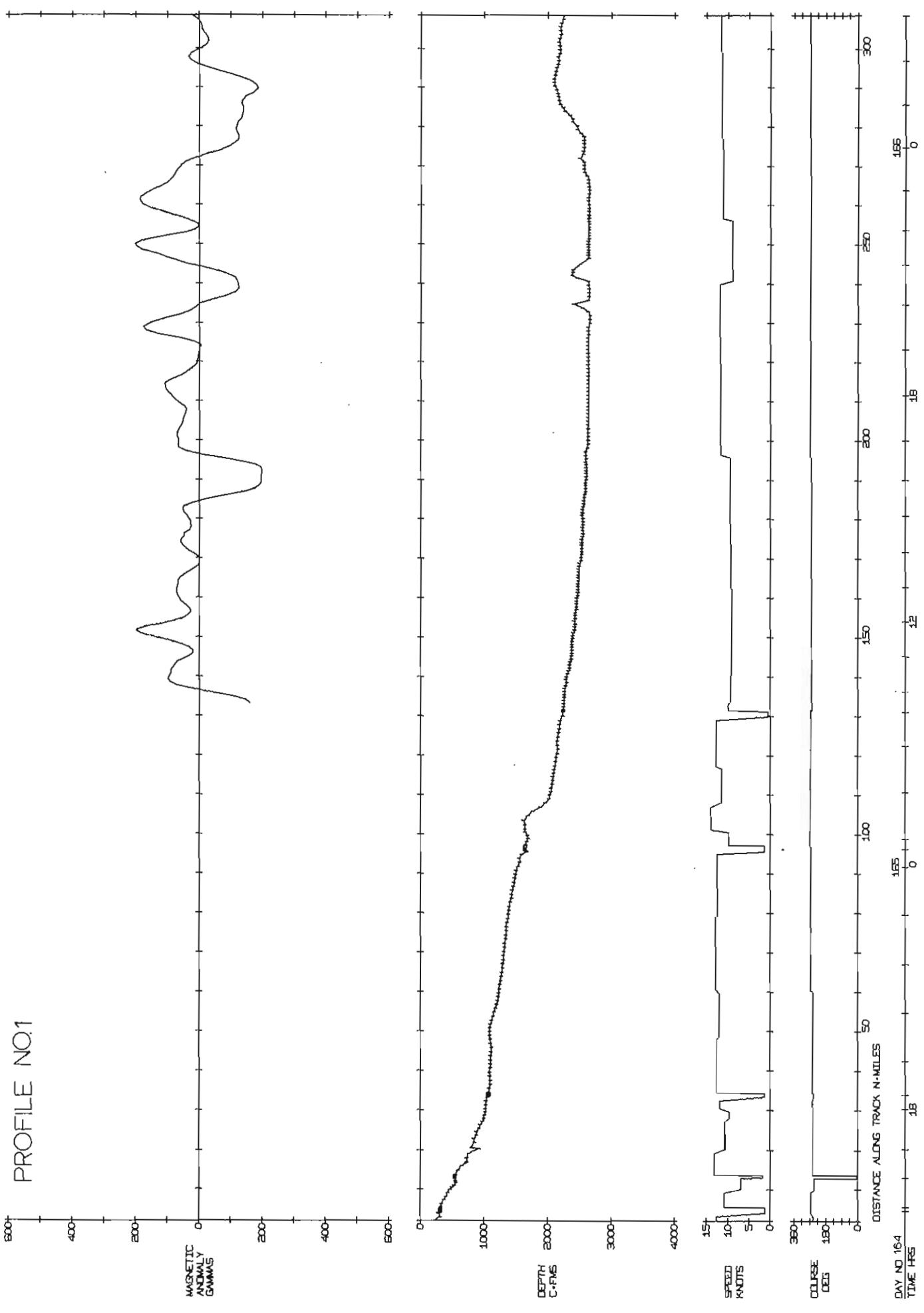
Jones, M.T. (1972), 'Bathymetric and Magnetic Traverses in the Area of Rockall Bank and King's Trough; RRS Discovery Cruise 33, April-May 1970', NIO Data Report, Geophysics 1, (unpublished manuscript).

Mead, G.D. (1970), ' International Geomagnetic Reference Field in Dipole Co-ordinates', J. Geophys. Res., 75, No. 22.

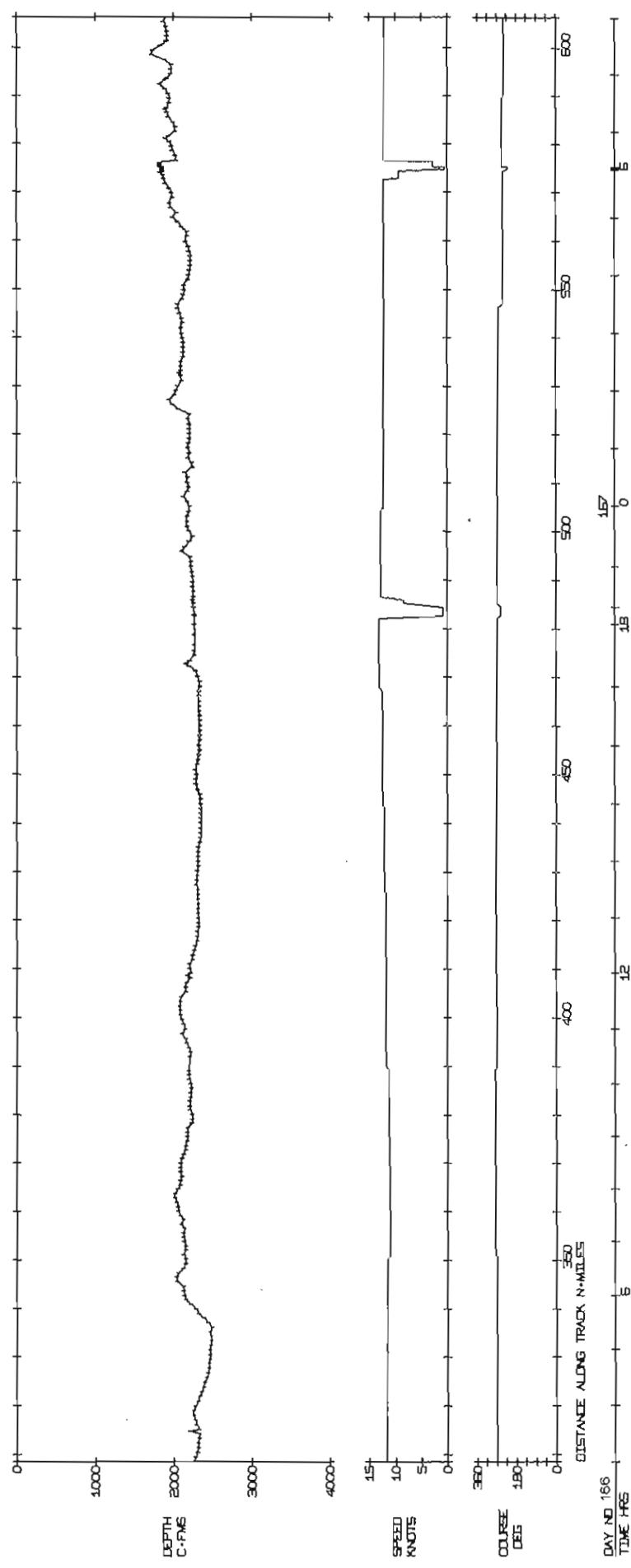
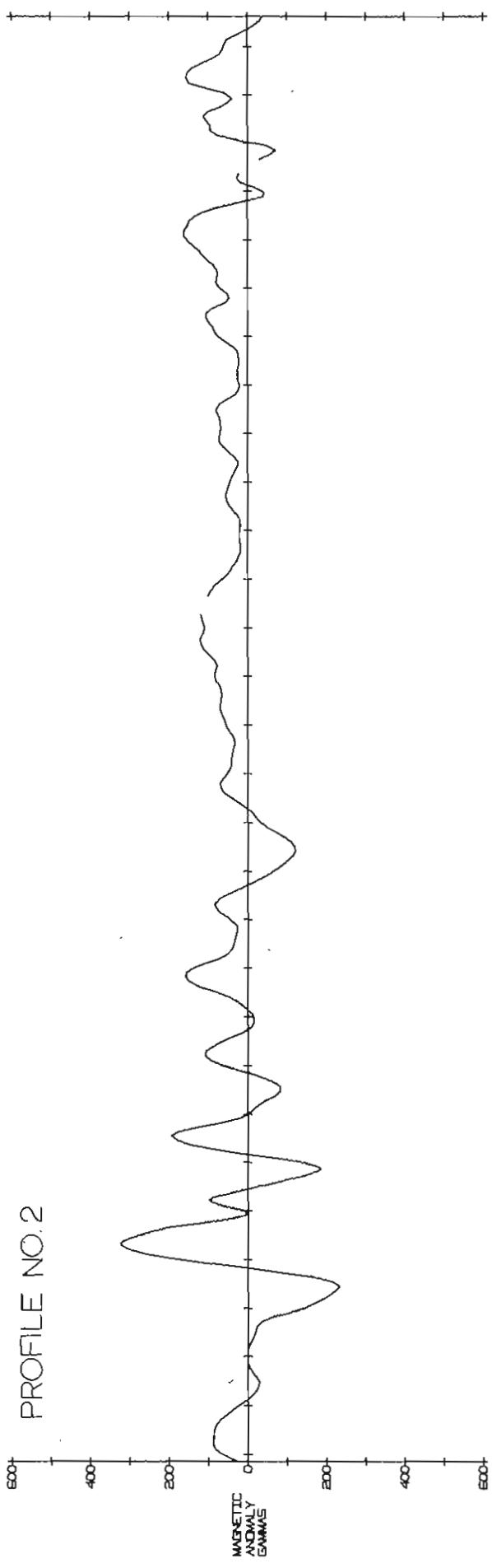
SECTION A

1:2,000,000 Profiles of Reduced Data (Bathymetric profiles at
13.9:1 vertical exaggeration at 57° and 46°N).

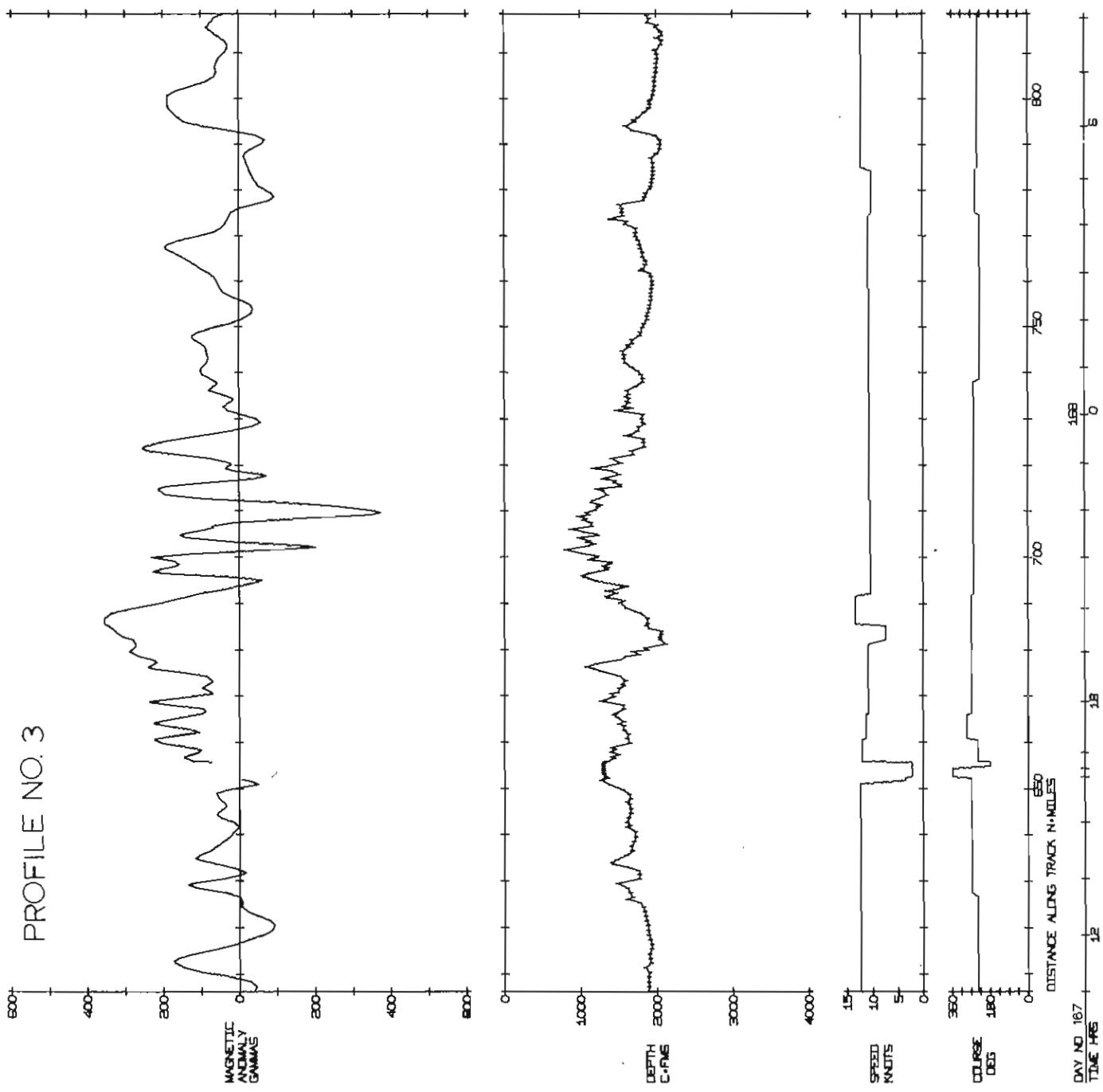
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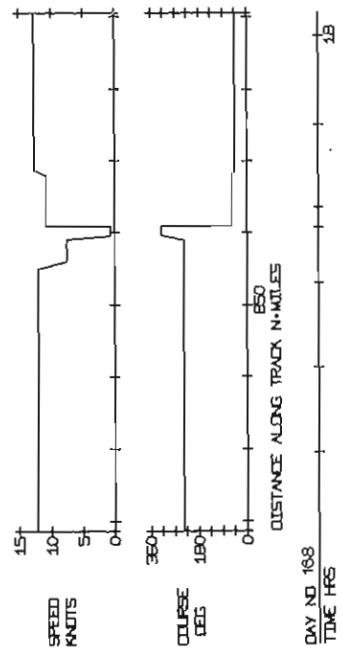
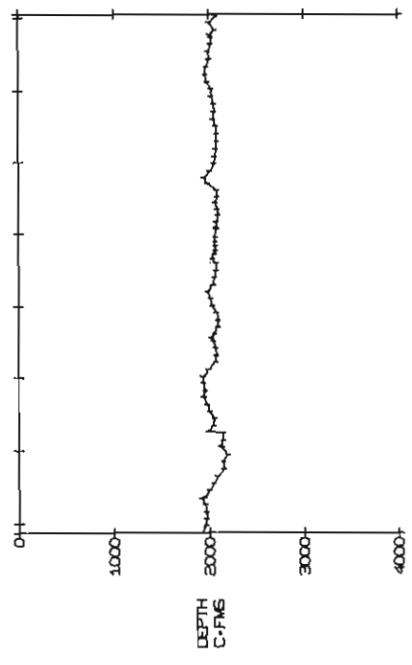
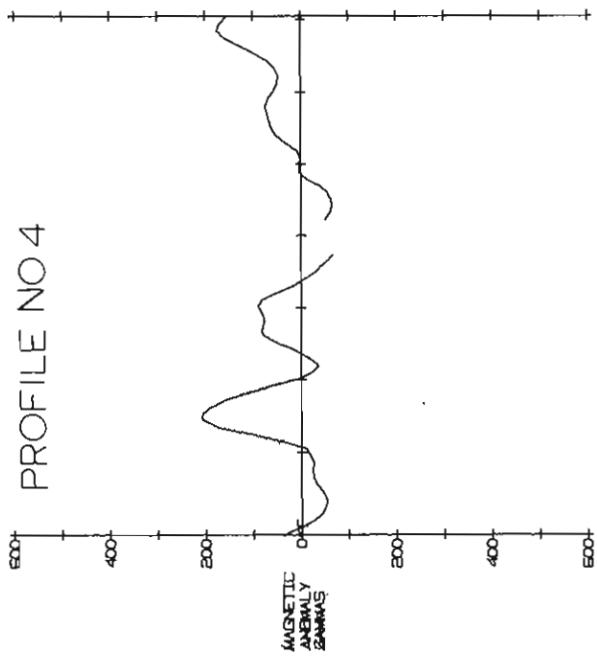
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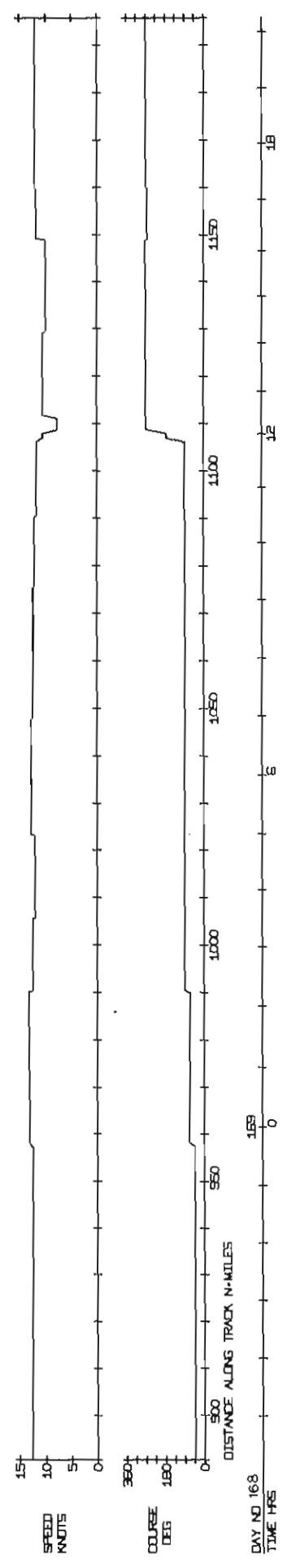
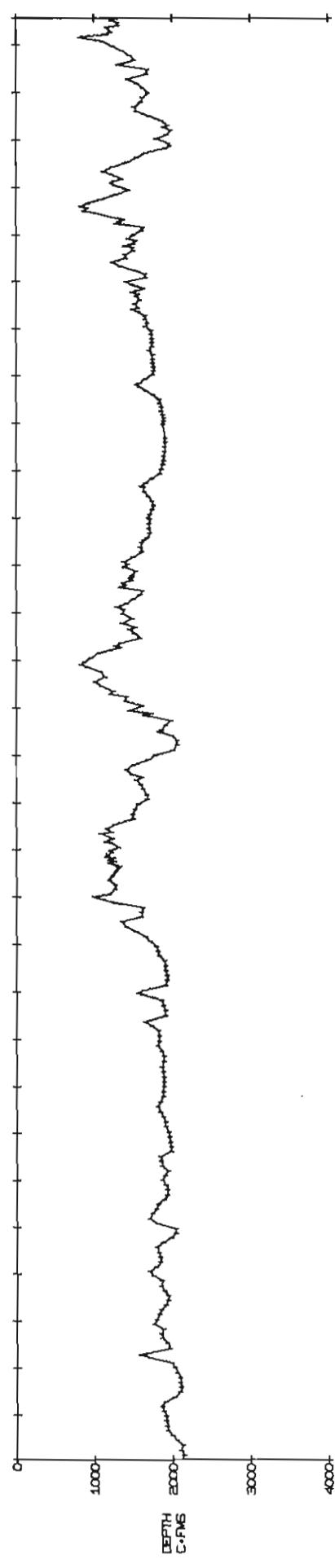
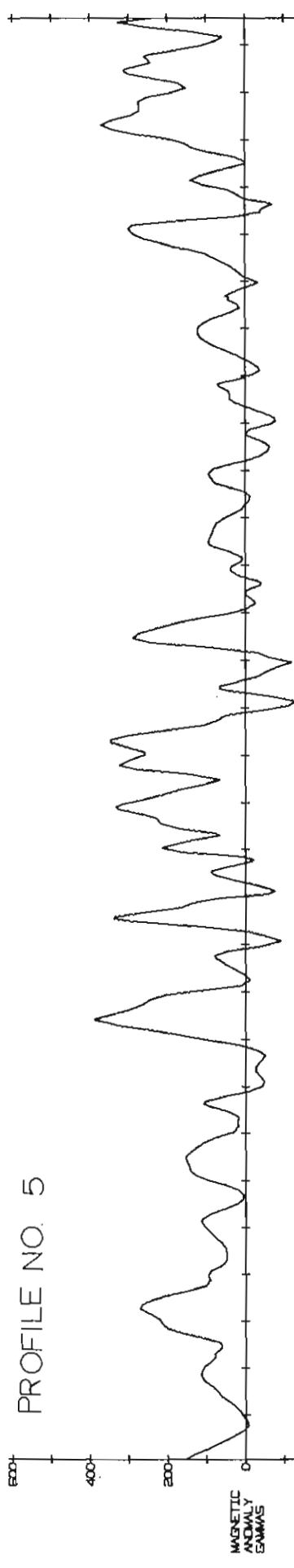
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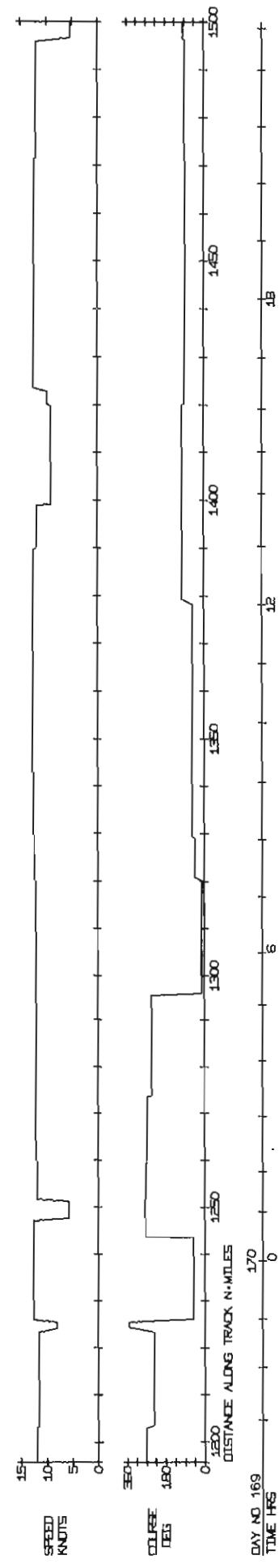
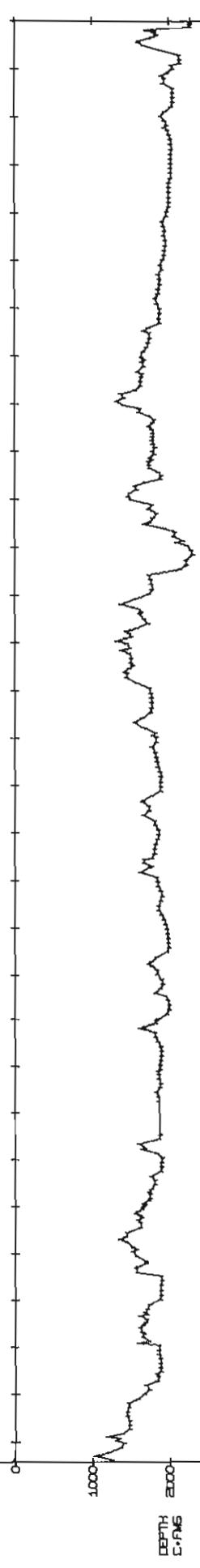
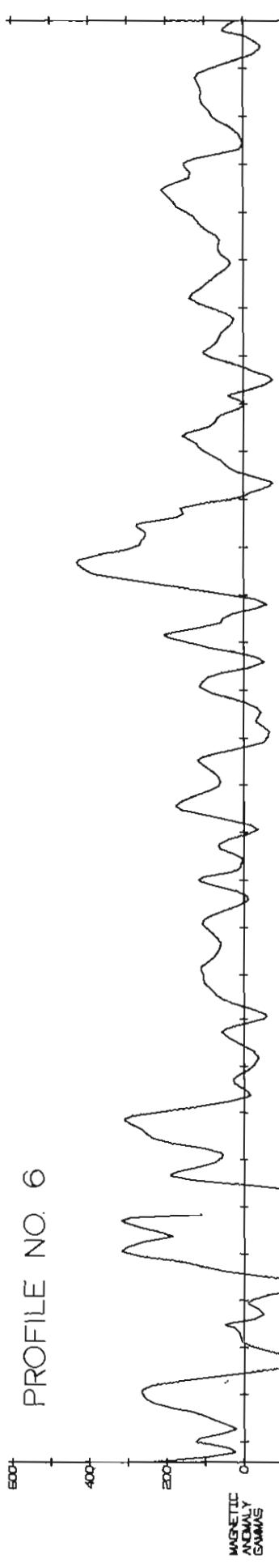
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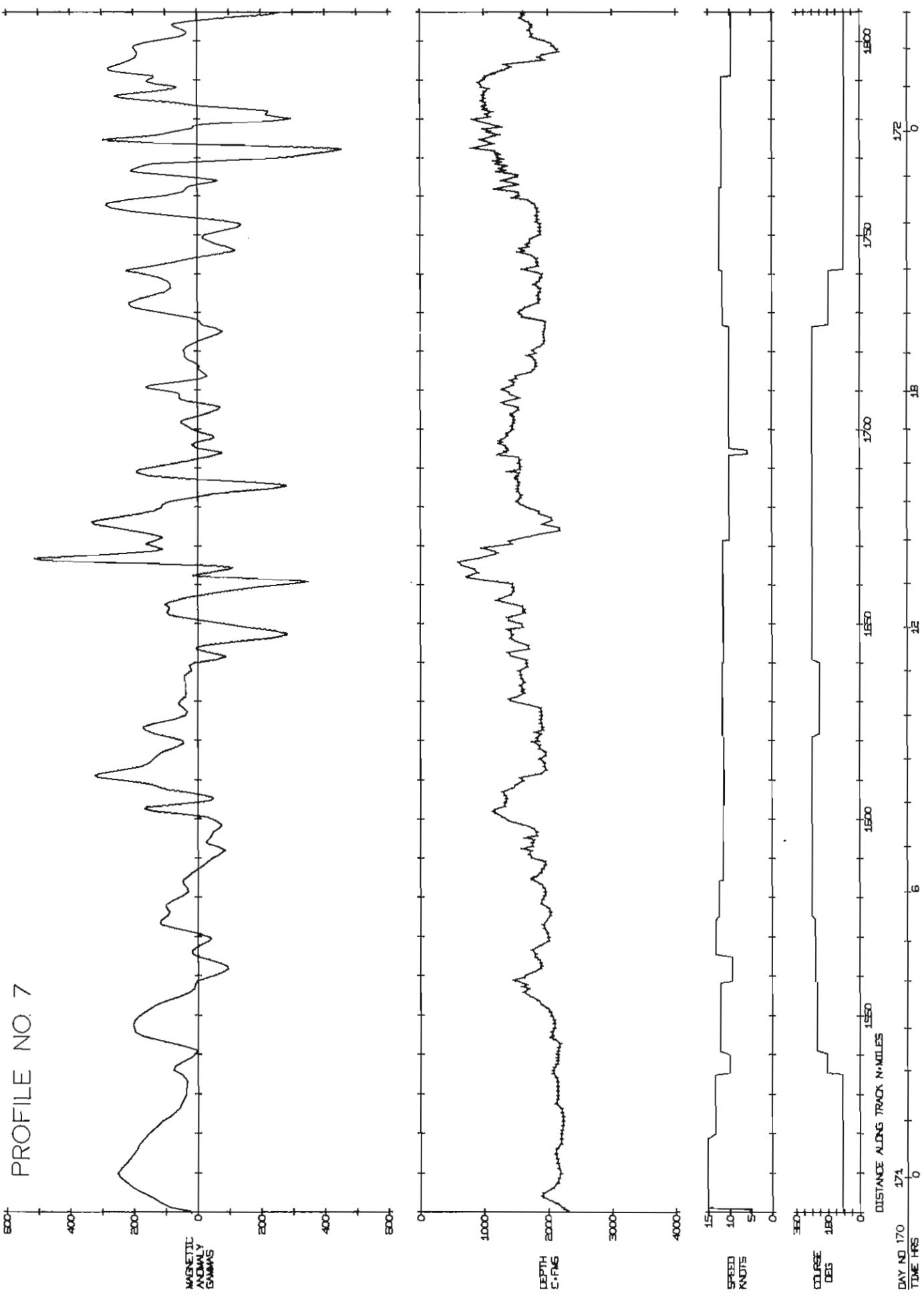
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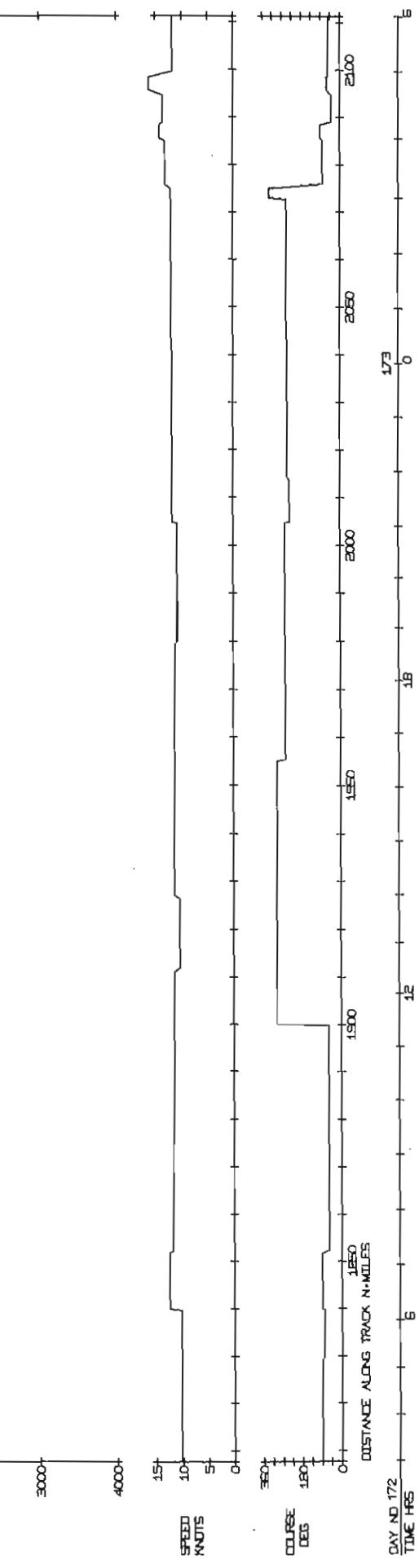
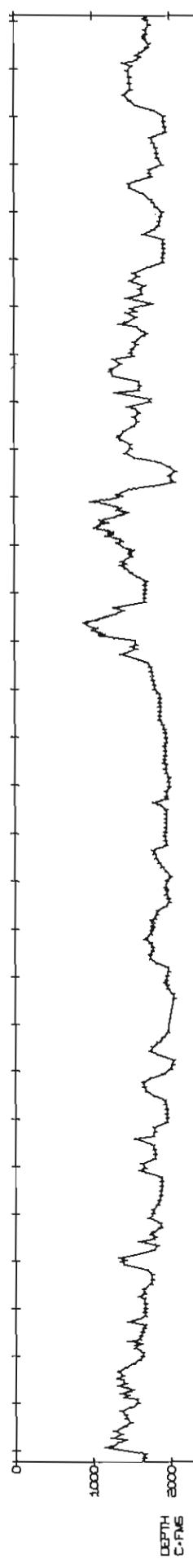
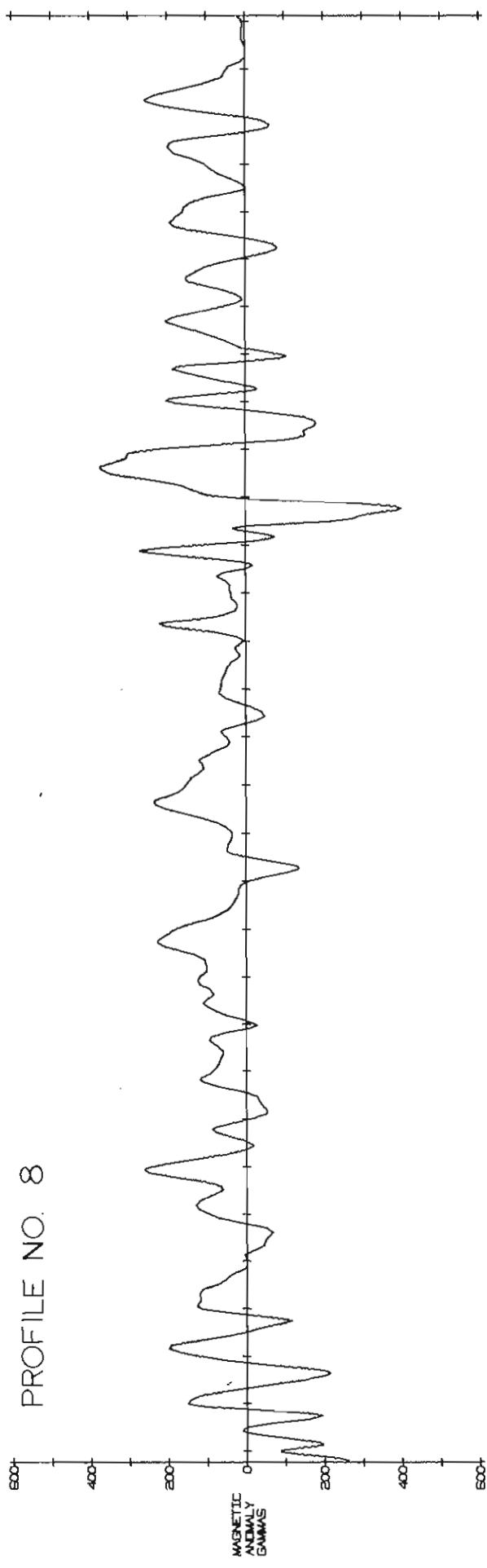
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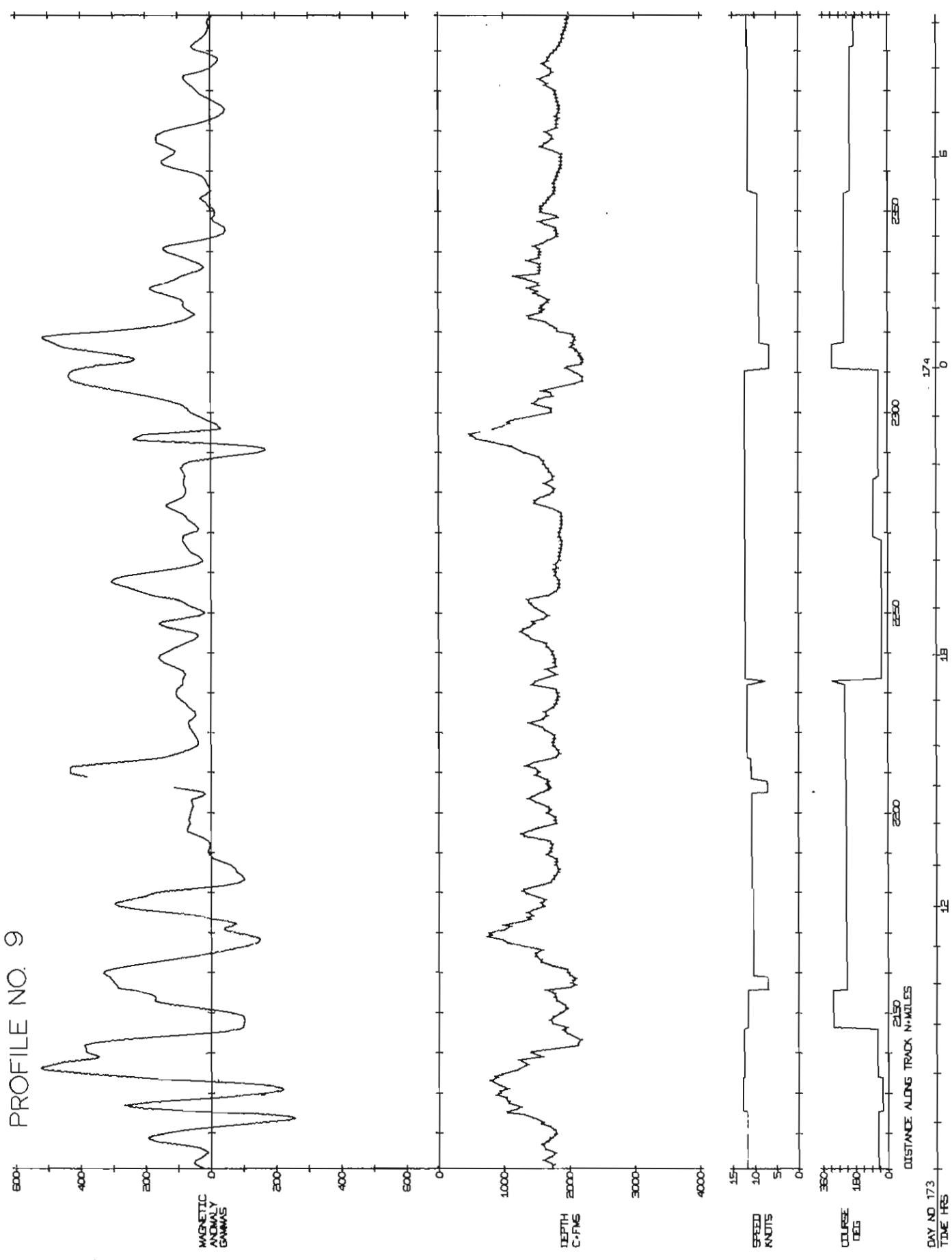
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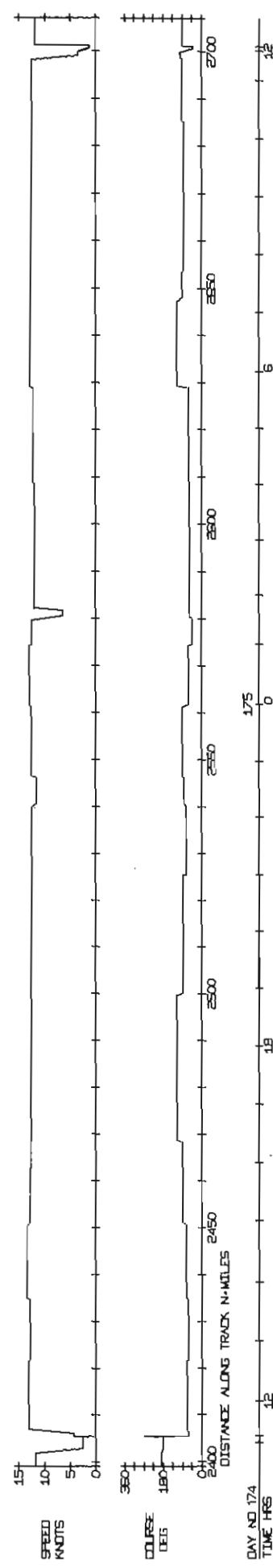
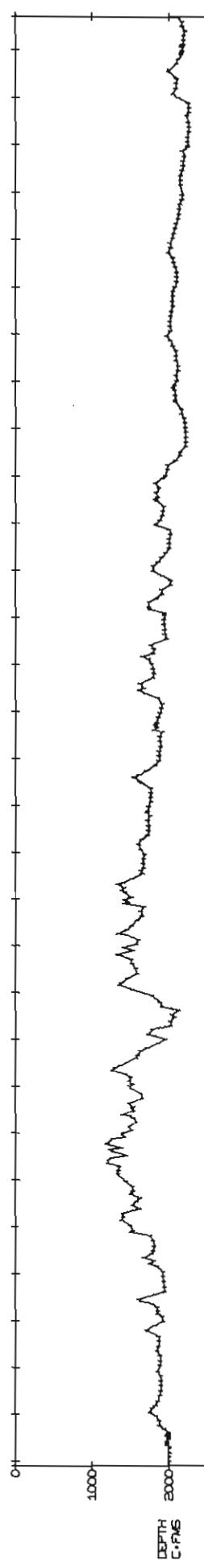
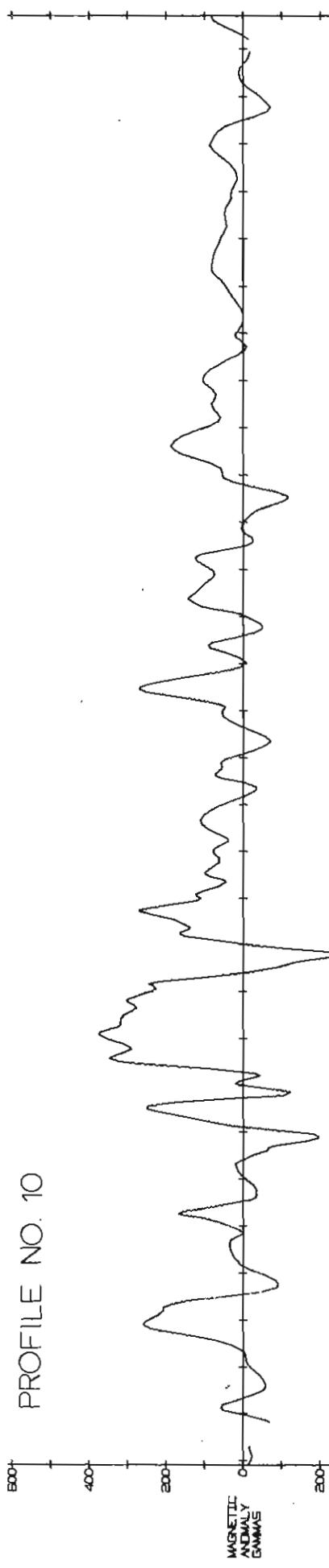
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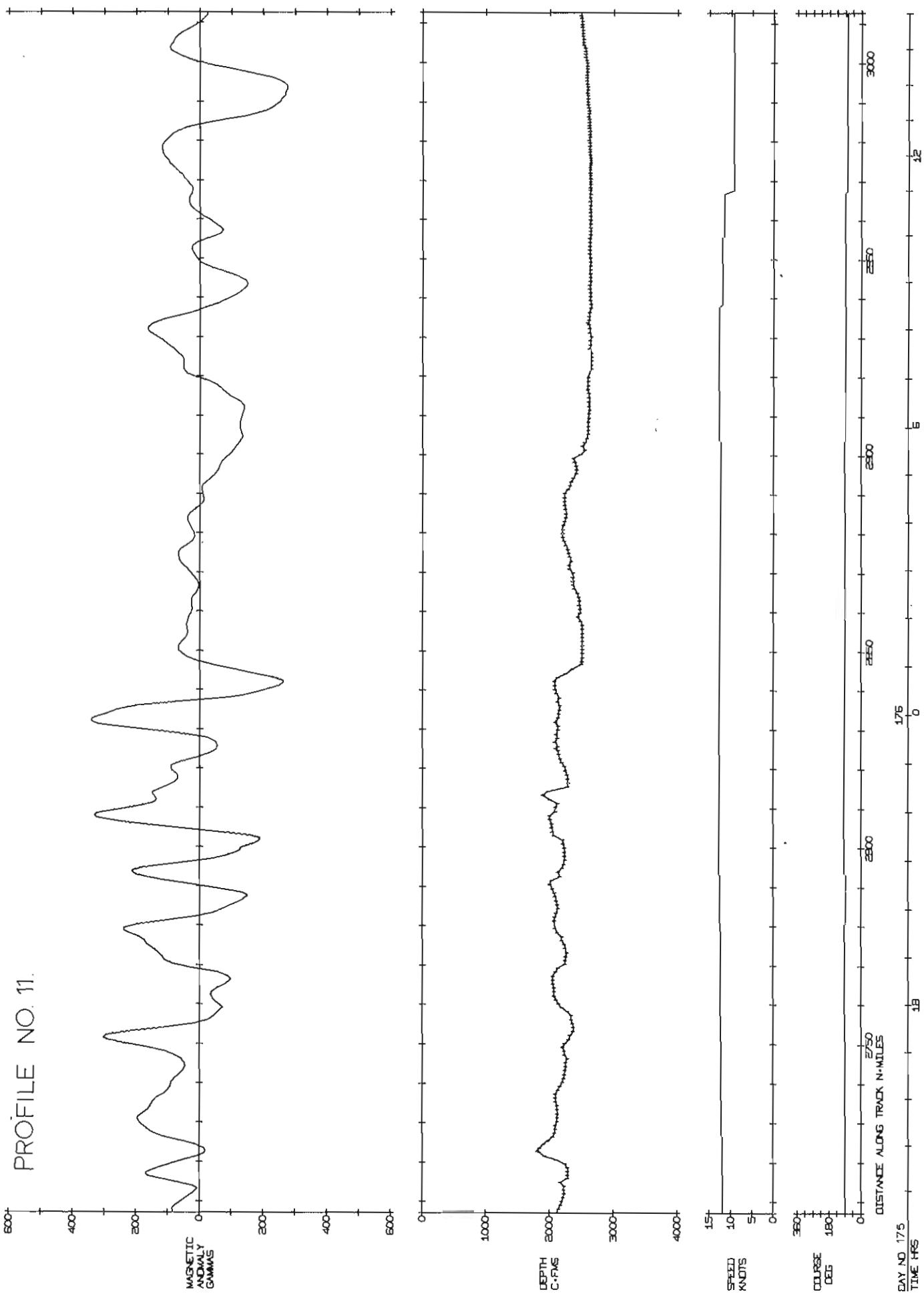
PROFILE NO. 9



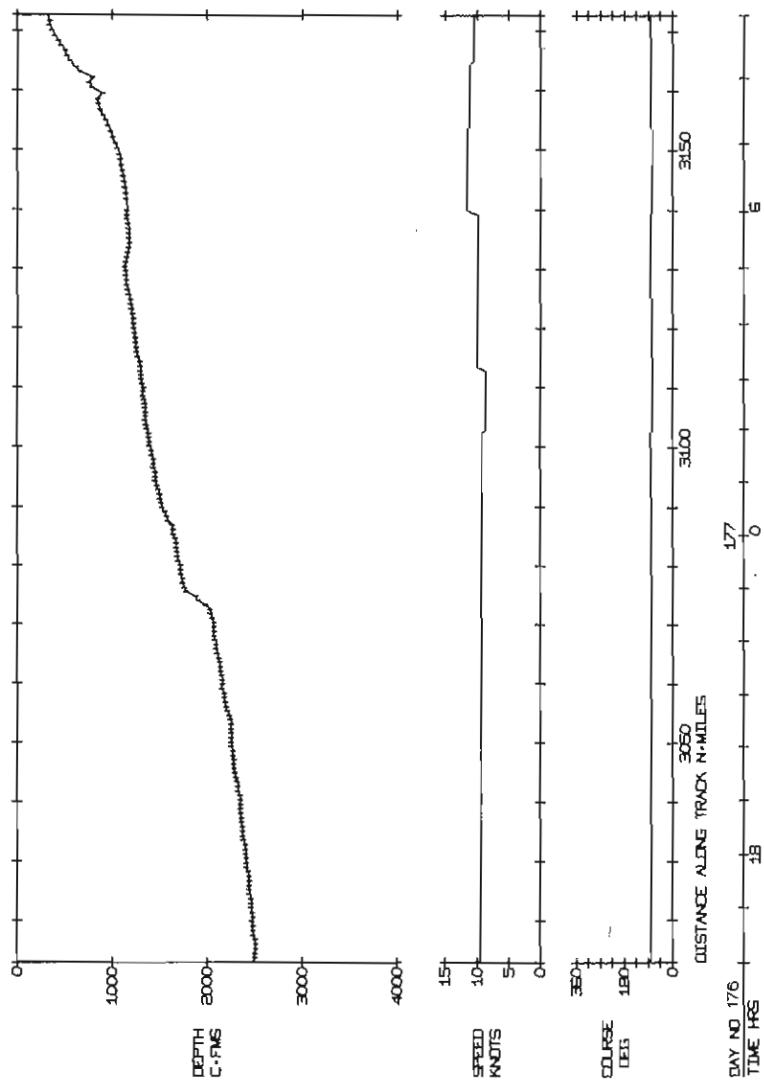
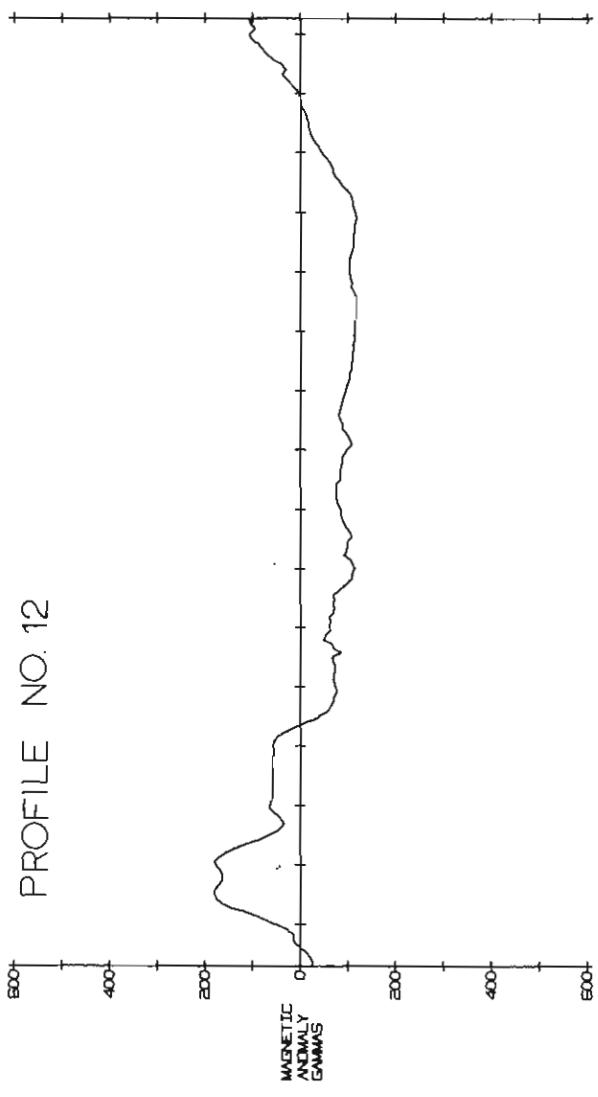
PROFILE NO. 10



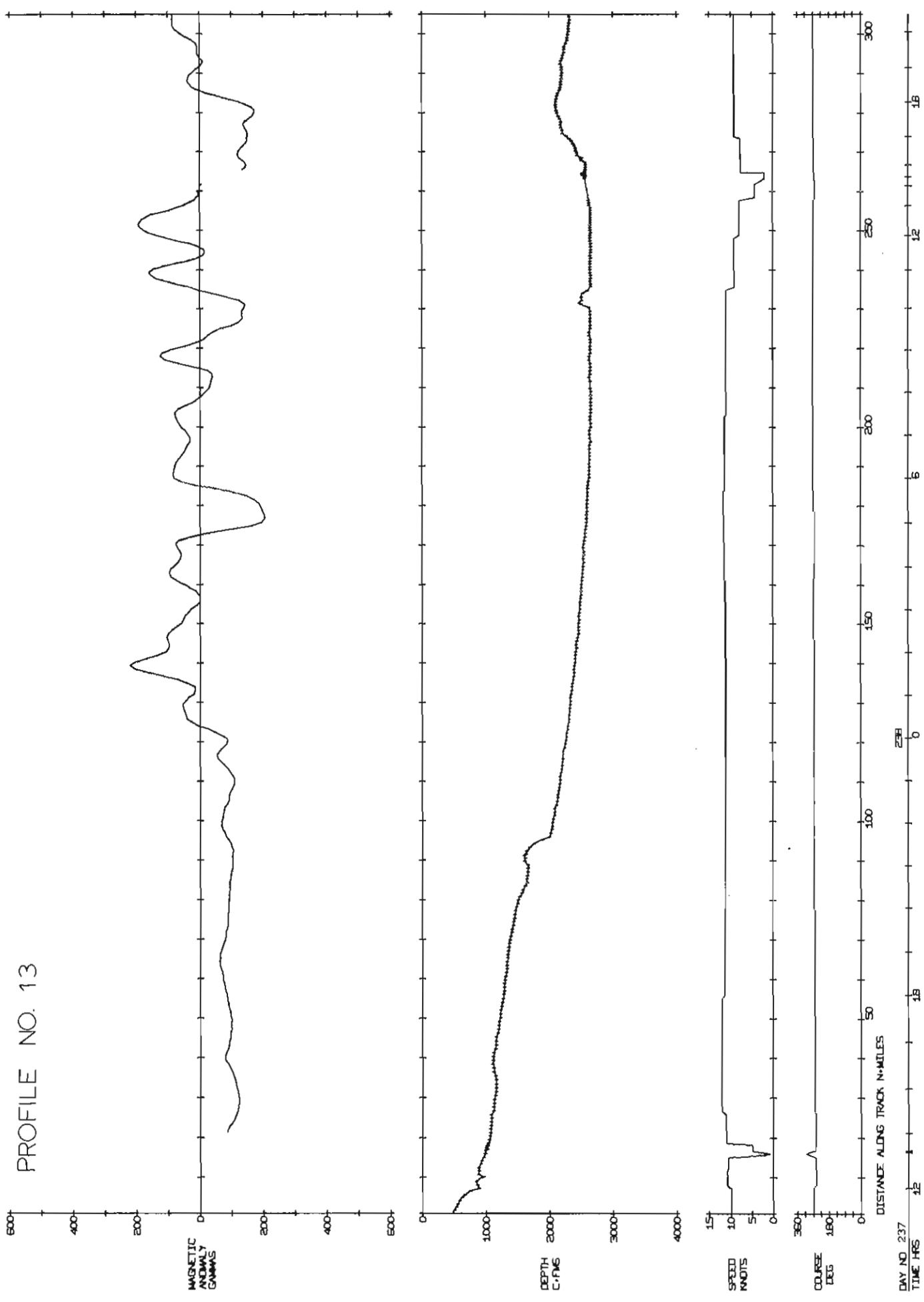
PROFILE NO. 11.



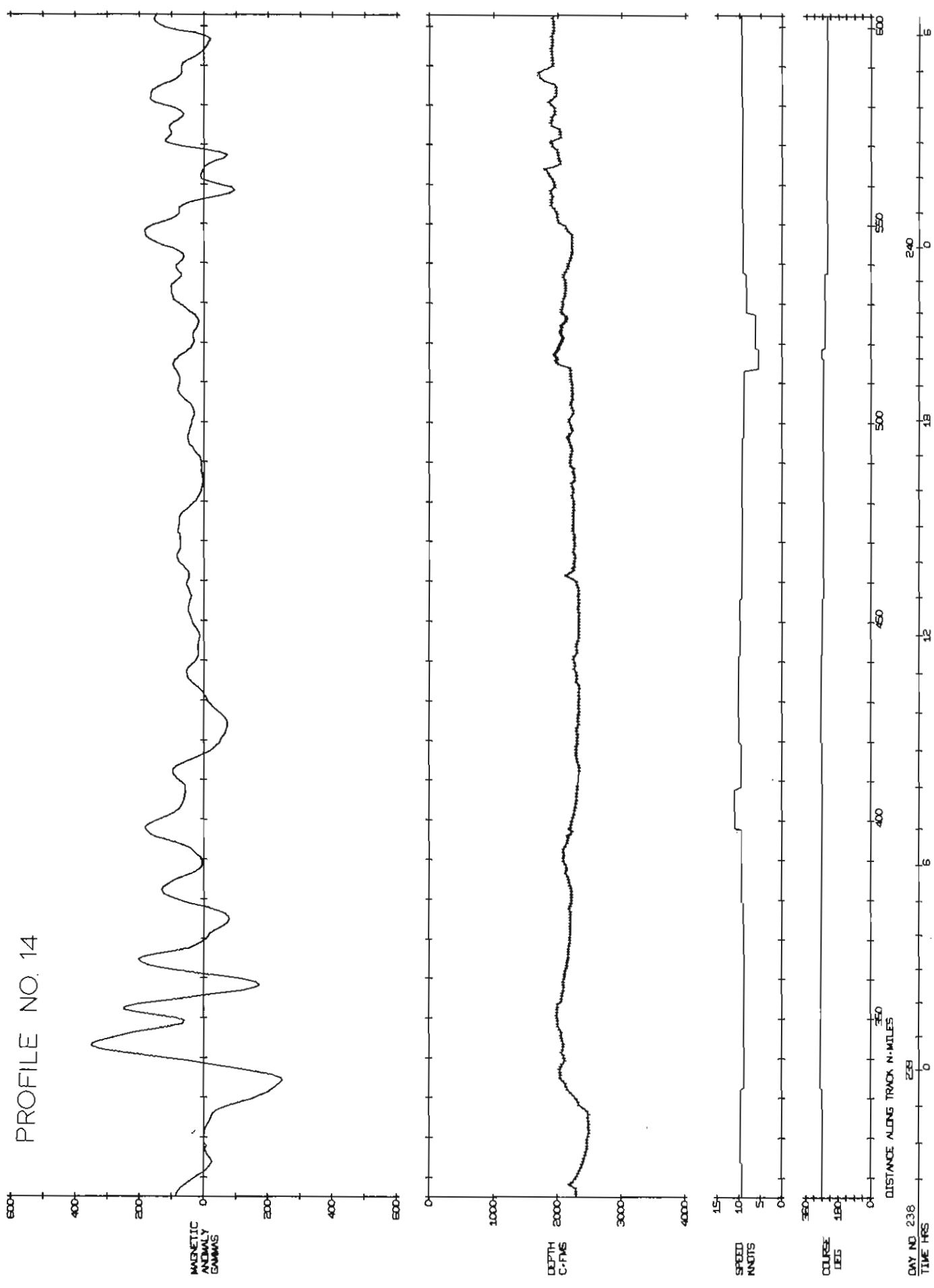
PROFILE NO. 12



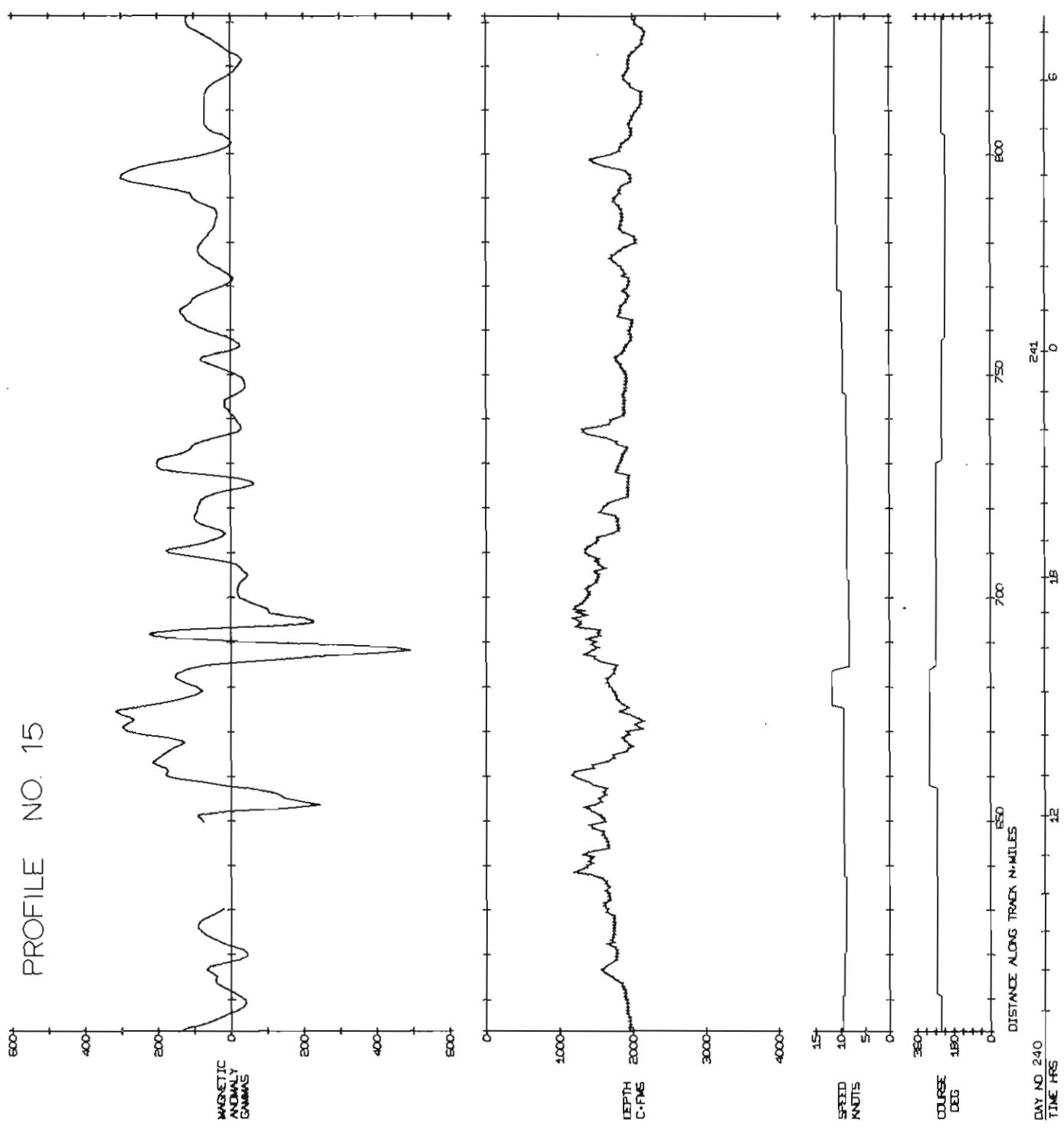
PROFILE NO. 13



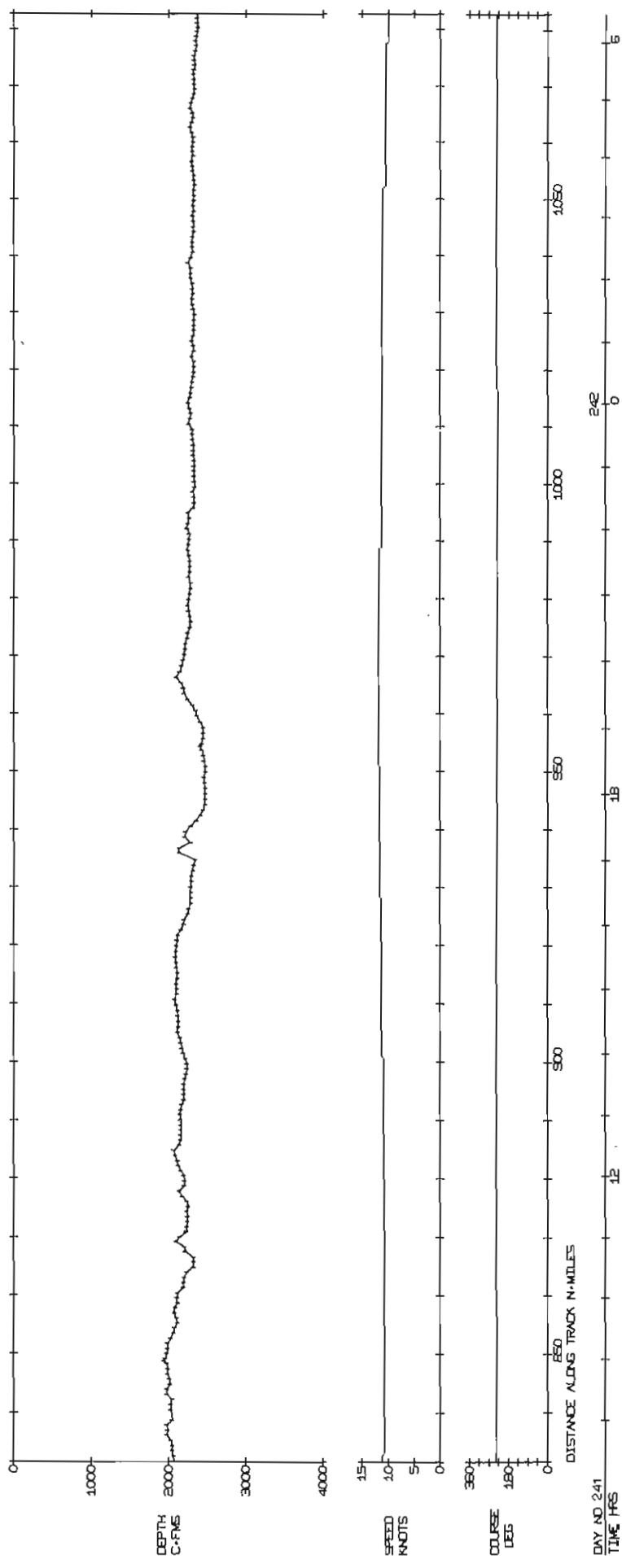
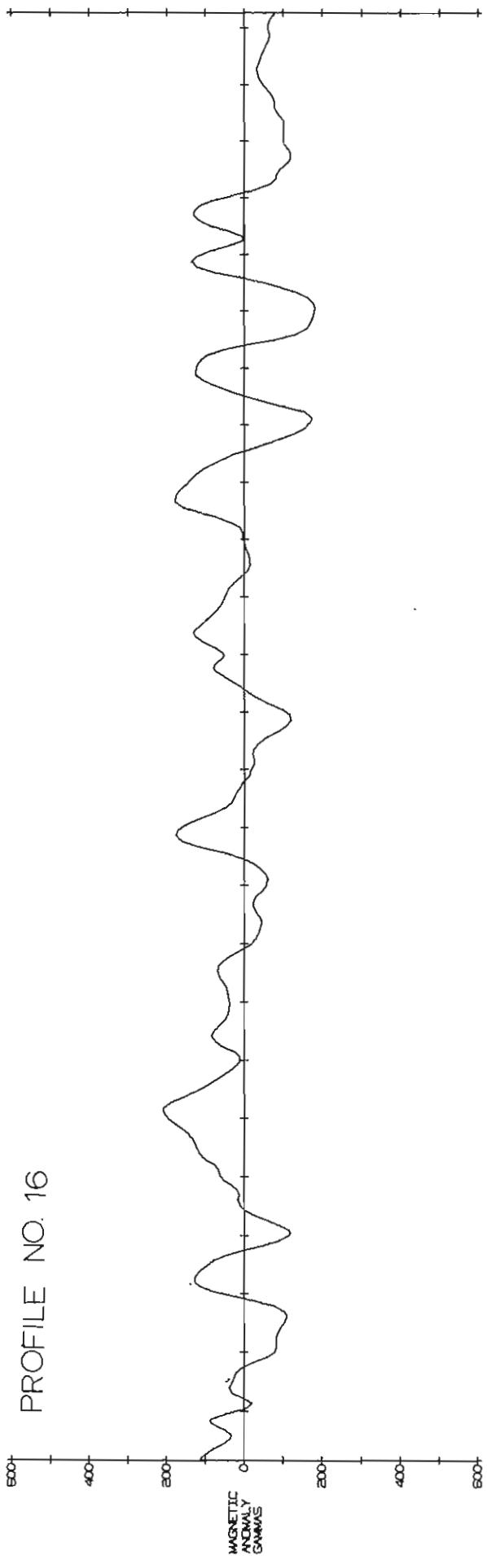
PROFILE NO. 14



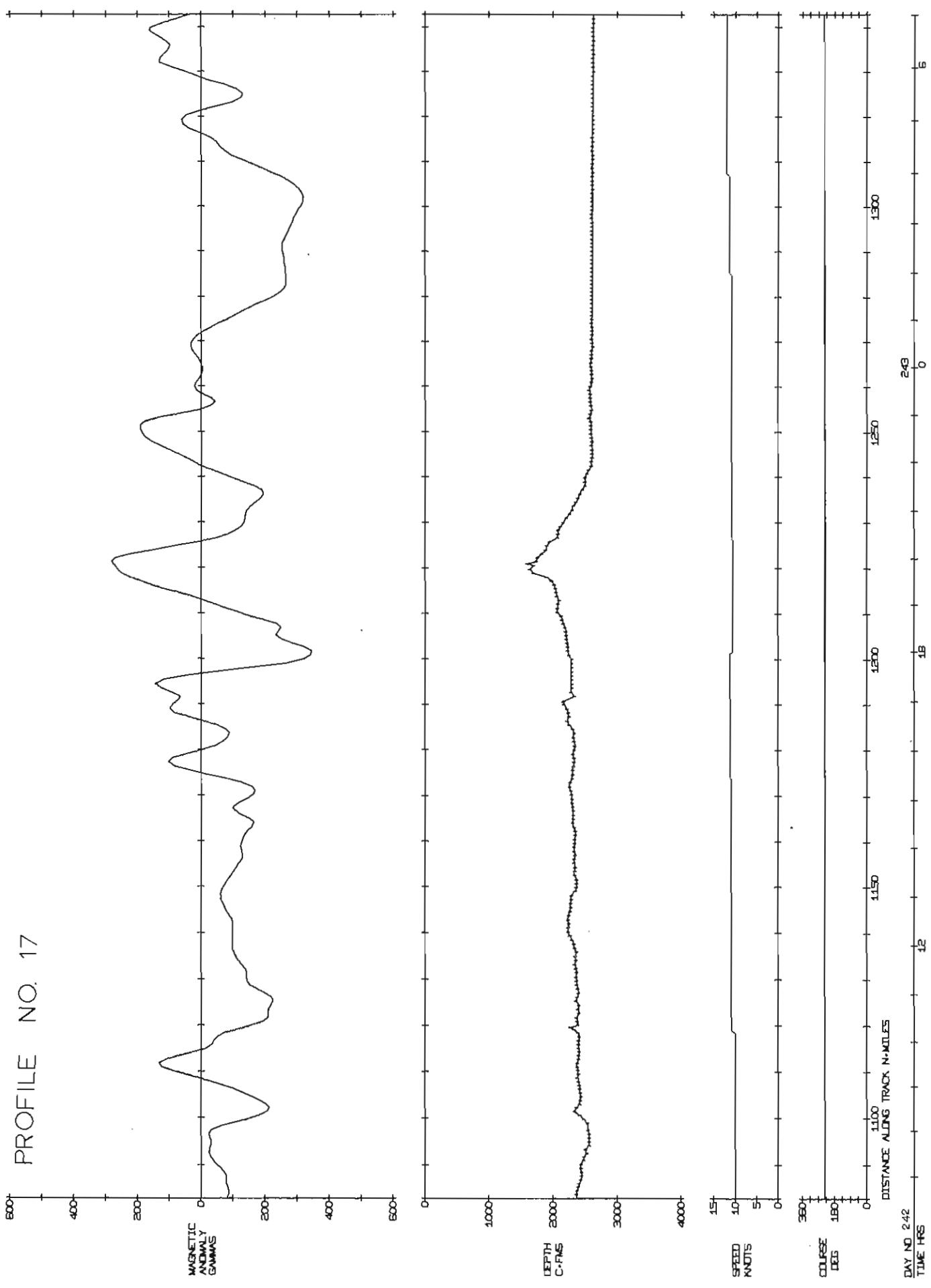
PROFILE NO. 15



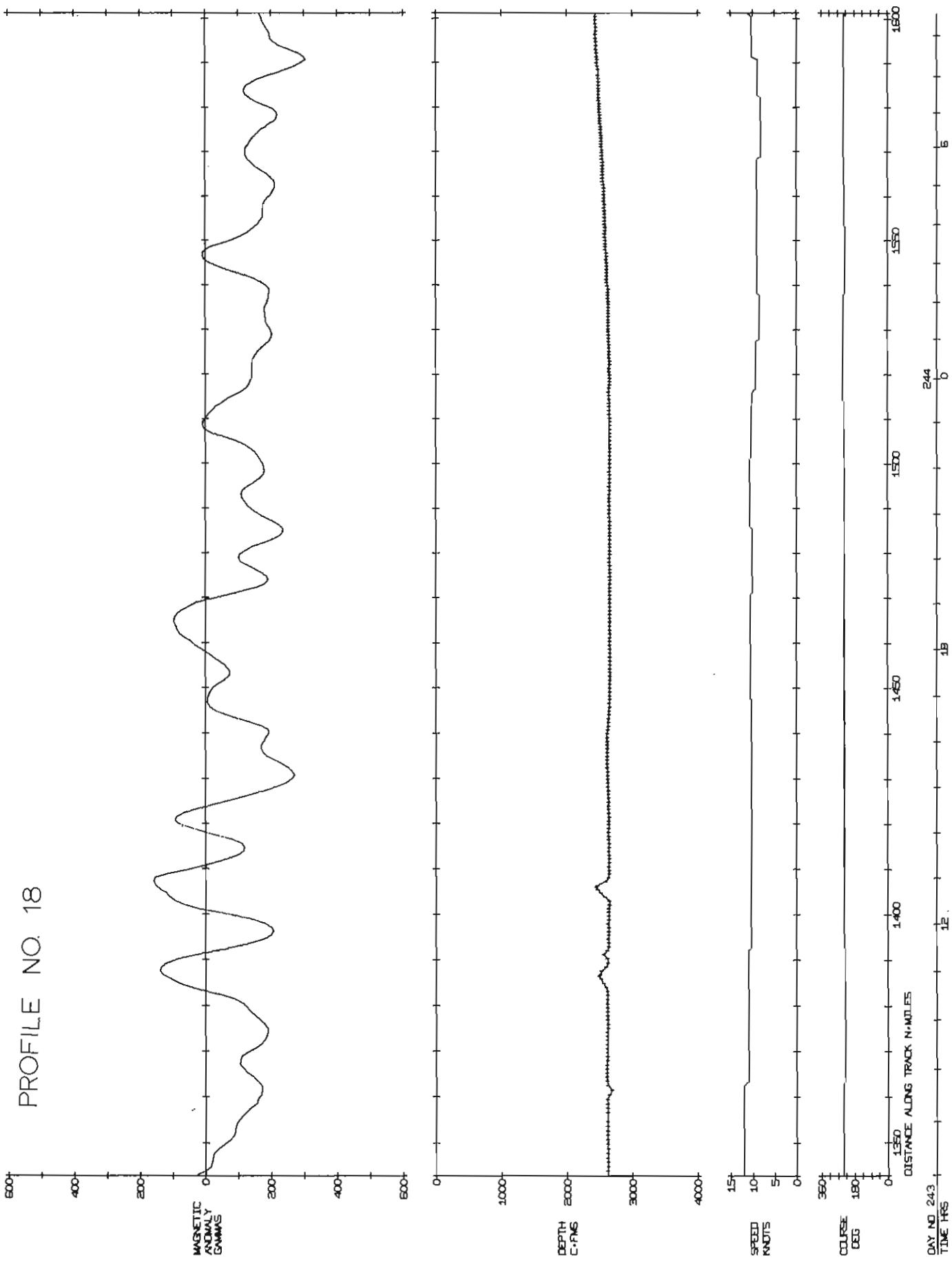
PROFILE NO. 16



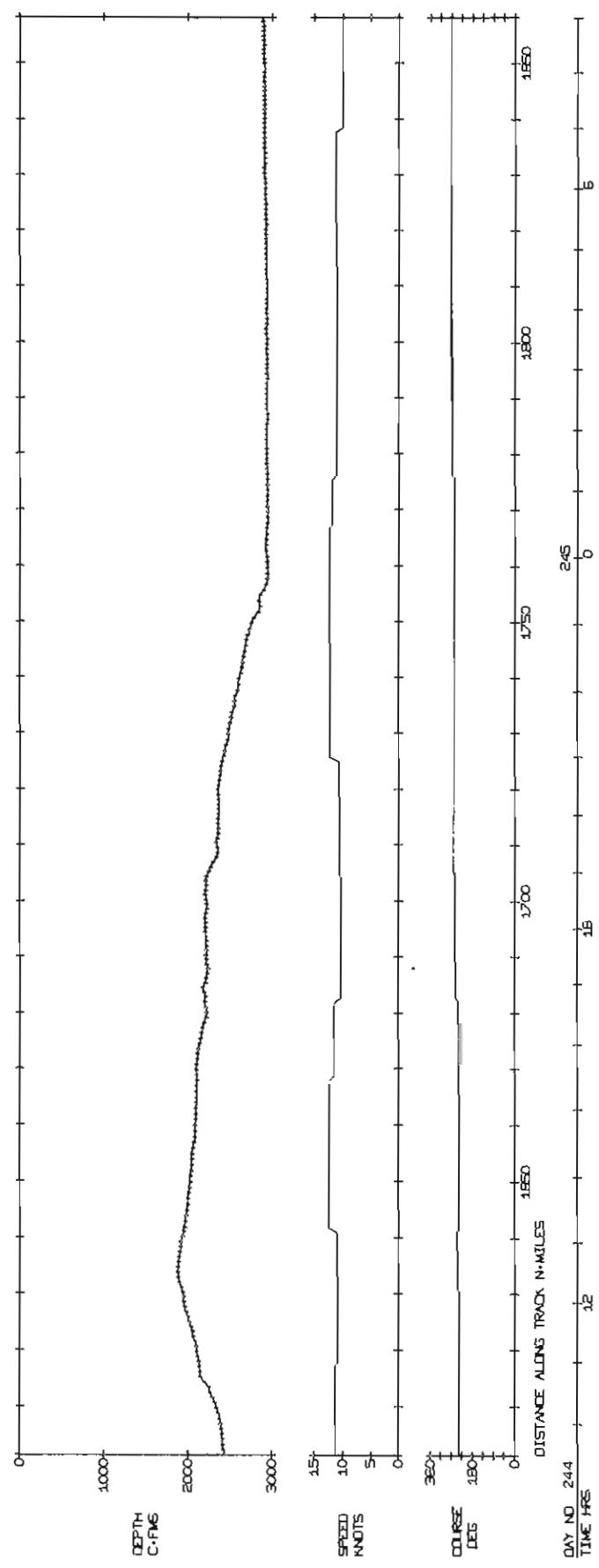
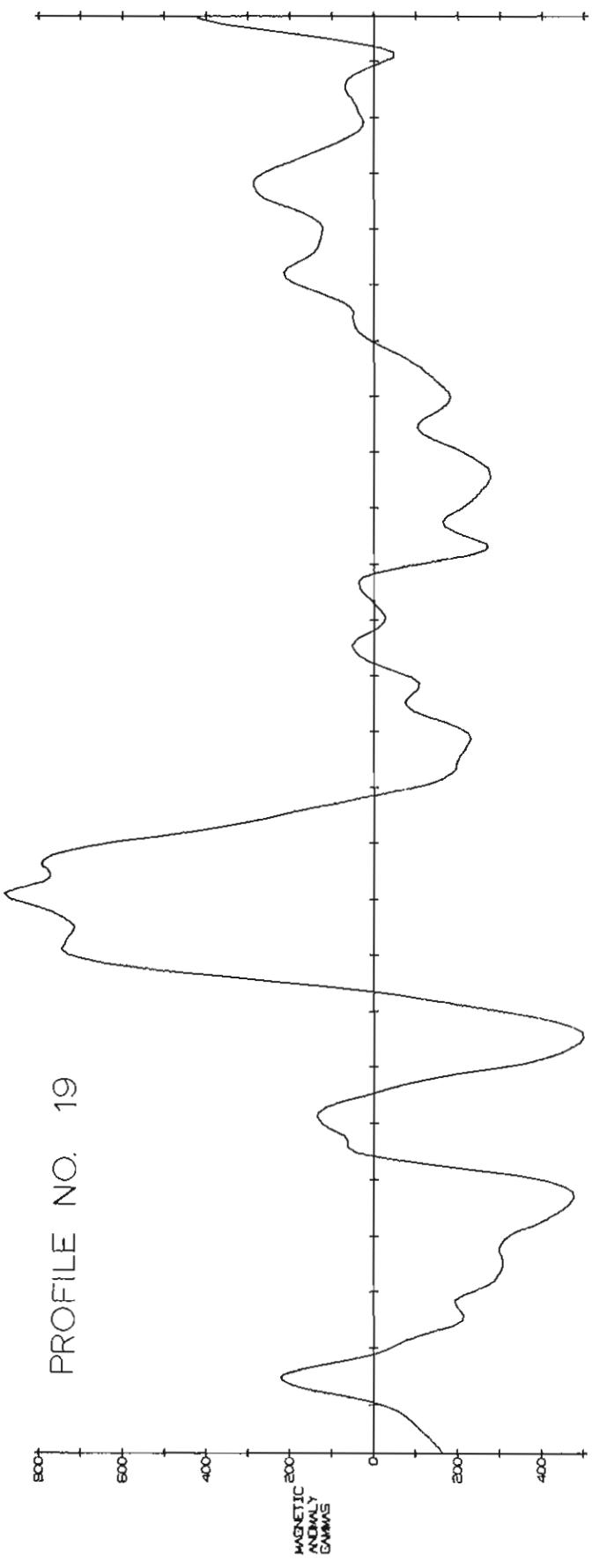
PROFILE NO. 17



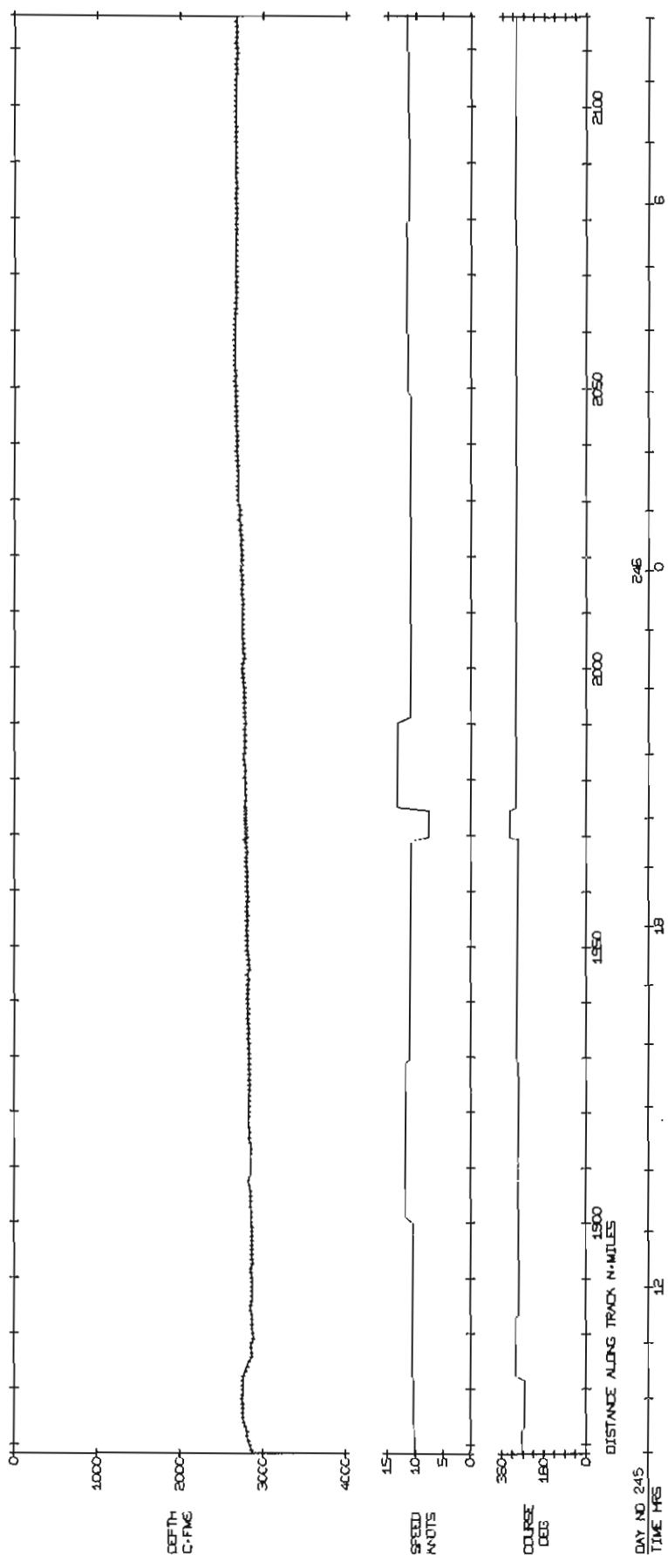
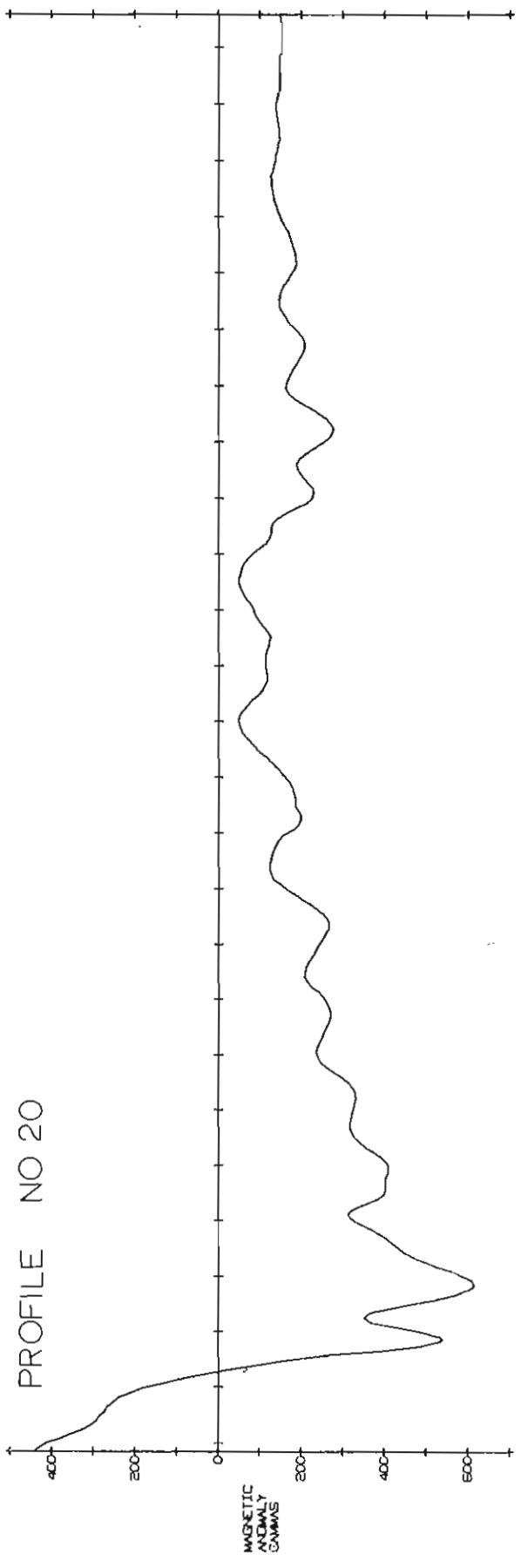
PROFILE NO. 18



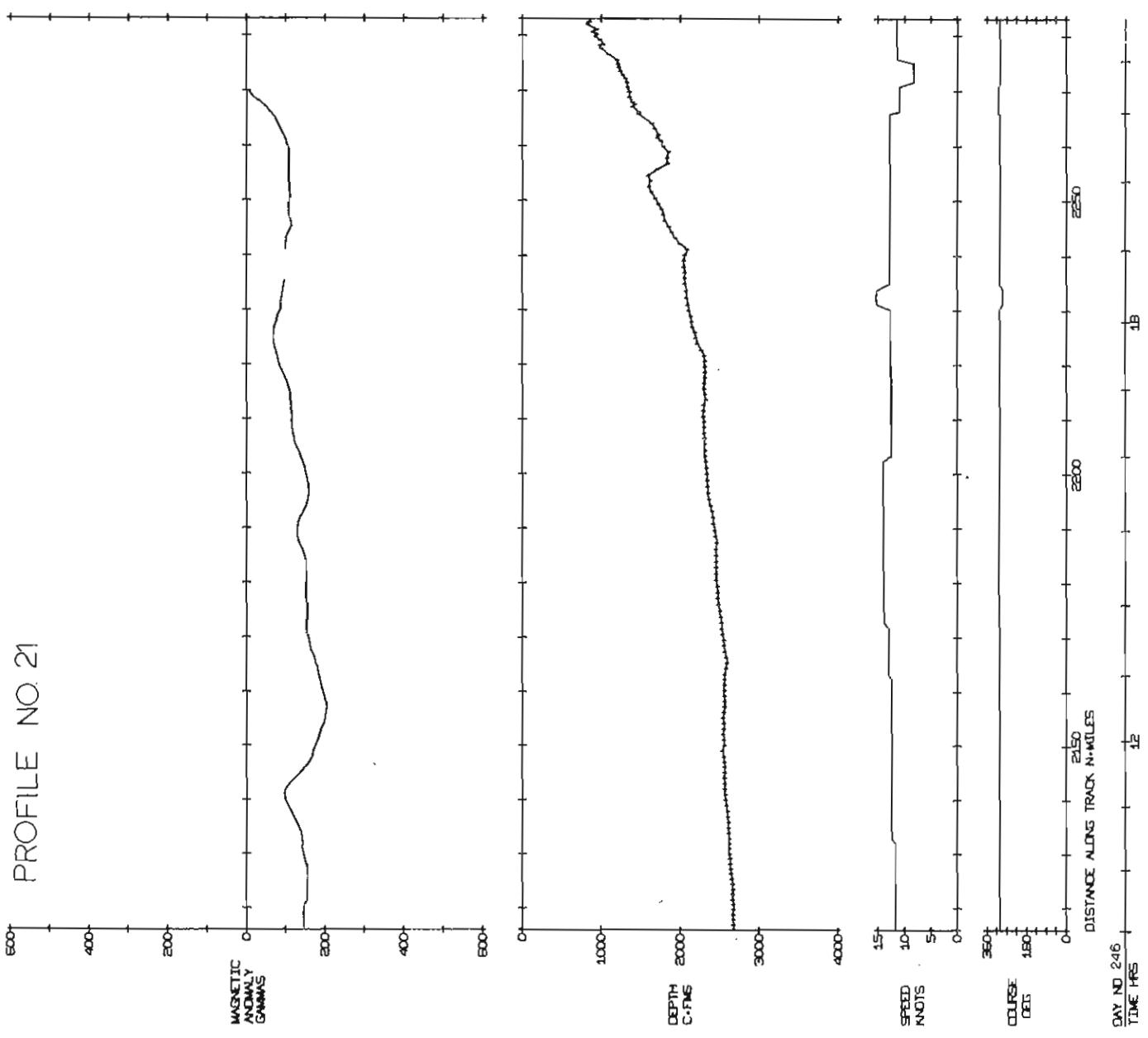
PROFILE NO. 19



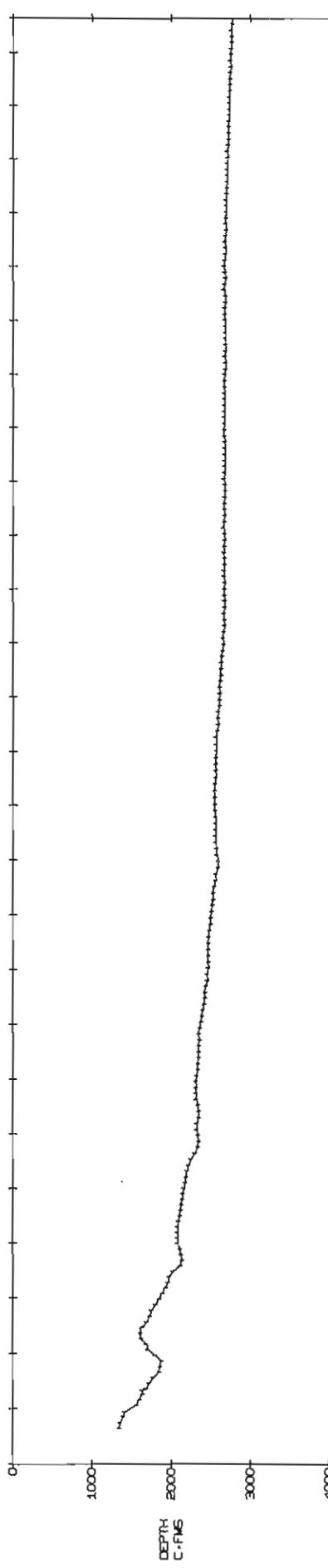
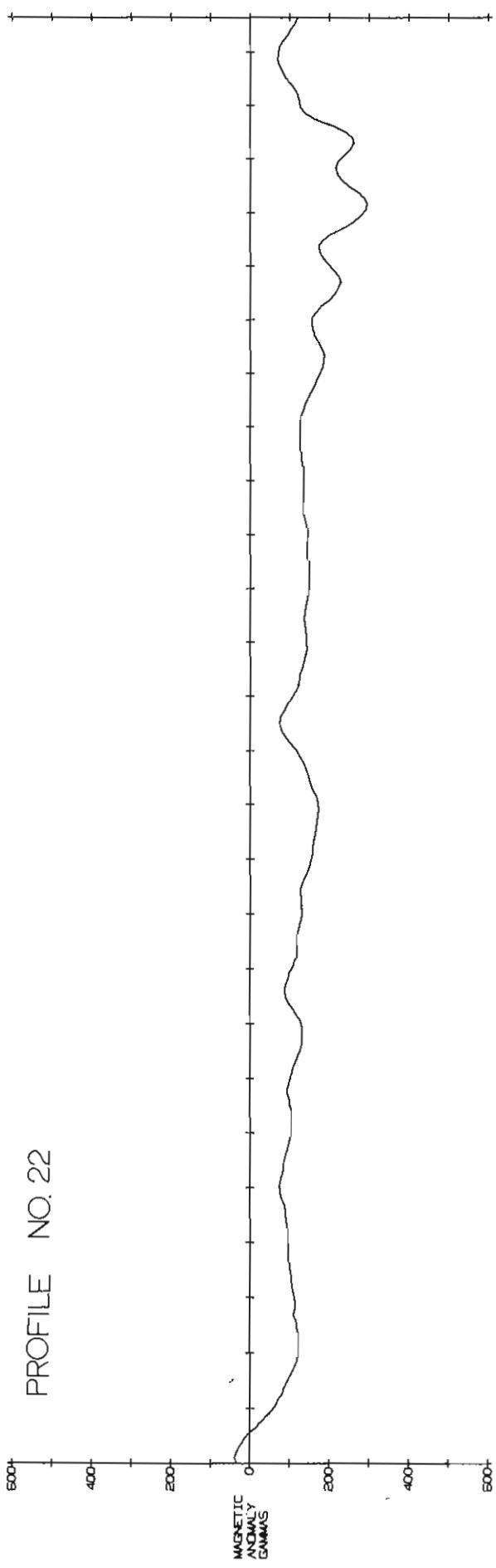
PROFILE NO 20



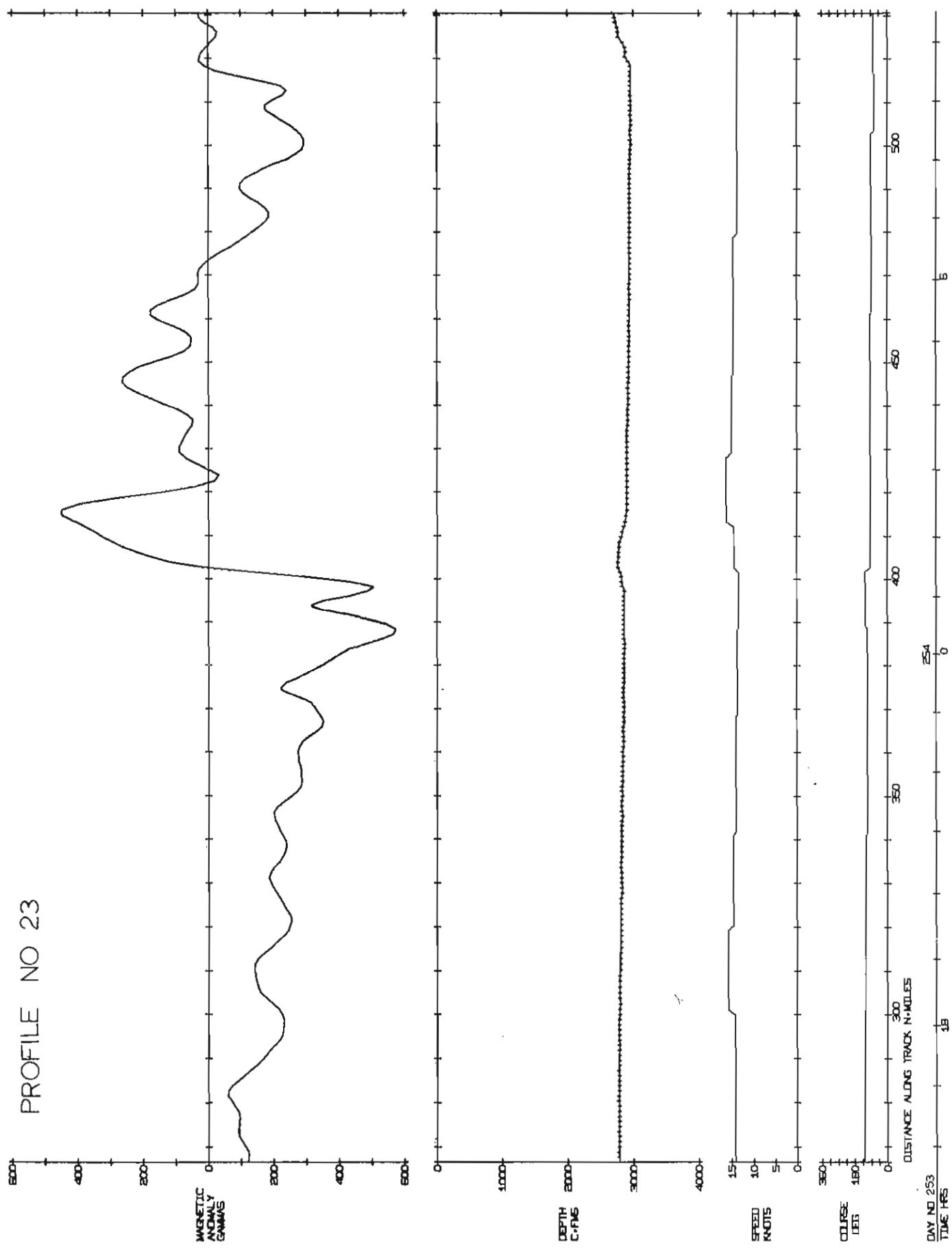
PROFILE NO. 21



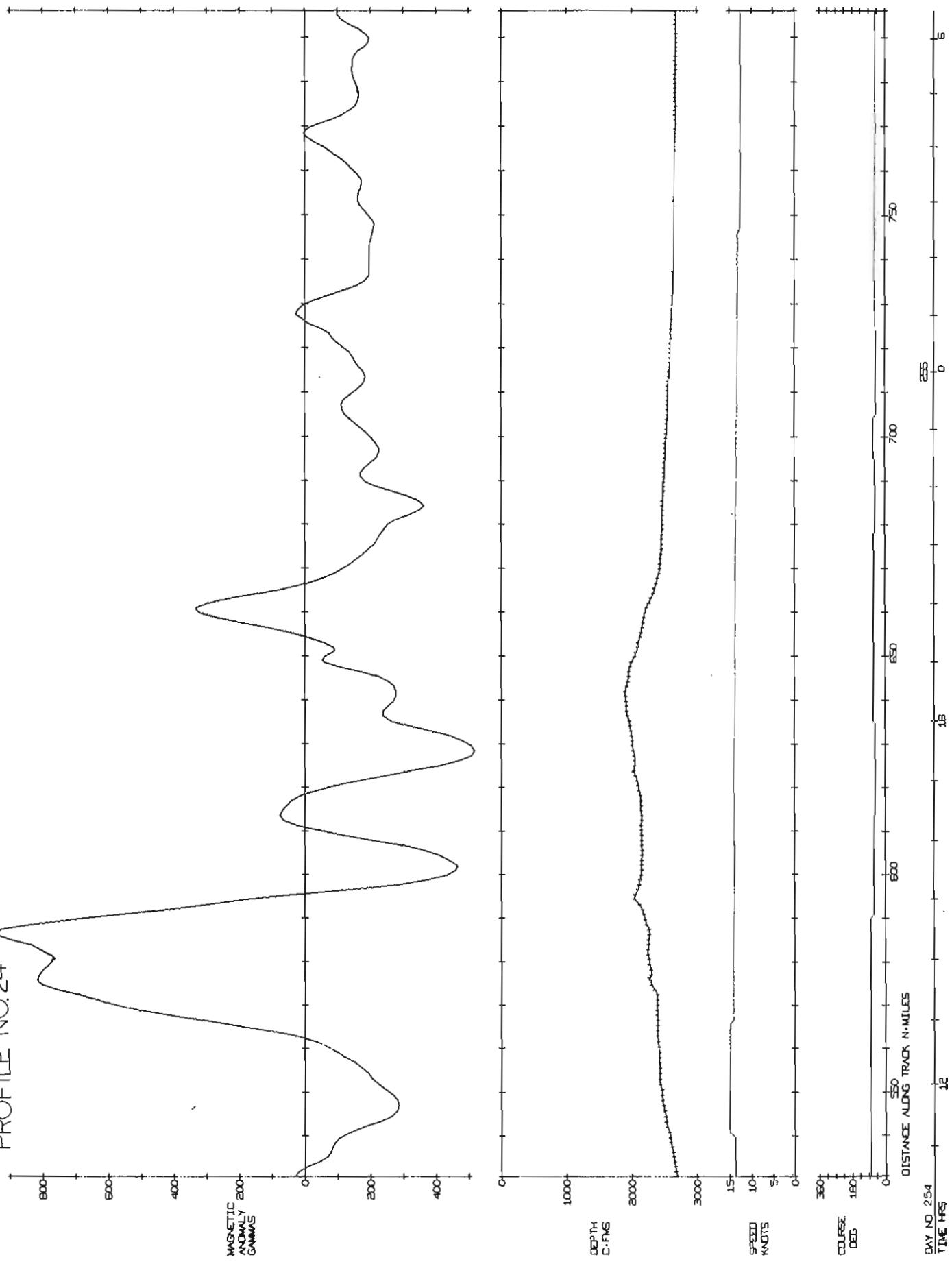
PROFILE NO. 22



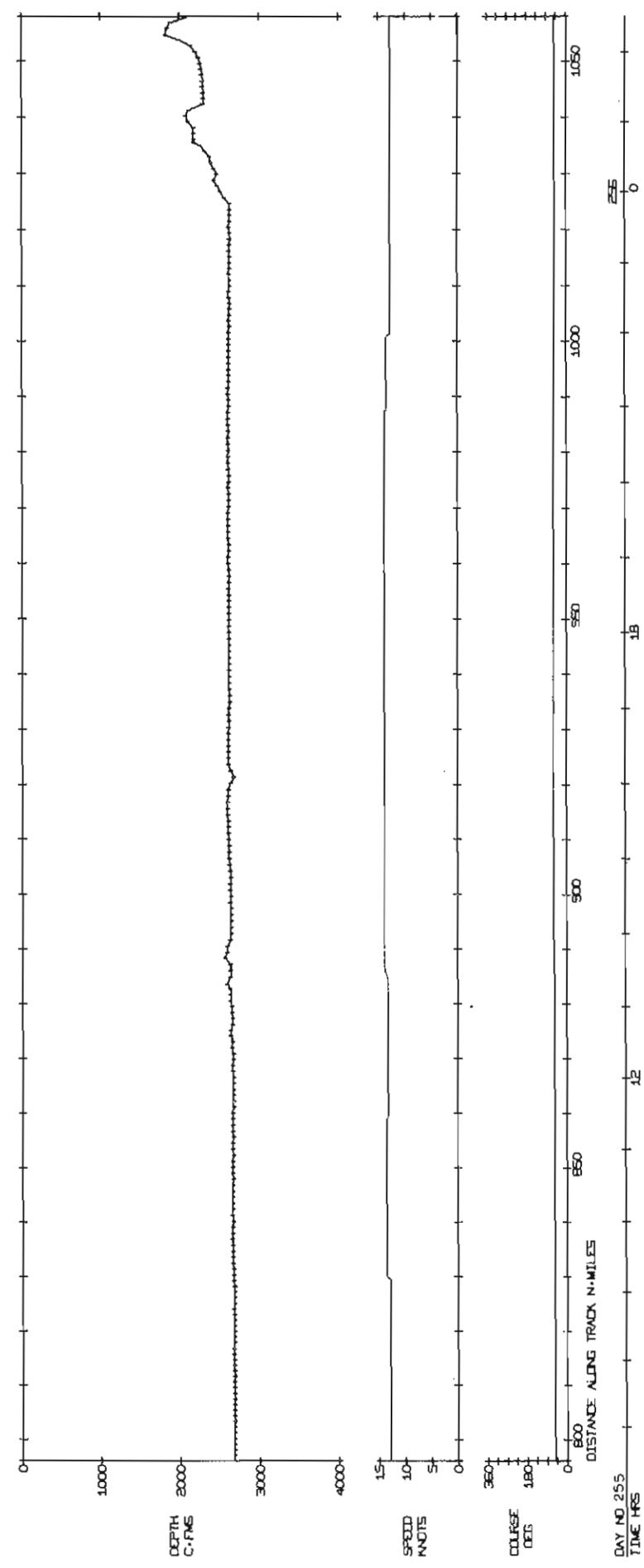
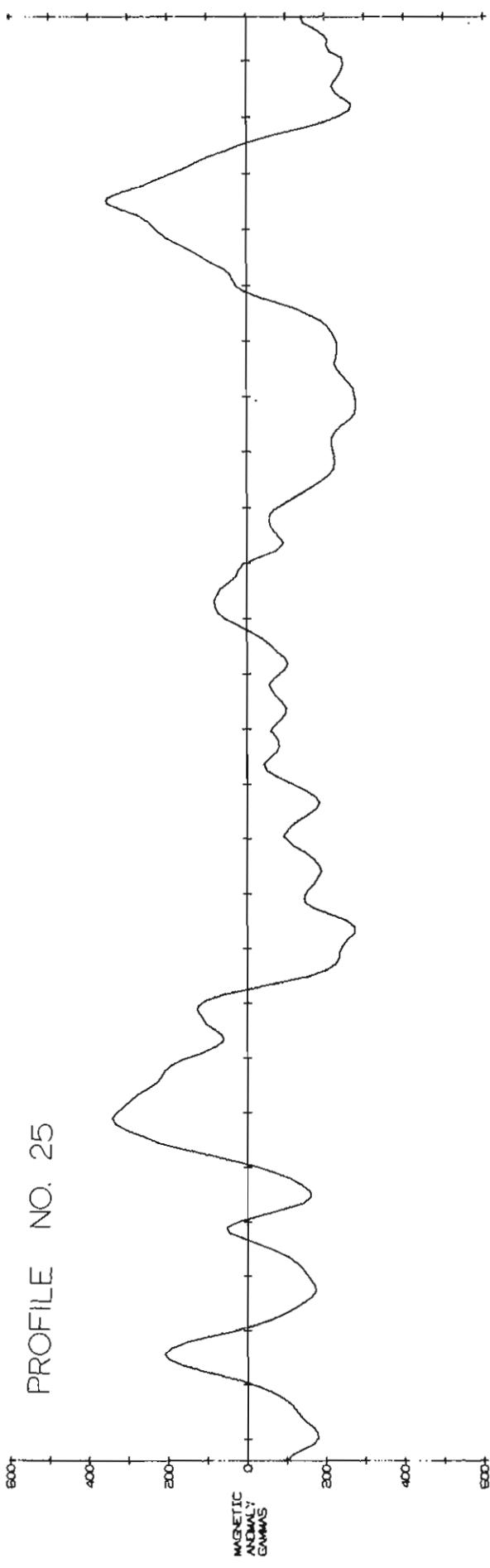
PROFILE NO 23



PROFILE NO. 24

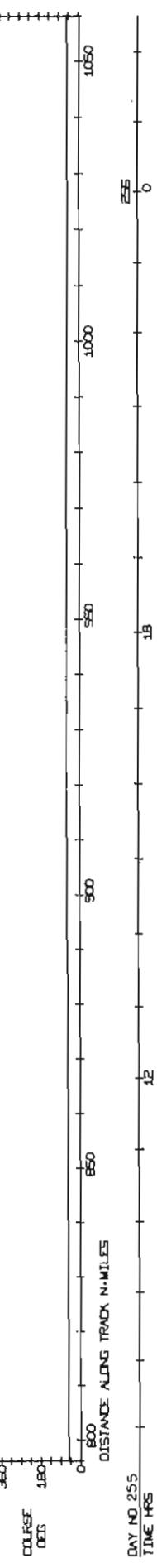


PROFILE NO. 25

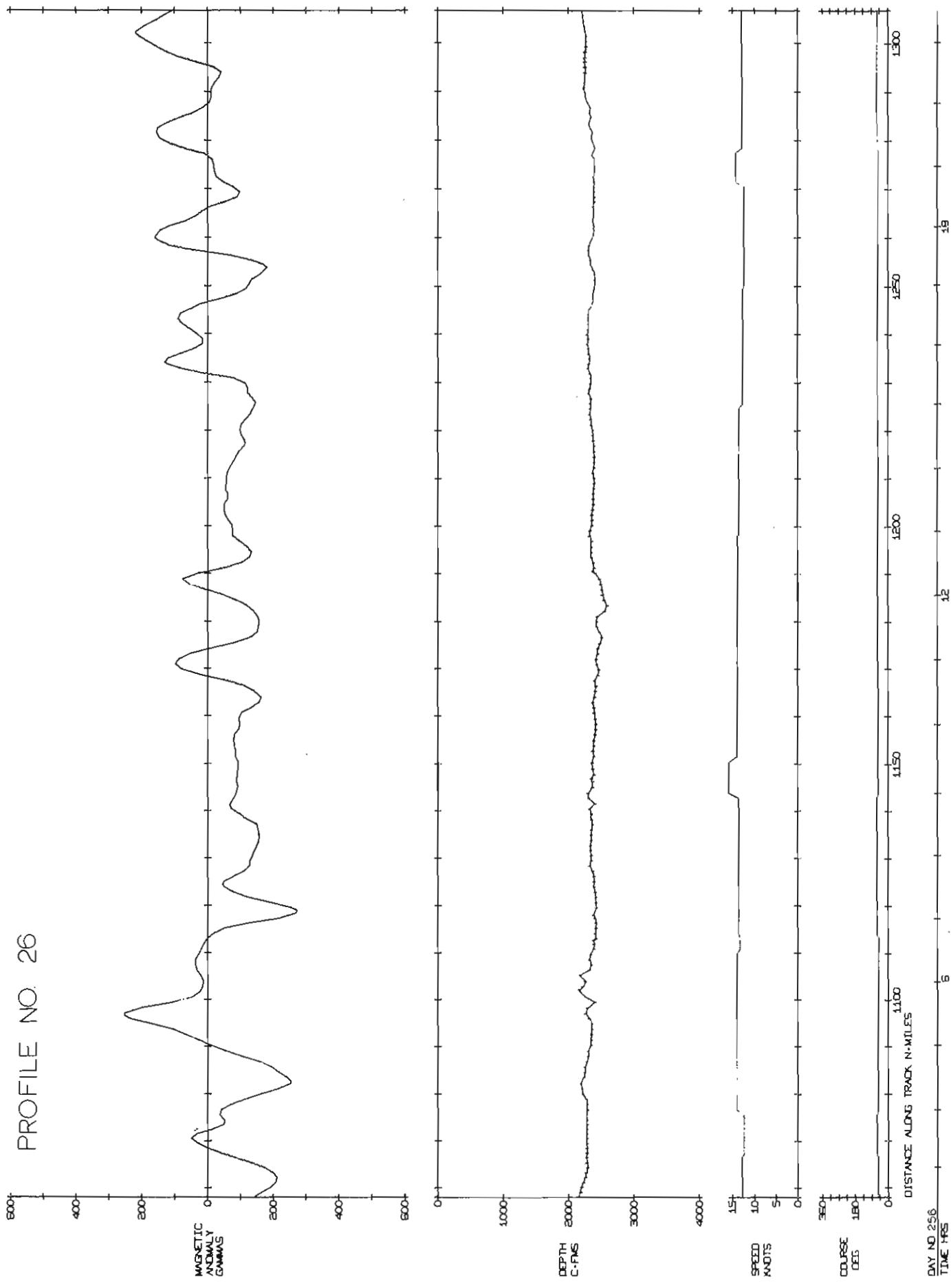


DAY NO 255

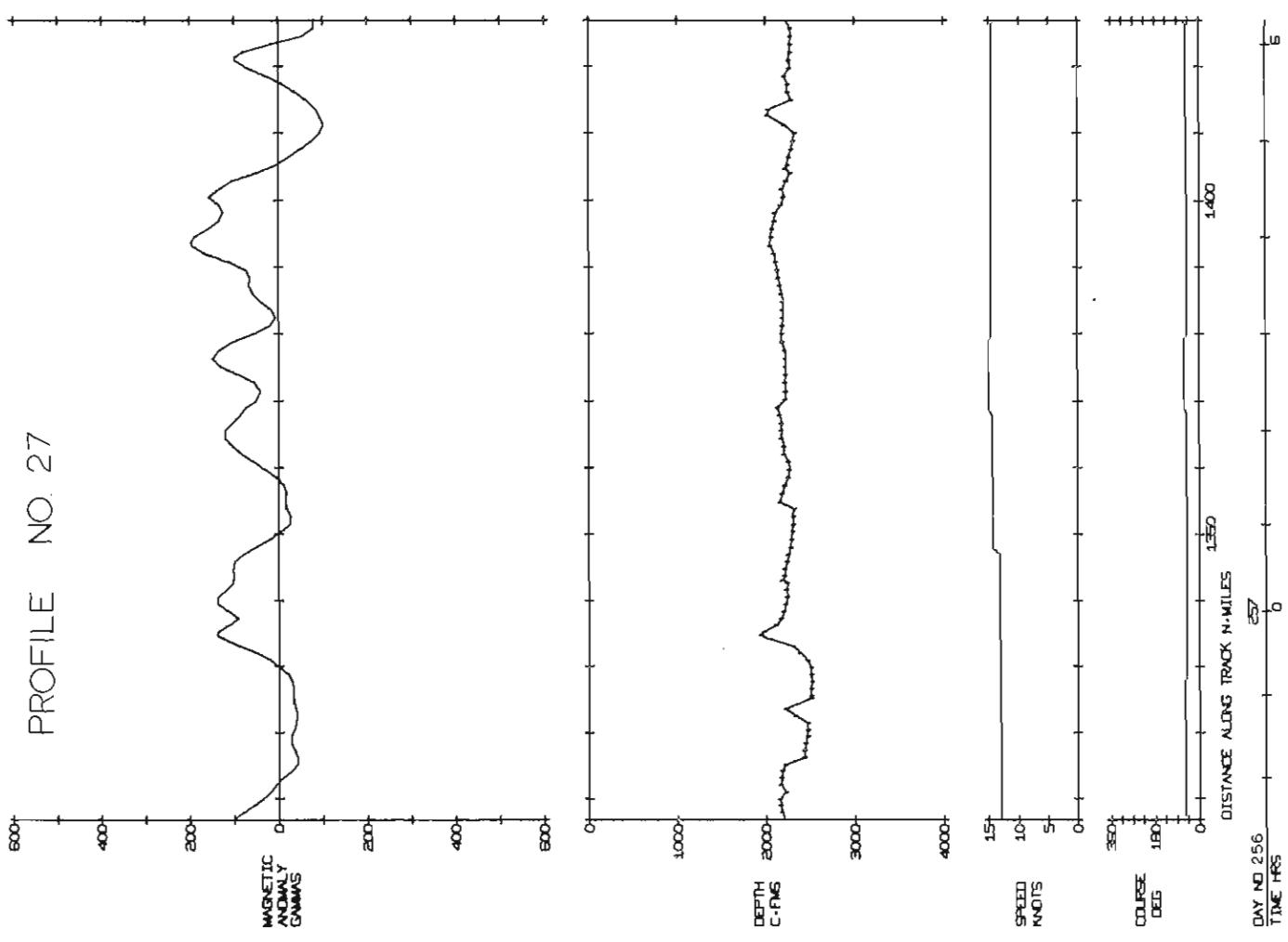
TIME HRS



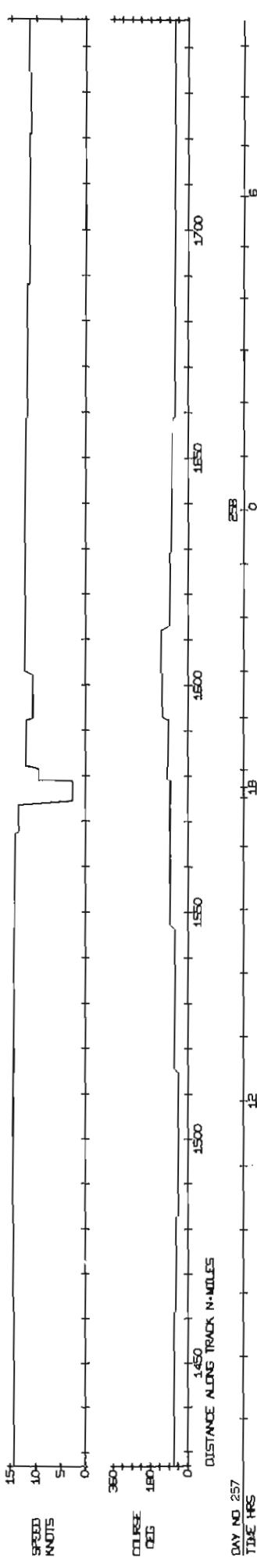
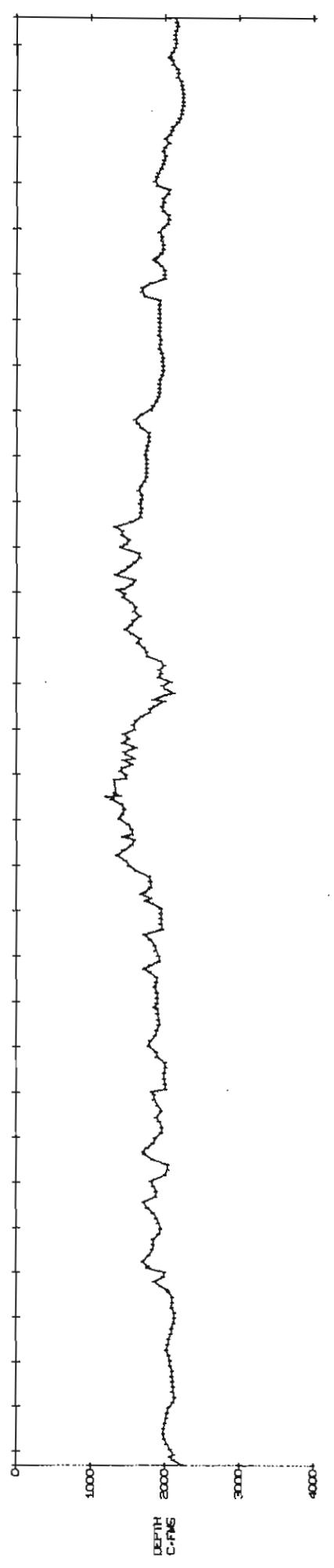
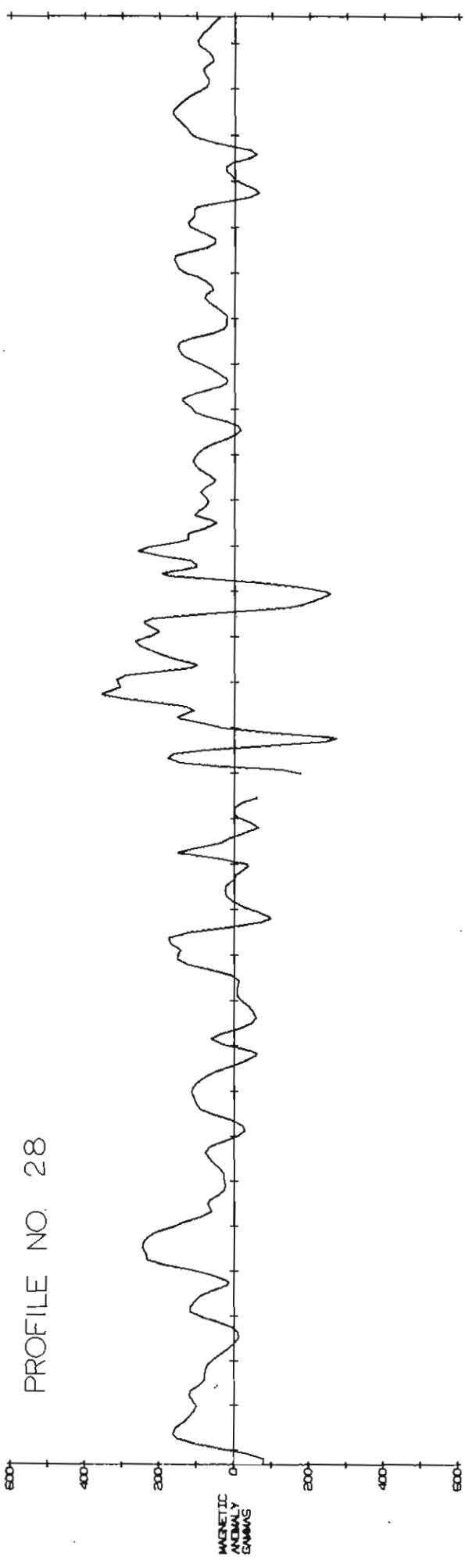
PROFILE NO. 26



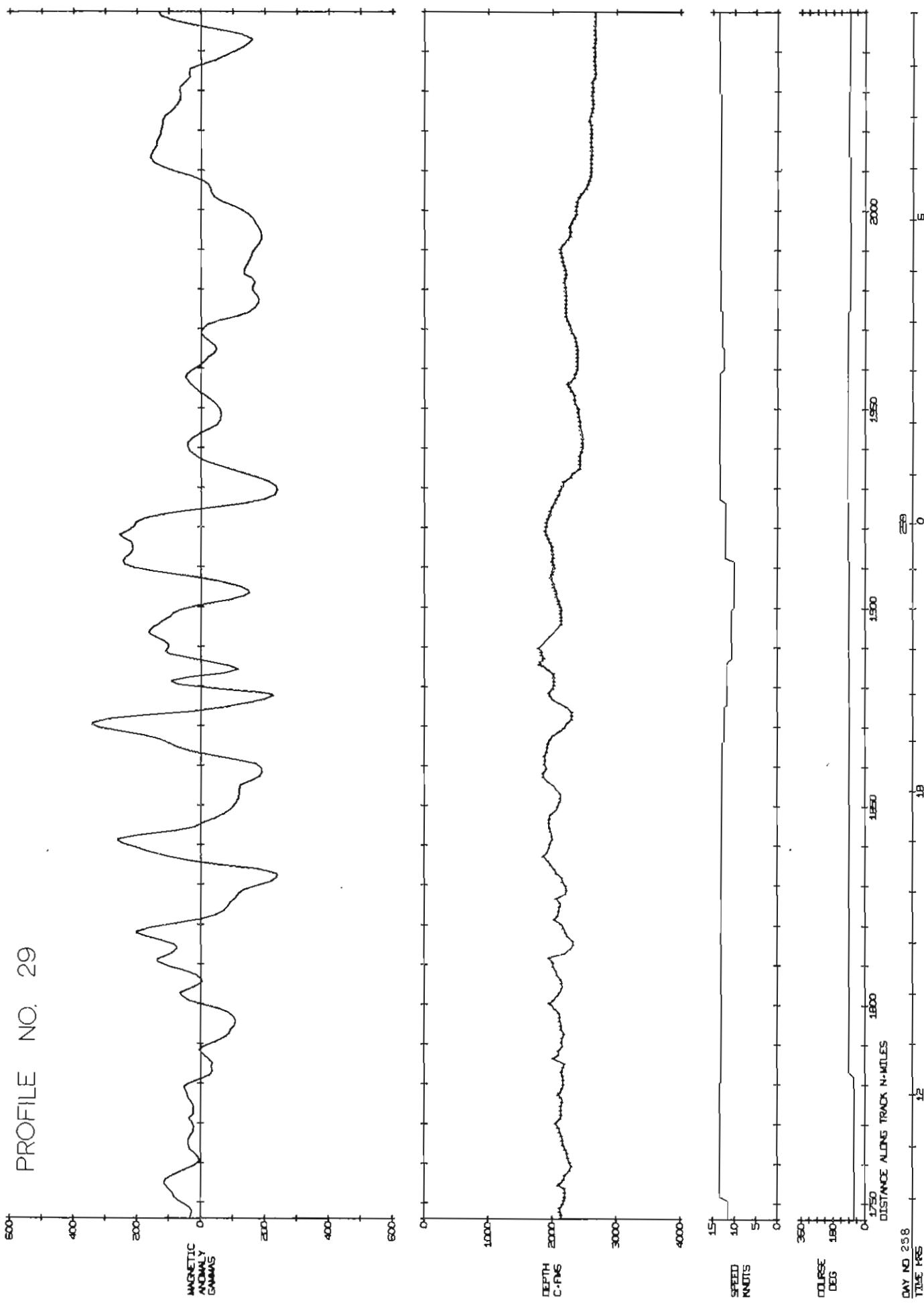
PROFILE NO. 27



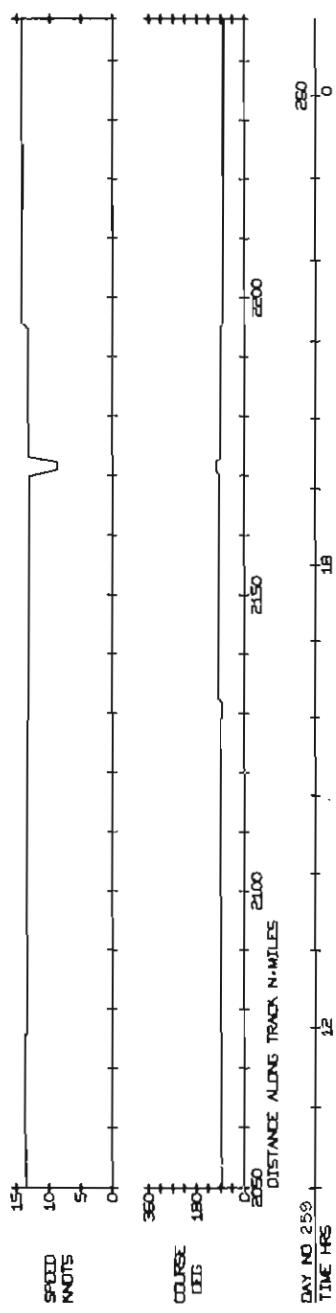
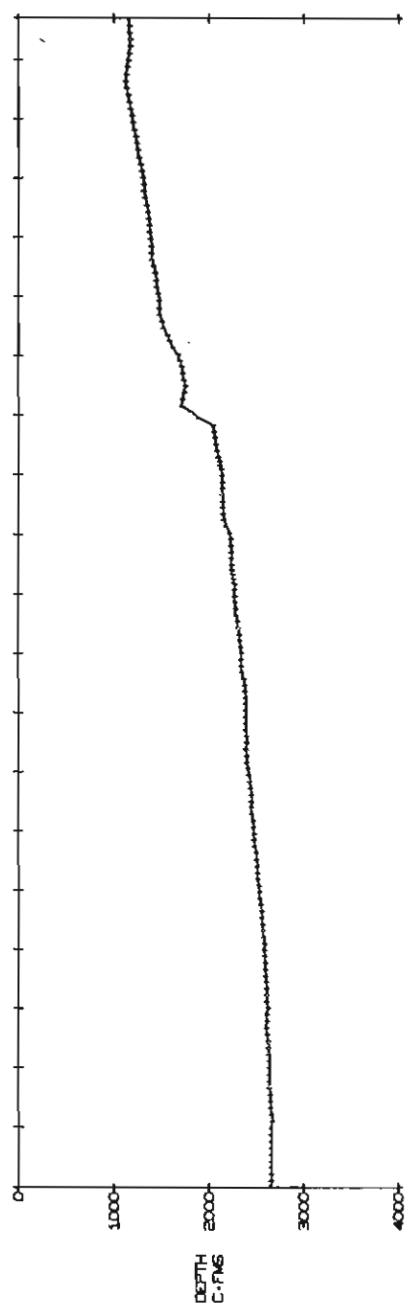
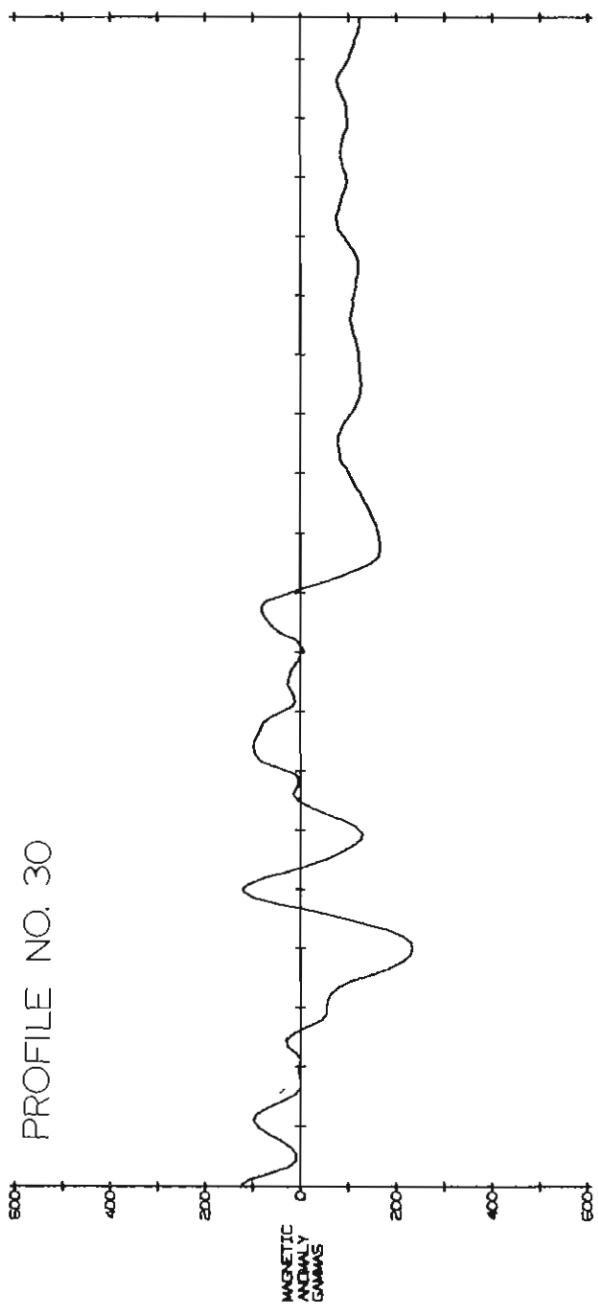
PROFILE NO. 28



PROFILE NO. 29



PROFILE NO. 30



SECTION B

Listing of Navigation Points

1:1,000,000 Track Charts

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 1

DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
164	13 0	50 13.0	-11 3.2
164	1319	50 11.7	-11 9.0
164	15 0	50 11.6	-11 11.5
164	1525	50 11.2	-11 18.4
164	1551	50 9.9	-11 22.4
164	1630	50 10.8	-11 22.3
164	17 0	50 9.0	-11 32.0
164	1745	50 6.7	-11 43.7
164	18 0	50 5.8	-11 47.1
164	1815	50 5.1	-11 51.5
164	1920	50 4.7	-11 53.1
164	1930	50 4.2	-11 56.2
164	2030	50 0.7	-12 14.7
164	2126	49 57.4	-12 31.0
164	23 0	49 56.5	-13 1.7
165	018	49 55.9	-13 26.3
165	150	49 55.8	-13 29.0
165	215	49 55.8	-13 35.2
165	245	49 55.5	-13 45.8
165	335	49 55.1	-14 0.3
165	435	49 53.2	-14 19.5
165	928	49 53.1	-14 21.6
165	945	49 52.6	-14 25.8
165	1030	49 51.6	-14 36.2
165	1130	49 50.1	-14 49.9
165	13 0	49 48.2	-15 10.0
165	1430	49 46.1	-15 30.7
165	1638	49 43.2	-16 0.6
165	1845	49 42.6	-16 38.3
165	2030	49 41.2	-17 9.7
165	2220	49 40.5	-17 34.3
166	015	49 39.6	-18 6.6
166	215	49 38.9	-18 41.0
166	5 0	49 39.0	-19 30.0
166	645	49 39.5	-20 0.3
166	830	49 42.2	-20 29.2
166	1020	49 44.7	-21 0.0
166	12 0	49 45.2	-21 29.5
166	1330	49 46.0	-21 56.0
166	15 0	49 46.6	-22 23.3
166	17 0	49 47.3	-23 0.7
166	18 8	49 46.0	-23 23.0
166	2215	49 45.4	-23 25.9
166	2230	49 45.4	-23 29.0
166	2359	49 43.7	-23 57.5
167	130	49 42.1	-24 25.5
167	327	49 39.9	-25 1.1
167	540	49 27.0	-25 36.7
167	553	49 26.1	-25 39.4
167	8 0	49 25.7	-25 39.9
167	830	49 25.2	-25 41.7
167	936	49 19.7	-26 0.0
167	11 0	49 10.8	-26 21.4
167	1245	48 59.6	-26 49.0
167	1445	48 58.0	-27 25.8
167	15 0	48 58.0	-27 27.0
167	1615	48 0.3	-27 27.3
167	1650	48 59.2	-27 27.2
167	1715	48 56.7	-27 33.6
167	1745	48 58.5	-27 41.5
167	1915	48 57.8	-28 5.6
167	1945	48 57.8	-28 11.0
167	2015	48 57.5	-28 21.0
167	2215	48 52.3	-28 51.0
168	045	48 45.9	-29 29.3
168	245	48 32.2	-29 52.3
168	415	48 21.4	-30 9.9
168	515	48 17.9	-30 23.8
168	715	48 5.5	-30 54.3
168	915	47 53.1	-31 24.5
168	1115	47 40.7	-31 54.3
168	1145	47 38.5	-31 58.6
168	1545	47 39.5	-31 59.8
168	1630	47 44.1	-31 50.4
168	1830	48 2.4	-31 25.3

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 1

DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
168	2030	48 20.2	-30 59.5
168	2230	48 37.7	-30 33.6
168	2345	48 48.8	-30 17.5
169	1 0	48 54.8	-29 54.9
169	215	49 1.9	-29 32.6
169	330	49 2.3	-29 9.2
169	5 0	49 1.8	-28 42.4
169	7 0	49 1.1	-28 4.4
169	915	49 3.0	-27 22.5
169	1030	49 3.6	-26 59.9
169	1155	49 4.0	-26 35.2
169	125	49 2.3	-26 34.8
169	1230	49 2.2	-26 39.5
169	1415	49 1.8	-27 6.8
169	1545	49 1.4	-27 28.9
169	1615	49 1.8	-27 36.2
169	1715	49 0.5	-27 53.5
169	190	49 0.0	-28 24.9
169	2052	48 59.6	-28 58.3
169	2245	48 46.7	-29 24.0
169	230	48 48.6	-29 24.5
170	026	48 59.6	-29 3.5
170	045	48 59.8	-29 9.5
170	130	49 0.3	-29 15.7
170	215	49 0.9	-29 29.0
170	321	49 0.0	-29 48.9
170	513	48 50.9	-30 19.5
170	718	49 15.1	-30 13.0
170	83	49 21.7	-30 3.6
170	915	49 29.8	-29 44.8
170	1045	49 40.5	-29 21.0
170	125	49 50.0	-29 0.0
170	130	49 47.9	-28 42.9
170	1345	49 46.3	-28 29.6
170	167	49 42.0	-27 58.0
170	1630	49 42.1	-27 52.4
170	1830	49 43.1	-27 14.7
170	2030	49 44.3	-26 37.4
170	2234	49 44.9	-25 59.7
170	2330	49 44.2	-25 52.5
171	045	49 41.7	-25 24.0
171	155	49 39.7	-25 0.5
171	230	49 34.1	-25 1.2
171	4 0	49 25.8	-25 25.7
171	445	49 23.6	-25 35.6
171	530	49 20.8	-25 50.0
171	615	49 20.7	-26 4.0
171	8 0	49 20.3	-26 34.4
171	931	49 20.5	-27 0.0
171	1115	49 7.3	-27 22.6
171	1230	49 7.5	-27 43.8
171	140	49 7.4	-28 9.7
171	1615	49 6.1	-28 43.5
171	1630	49 6.1	-28 45.6
171	1945	49 5.2	-29 34.0
171	210	48 51.0	-29 33.0
171	2246	48 51.2	-29 0.5
172	115	48 52.7	-28 16.9
172	3 0	48 52.7	-27 51.9
172	515	48 53.0	-27 18.0
172	615	48 54.6	-27 3.0
172	715	48 54.8	-26 44.3
172	915	49 7.2	-26 14.5
172	1124	49 20.1	-25 42.8
172	1230	49 25.3	-25 59.9
172	140	49 32.1	-26 20.8
172	1515	49 38.3	-26 40.0
172	1630	49 43.8	-27 0.0
172	1845	49 36.9	-27 36.9
172	215	49 30.0	-28 13.5
172	2152	49 24.7	-28 24.7
173	030	49 12.1	-29 6.5
173	3 0	49 1.8	-29 48.1
173	315	49 4.3	-29 50.5
173	4 0	49 6.2	-29 36.1

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 1

DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
173	415	49 6.1	-29 30.8
173	445	49 11.2	-29 24.3
173	5 0	49 13.2	-29 19.0
173	715	49 28.4	-28 46.7
173	755	49 35.7	-28 40.3
173	855	49 42.5	-28 24.5
173	945	49 47.6	-28 36.8
173	1015	49 45.3	-28 40.6
173	11 0	49 40.1	-28 49.0
173	1230	49 30.5	-29 6.7
173	1445	49 16.0	-29 35.0
173	1515	49 13.8	-29 39.0
173	1545	49 10.6	-29 45.5
173	1725	49 0.0	-30 9.8
173	1730	49 0.4	-30 10.5
173	2030	49 30.3	-29 41.0
173	2142	49 33.3	-29 19.3
174	0 0	49 50.9	-28 46.5
174	1 0	49 54.8	-28 54.3
174	245	49 47.5	-29 14.6
174	515	49 37.0	-29 45.8
174	830	49 5.3	-30 12.3
174	930	48 53.9	-30 14.6
174	1036	48 51.3	-30 14.6
174	1115	48 51.3	-30 14.8
174	1130	48 51.8	-30 13.5
174	1245	48 57.8	-29 50.9
174	1345	49 3.7	-29 34.0
174	15 0	49 8.6	-29 10.2
174	1622	49 8.3	-28 44.0
174	1853	48 55.7	-28 0.5
174	21 0	48 57.6	-27 21.2
174	2215	49 2.0	-26 58.9
174	2245	49 2.8	-26 50.3
175	0 0	49 3.2	-26 27.0
175	1 0	49 9.3	-26 10.0
175	130	49 13.7	-26 3.5
175	145	49 14.5	-26 1.5
175	4 4	49 28.4	-25 25.9
175	545	49 38.4	-24 59.1
175	715	49 30.1	-24 33.0
175	745	49 30.3	-24 23.5
175	1020	49 34.0	-23 35.3
175	1125	49 33.4	-23 14.8
175	1145	49 33.2	-23 13.2
175	13 0	49 34.1	-23 12.1
175	1515	49 34.5	-22 31.9
175	1715	49 34.7	-21 55.2
175	1945	49 33.4	-21 8.8
175	2045	49 34.2	-20 49.9
175	23 0	49 30.0	-20 7.2
176	1 0	49 28.9	-19 29.2
176	230	49 29.3	-19 0.8
176	415	49 29.8	-18 27.9
176	545	49 28.8	-18 0.0
176	830	49 31.7	-17 7.4
176	10 0	49 31.9	-16 40.2
176	11 0	49 31.9	-16 22.7
176	1330	49 36.5	-15 48.7
176	16 0	49 41.3	-15 14.5
176	19 0	49 47.0	-14 32.8
176	2230	49 52.3	-13 44.8
177	045	49 56.7	-13 14.1
177	2 0	49 58.1	-12 57.0
177	315	50 1.0	-12 41.4
177	430	50 4.3	-12 23.3
177	6 0	50 5.9	-12 1.3
177	715	50 9.1	-11 39.7
177	815	50 10.4	-11 22.8
177	925	50 12.1	-11 4.4
177	935	50 13.1	-11 3.9

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 2

DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
237	1115	50 11.6	-11 18.0
237	12 5	50 11.1	-11 30.4
237	1230	50 9.8	-11 37.0
237	1250	50 9.0	-11 42.2
237	1415	50 9.3	-11 42.8
237	1445	50 8.7	-11 46.3
237	1530	50 6.3	-11 58.3
237	18 0	50 0.3	-12 43.1
237	20 0	49 55.8	-13 16.7
237	2230	49 54.5	-13 58.3
238	030	49 49.9	-14 31.4
238	216	49 46.3	-15 0.4
238	345	49 45.4	-15 25.2
238	515	49 42.3	-15 50.6
238	545	49 41.9	-15 59.4
238	730	49 42.2	-16 29.3
238	1030	49 42.0	-17 18.8
238	12 0	49 42.2	-17 39.2
238	1315	49 41.6	-17 53.9
238	1415	49 40.7	-18 0.0
238	1545	49 40.3	-18 3.9
238	17 0	49 39.8	-18 17.9
238	1815	49 39.7	-18 34.8
238	1930	49 40.0	-18 52.0
238	2130	49 39.8	-19 19.7
238	2330	49 40.0	-19 48.7
239	130	49 43.0	-20 14.8
239	330	49 43.7	-20 40.8
239	5 0	49 44.5	-21 0.8
239	7 0	49 44.7	-21 29.0
239	8 0	49 45.0	-21 45.5
239	915	49 45.1	-22 3.2
239	1130	49 47.3	-22 37.0
239	13 0	49 46.9	-22 59.0
239	16 0	49 43.4	-23 40.5
239	1730	49 42.5	-24 1.0
239	1930	49 40.9	-24 27.5
239	20 0	49 40.8	-24 31.5
239	2030	49 40.9	-24 35.5
239	22 0	49 38.7	-24 48.8
239	2315	49 36.2	-25 3.9
240	045	49 30.2	-25 21.8
240	4 0	49 18.2	-26 2.3
240	6 0	49 9.5	-26 26.8
240	725	49 3.4	-26 44.6
240	830	49 2.0	-26 59.2
240	1030	48 58.7	-27 24.4
240	1245	48 55.8	-27 54.8
240	1445	49 4.7	-28 19.0
240	1530	49 8.9	-28 30.5
240	18 0	49 7.5	-29 0.5
240	21 8	49 5.9	-29 40.1
240	23 0	48 57.6	-30 0.4
241	020	48 50.9	-30 16.0
241	130	48 42.8	-30 27.2
241	3 0	48 30.8	-30 41.8
241	455	48 14.7	-31 0.6
241	730	47 59.0	-31 35.8
241	945	47 44.8	-32 3.7
241	12 0	47 31.7	-32 32.5
241	14 0	47 20.1	-32 58.4
241	1630	47 4.6	-33 32.2
241	1830	46 51.8	-33 59.7
241	20 0	46 41.7	-34 20.6
241	2145	46 29.9	-34 44.3
242	015	46 12.7	-35 15.2
242	330	45 53.9	-35 58.7
242	6 0	45 39.9	-36 29.3
242	815	45 27.1	-36 54.7
242	1015	45 15.5	-37 16.6
242	1130	45 8.5	-37 32.4
242	13 0	44 59.4	-37 50.8
242	1530	44 44.3	-38 21.5
242	18 0	44 29.8	-38 53.8
242	2030	44 14.4	-39 22.5

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 2

DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
242	2230	44 1.8	-39 46.4
243	030	43 50.5	-40 11.0
243	2 0	43 42.0	-40 29.3
243	4 0	43 29.8	-40 54.9
243	630	43 13.9	-41 28.7
243	845	43 0.5	-42 0.0
243	1130	42 42.3	-42 31.8
243	13 0	42 34.5	-42 49.5
243	15 0	42 23.4	-43 12.2
243	17 0	42 12.7	-43 35.2
243	1915	42 0.7	-44 1.8
243	2045	41 52.1	-44 17.9
243	2215	41 43.0	-44 34.8
243	2330	41 36.1	-44 49.0
243	2345	41 35.1	-44 52.0
244	1 0	41 30.0	-45 5.5
244	215	41 25.1	-45 17.6
244	4 0	41 15.5	-45 33.5
244	545	41 7.6	-45 51.1
244	730	41 1.0	-46 7.0
244	830	40 56.4	-46 16.6
244	930	40 51.2	-46 27.8
244	11 0	40 42.1	-46 46.2
244	1215	40 34.7	-47 0.5
244	1315	40 30.4	-47 13.3
244	1530	40 16.5	-47 43.8
244	1645	40 10.1	-48 0.0
244	19 0	40 5.1	-48 28.5
244	20 0	40 3.6	-48 41.8
244	21 0	40 1.4	-48 55.0
244	2245	39 56.2	-49 21.3
245	030	39 51.0	-49 47.9
245	115	39 49.5	-49 59.1
245	315	39 49.5	-50 27.1
245	530	39 50.7	-50 58.5
245	7 0	39 51.5	-51 19.9
245	930	39 52.4	-51 52.1
245	1025	39 51.5	-52 3.9
245	1130	39 57.2	-52 16.4
245	1315	40 2.5	-52 38.3
245	1545	40 12.6	-53 13.5
245	1645	40 17.5	-53 26.1
245	1815	40 24.3	-53 44.9
245	1930	40 28.8	-54 1.3
245	2015	40 33.3	-54 5.3
245	2130	40 42.2	-54 23.1
245	2330	40 53.6	-54 46.5
246	115	41 3.5	-55 7.3
246	3 0	41 12.8	-55 28.6
246	4 0	41 18.7	-55 40.9
246	545	41 29.4	-56 3.0
246	730	41 40.5	-56 23.6
246	830	41 46.5	-56 36.1
246	1030	41 58.4	-57 1.9
246	13 0	42 14.7	-57 36.4
246	1345	42 19.9	-57 47.1
246	1430	42 25.8	-57 58.3
246	16 0	42 37.3	-58 21.5
246	1715	42 45.4	-58 39.1
246	1815	42 52.3	-58 53.1
246	1830	42 53.5	-58 58.0
246	21 0	43 10.5	-59 34.0
246	2130	43 13.9	-59 39.7
246	22 0	43 15.8	-59 44.6
246	2245	43 20.4	-59 54.3

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 3

DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
252	1945	43 14.5	-59 43.8
252	2030	43 9.0	-59 32.9
252	2145	43 0.6	-59 15.8
253	0 0	42 46.0	-58 44.1
253	3 0	42 24.7	-57 59.3
253	5 0	42 9.4	-57 28.0
253	6 0	42 1.9	-57 10.8
253	745	41 48.4	-56 44.2
253	1015	41 30.0	-56 5.7
253	1130	41 20.0	-55 47.3
253	1330	41 5.5	-55 17.2
253	1530	40 50.8	-54 47.0
253	17 0	40 39.0	-54 24.5
253	1815	40 30.1	-54 4.9
253	1930	40 22.4	-53 41.6
253	21 0	40 13.7	-53 15.8
253	23 0	40 5.0	-52 41.9
254	030	39 58.5	-52 17.0
254	130	39 51.8	-52 2.2
254	215	39 51.0	-51 48.4
254	315	39 50.9	-51 27.6
254	430	39 49.9	-51 3.6
254	530	39 48.6	-50 45.1
254	645	39 49.3	-50 21.7
254	830	39 48.9	-49 51.0
254	930	39 52.8	-49 34.0
254	1115	39 57.5	-49 3.9
254	13 0	40 2.9	-48 31.0
254	1445	40 6.9	-47 59.6
254	1630	40 18.1	-47 32.0
254	18 0	40 30.2	-47 10.3
254	19 5	40 36.2	-46 52.9
254	2115	40 51.0	-46 19.8
254	2230	41 0.3	-46 2.1
254	2315	41 4.4	-45 50.2
255	045	41 16.3	-45 30.0
255	230	41 29.6	-45 5.5
255	4 0	41 40.4	-44 45.2
255	430	41 44.4	-44 39.2
255	630	41 59.3	-44 13.3
255	915	42 19.0	-43 35.5
255	1130	42 36.8	-43 3.1
255	1330	42 52.5	-42 34.9
255	1545	43 9.7	-42 0.1
255	17 0	43 17.6	-41 39.4
255	1830	43 29.6	-41 16.5
255	21 0	43 48.3	-40 37.3
255	22 0	43 56.4	-40 22.7
255	23 0	44 4.1	-40 9.0
256	030	44 15.4	-39 47.9
256	2 0	44 27.3	-39 27.6
256	315	44 36.7	-39 9.9
256	4 0	44 41.0	-38 58.7
256	630	45 0.5	-38 18.9
256	645	45 2.5	-38 15.3
256	9 0	45 17.6	-37 39.0
256	930	45 22.2	-37 30.1
256	11 0	45 33.9	-37 6.1
256	13 0	45 49.0	-36 34.0
256	14 0	45 56.7	-36 18.5
256	15 0	46 4.2	-36 2.6
256	17 0	46 17.7	-35 32.8
256	1845	46 29.6	-35 7.5
256	1915	46 34.0	-34 59.6
256	1945	46 37.5	-34 52.0
256	21 0	46 45.1	-34 32.0
256	2315	47 0.5	-33 57.1
257	045	47 12.5	-33 35.2
257	215	47 25.6	-33 10.9
257	3 0	47 30.8	-32 56.5
257	5 0	47 49.1	-32 23.4
257	615	47 59.6	-32 1.6
257	845	48 15.4	-31 14.5
257	1015	48 27.5	-30 48.3
257	1230	48 50.9	-30 14.6

B 7

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 3

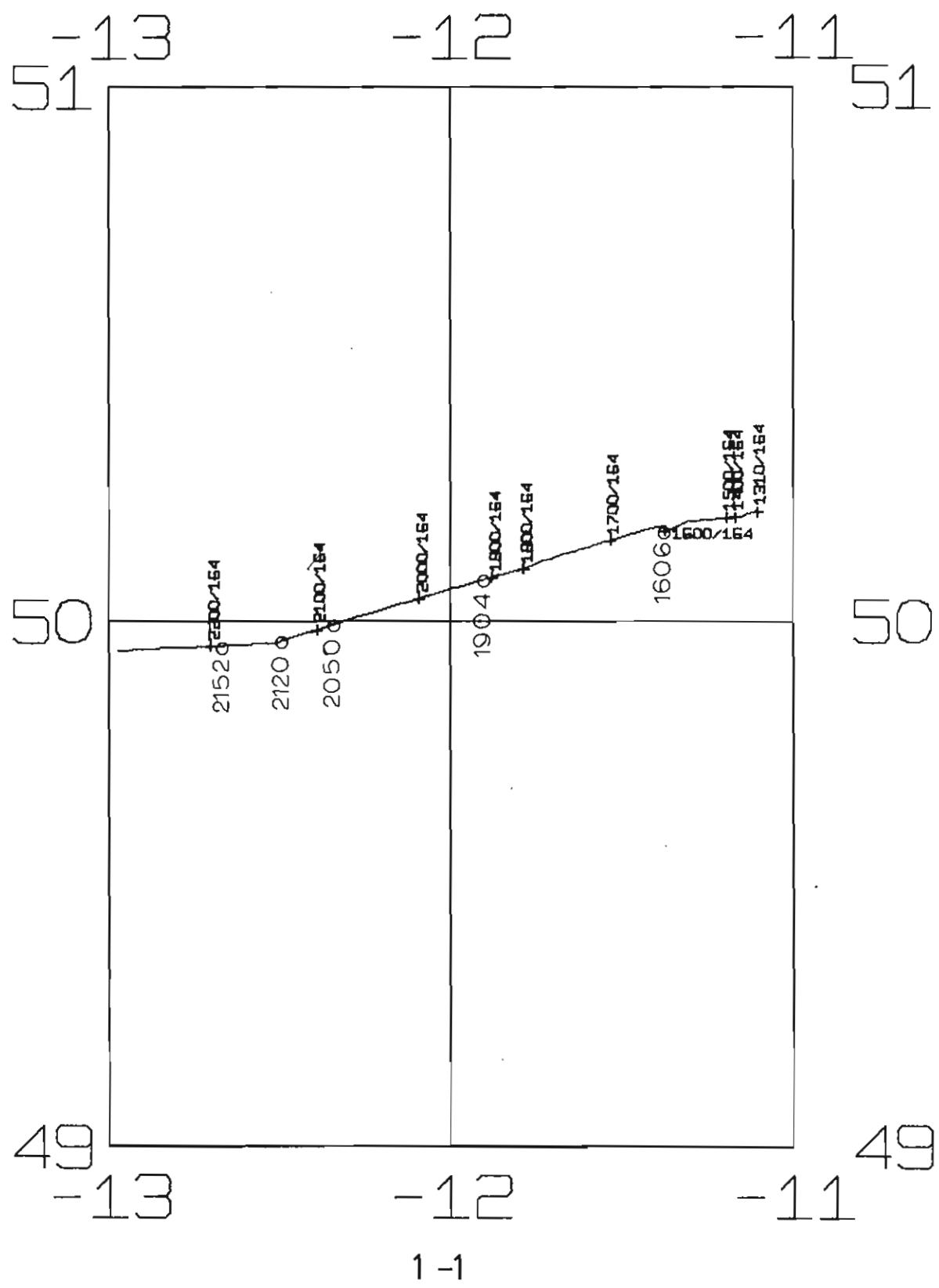
DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
257	1315	48 55.7	-30 0.1
257	1445	49 5.5	-29 31.9
257	1615	49 6.5	-29 0.0
257	1645	49 7.1	-28 50.0
257	1845	49 7.8	-28 43.1
257	19 5	49 7.2	-28 38.6
257	20 0	49 6.3	-28 22.4
257	21 0	49 1.0	-28 9.1
257	2150	48 54.9	-27 57.2
257	2315	48 55.7	-27 31.8
258	1 0	48 59.3	-27 0.5
258	145	49 1.7	-26 47.5
258	415	49 14.8	-26 8.4
258	715	49 30.2	-25 23.1
258	830	49 37.0	-25 5.4
258	10 0	49 44.8	-24 42.4
258	1215	49 59.1	-24 2.6
258	1225	50 0.0	-23 59.6
258	14 0	50 0.0	-23 28.5
258	16 0	50 0.7	-22 48.5
258	19 0	50 0.4	-21 49.5
258	1945	50 0.6	-21 35.5
258	2045	49 59.8	-21 17.8
258	22 0	50 0.0	-20 57.6
258	2315	49 59.7	-20 38.5
259	030	49 57.7	-20 15.7
259	145	49 55.1	-19 50.6
259	3 0	49 54.1	-19 25.3
259	330	49 53.6	-19 16.0
259	415	49 53.0	-19 1.4
259	715	49 57.0	-18 1.5
259	830	49 56.5	-17 36.7
259	1015	49 58.0	-17 0.8
259	12 0	49 59.2	-16 24.1
259	14 0	49 59.7	-15 43.5
259	16 0	49 59.6	-15 2.5
259	1615	50 0.0	-14 57.5
259	1915	49 55.7	-13 58.2
259	1930	49 55.1	-13 55.1
259	2115	49 55.4	-13 19.7
259	22 0	49 56.9	-13 3.5
259	2330	50 1.4	-12 32.0
260	1 0	50 5.4	-11 59.8

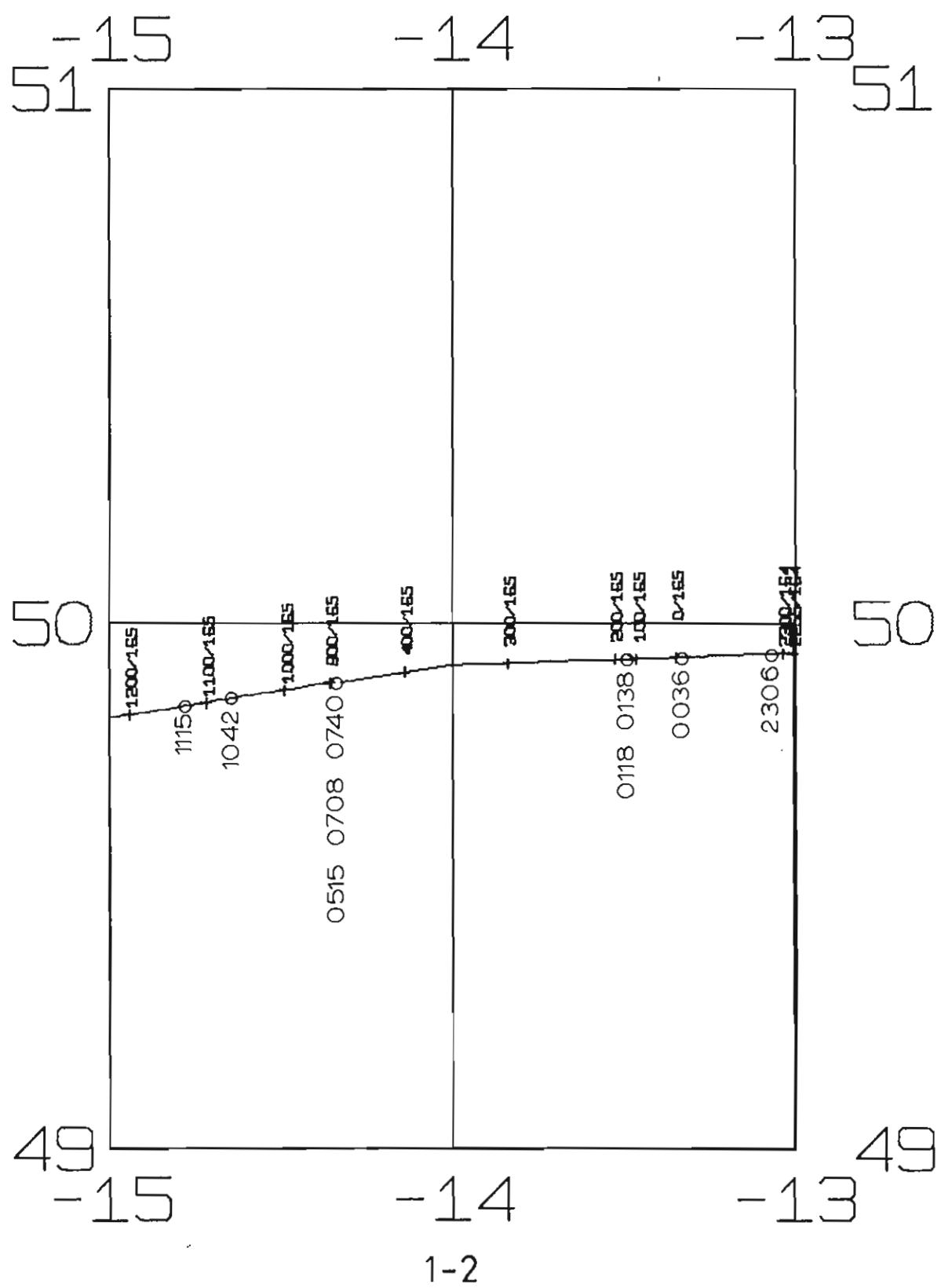
NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 3

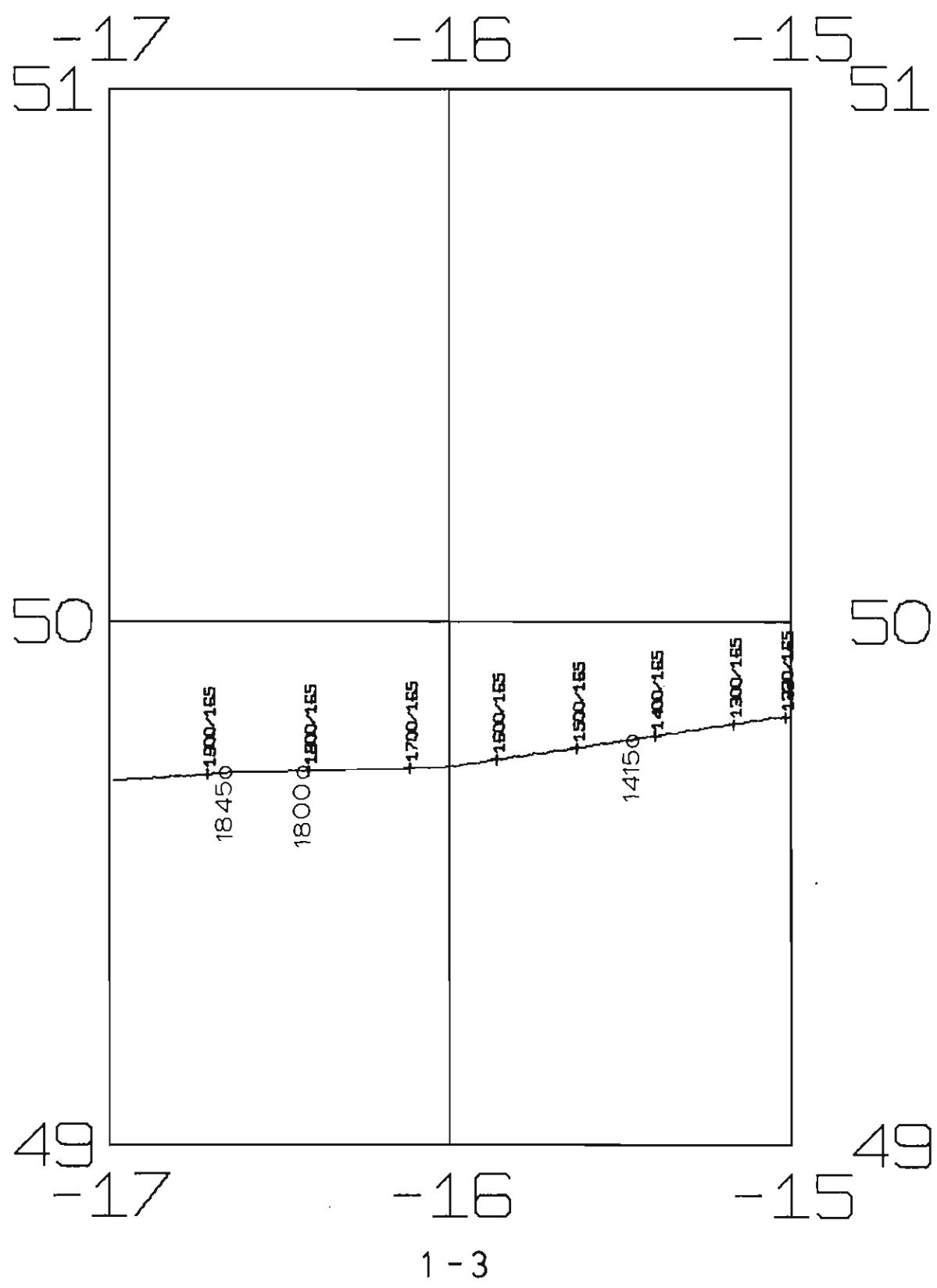
DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
252	1945	43 14.5	-59 43.8
252	2030	43 9.0	-59 32.9
252	2145	43 0.6	-59 15.8
253	0 0	42 46.0	-58 44.1
253	3 0	42 24.7	-57 59.3
253	5 0	42 9.4	-57 28.0
253	6 0	42 1.9	-57 10.8
253	745	41 48.4	-56 44.2
253	1015	41 30.0	-56 5.7
253	1130	41 20.0	-55 47.3
253	1330	41 5.5	-55 17.2
253	1530	40 50.8	-54 47.0
253	17 0	40 39.0	-54 24.5
253	1815	40 30.1	-54 4.9
253	1930	40 22.4	-53 41.6
253	21 0	40 13.7	-53 15.8
253	23 0	40 5.0	-52 41.9
254	030	39 58.5	-52 17.0
254	130	39 51.8	-52 2.2
254	215	39 51.0	-51 48.4
254	315	39 50.9	-51 27.6
254	430	39 49.9	-51 3.6
254	530	39 48.6	-50 45.1
254	645	39 49.3	-50 21.7
254	830	39 48.9	-49 51.0
254	930	39 52.8	-49 34.0
254	1115	39 57.5	-49 3.9
254	13 0	40 2.9	-48 31.0
254	1445	40 6.9	-47 59.6
254	1630	40 18.1	-47 32.0
254	18 0	40 30.2	-47 10.3
254	19 5	40 36.2	-46 52.9
254	2115	40 51.0	-46 19.8
254	2230	41 0.3	-46 2.1
254	2315	41 4.4	-45 50.2
255	045	41 16.3	-45 30.0
255	230	41 29.6	-45 5.5
255	4 0	41 40.4	-44 45.2
255	430	41 44.4	-44 39.2
255	630	41 59.3	-44 13.3
255	915	42 19.0	-43 35.5
255	1130	42 36.8	-43 3.1
255	1330	42 52.5	-42 34.9
255	1545	43 9.7	-42 0.1
255	17 0	43 17.6	-41 39.4
255	1830	43 29.6	-41 16.5
255	21 0	43 48.3	-40 37.3
255	22 0	43 56.4	-40 22.7
255	23 0	44 4.1	-40 9.0
256	030	44 15.4	-39 47.9
256	2 0	44 27.3	-39 27.6
256	315	44 36.7	-39 9.9
256	4 0	44 41.0	-38 58.7
256	630	45 0.5	-38 18.9
256	645	45 2.5	-38 15.3
256	9 0	45 17.6	-37 39.0
256	930	45 22.2	-37 30.1
256	11 0	45 33.9	-37 6.1
256	13 0	45 49.0	-36 34.0
256	14 0	45 56.7	-36 18.5
256	15 0	46 4.2	-36 2.6
256	17 0	46 17.7	-35 32.8
256	1845	46 29.6	-35 7.5
256	1915	46 34.0	-34 59.6
256	1945	46 37.5	-34 52.0
256	21 0	46 45.1	-34 32.0
256	2315	47 0.5	-33 57.1
257	045	47 12.5	-33 35.2
257	215	47 25.6	-33 10.9
257	3 0	47 30.8	-32 56.5
257	5 0	47 49.1	-32 23.4
257	615	47 59.6	-32 1.6
257	845	48 15.4	-31 14.5
257	1015	48 27.5	-30 48.3
257	1230	48 50.9	-30 14.6

NAVIGATION POINTS FOR CANTAT II OCEAN SURVEY LEG 3

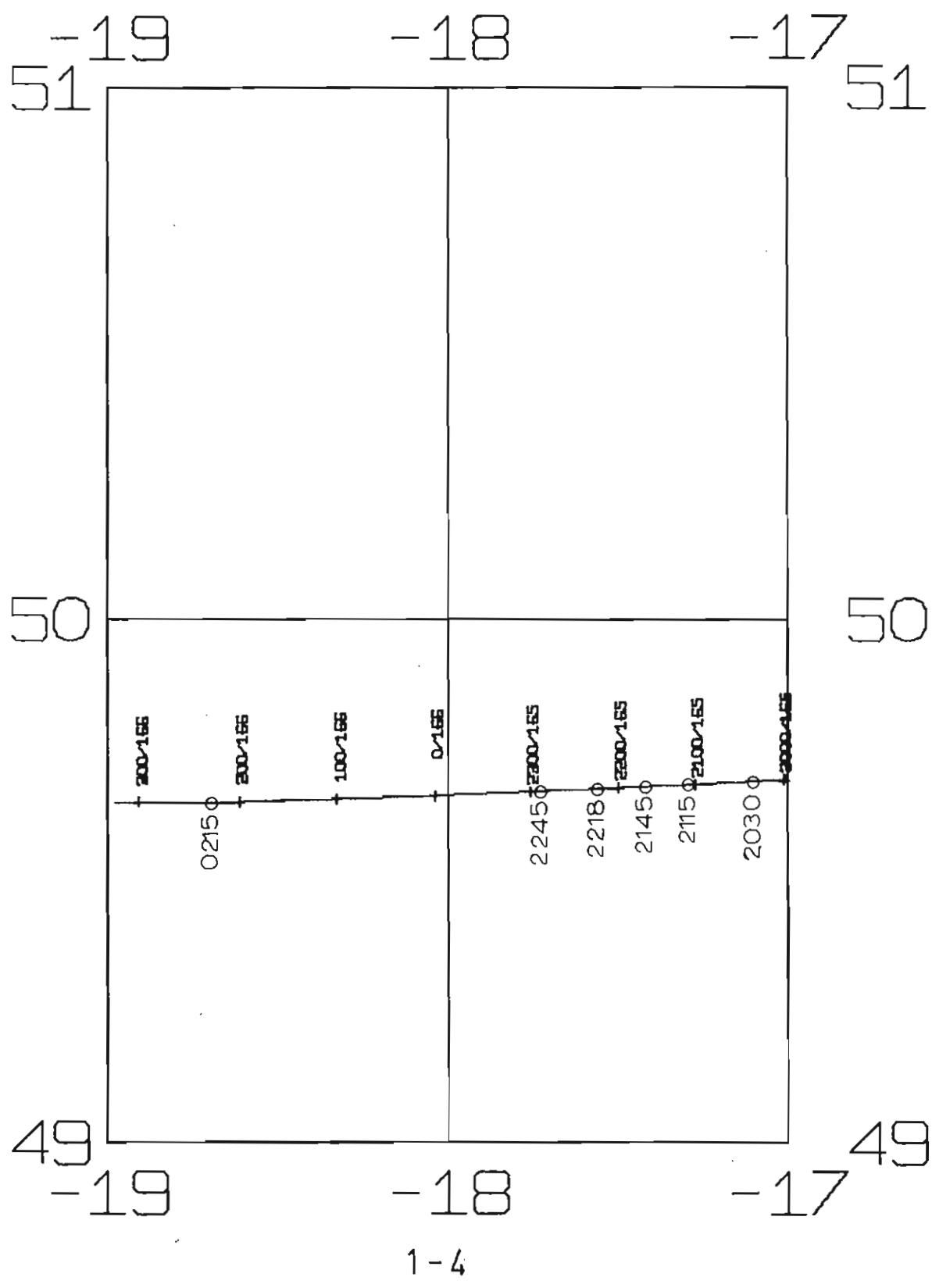
DAY NO	TIME H M	LATITUDE DEG MIN	LONGITUDE DEG MIN
257	1315	48 55.7	-30 0.1
257	1445	49 5.5	-29 31.9
257	1615	49 6.5	-29 0.0
257	1645	49 7.1	-28 50.0
257	1845	49 7.8	-28 43.1
257	19 5	49 7.2	-28 38.6
257	20 0	49 6.3	-28 22.4
257	21 0	49 1.0	-28 9.1
257	2150	48 54.9	-27 57.2
257	2315	48 55.7	-27 31.8
258	1 0	48 59.3	-27 0.5
258	145	49 1.7	-26 47.5
258	415	49 14.8	-26 8.4
258	715	49 30.2	-25 23.1
258	830	49 37.0	-25 5.4
258	10 0	49 44.8	-24 42.4
258	1215	49 59.1	-24 2.6
258	1225	50 0.0	-23 59.6
258	14 0	50 0.0	-23 28.5
258	16 0	50 0.7	-22 48.5
258	19 0	50 0.4	-21 49.5
258	1945	50 0.6	-21 35.5
258	2045	49 59.8	-21 17.8
258	22 0	50 0.0	-20 57.6
258	2315	49 59.7	-20 38.5
259	030	49 57.7	-20 15.7
259	145	49 55.1	-19 50.6
259	3 0	49 54.1	-19 25.3
259	330	49 53.6	-19 16.0
259	415	49 53.0	-19 1.4
259	715	49 57.0	-18 1.5
259	830	49 56.5	-17 36.7
259	1015	49 58.0	-17 0.8
259	12 0	49 59.2	-16 24.1
259	14 0	49 59.7	-15 43.5
259	16 0	49 59.6	-15 2.5
259	1615	50 0.0	-14 57.5
259	1915	49 55.7	-13 58.2
259	1930	49 55.1	-13 55.1
259	2115	49 55.4	-13 19.7
259	22 0	49 56.9	-13 3.5
259	2330	50 1.4	-12 32.0
260	1 0	50 5.4	-11 59.8



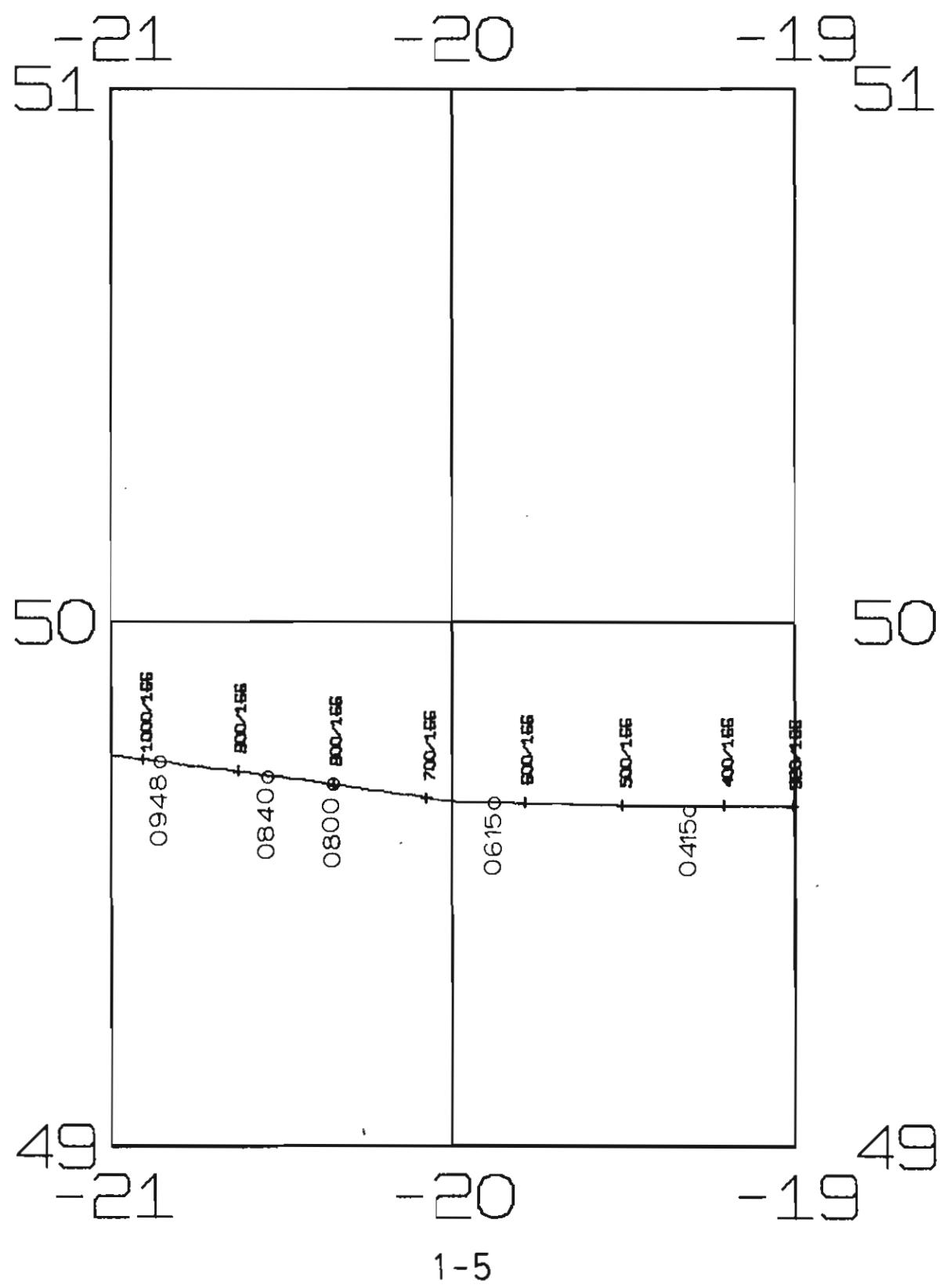


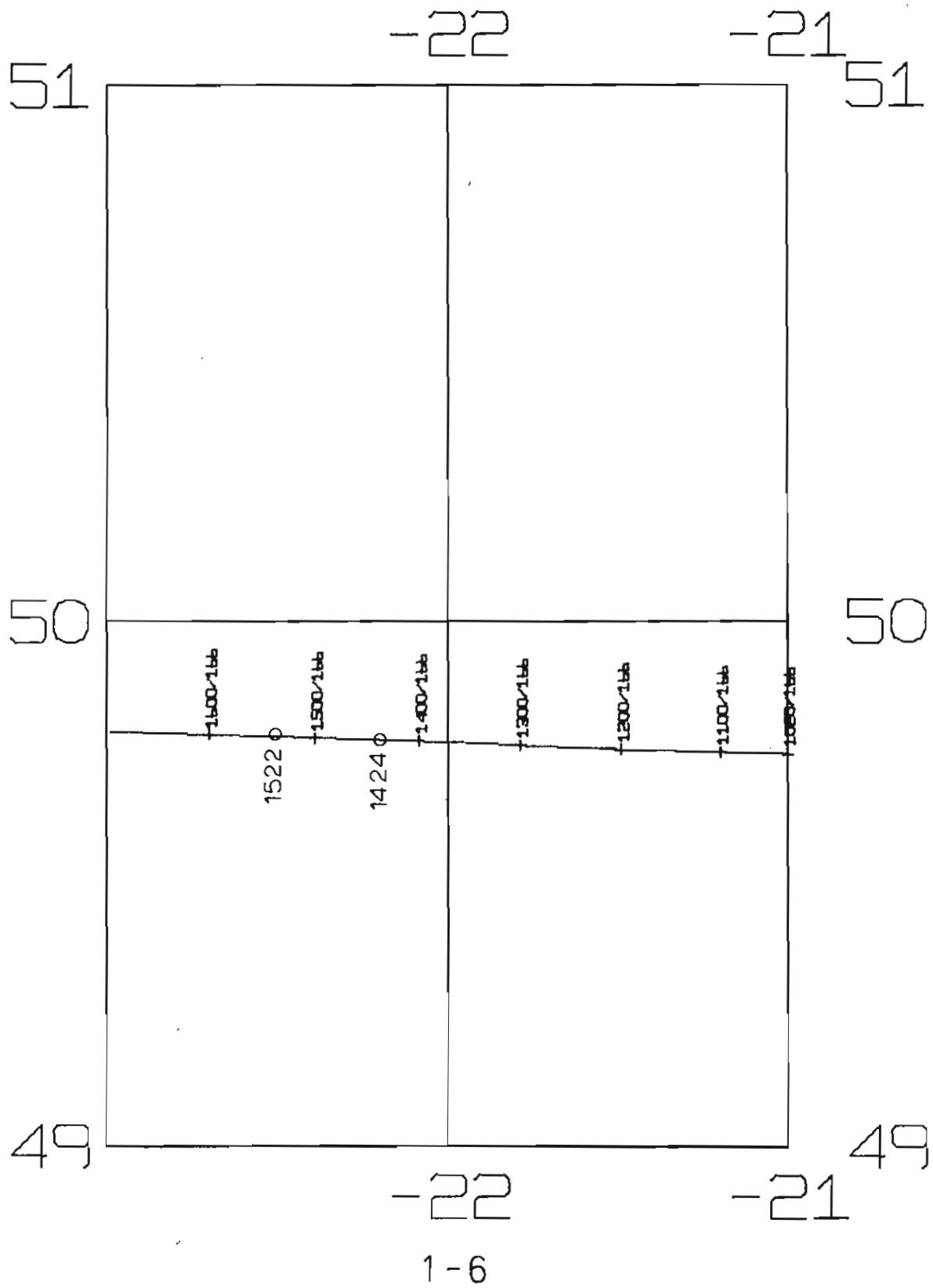


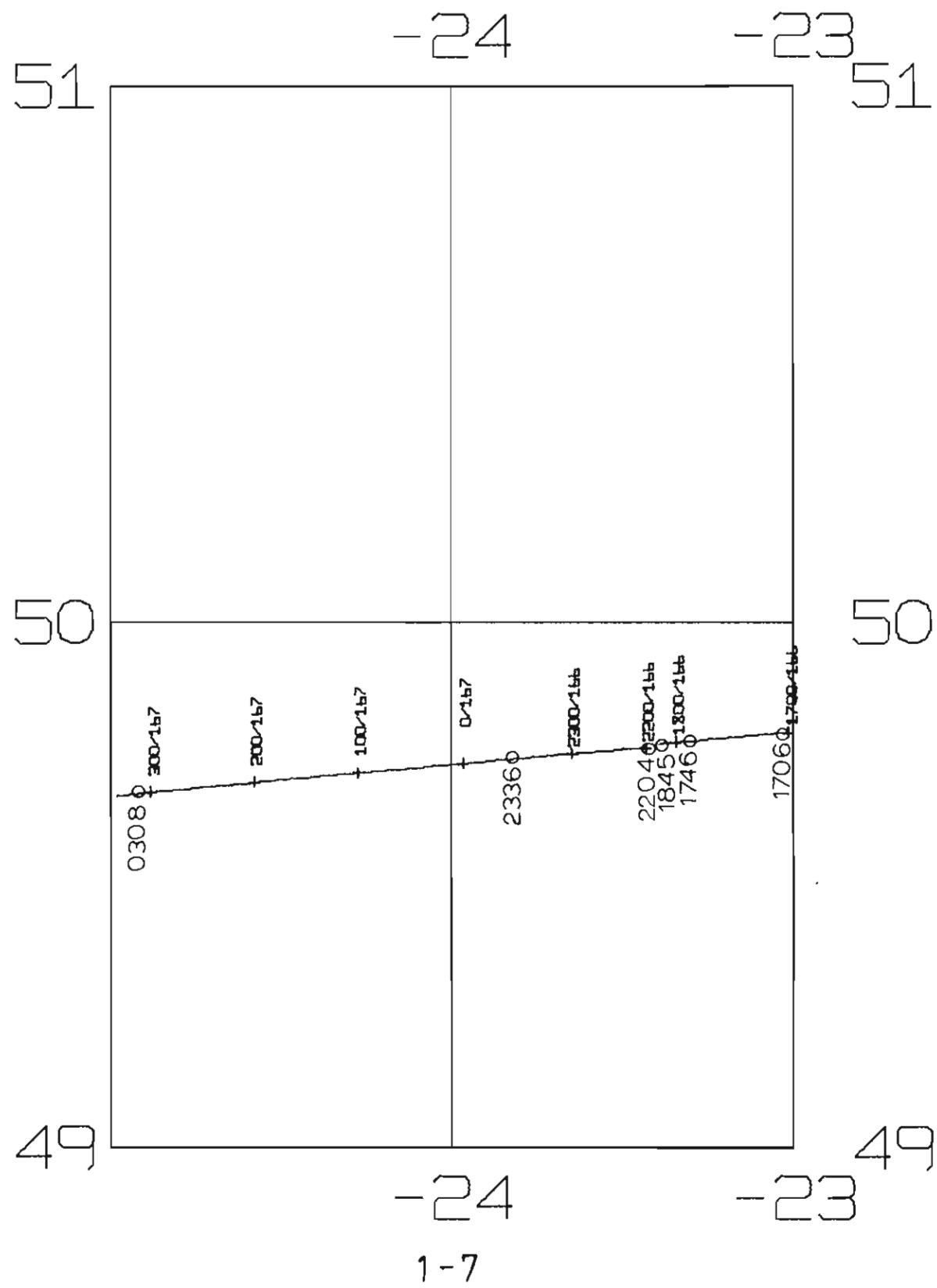
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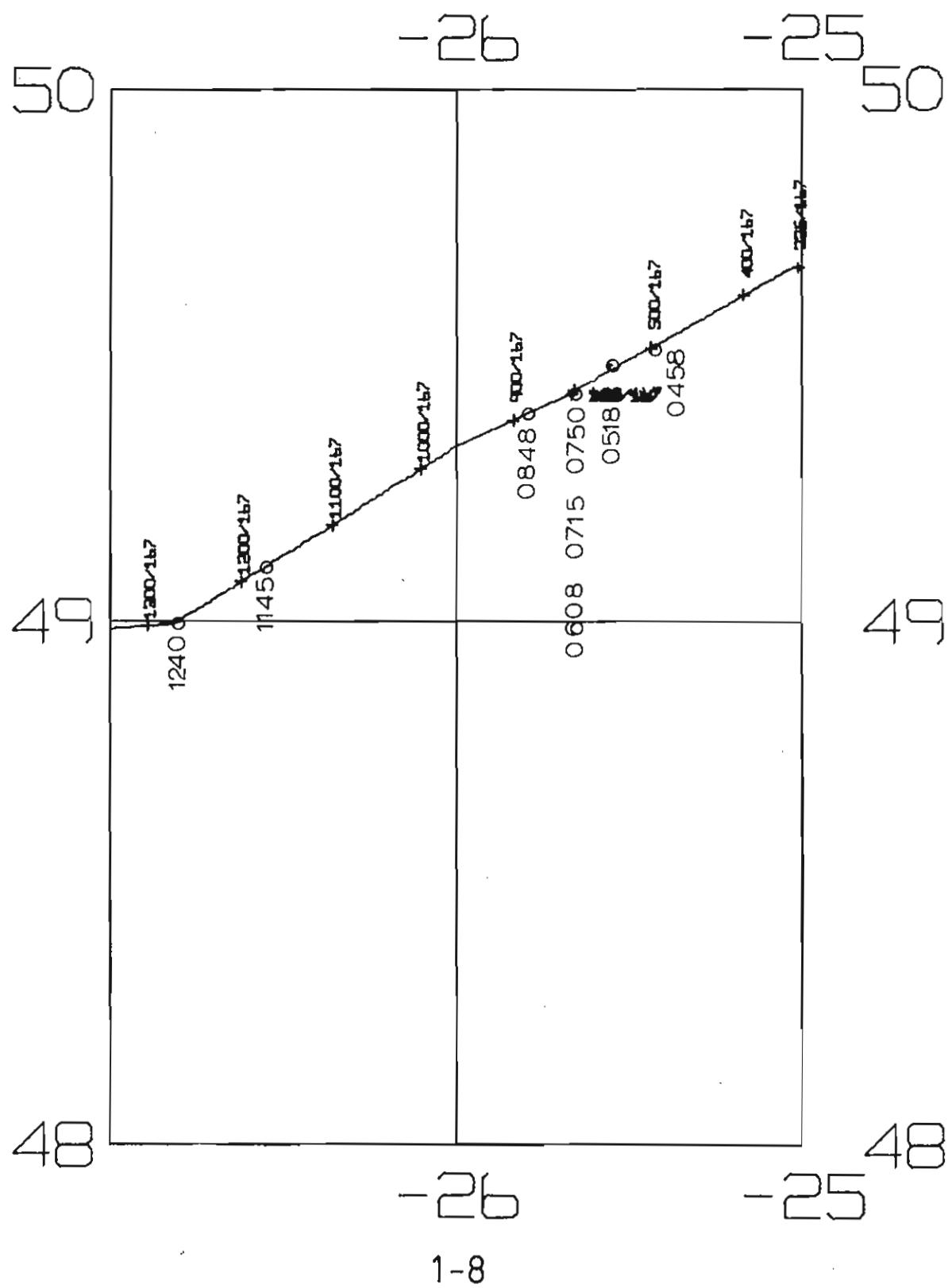


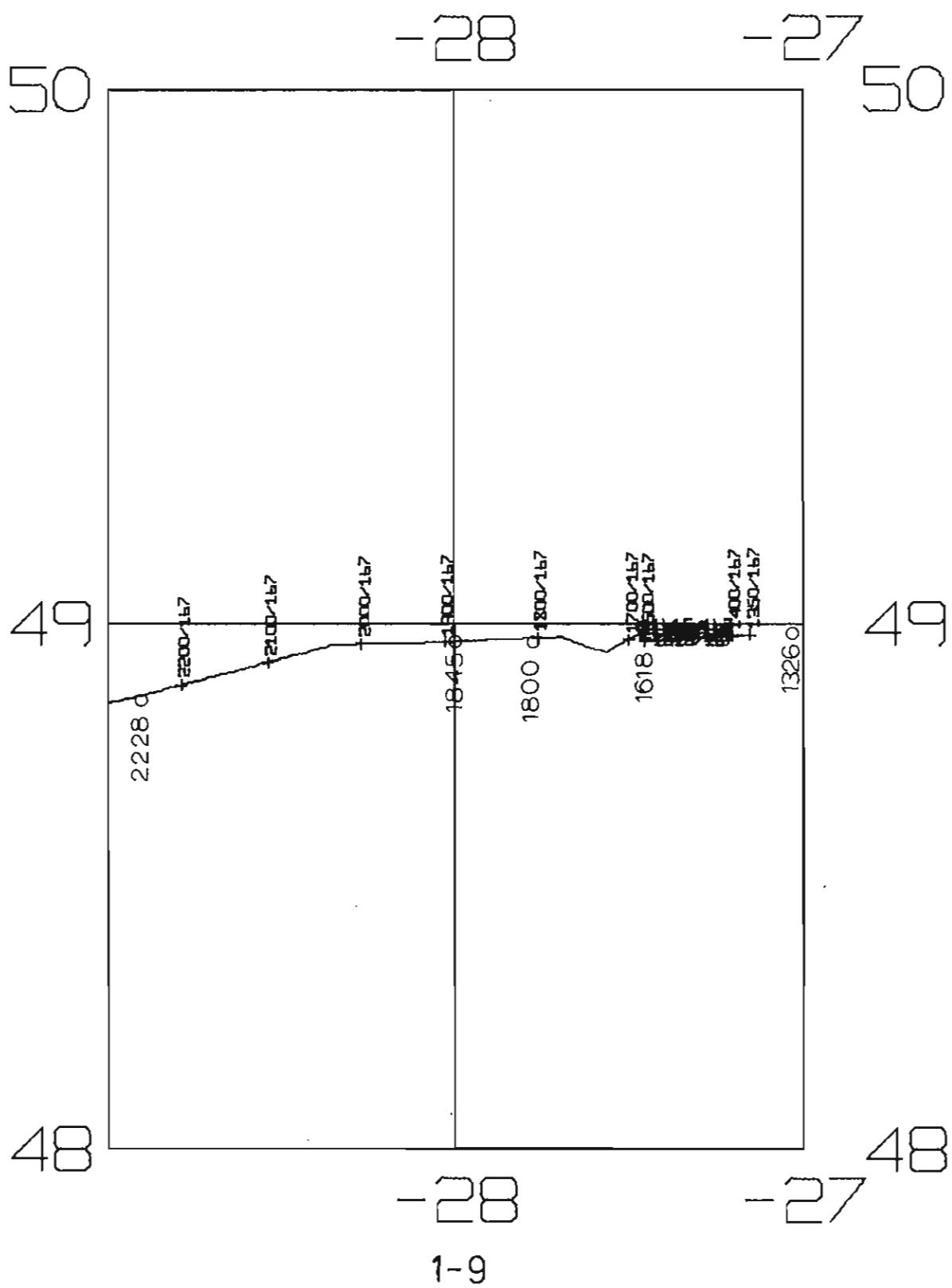
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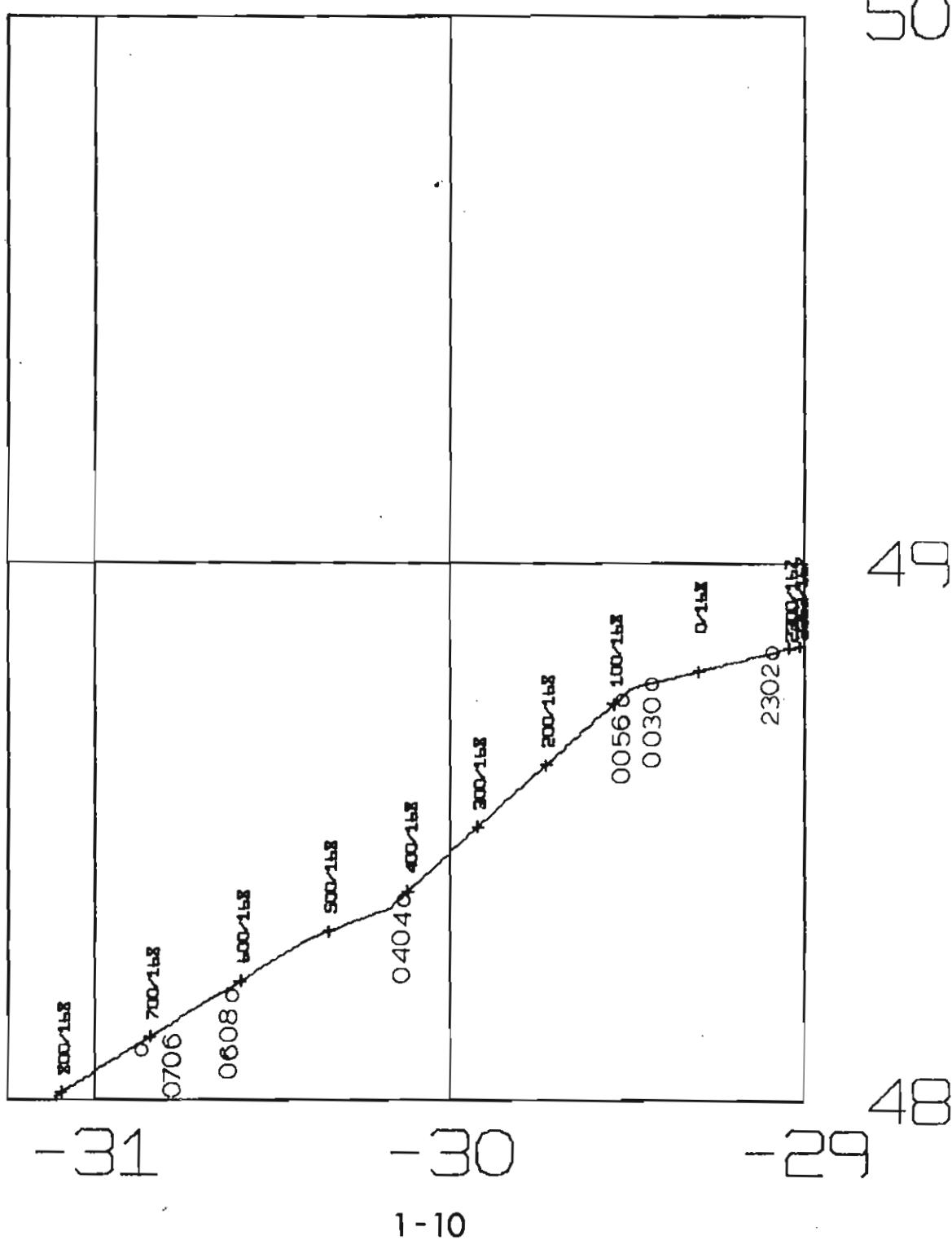












-31

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-29

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48

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-32

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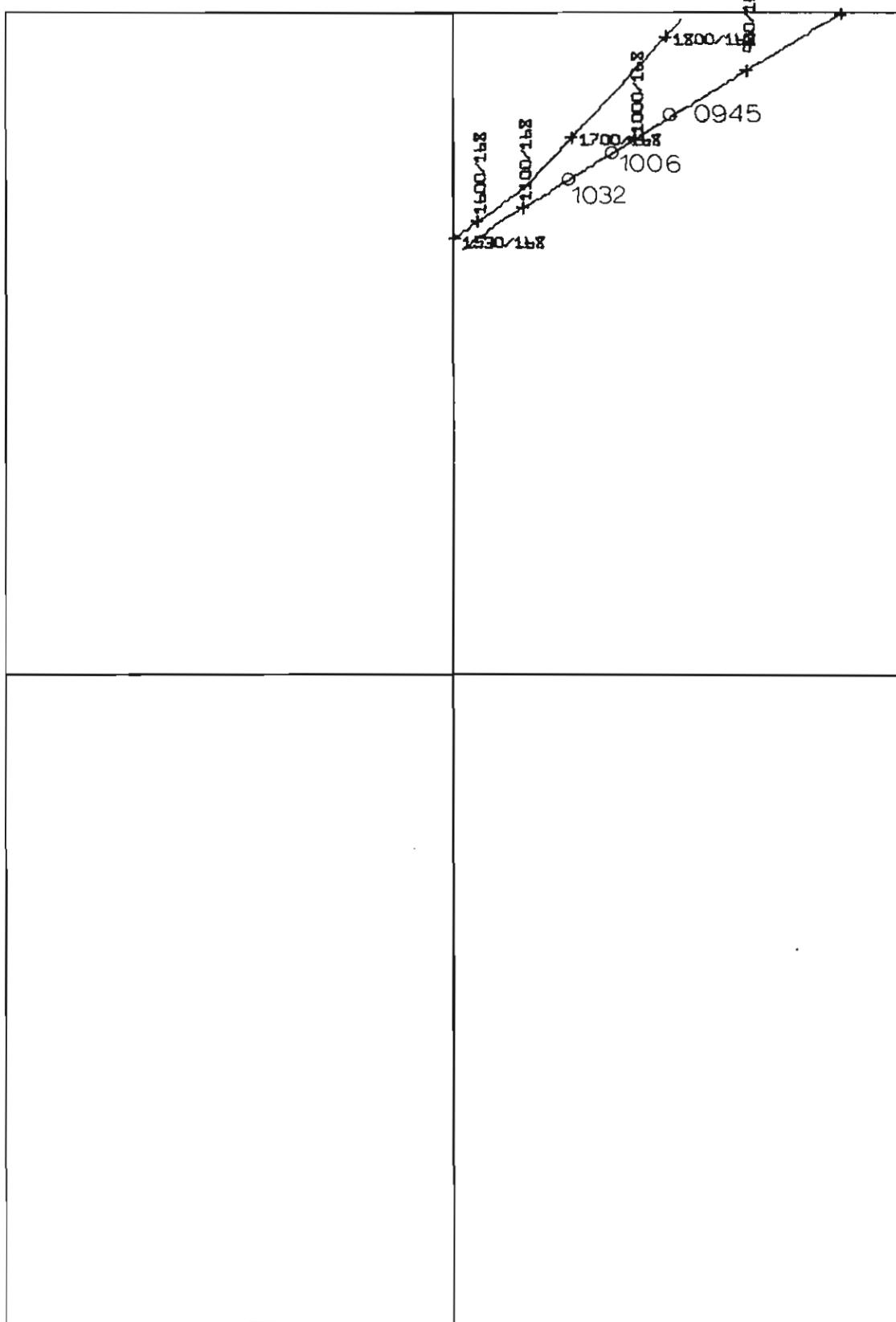
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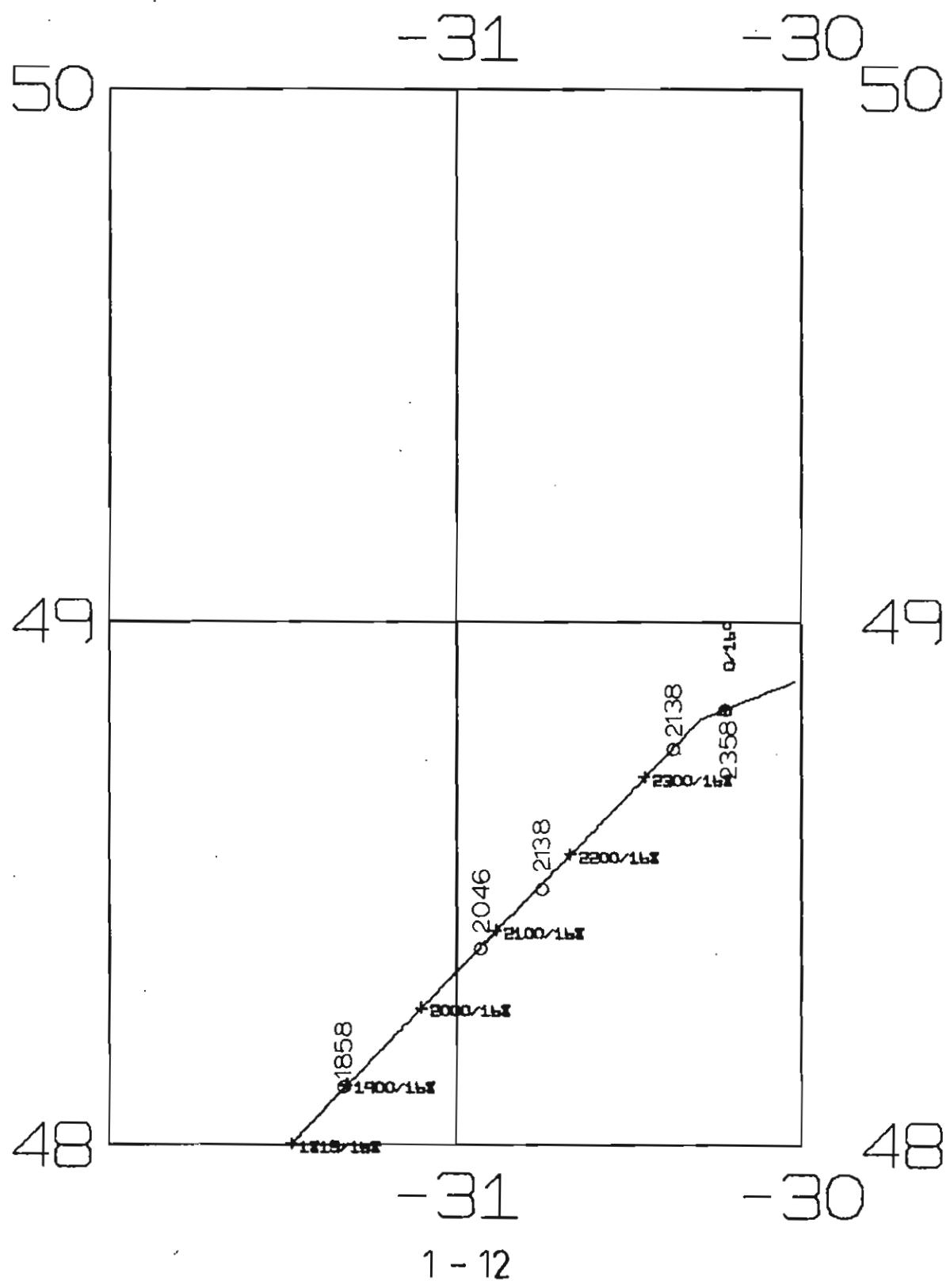
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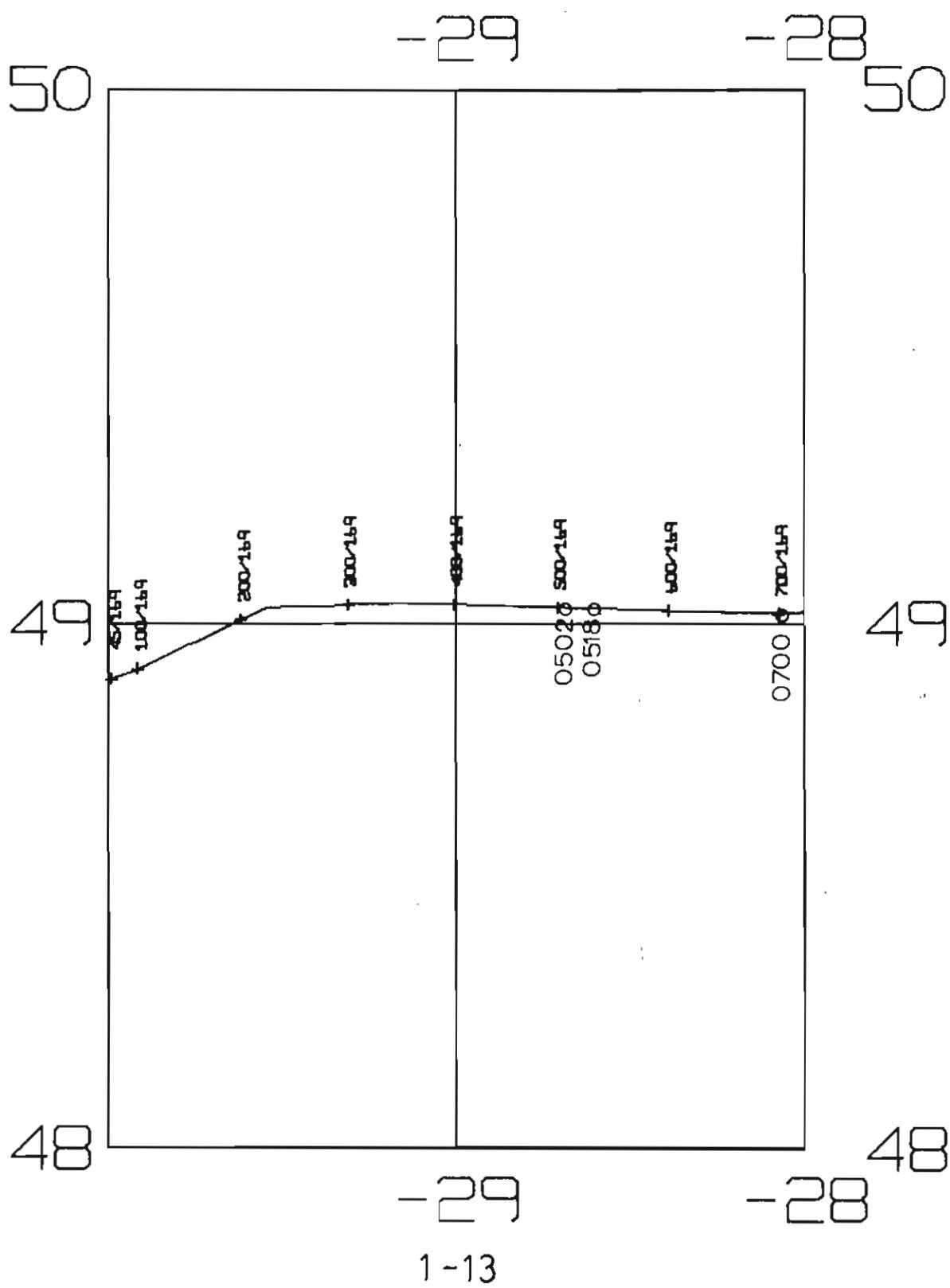
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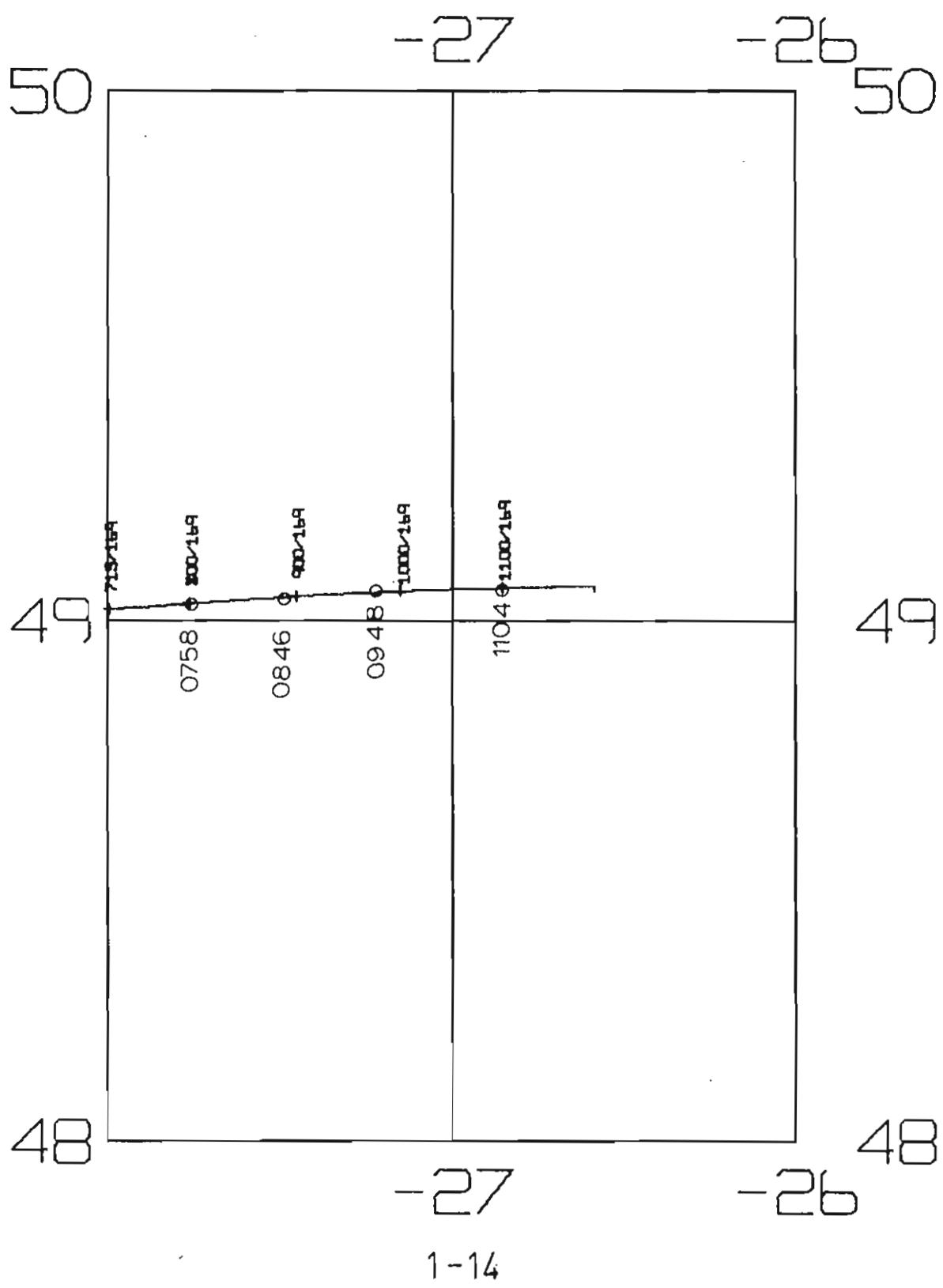
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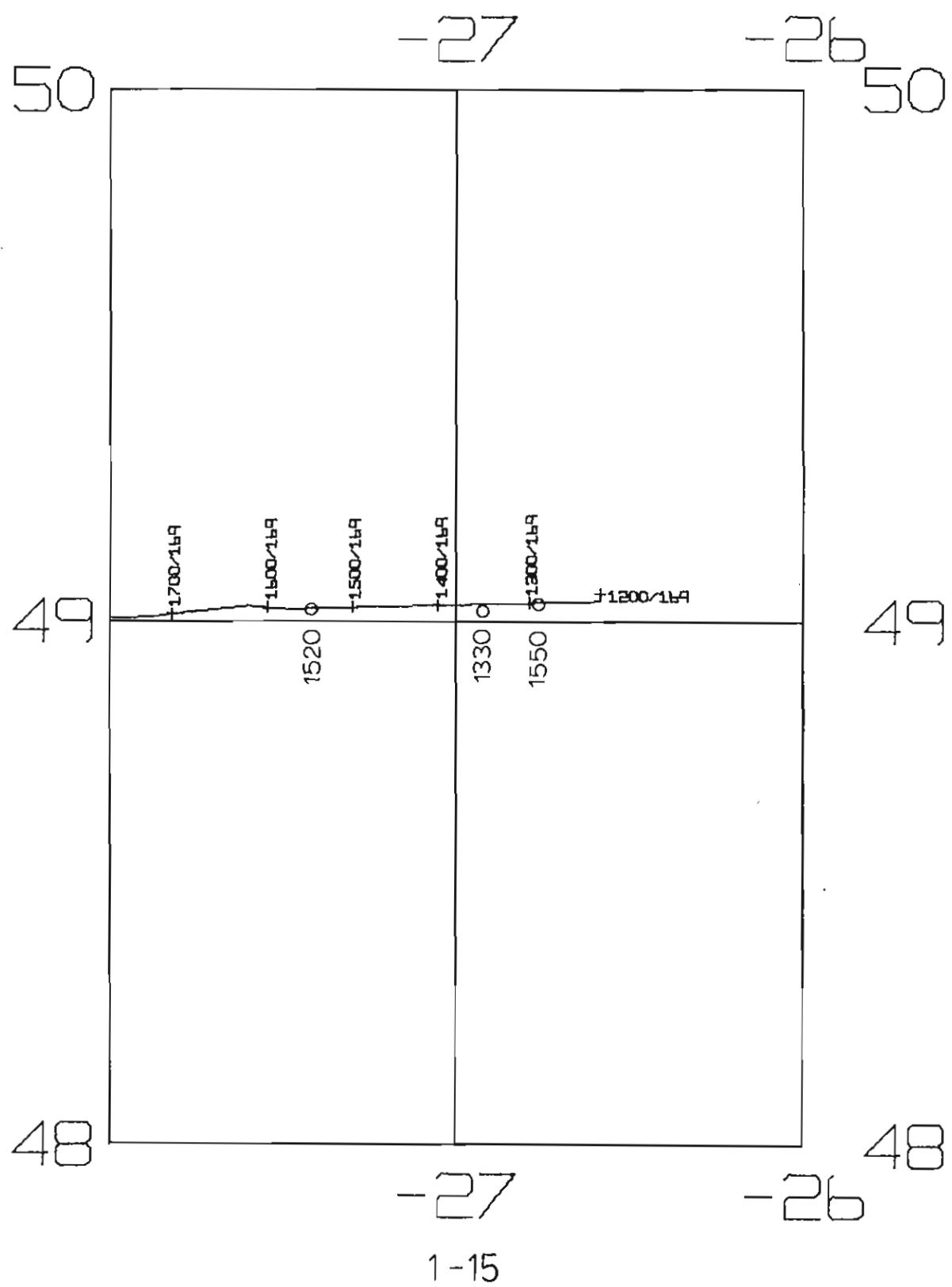
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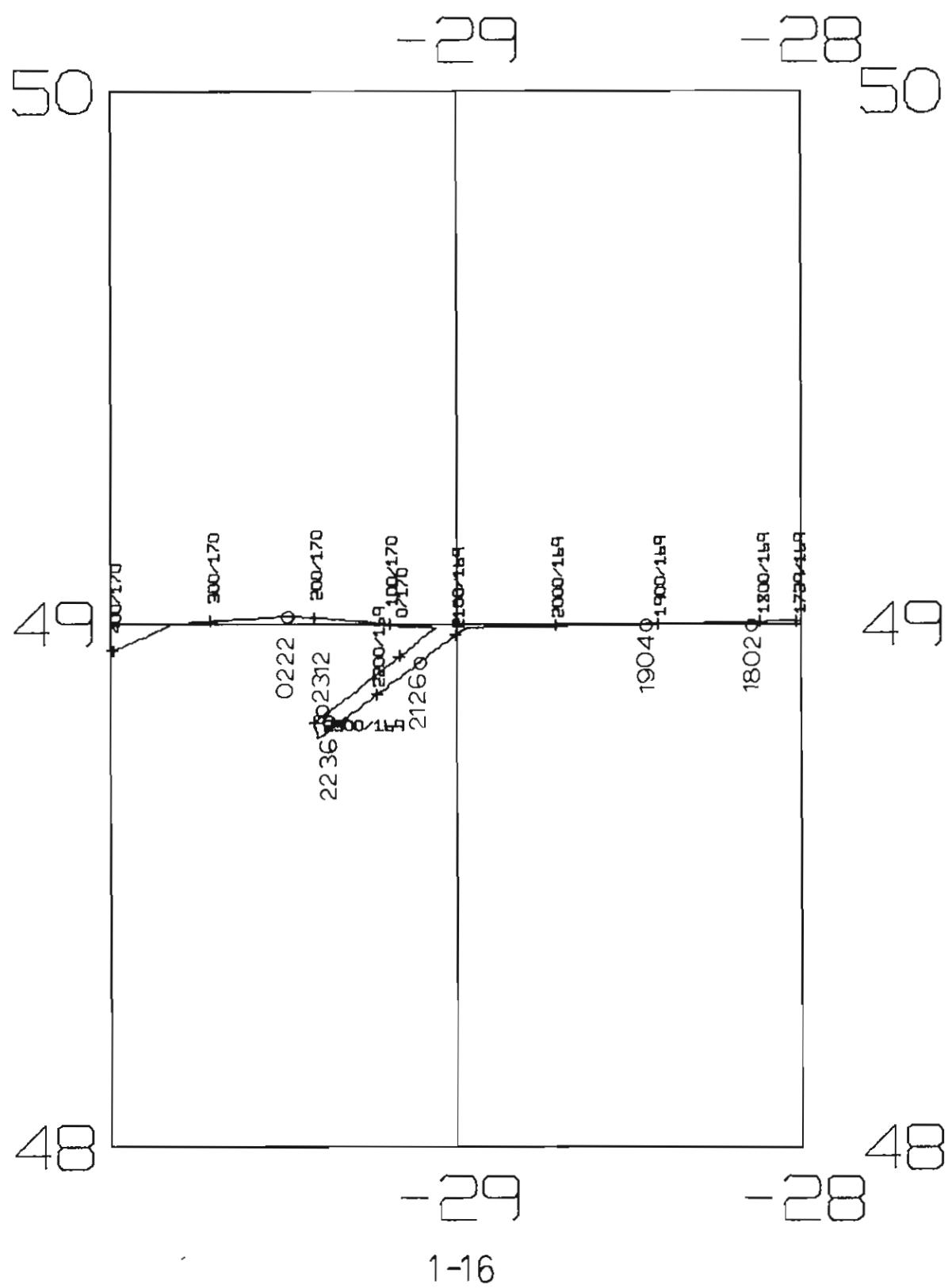


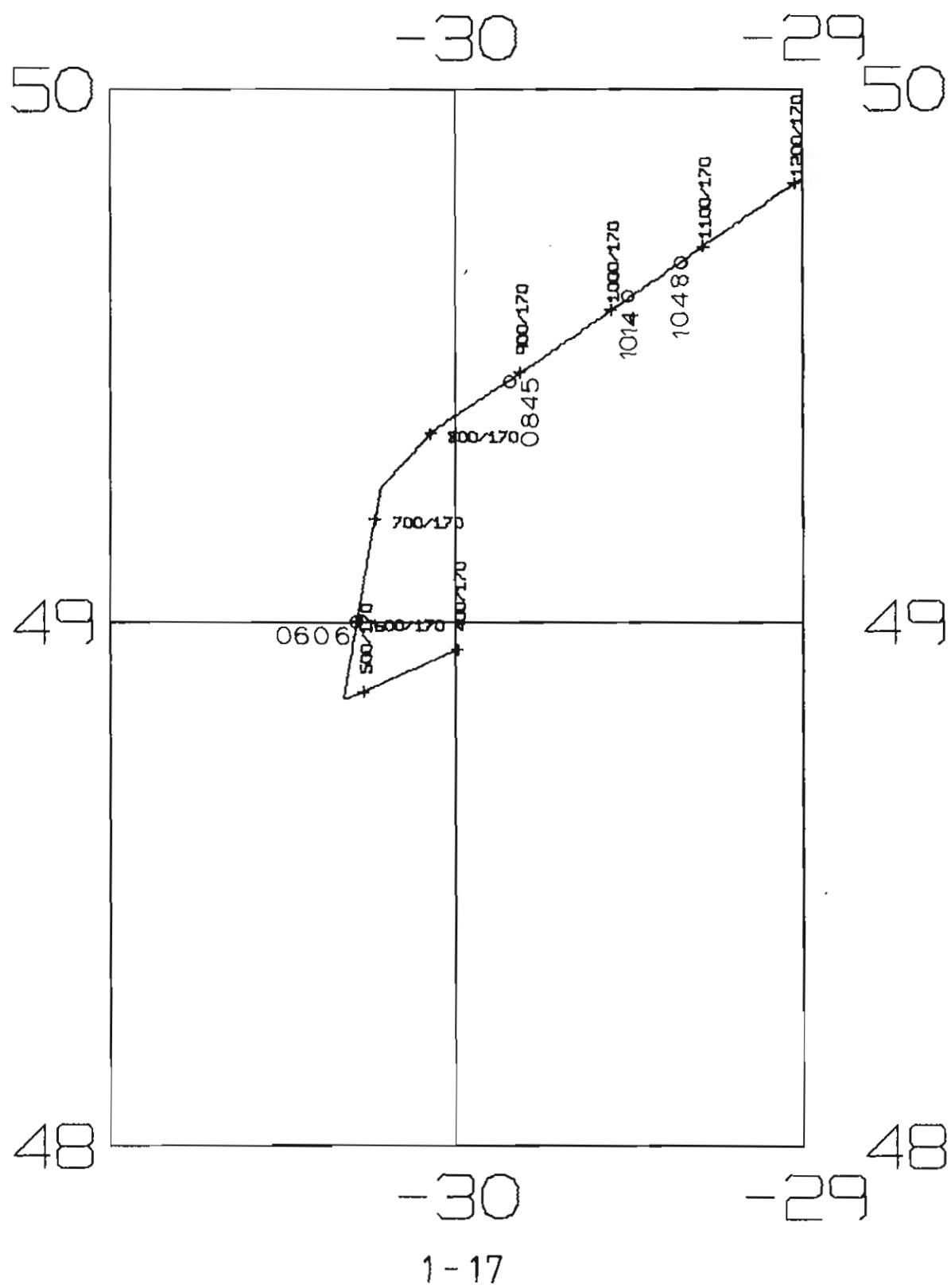




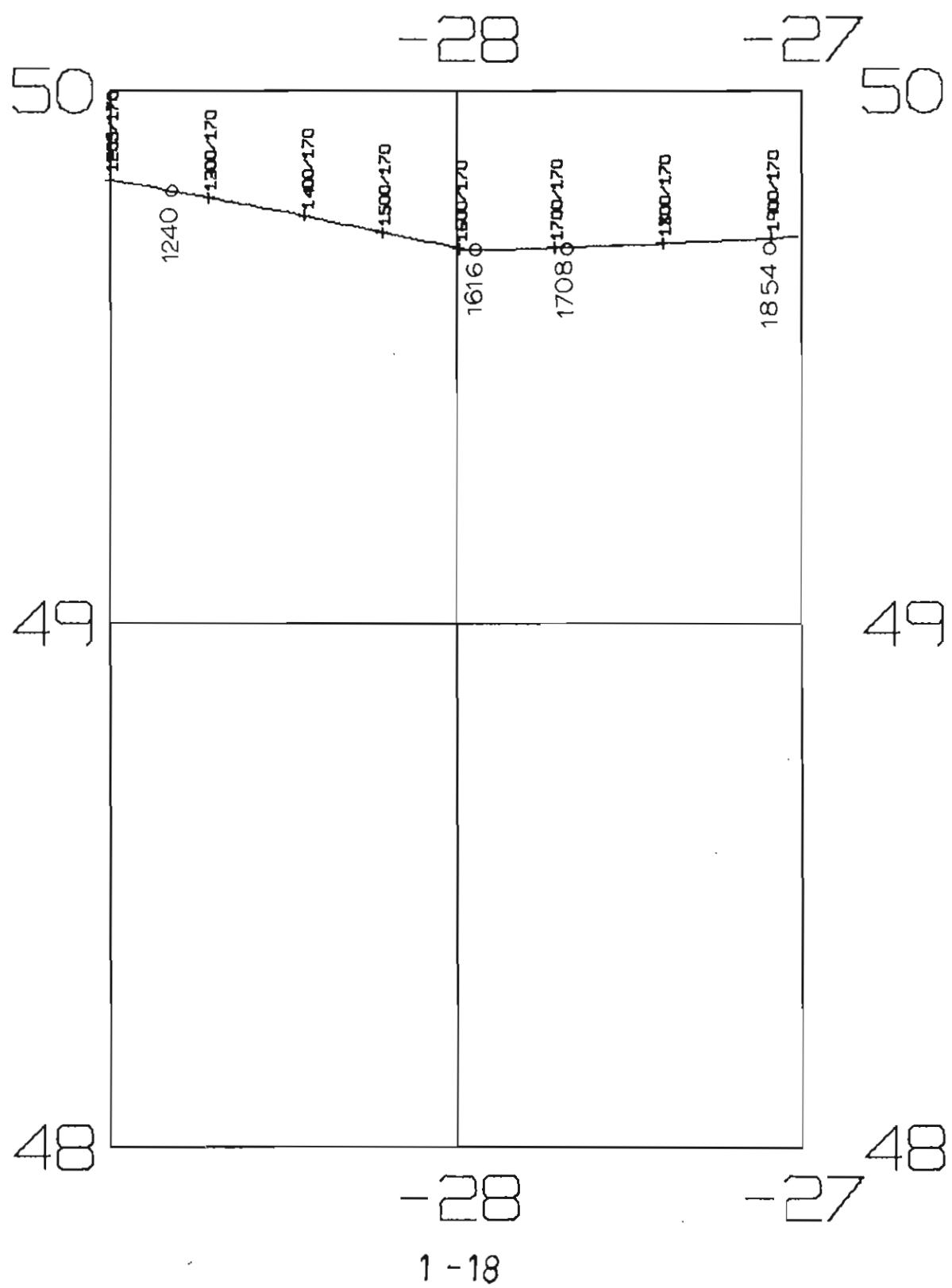


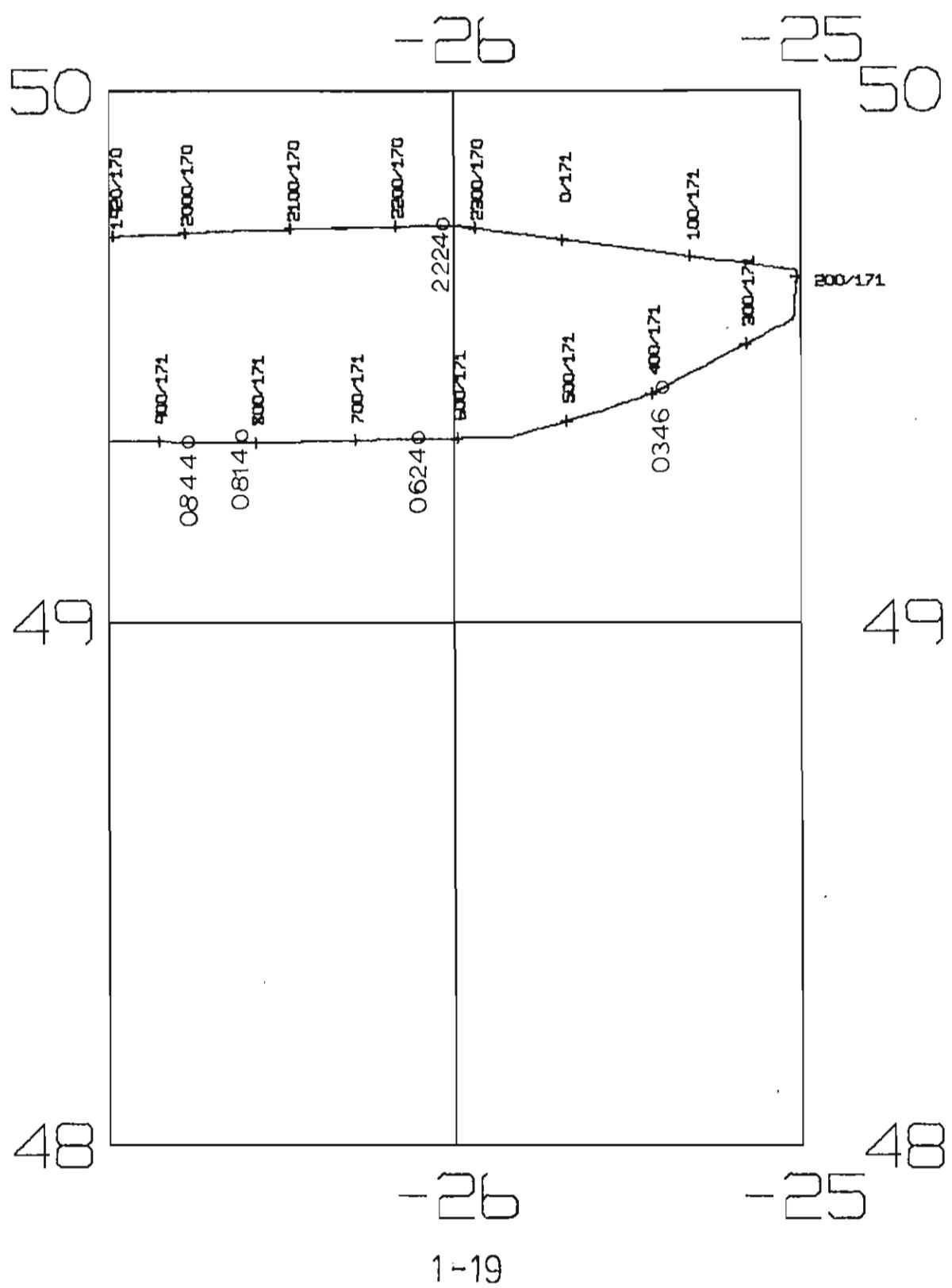


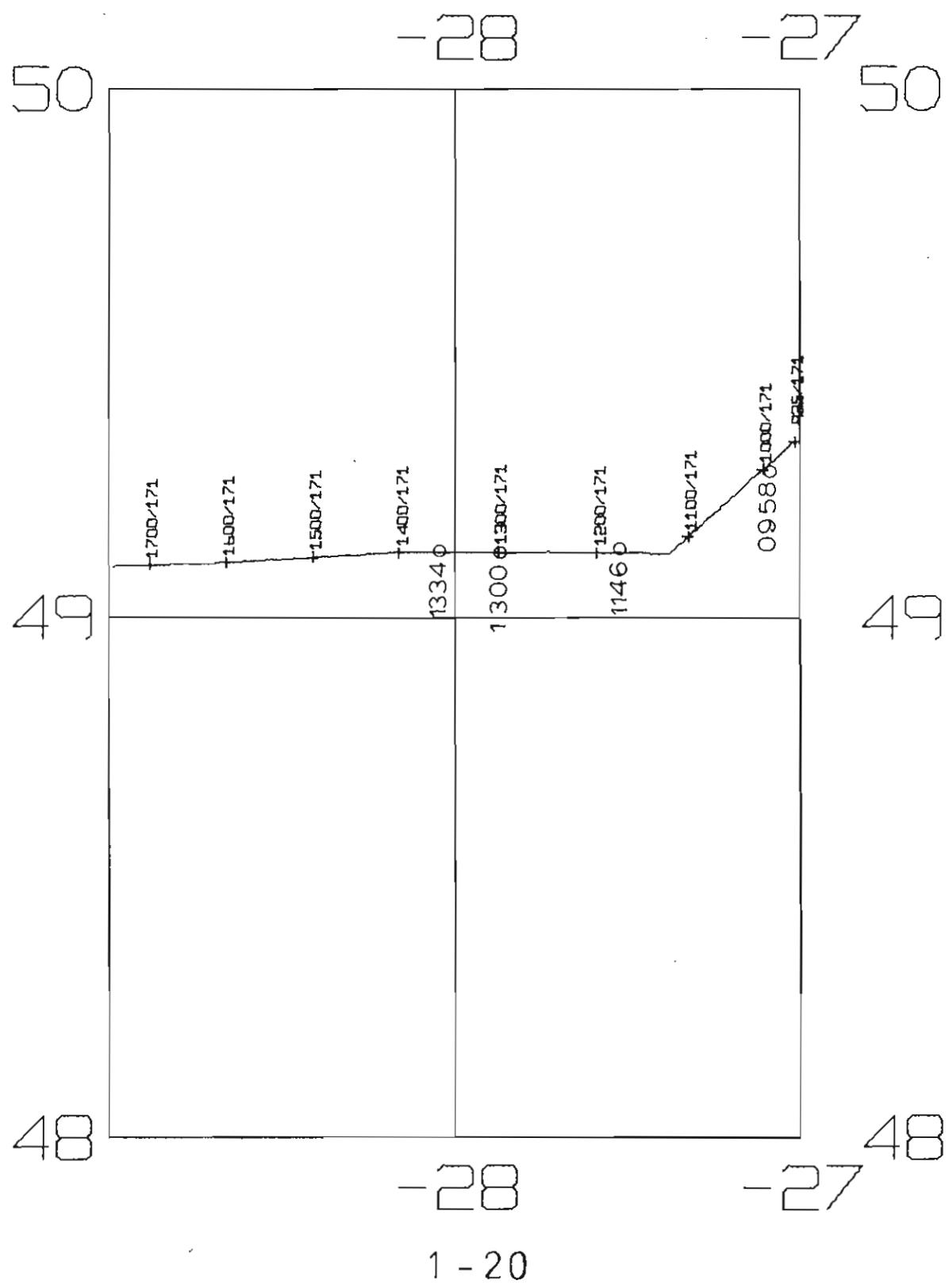


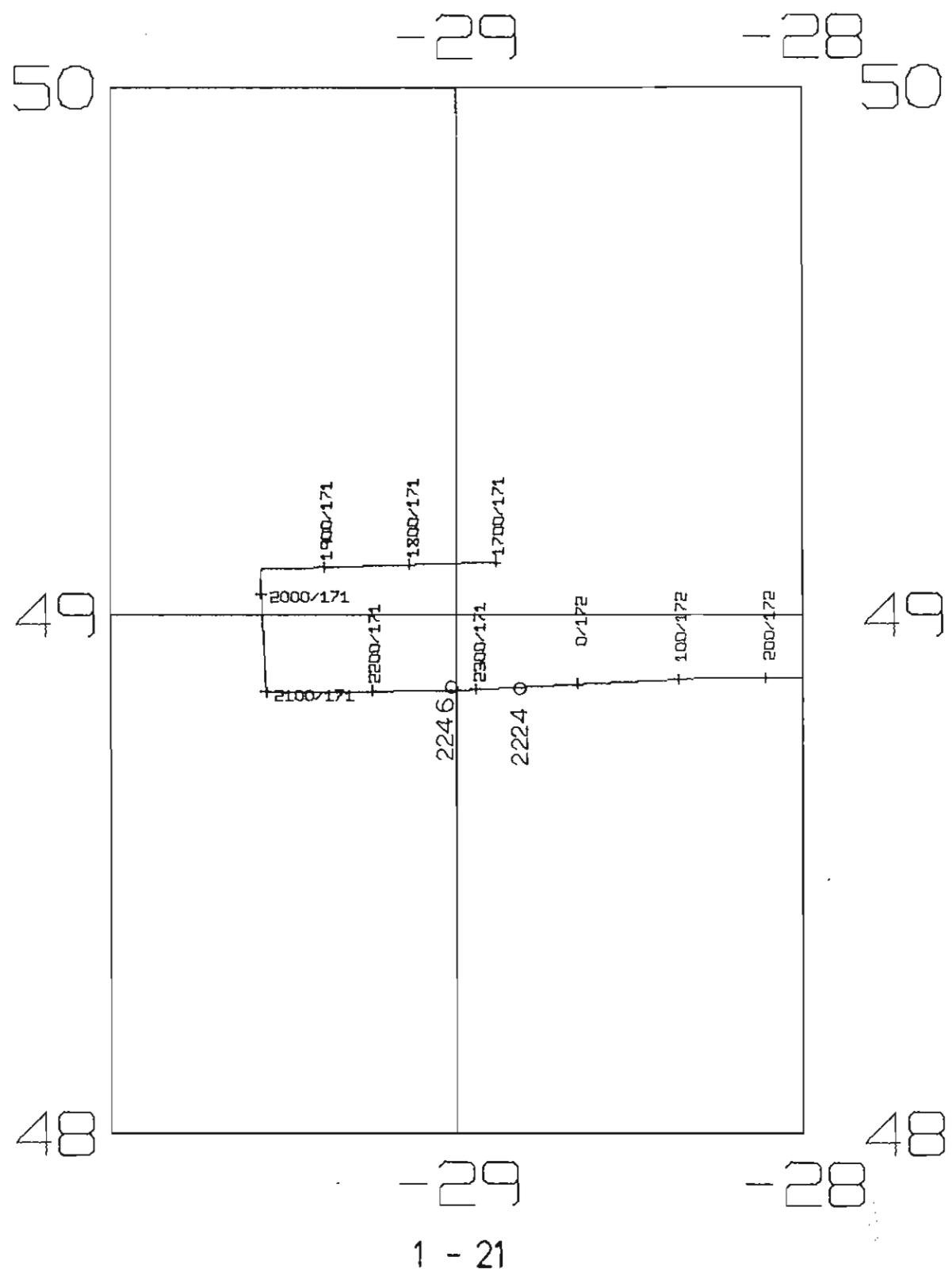


1 - 17









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-27

-26

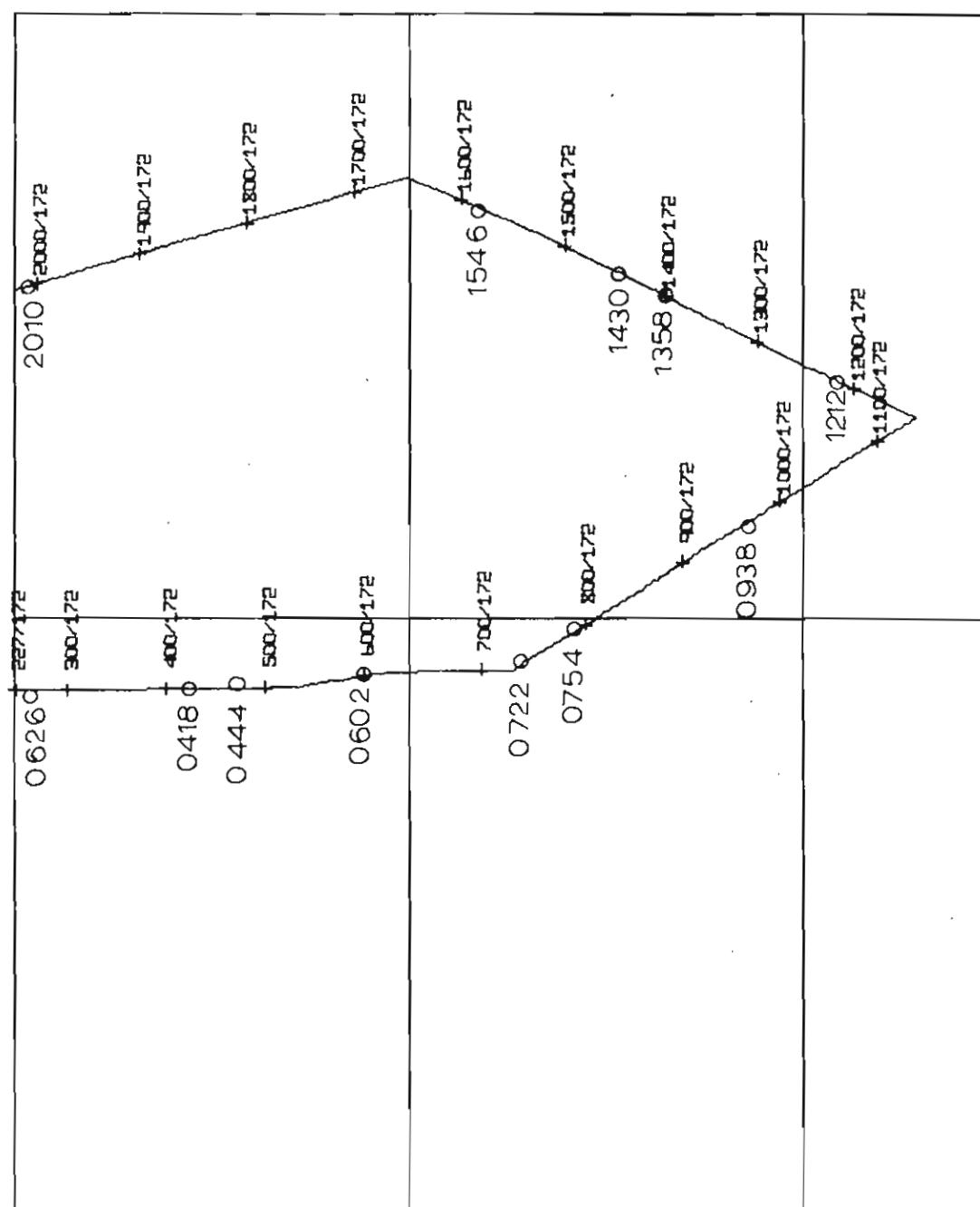
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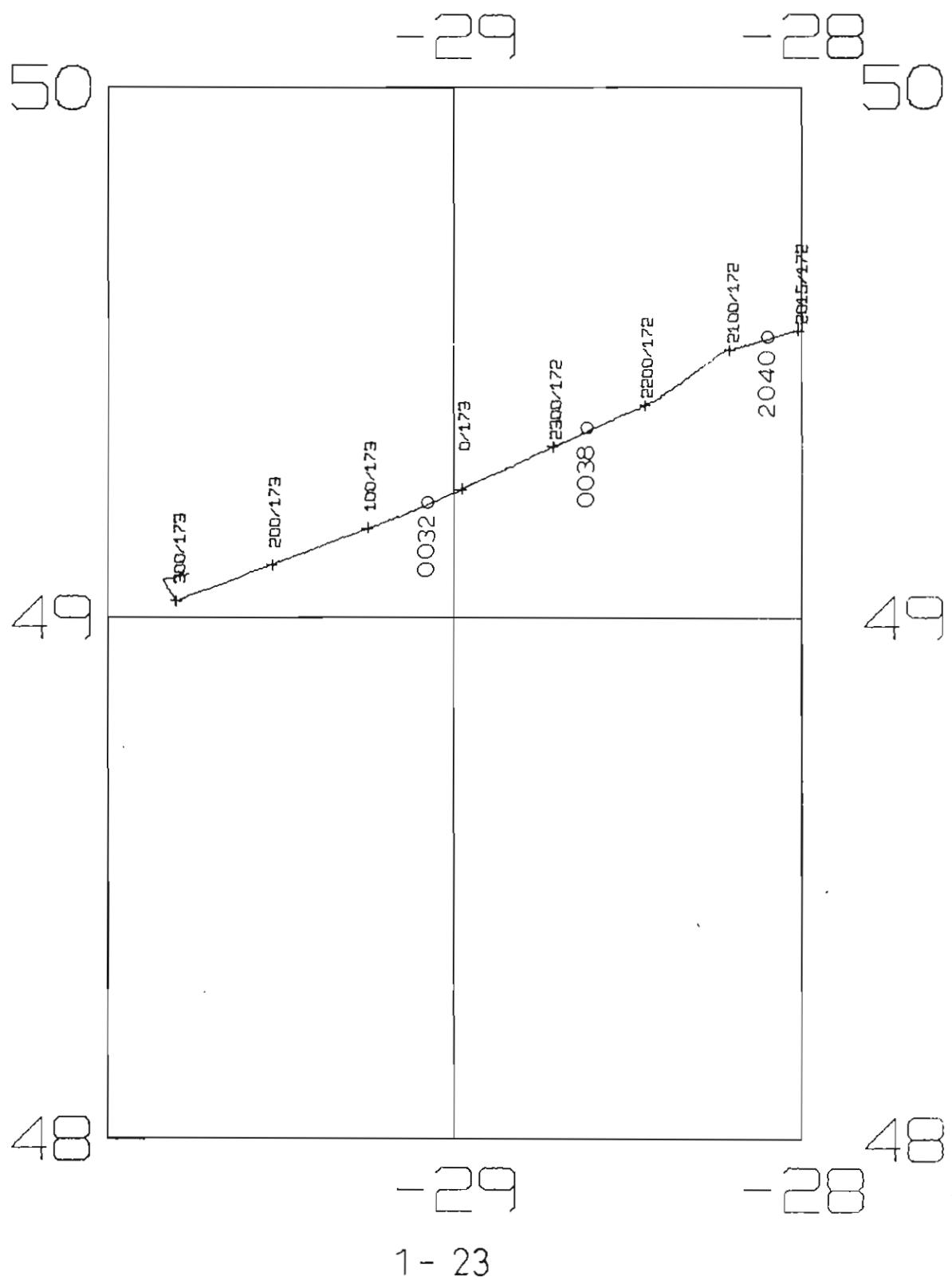
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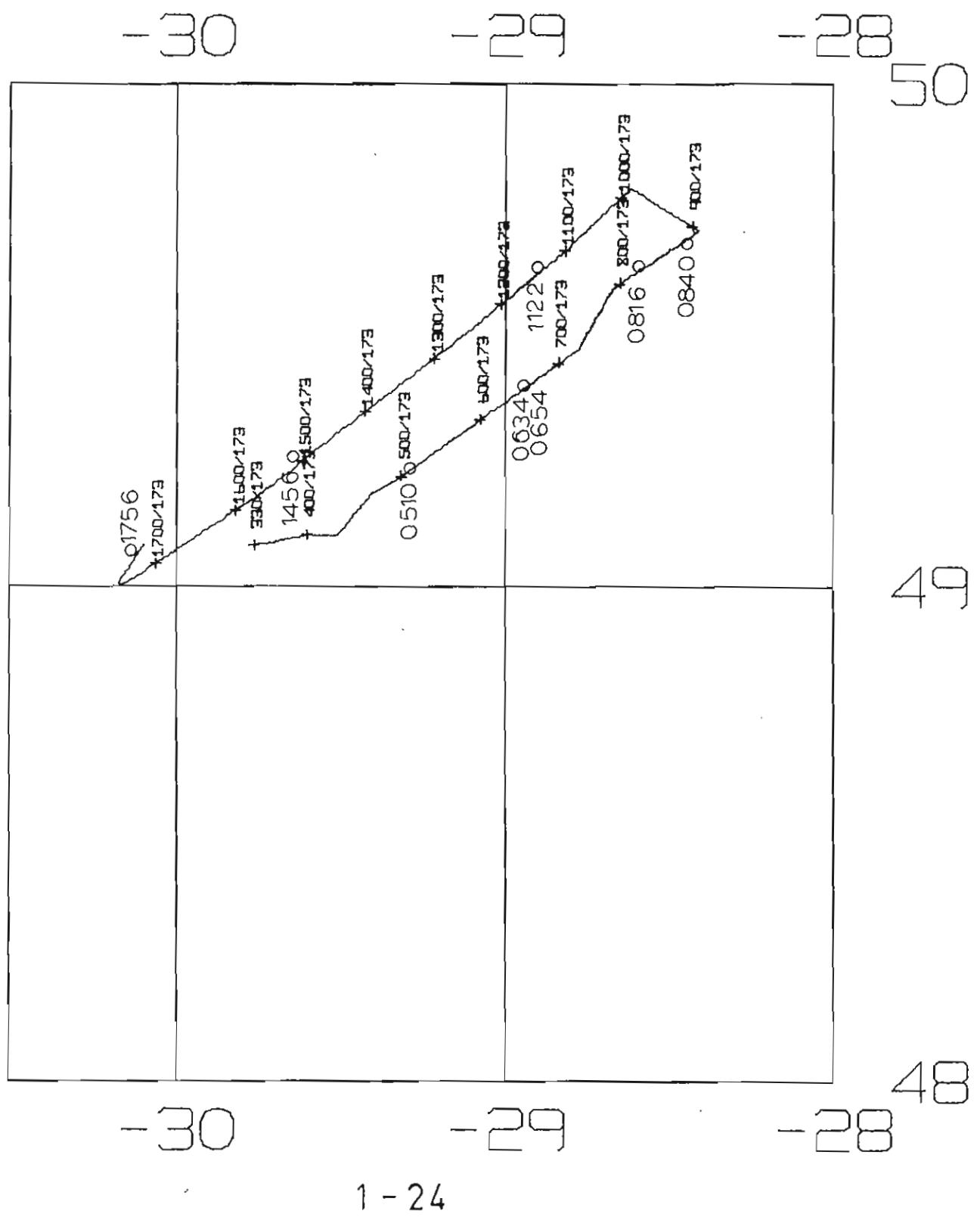
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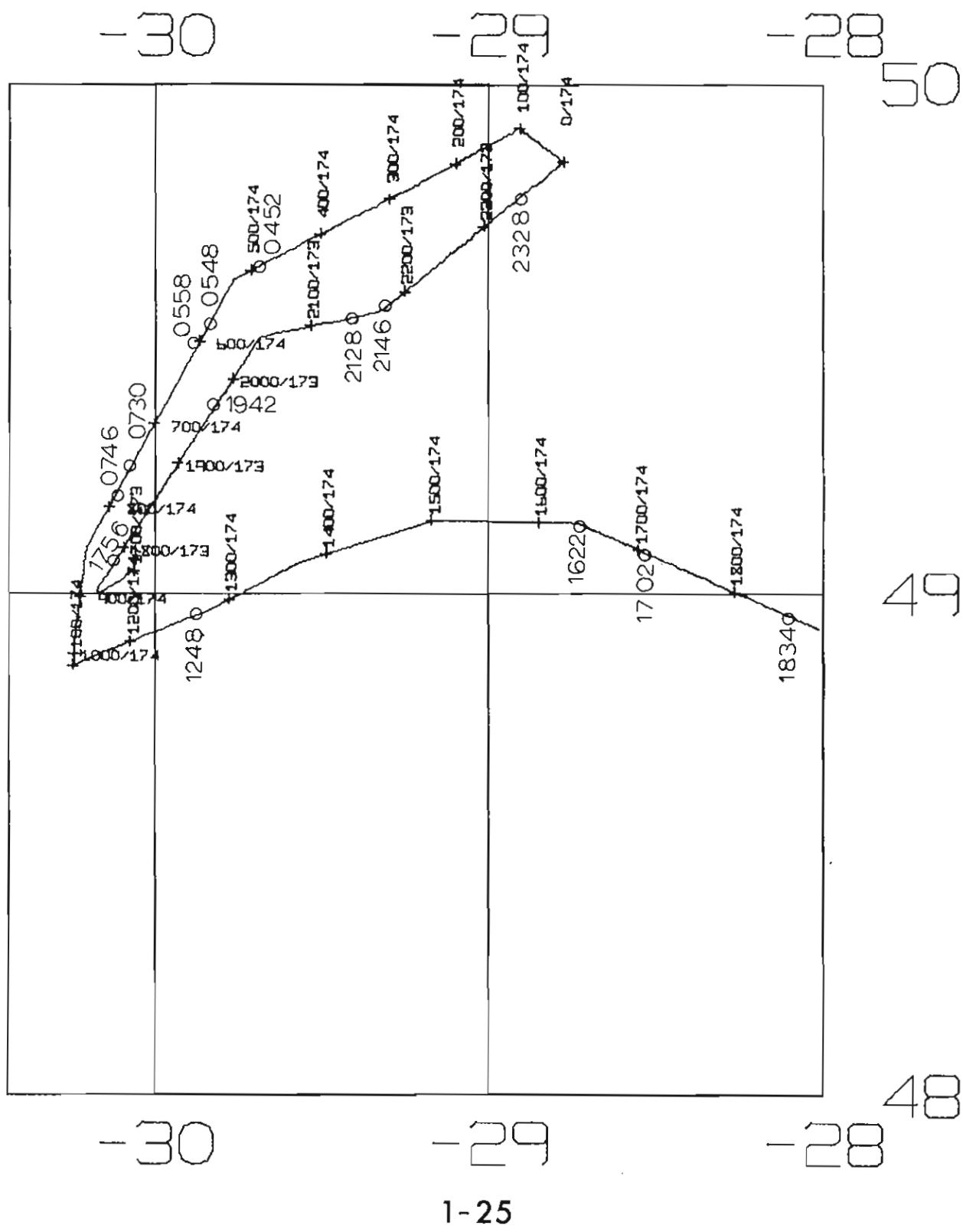
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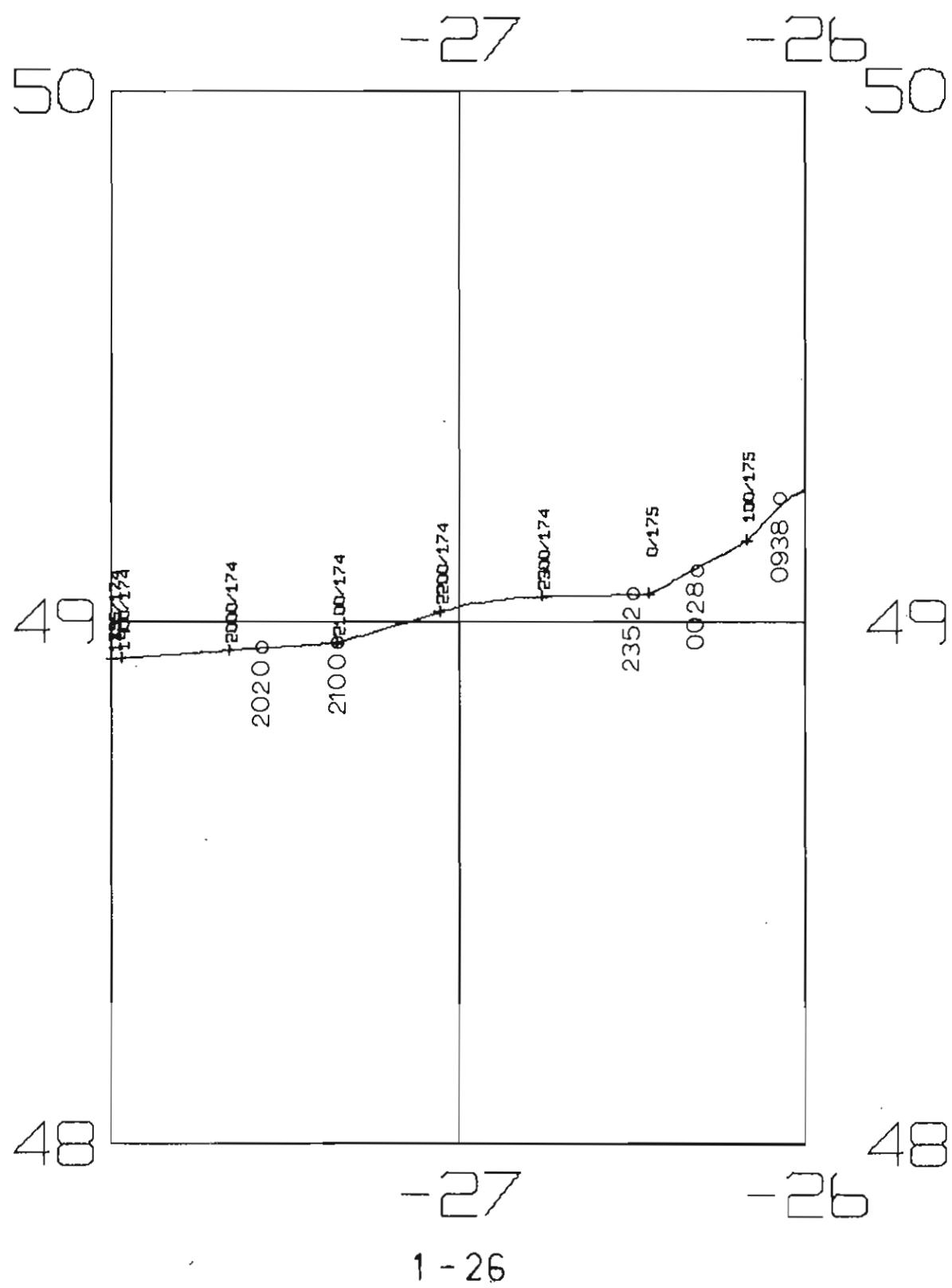
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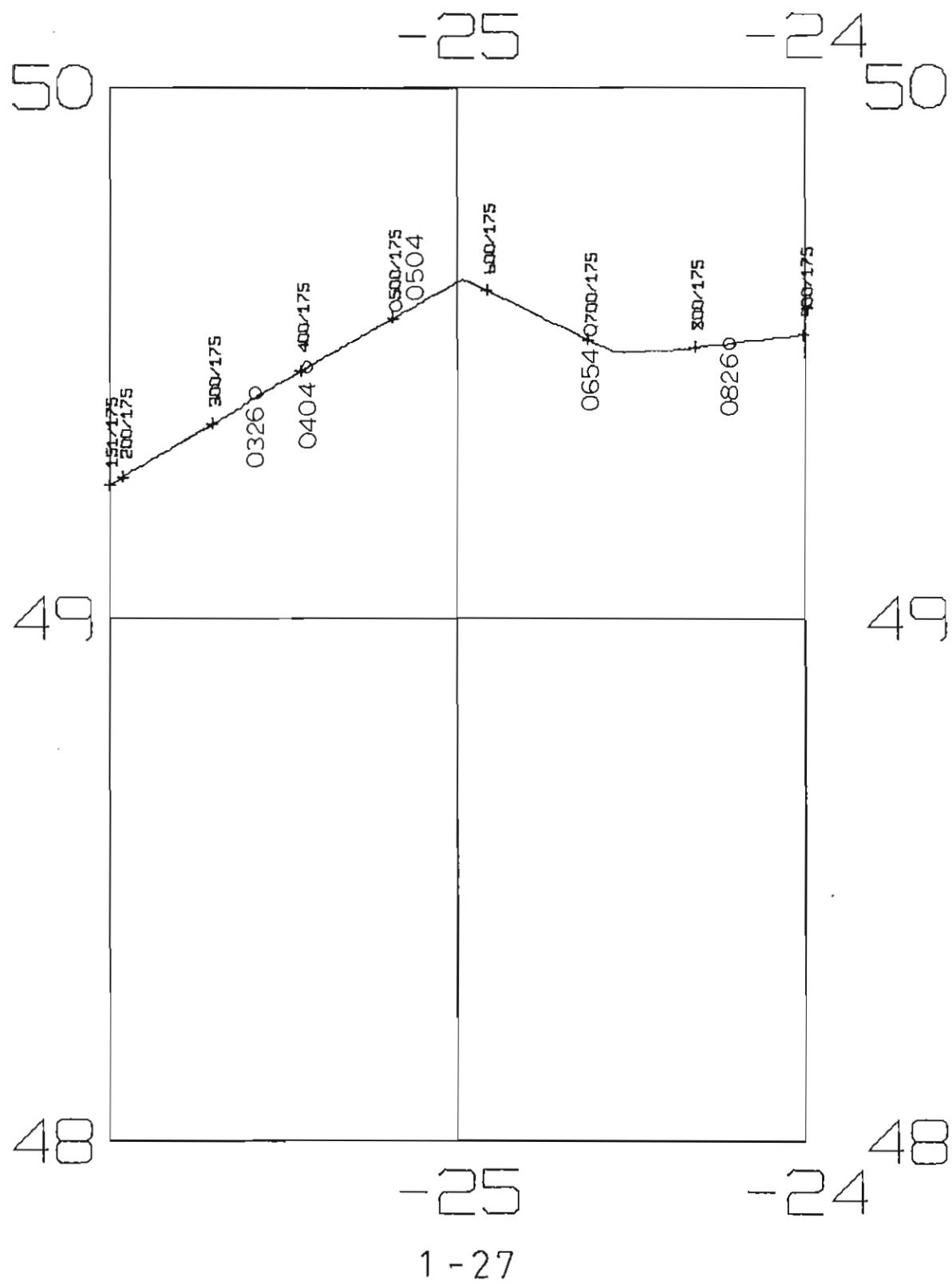


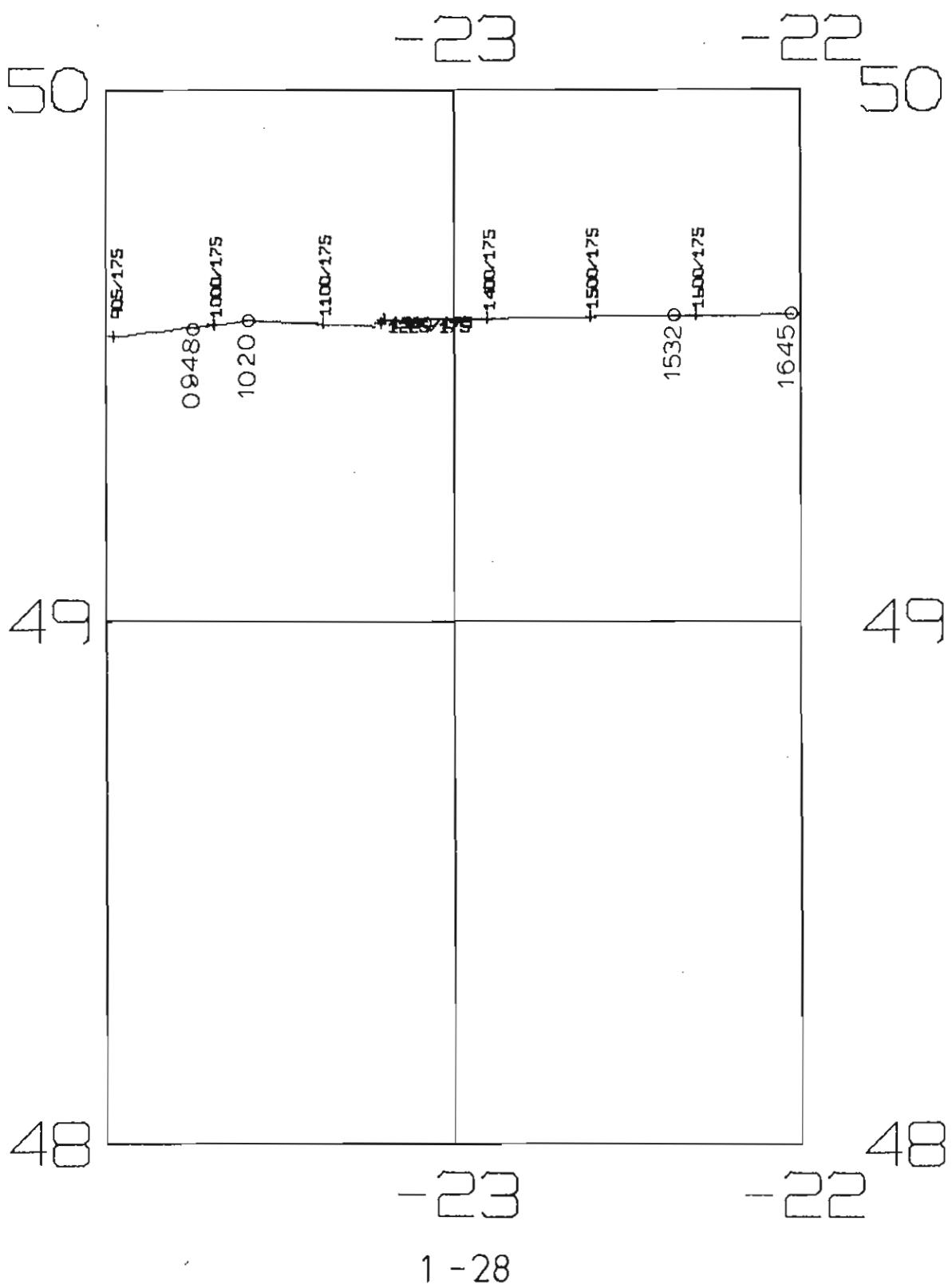


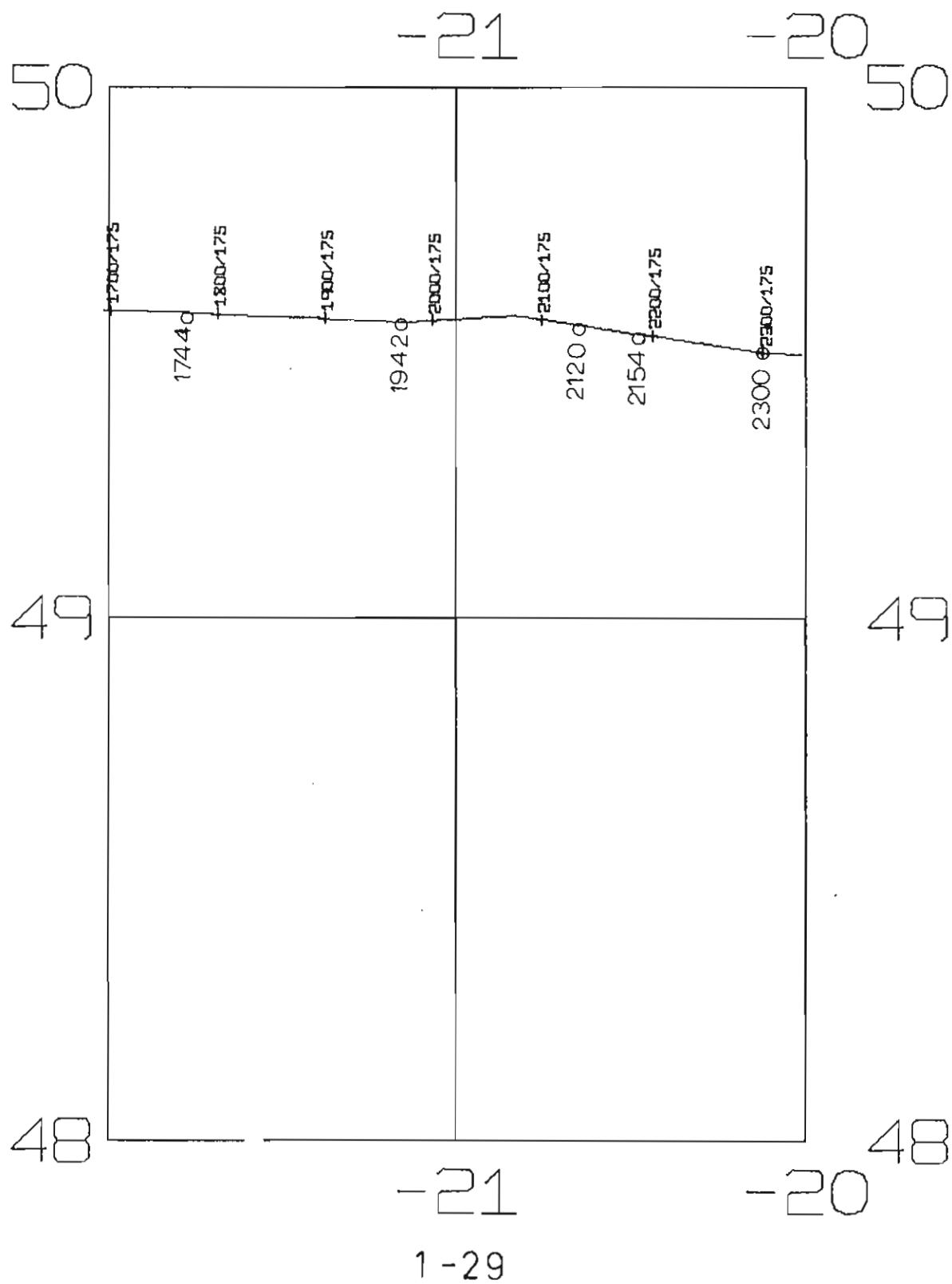


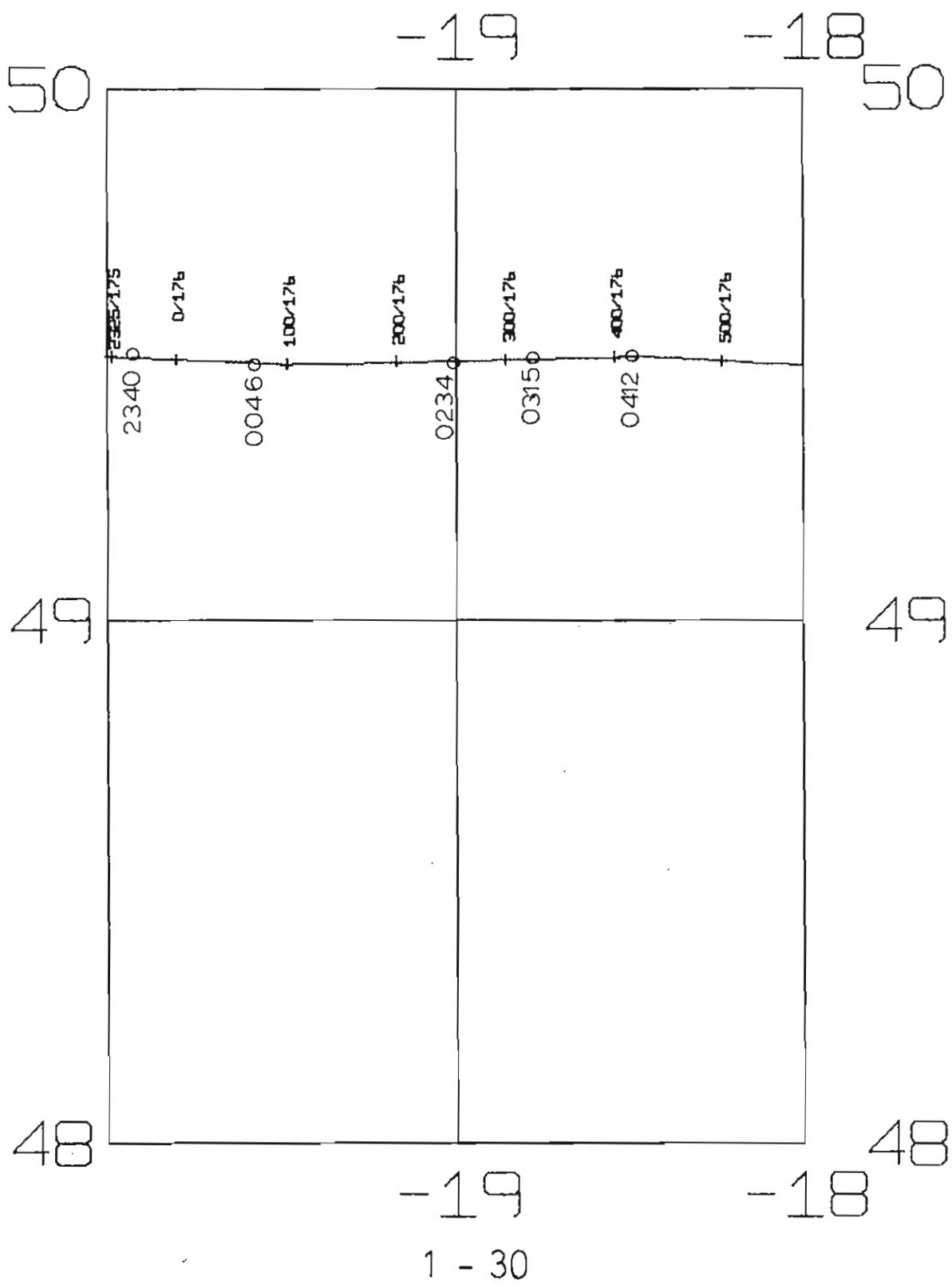




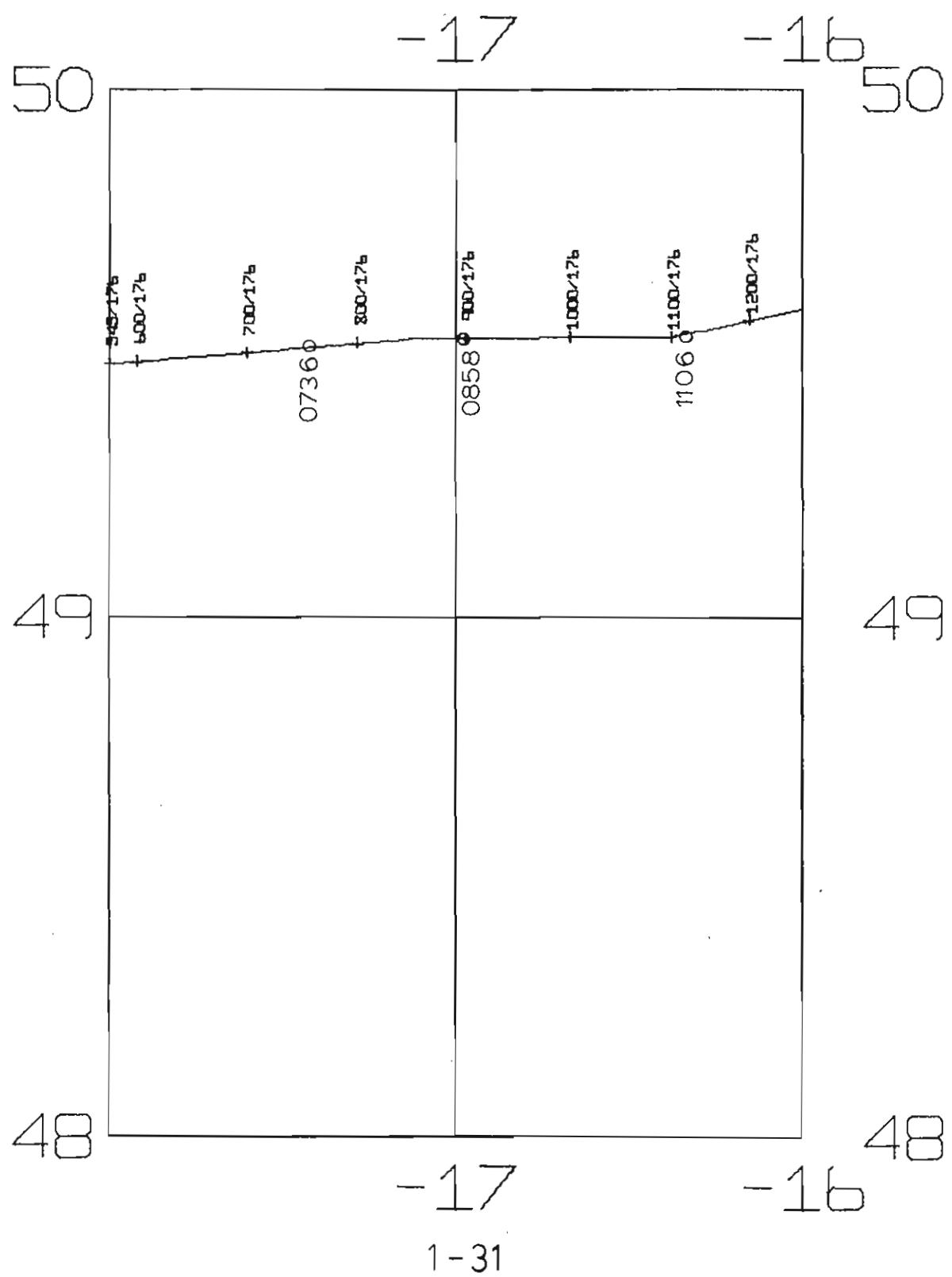


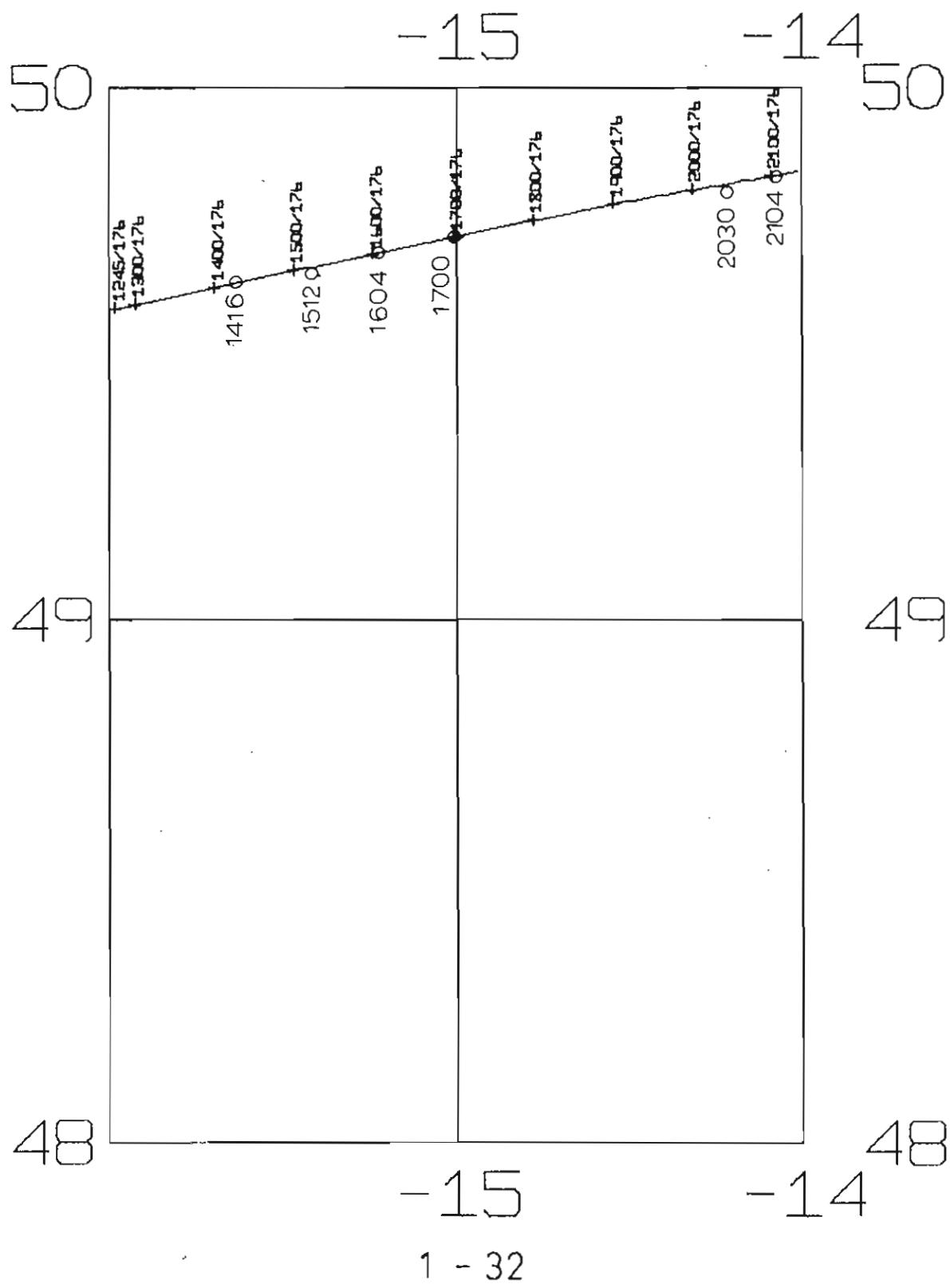


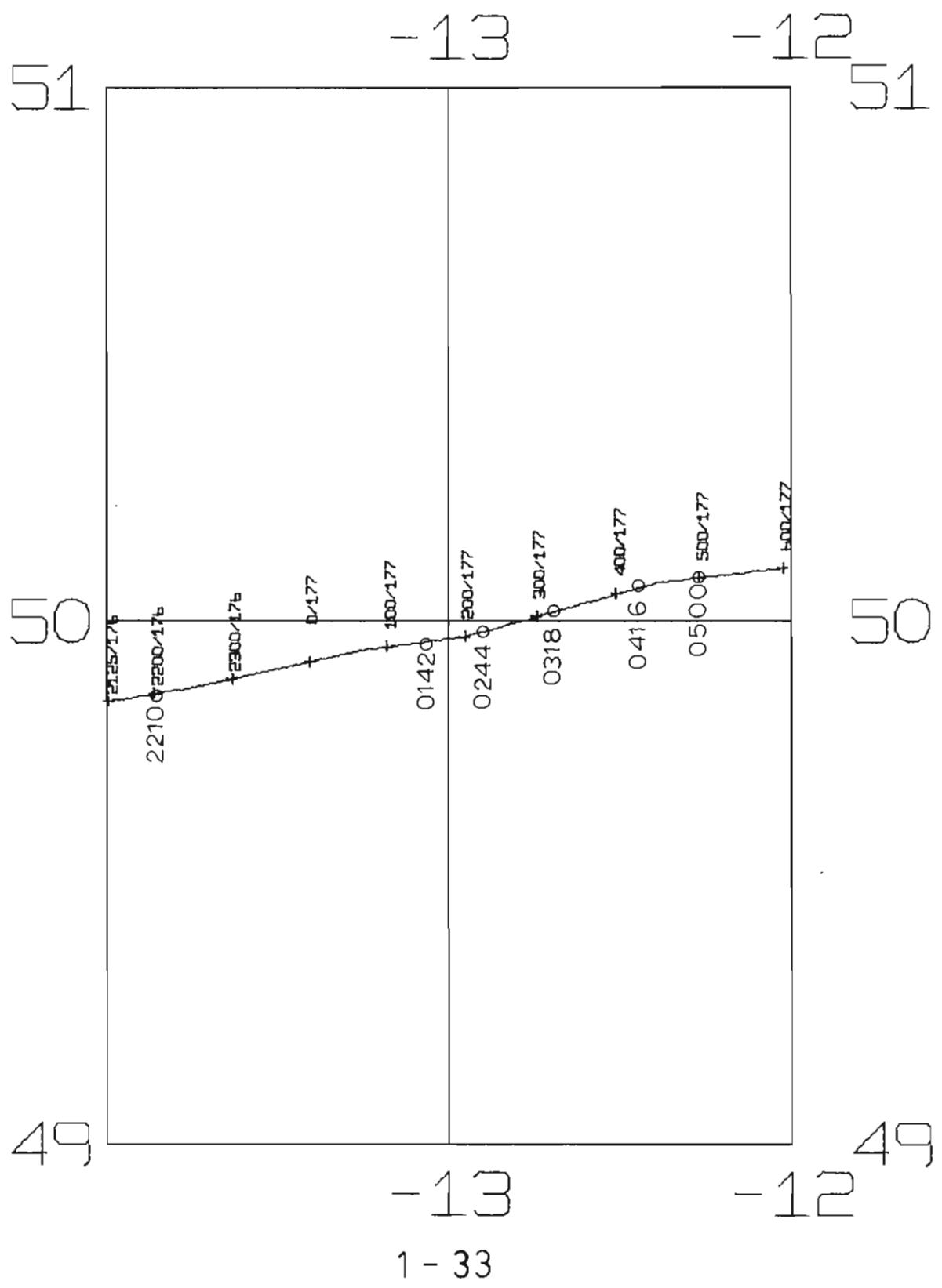


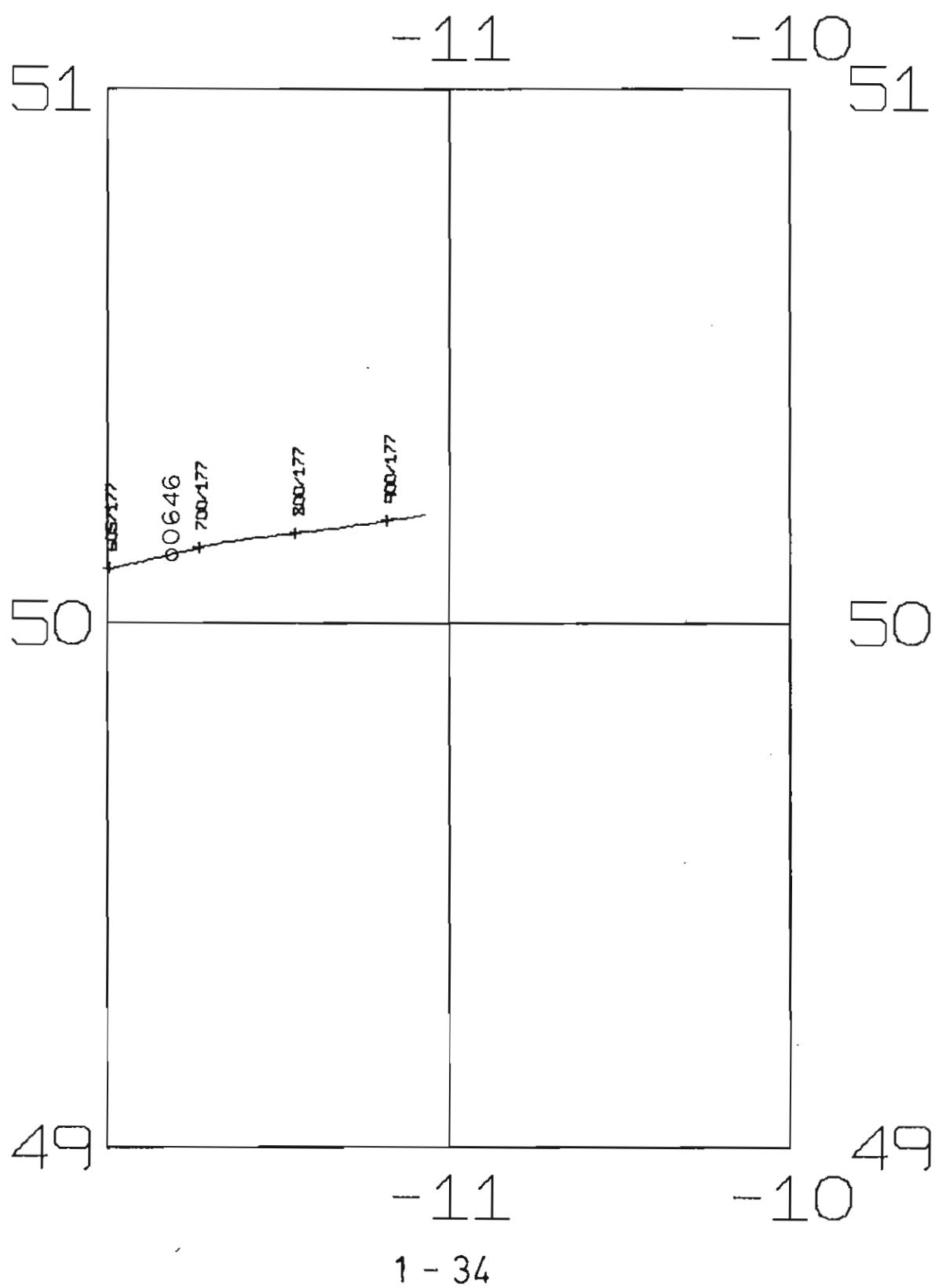


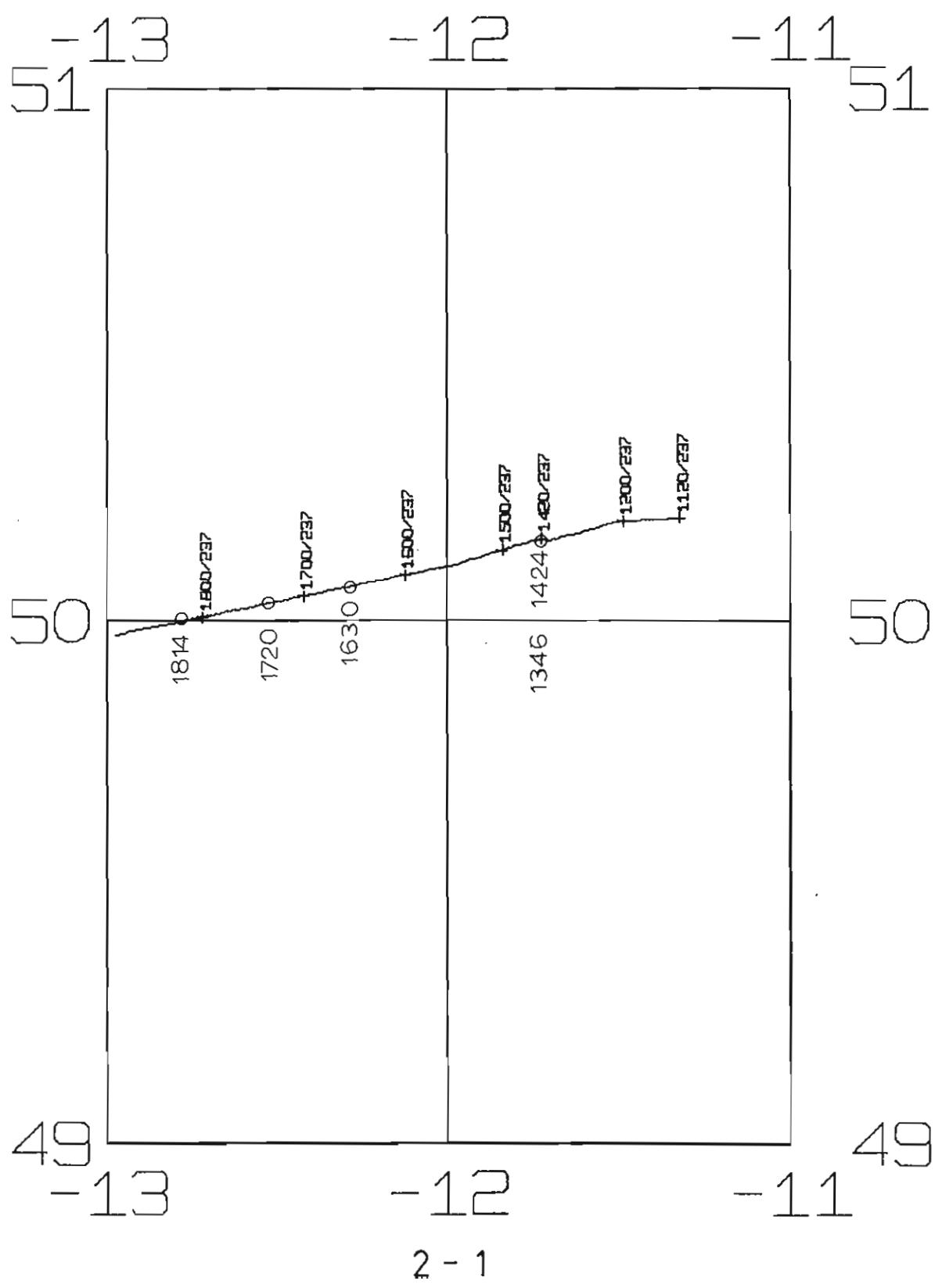
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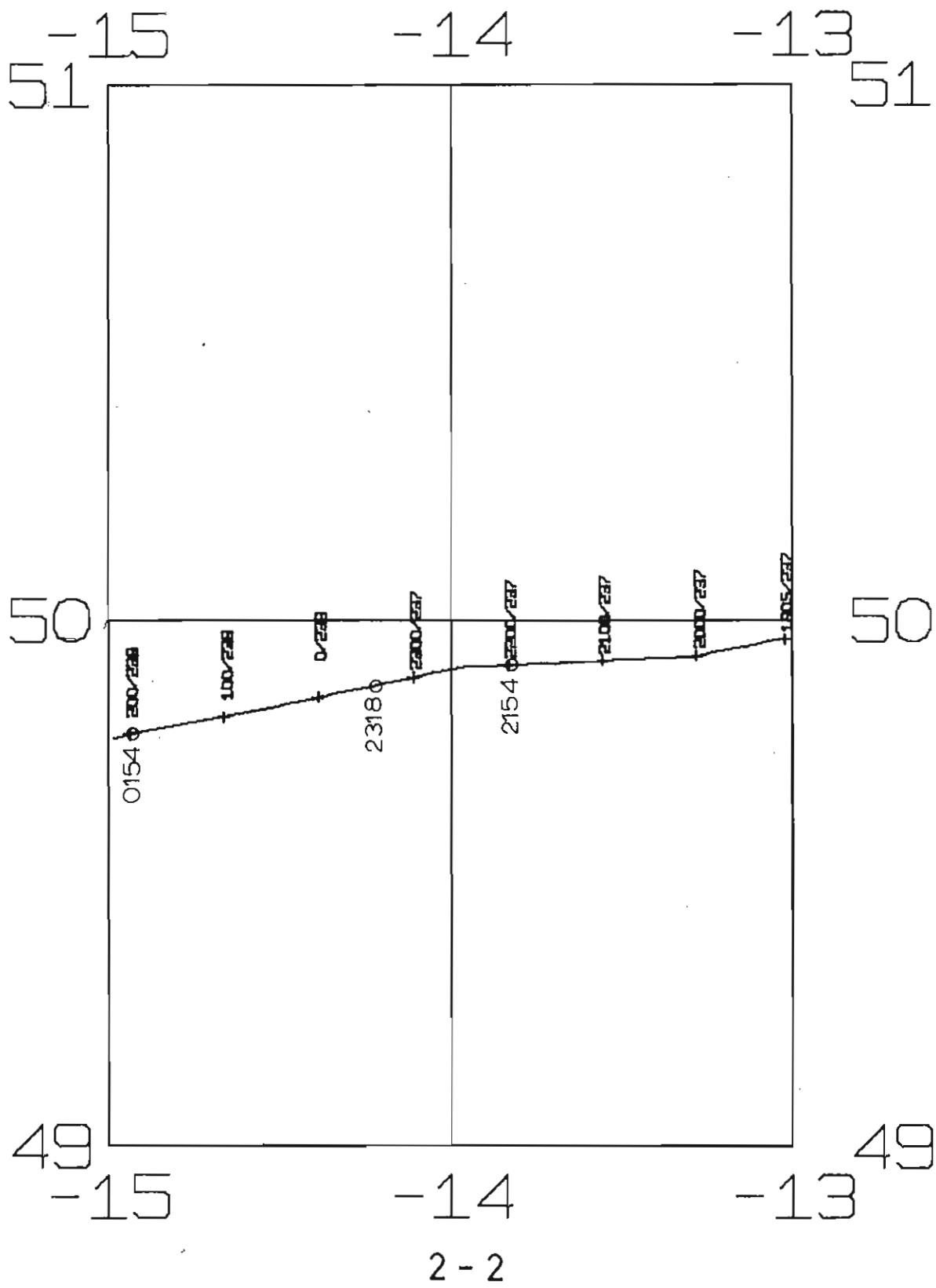


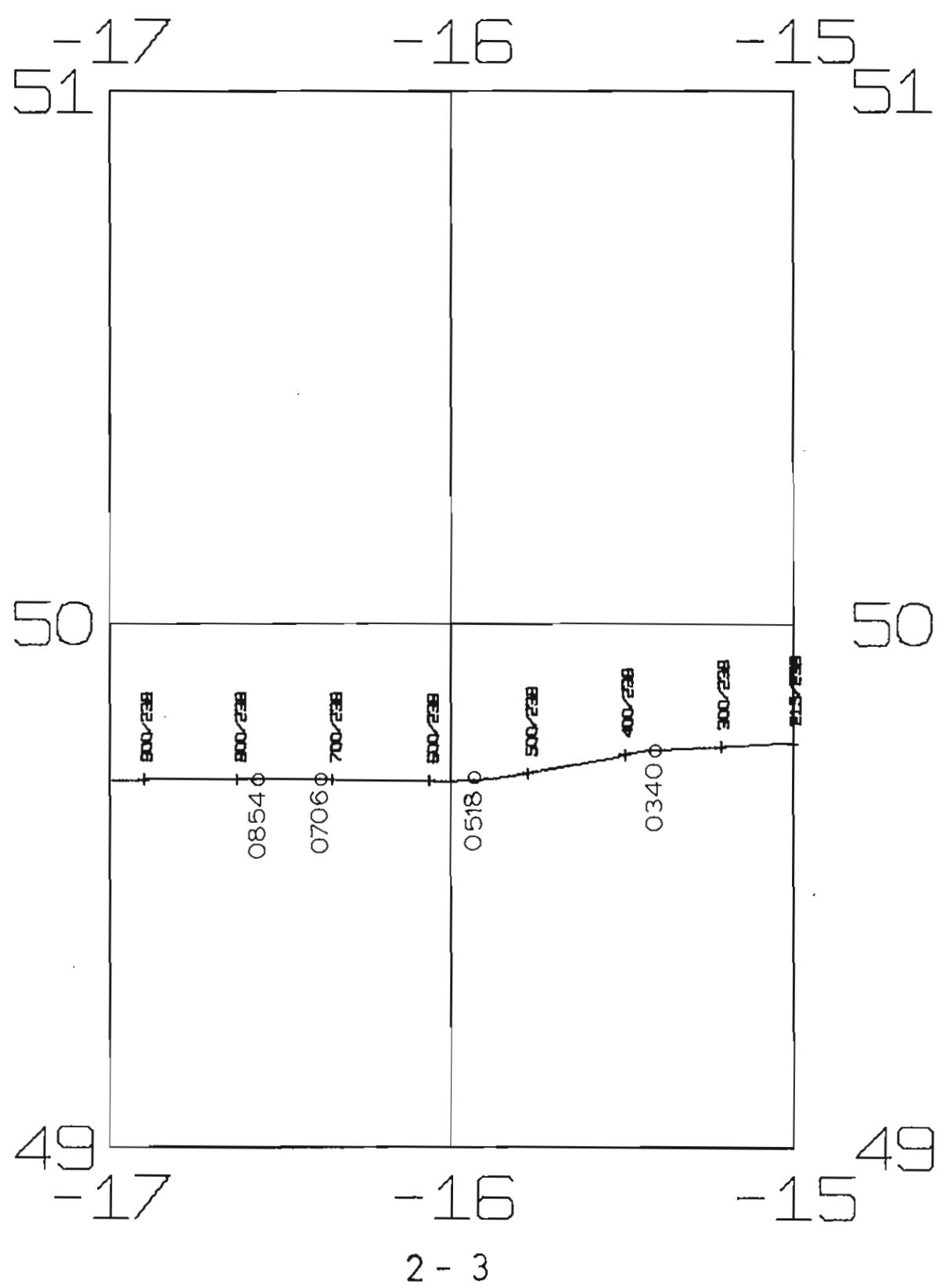


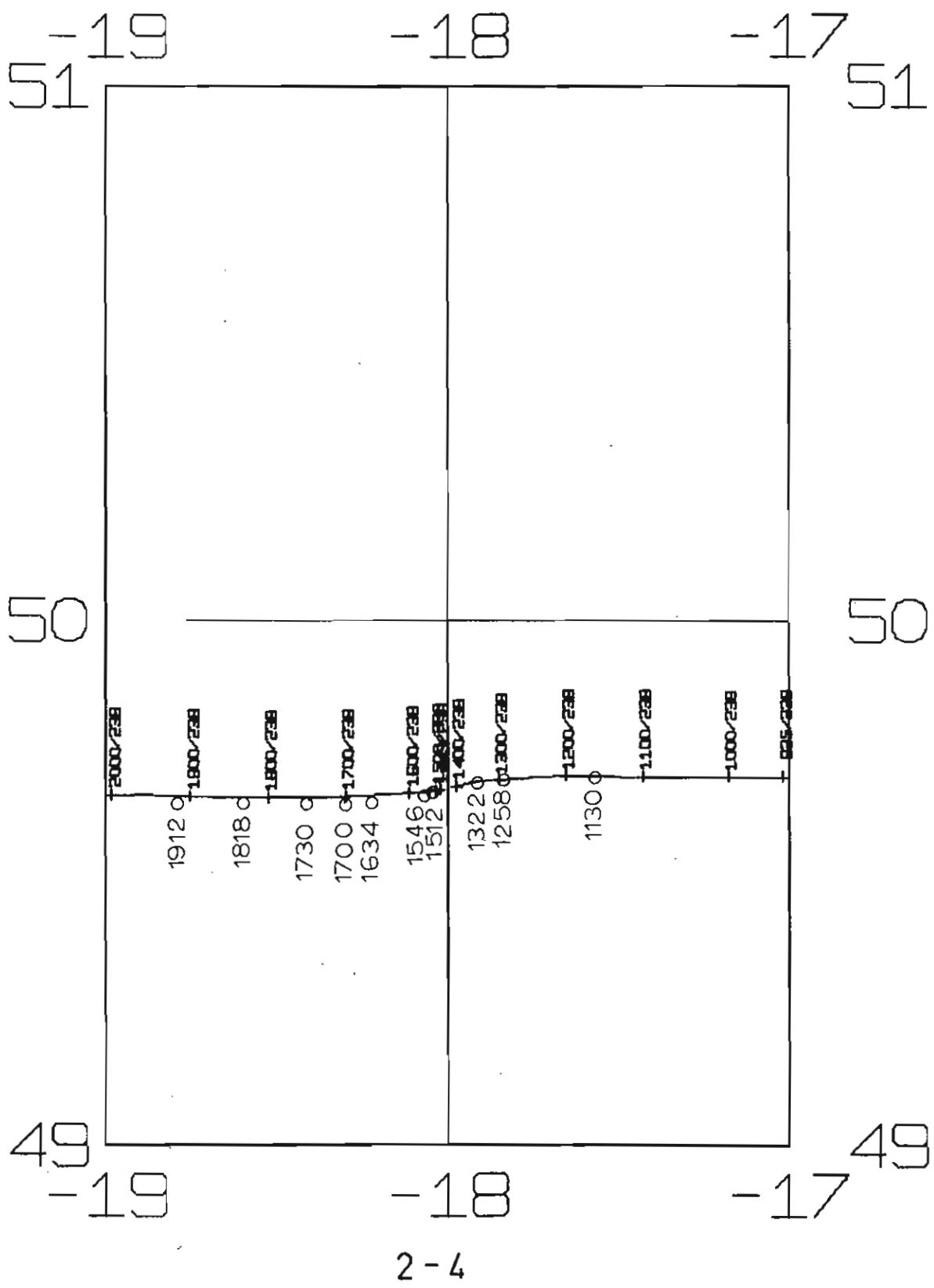




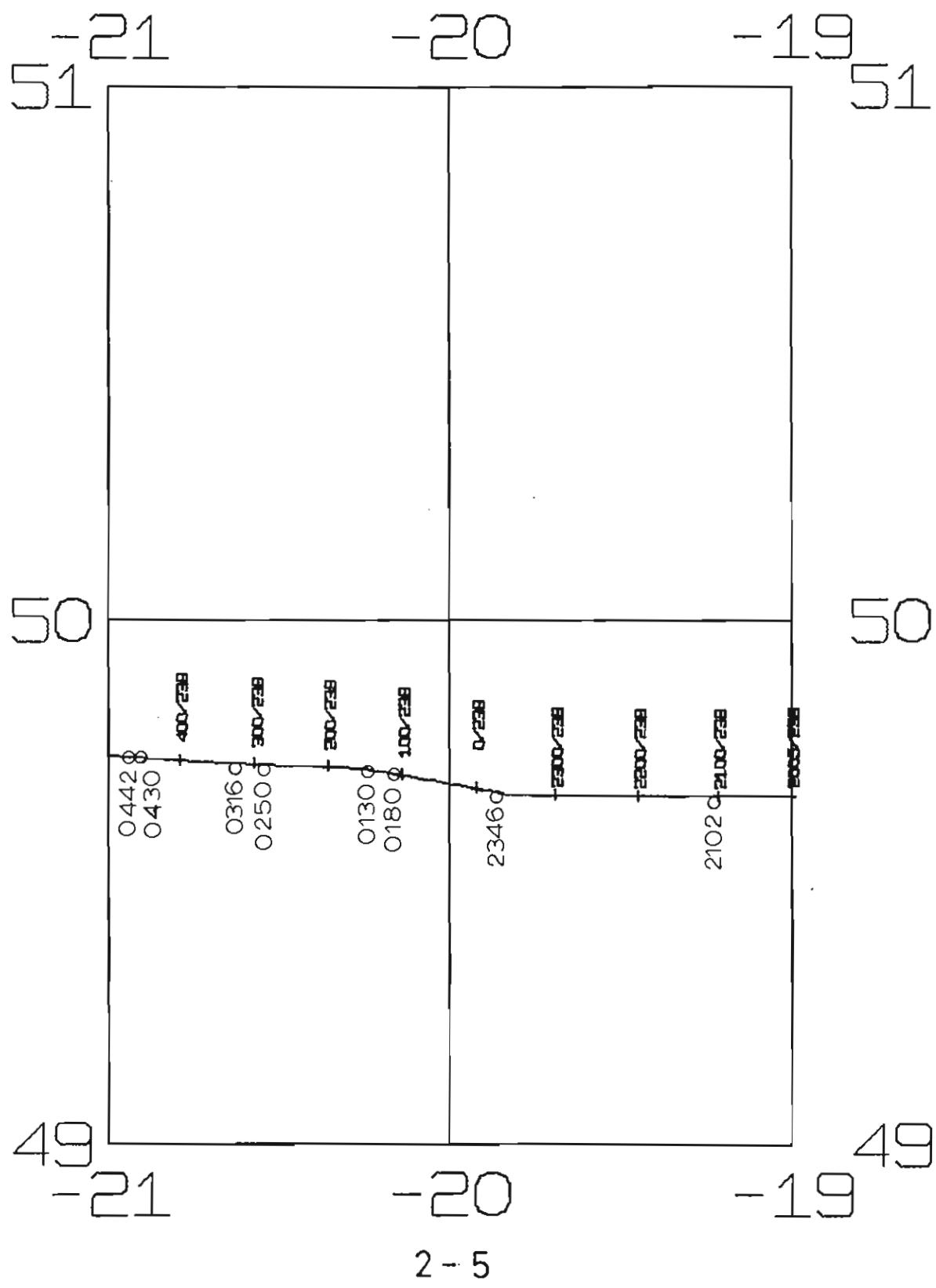


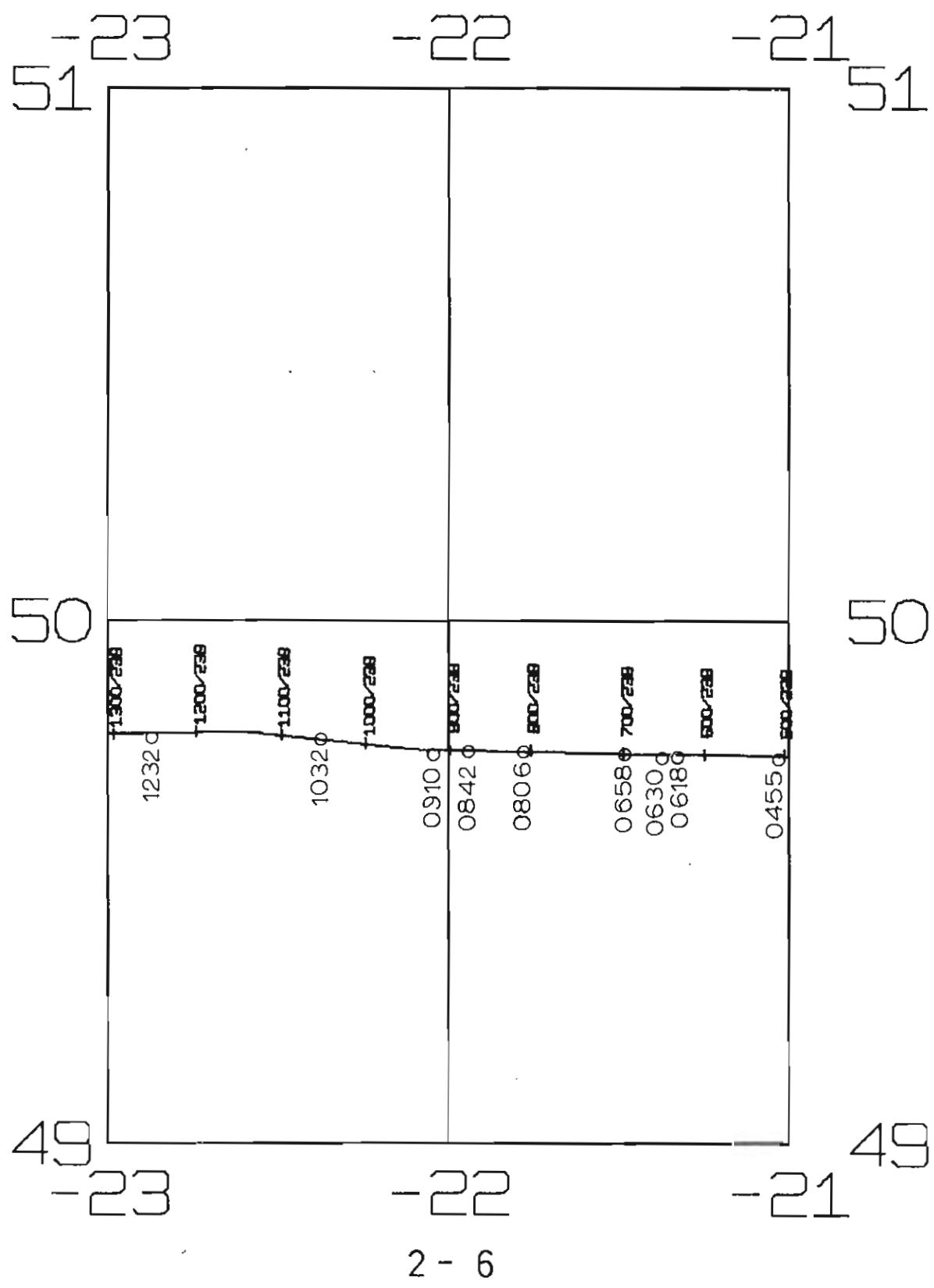


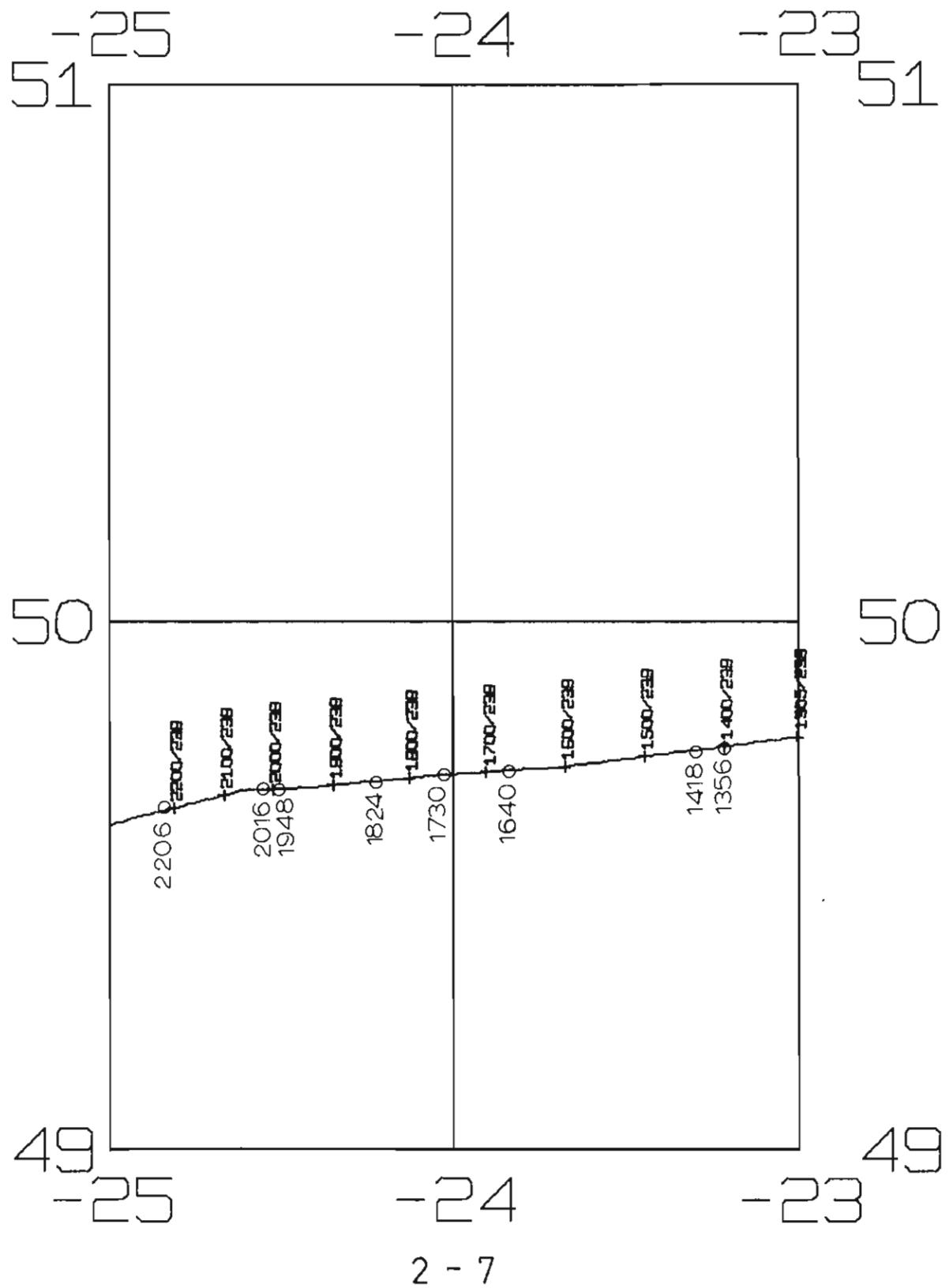




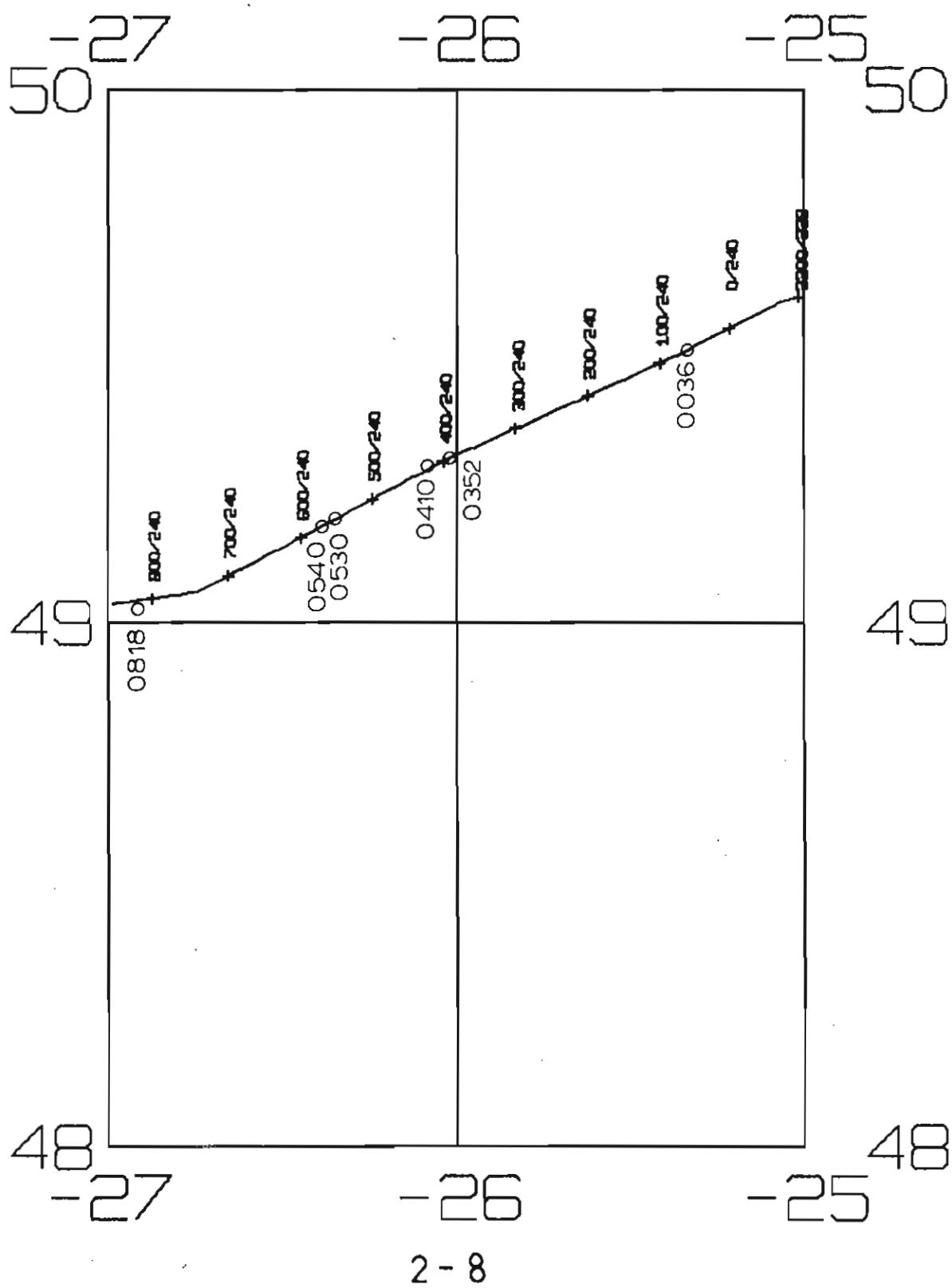
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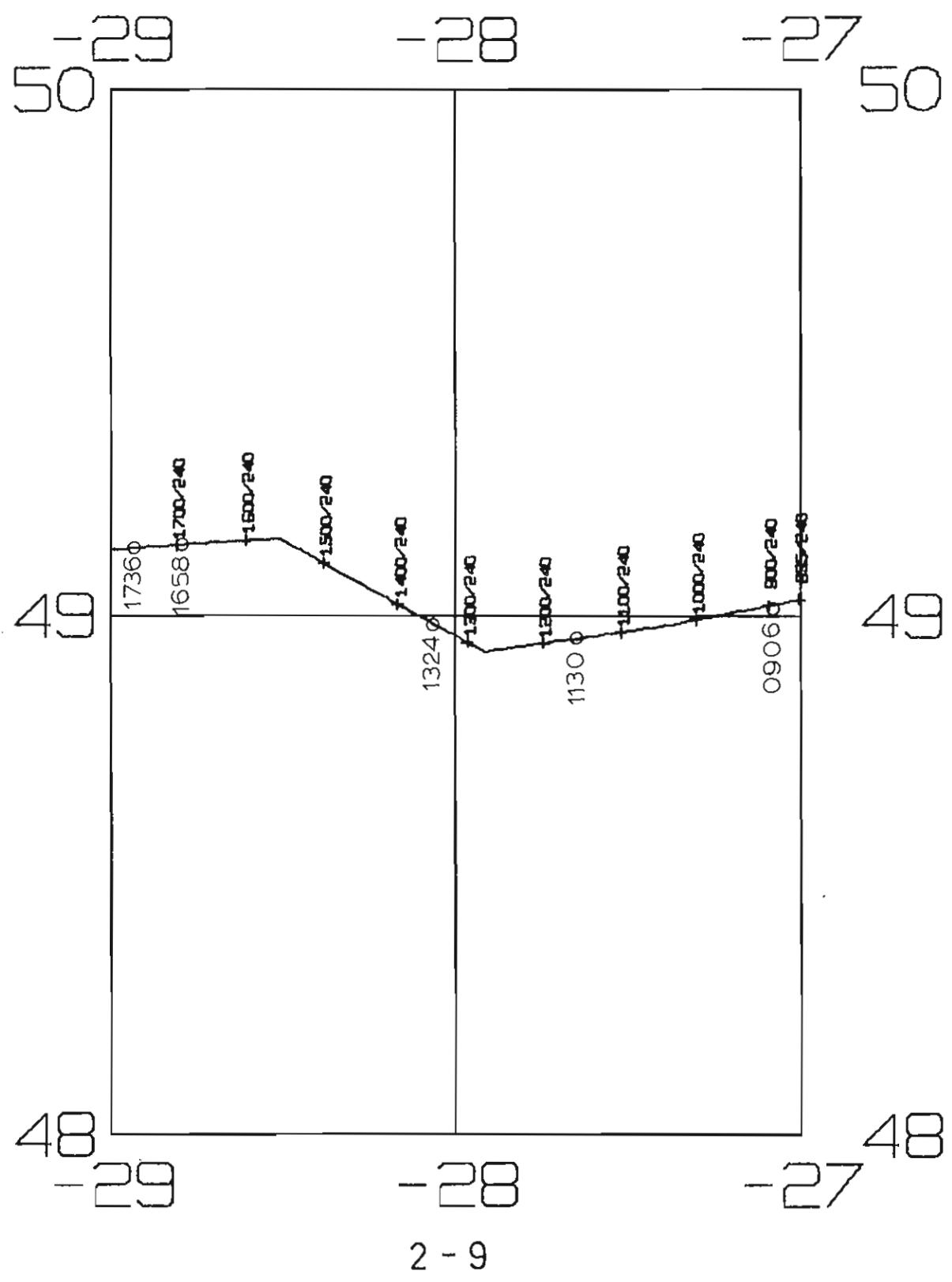


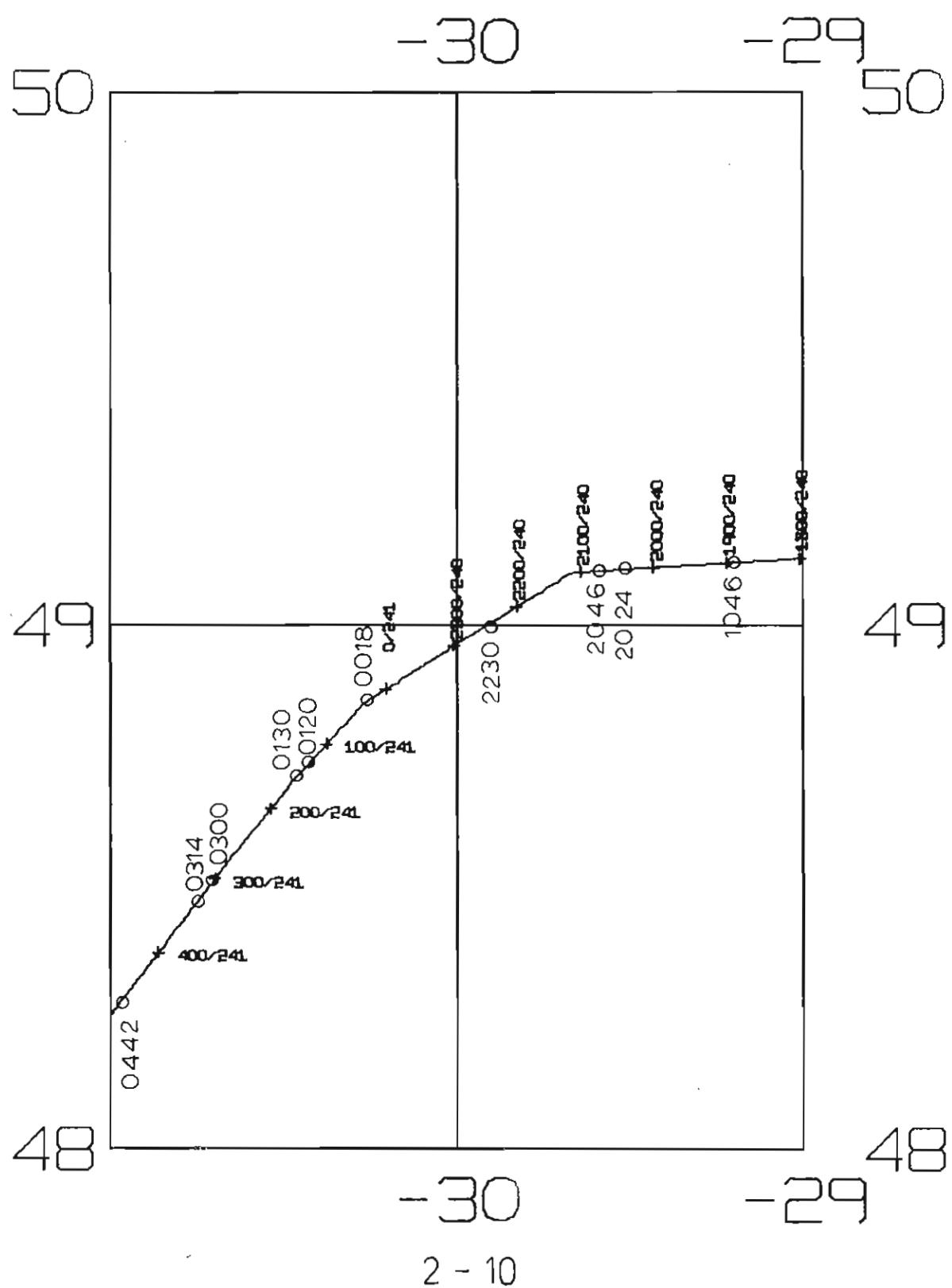


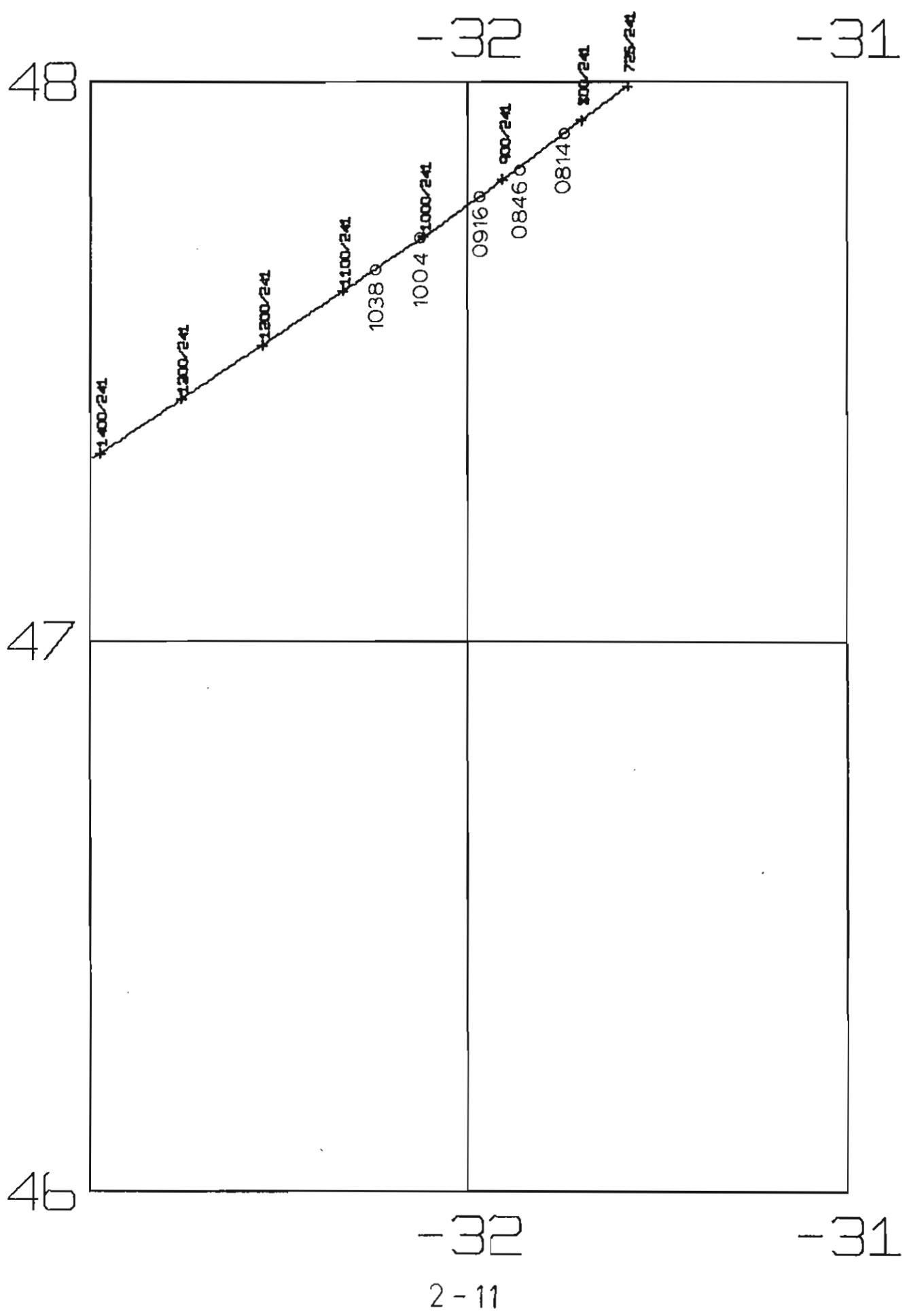


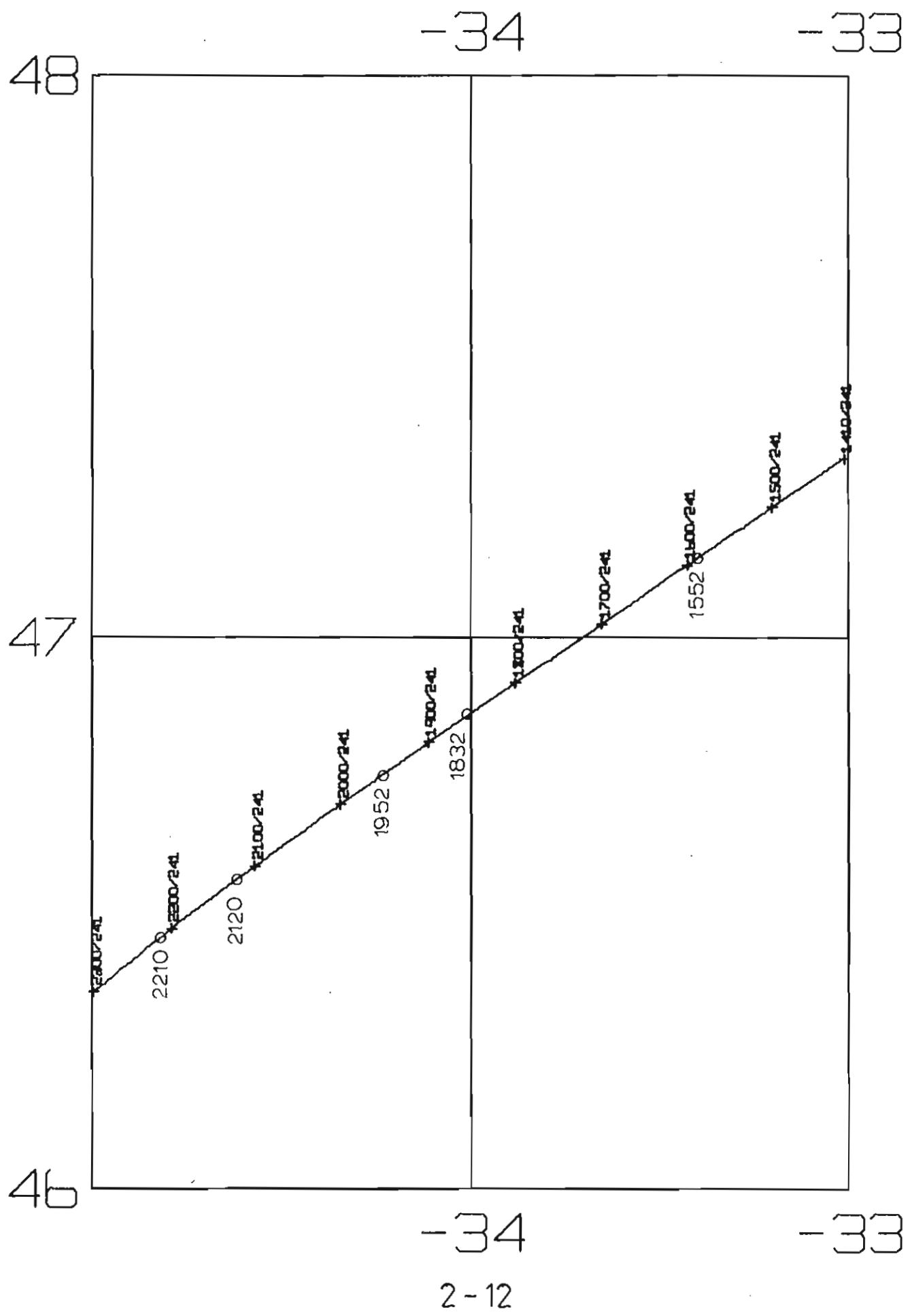
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47

-36

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46

0214

300/22

0058
100/24

00360

0/22

300/22

03580
400/22

500/22

0542
100/22

700/22

0828
07561
0728
300/22

45

-36

-35

2 - 13

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-38

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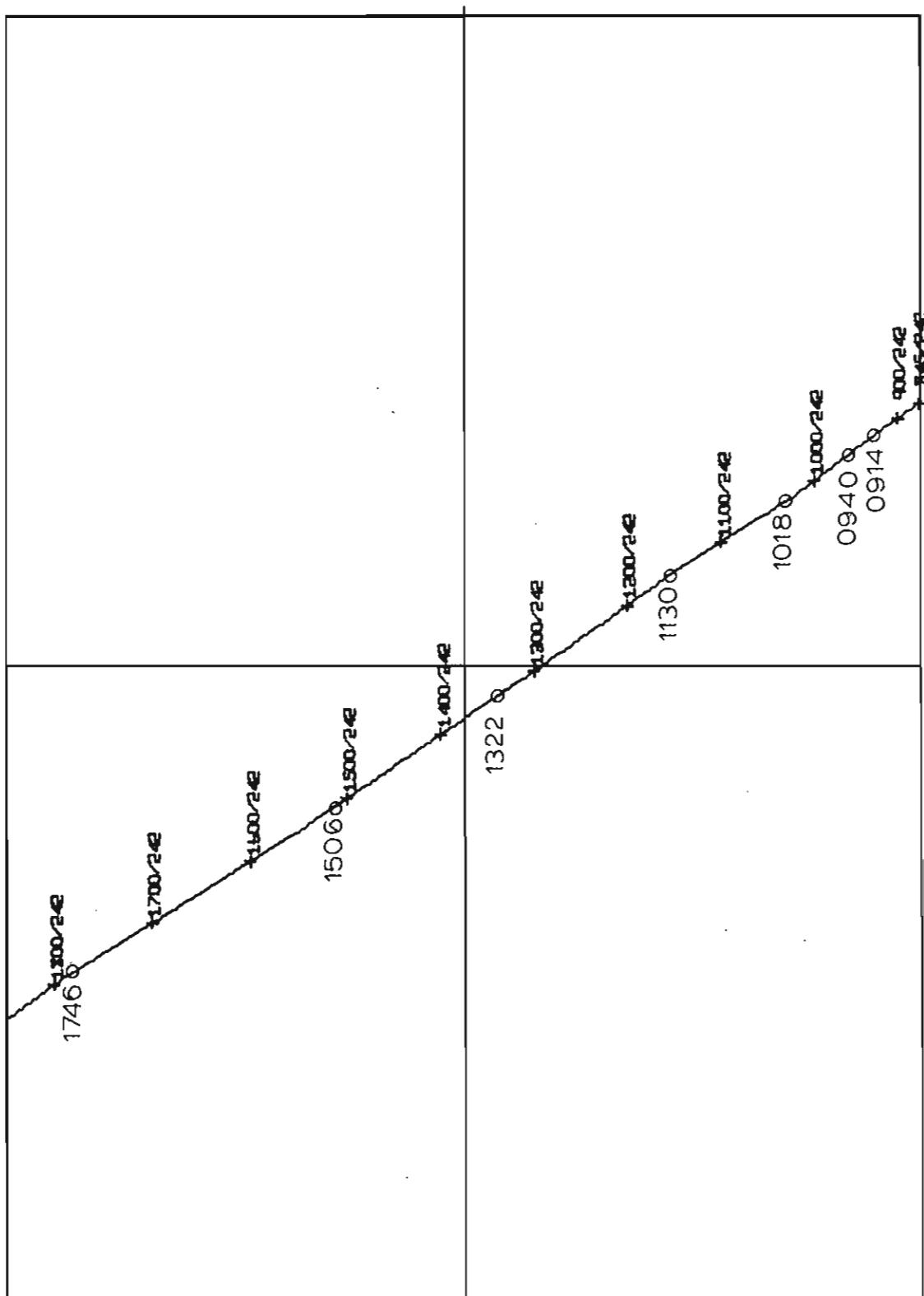
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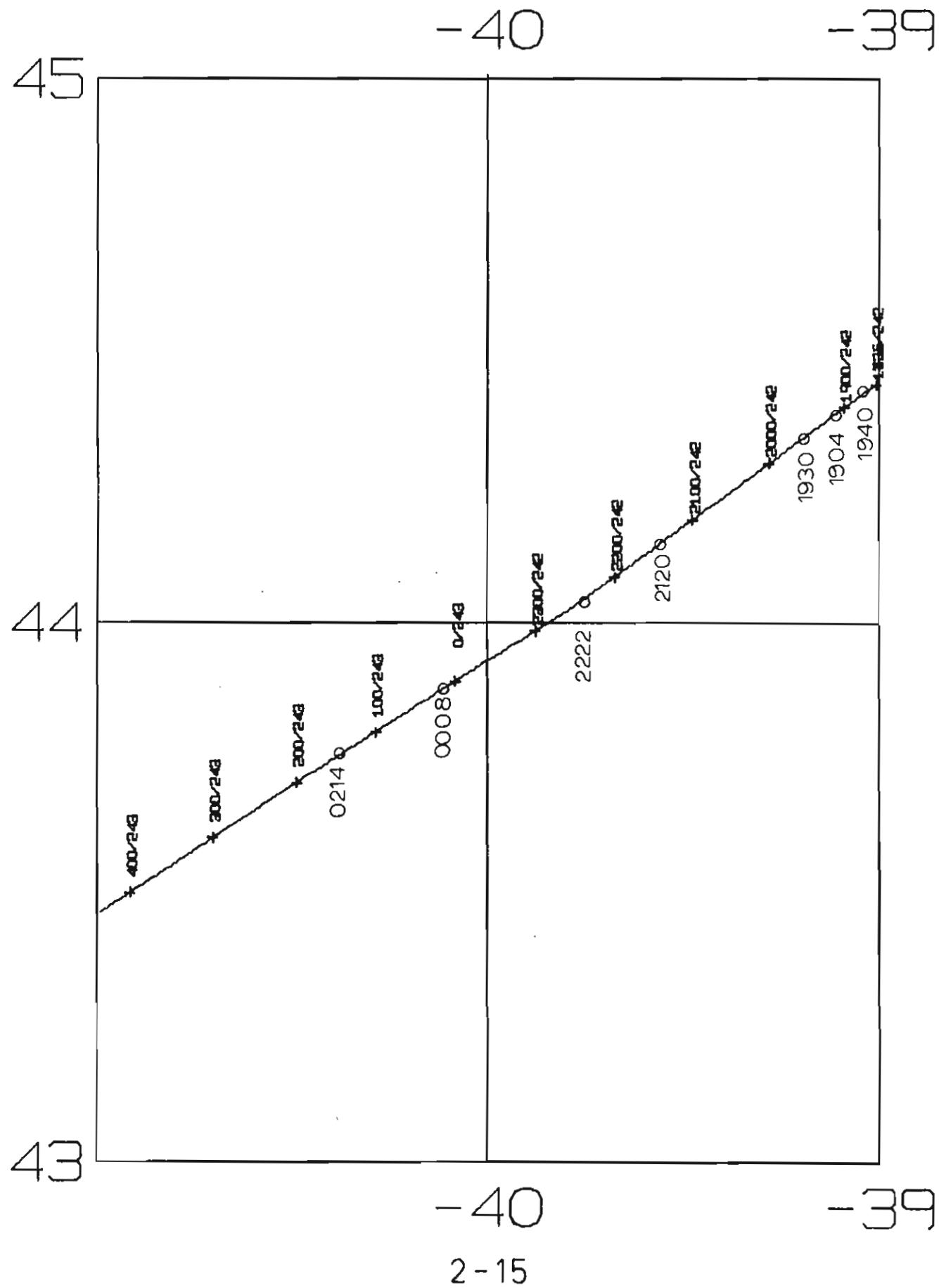
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2 - 14





44

-42

-41

43

0710

700/243

600/243

500/243

45

42

-42

-41

2 - 16

1304

1300/243

1228

11300/243

1114

1100/243

10366

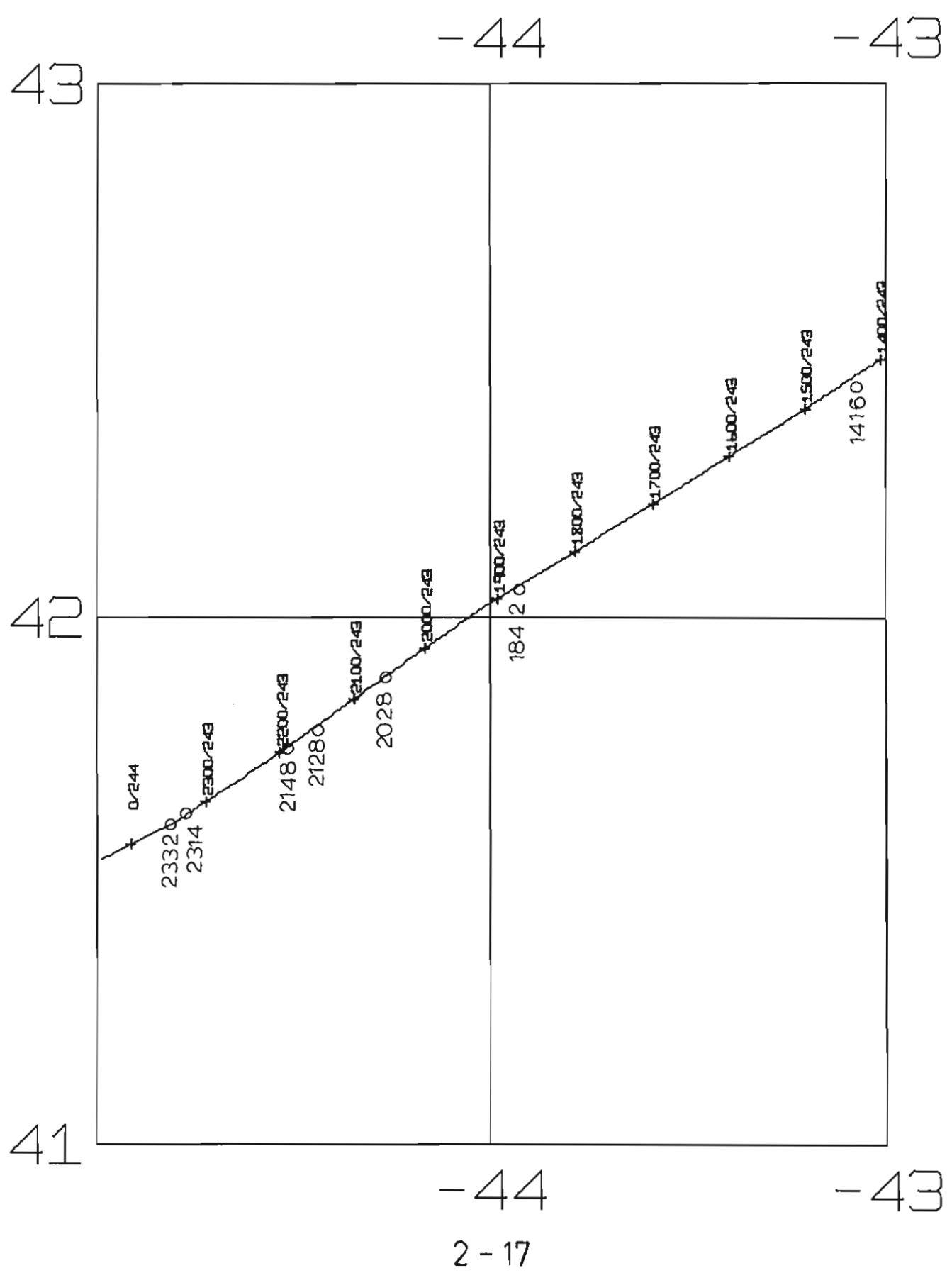
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09266

900/243

0850

800/243

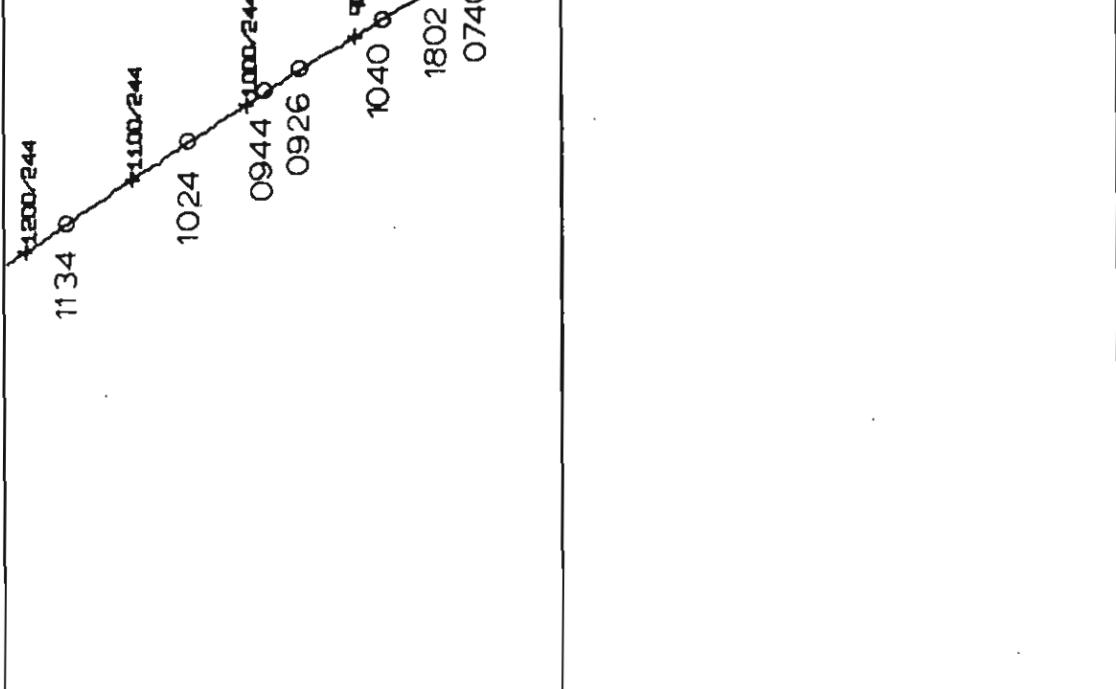


42

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-45

41



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-45

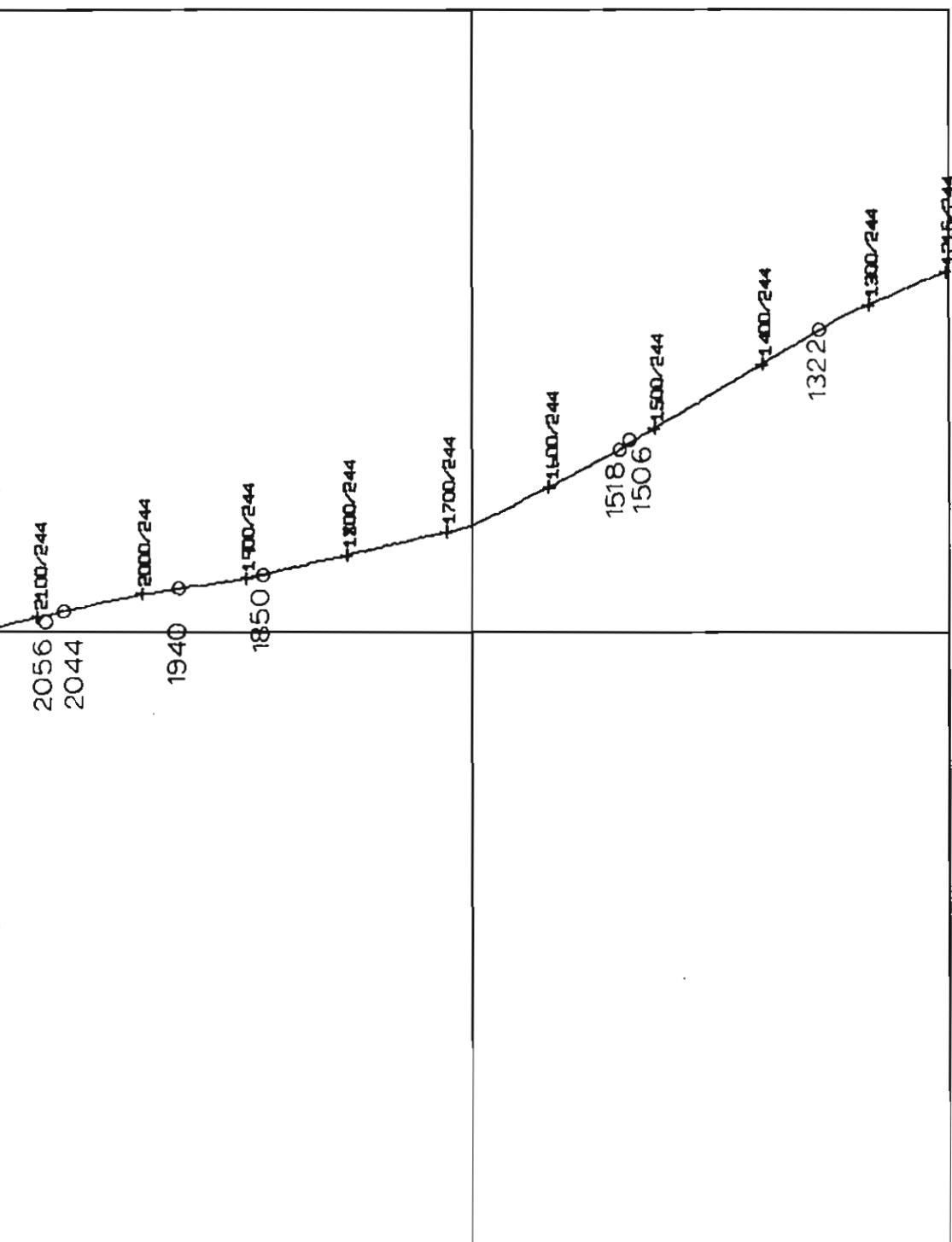
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-47

2 - 19

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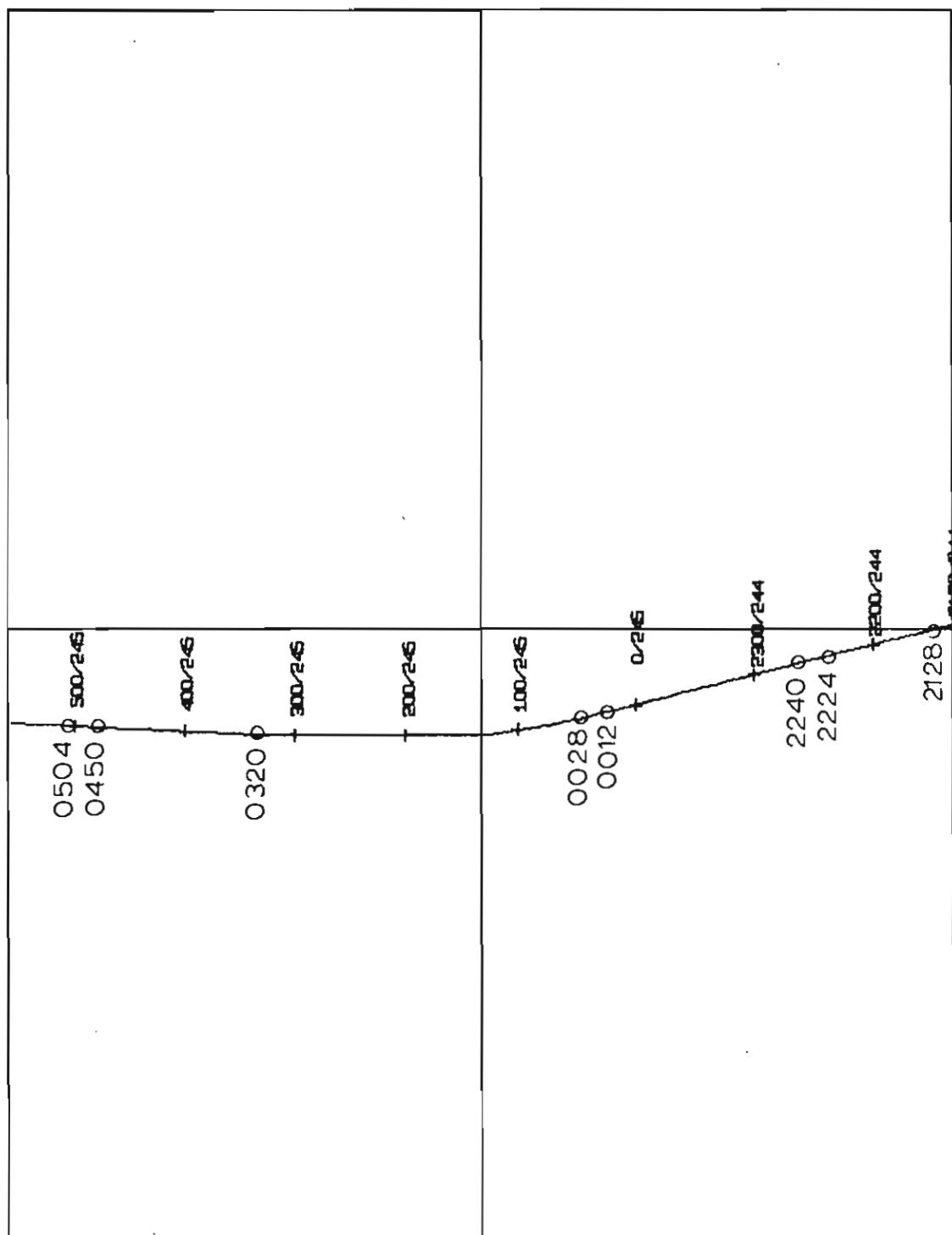
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2 - 20



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-51

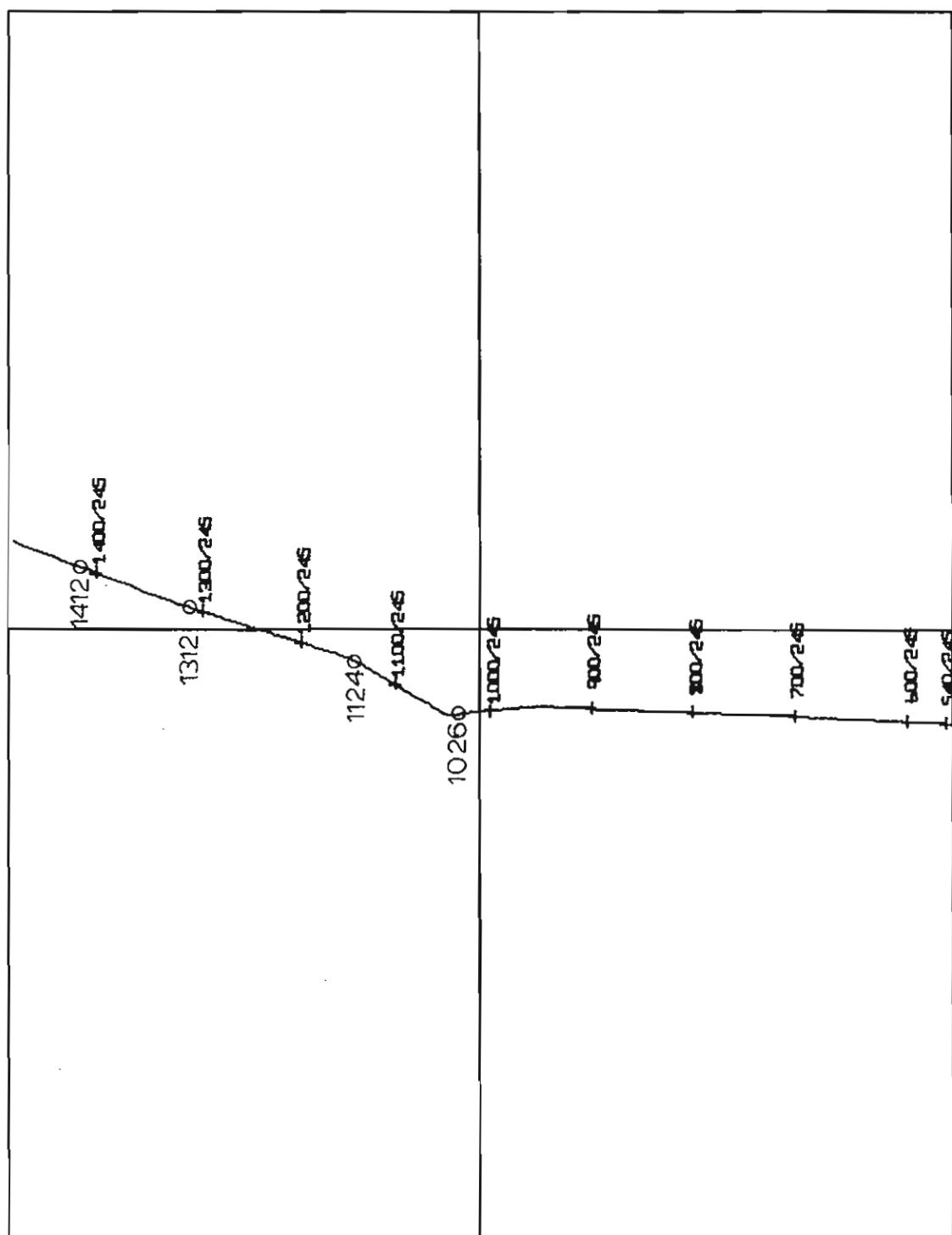
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42

-54

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41

0/246

23409 246

22309 246

21529 246

21389 246

24009 246

18529 246

17449 246

17009 246

15589 246

15009 246

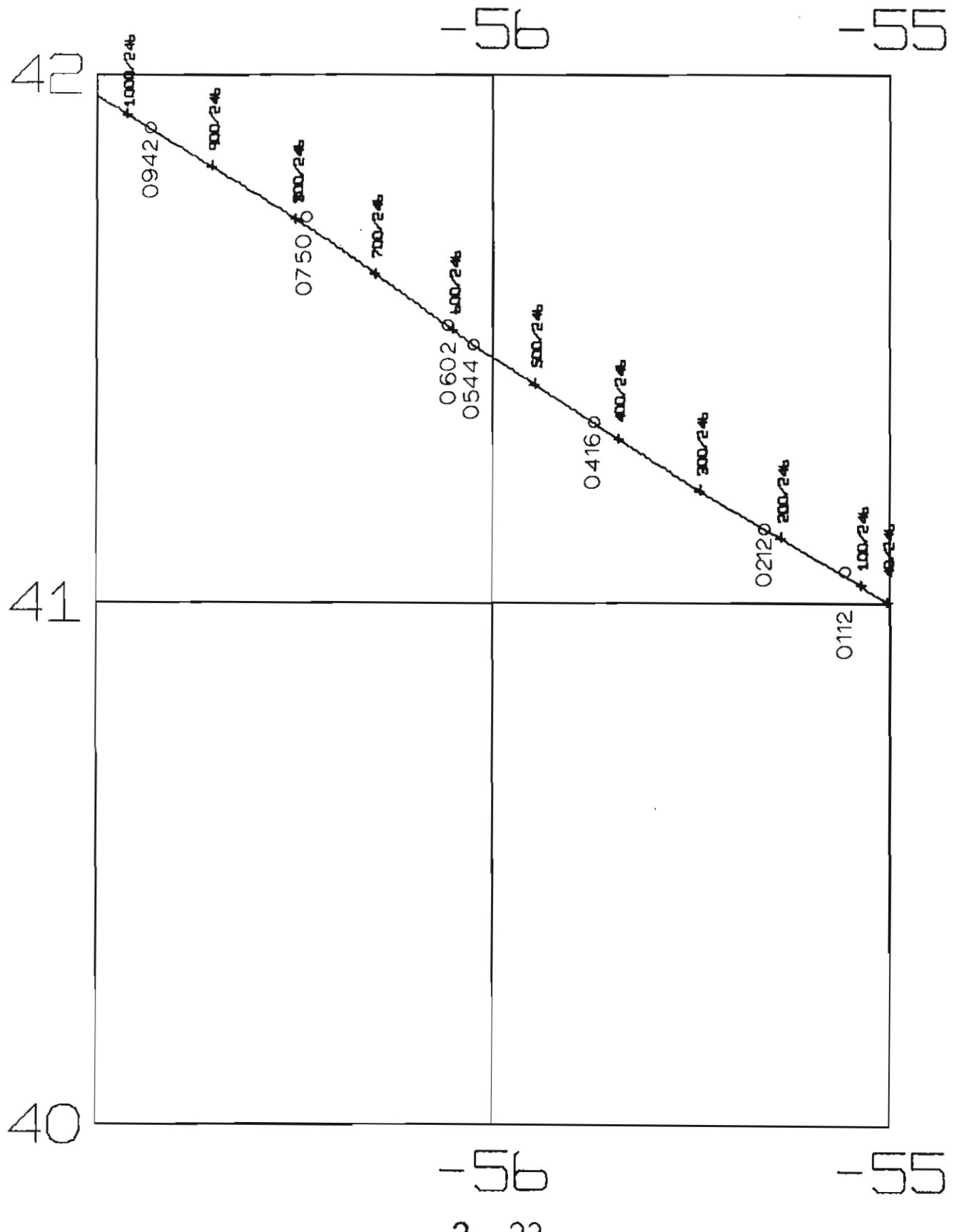
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2 - 22



2 - 23

43

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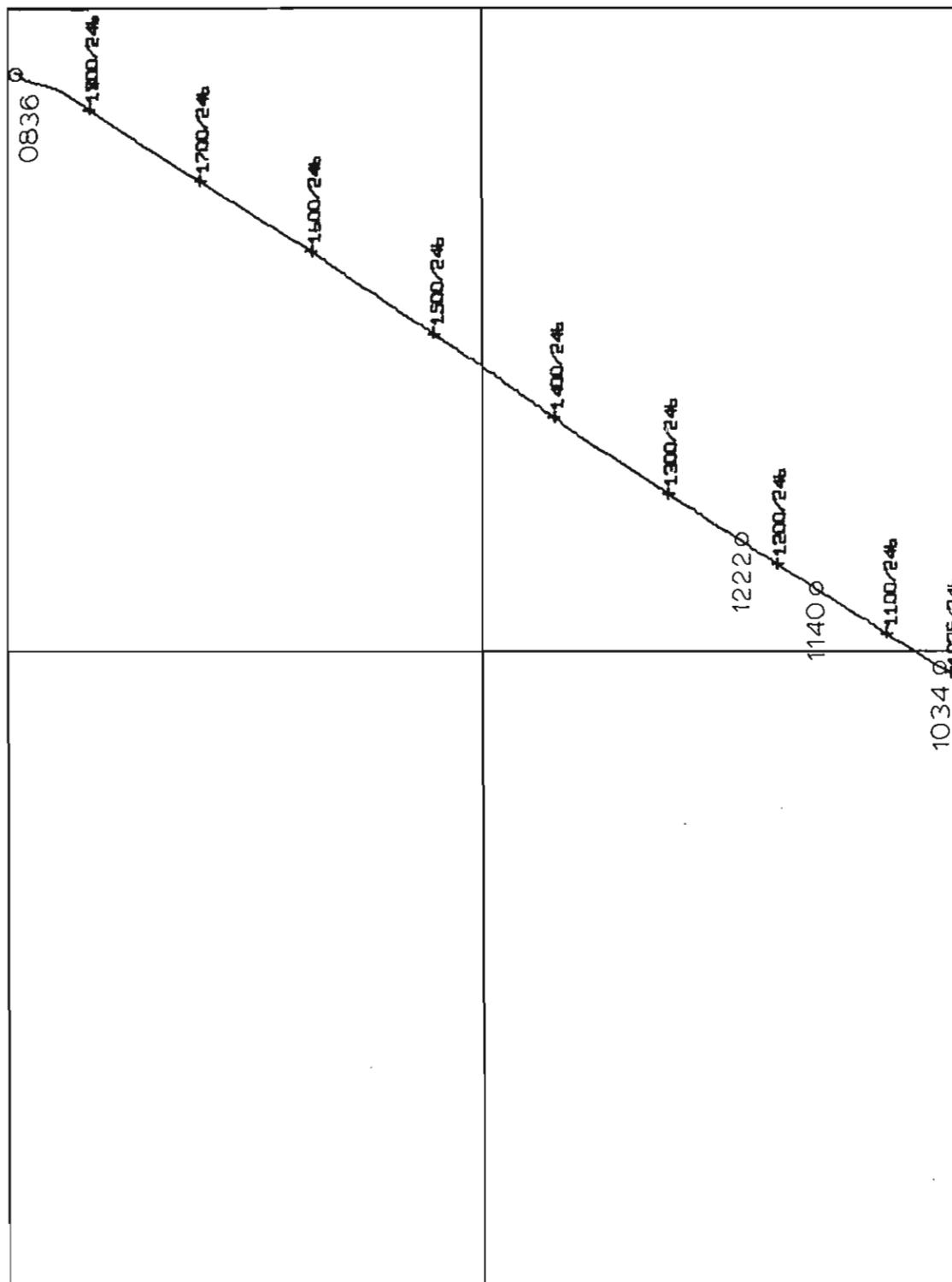
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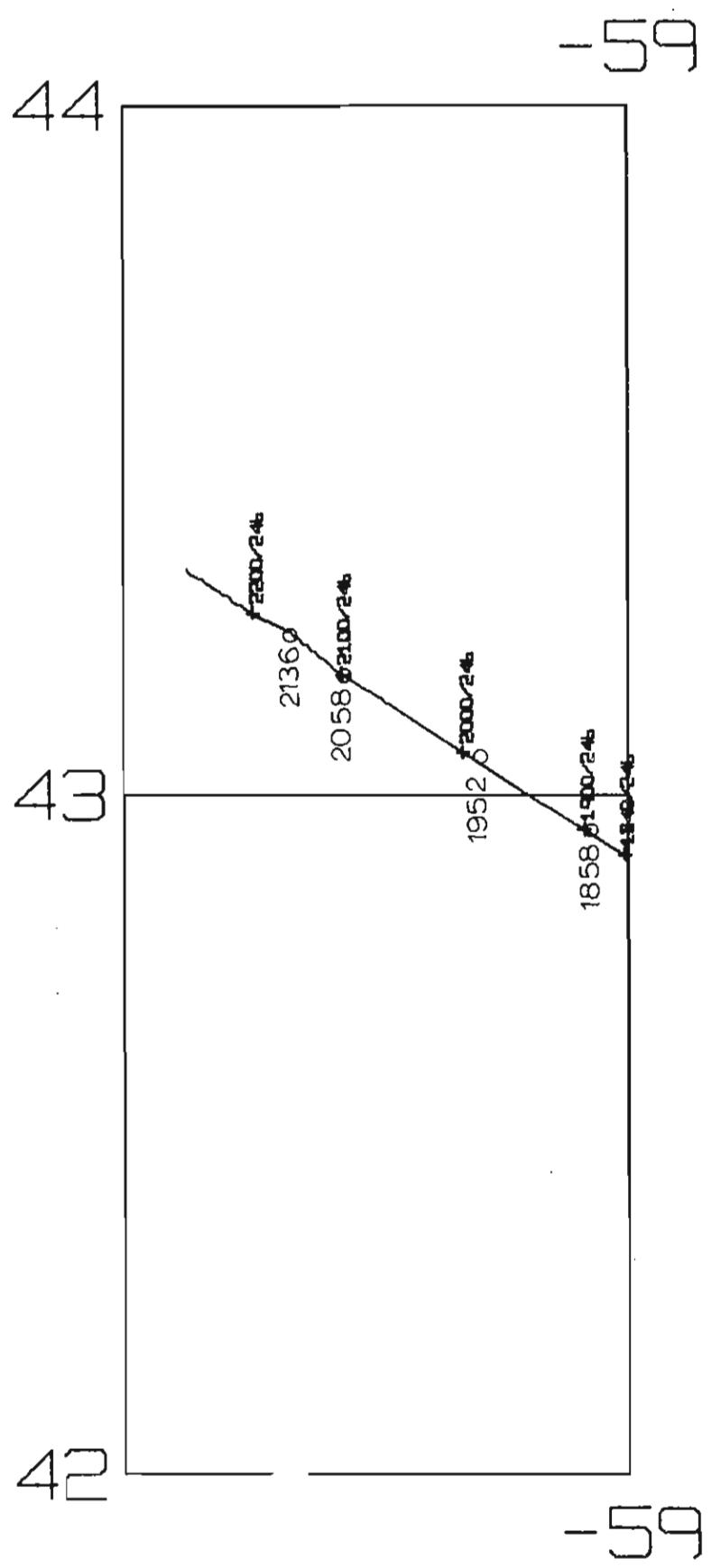
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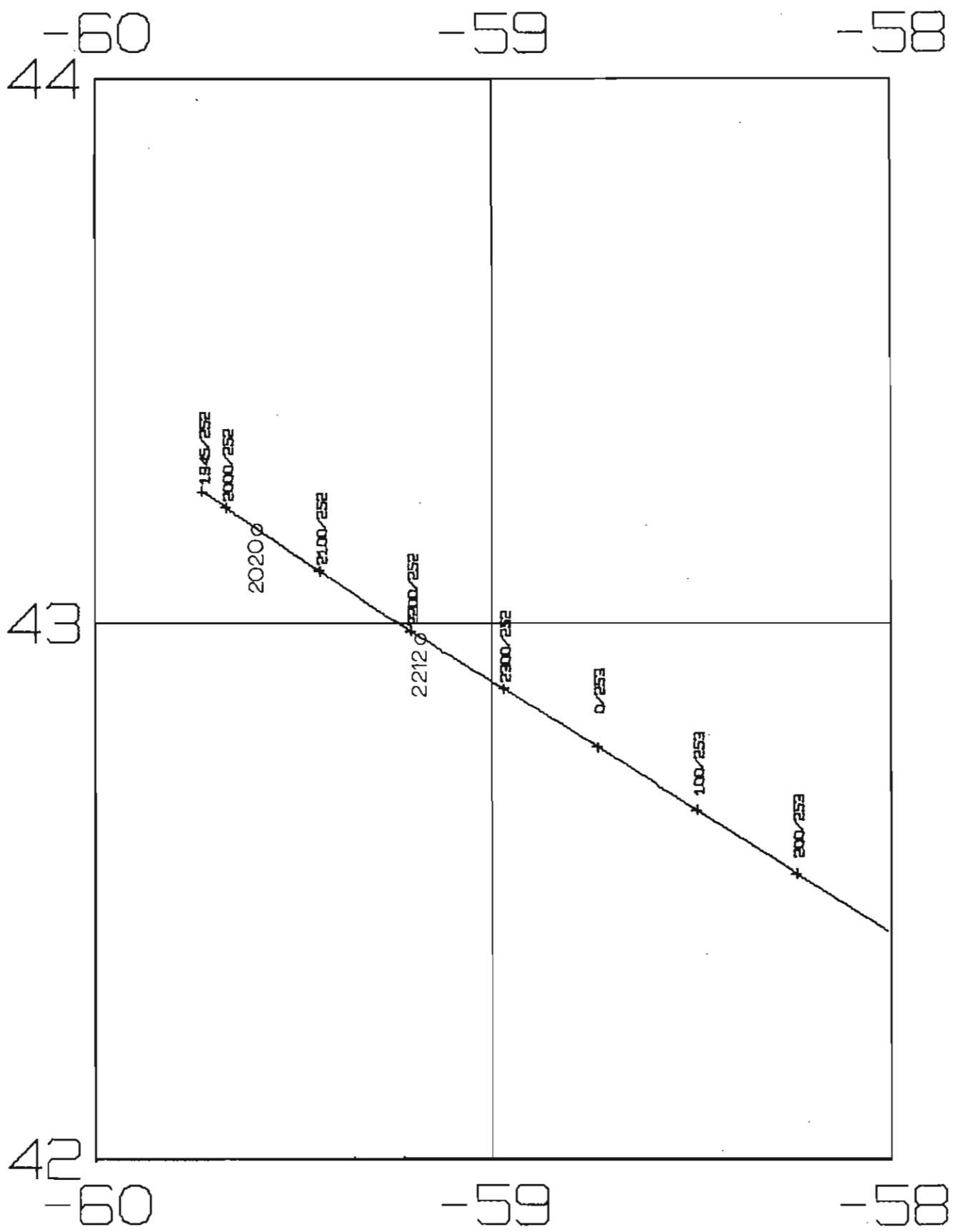
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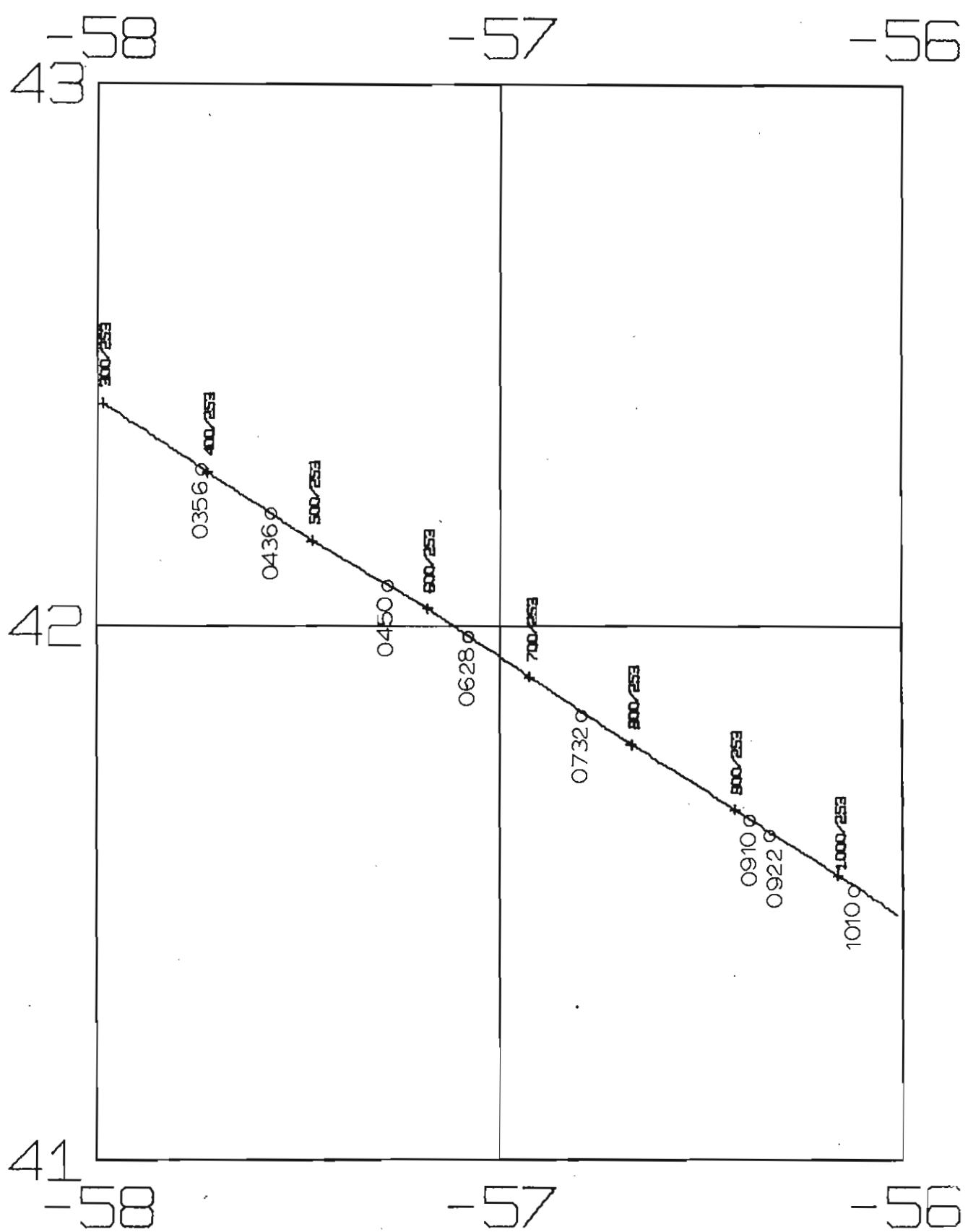
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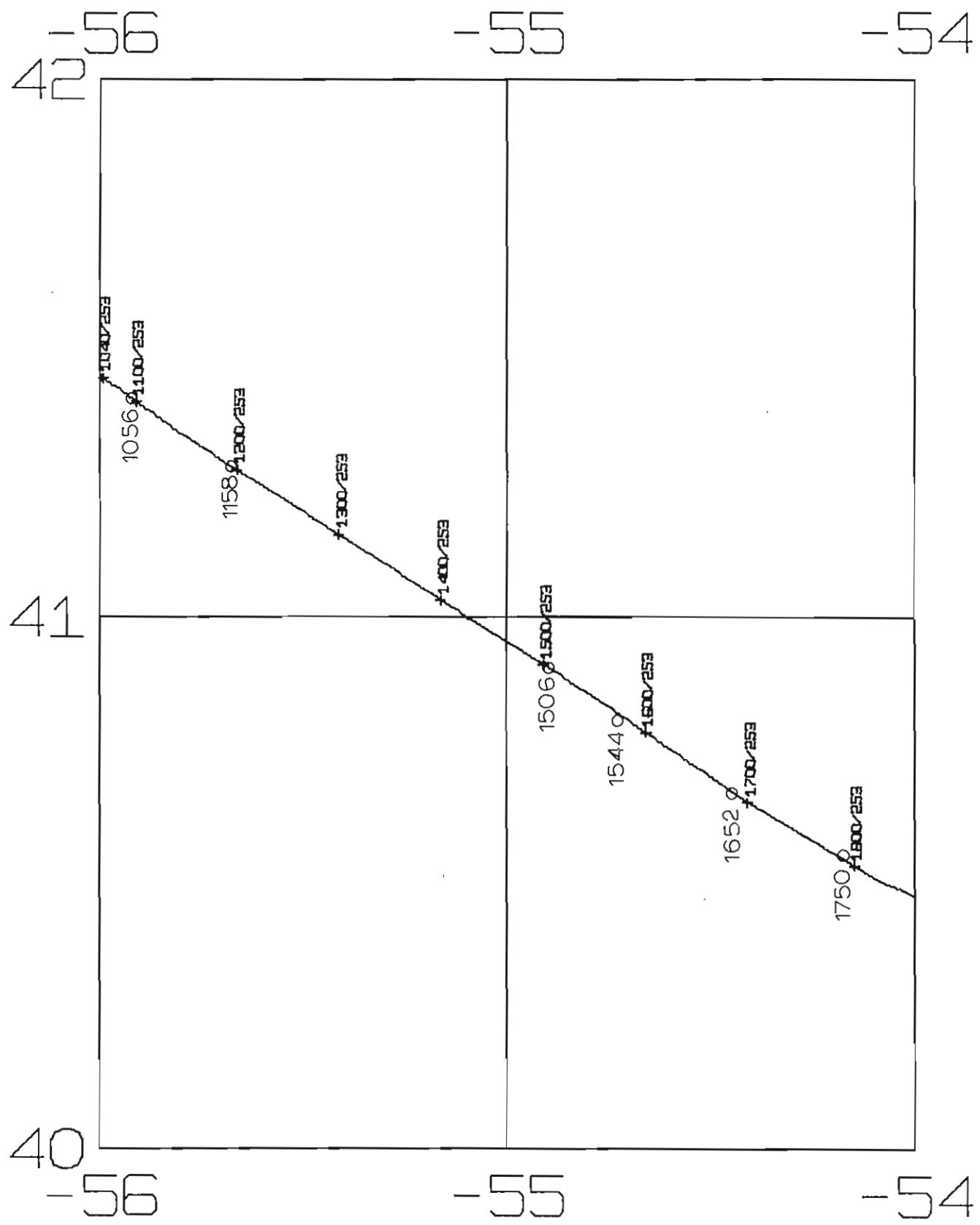


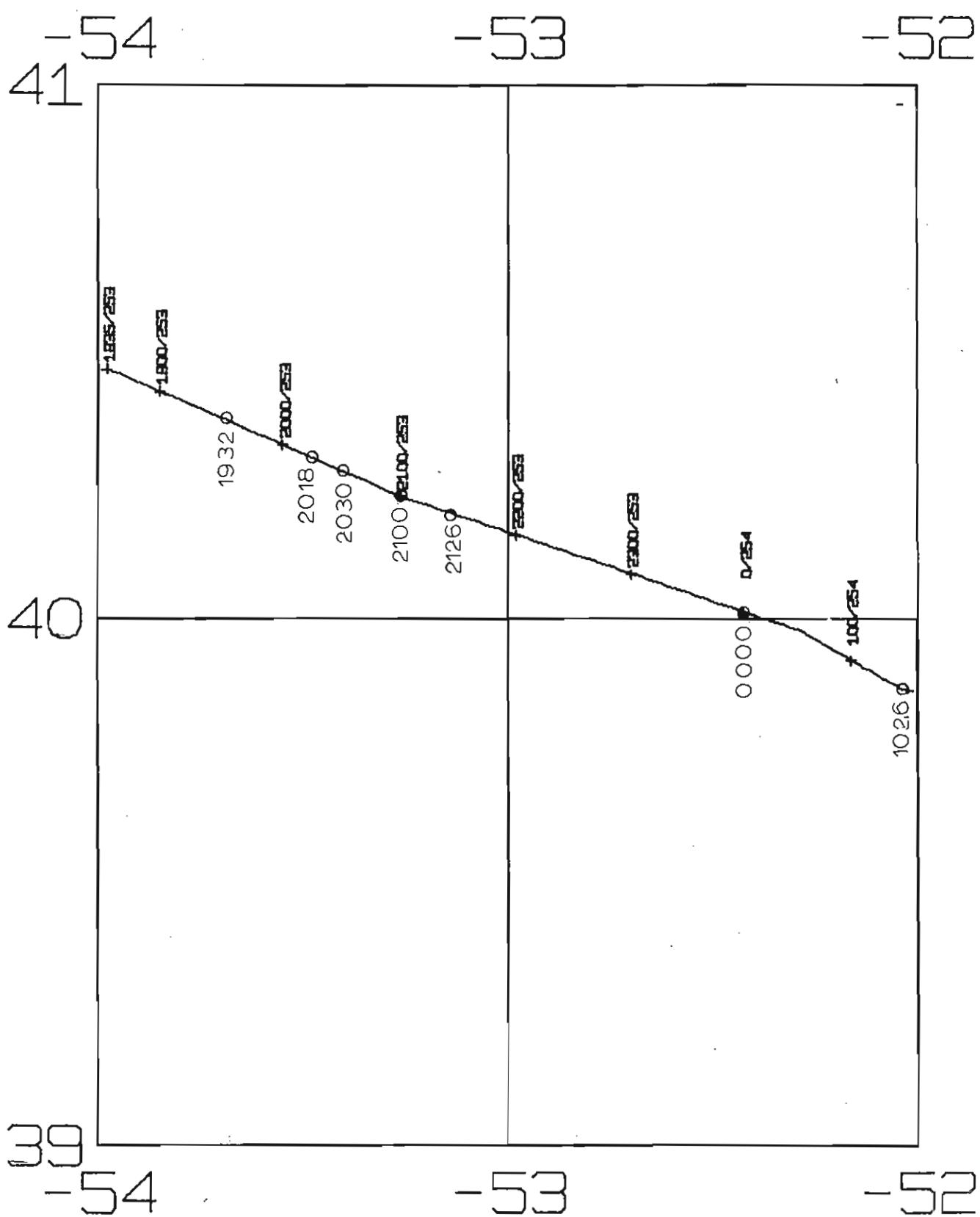


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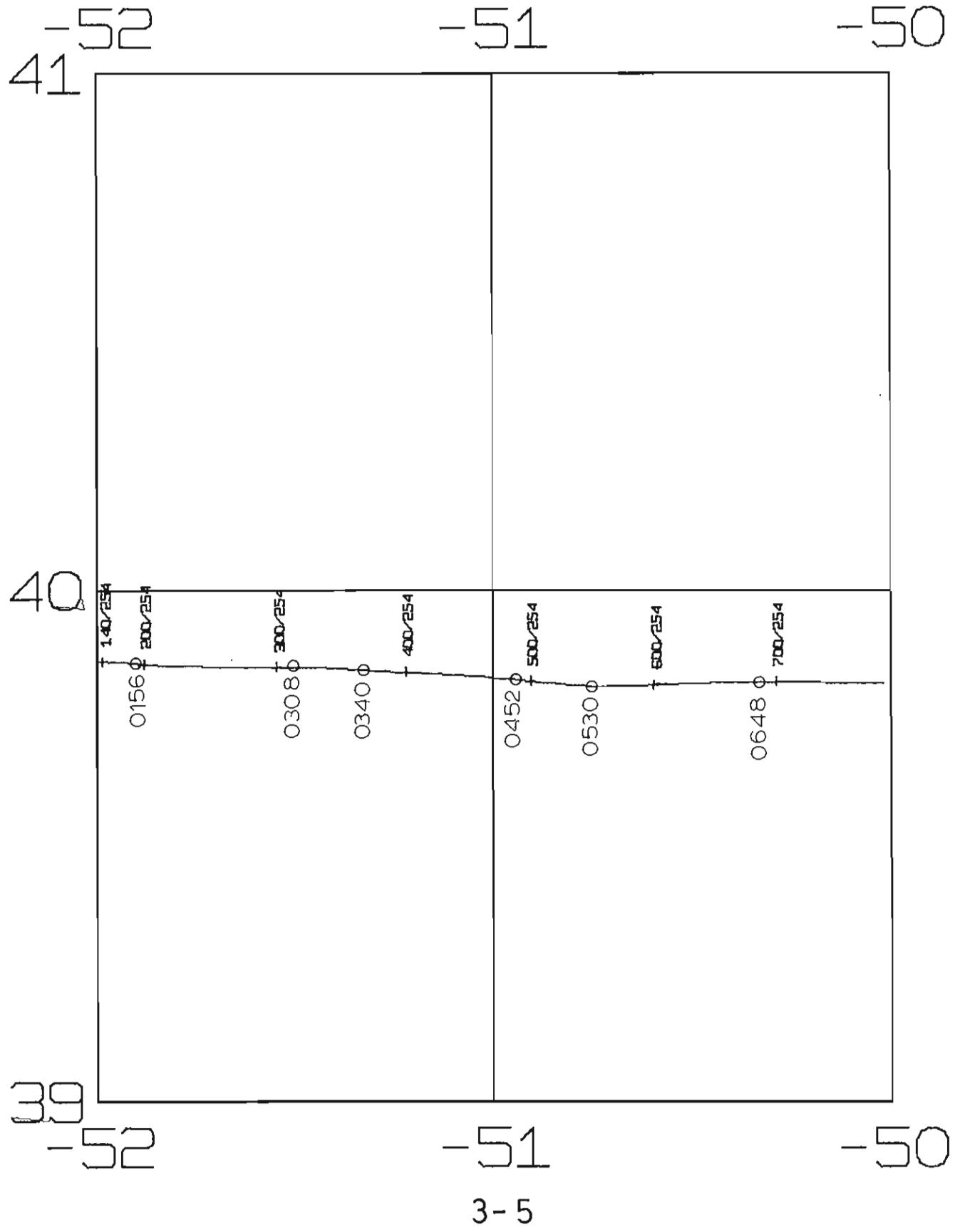








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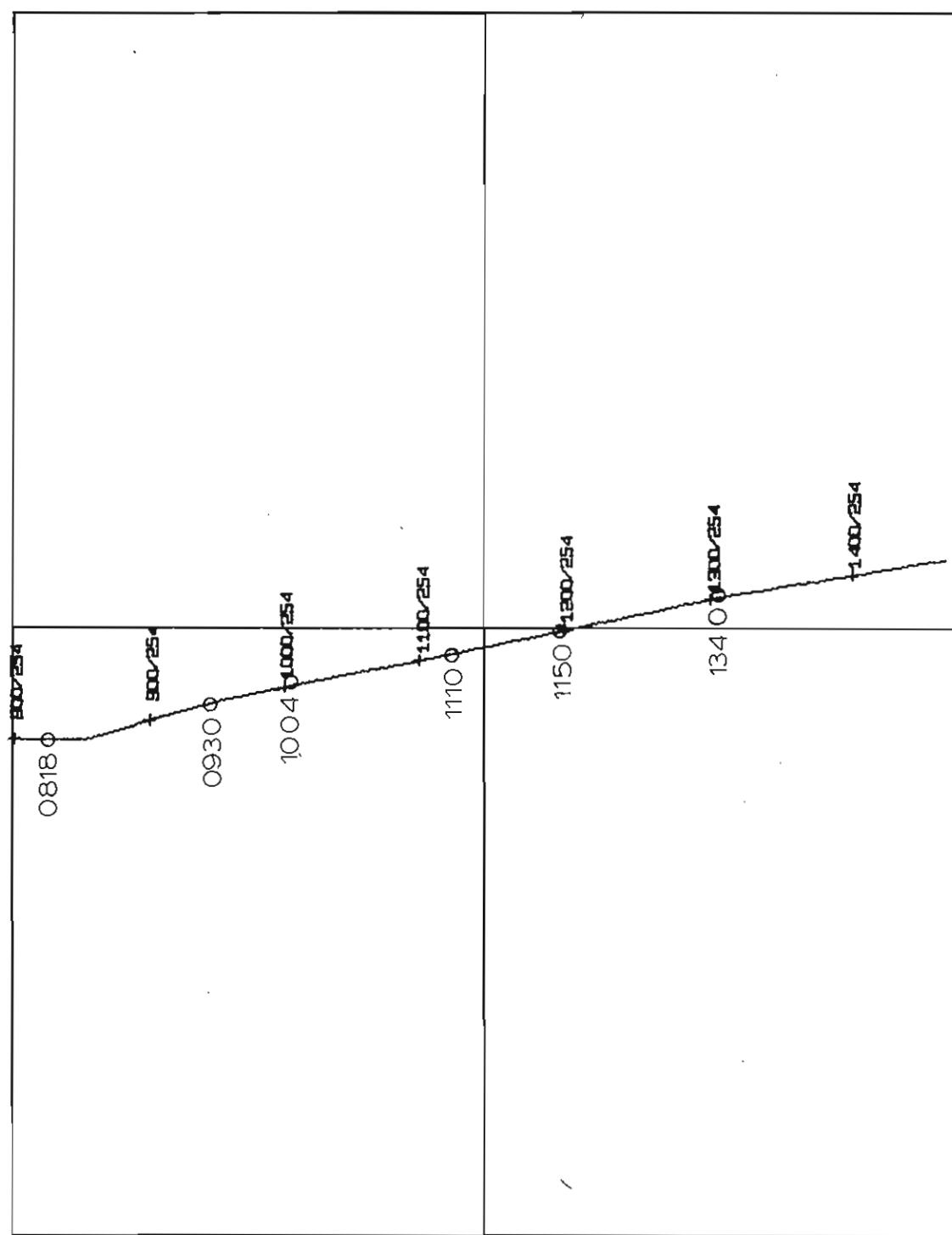
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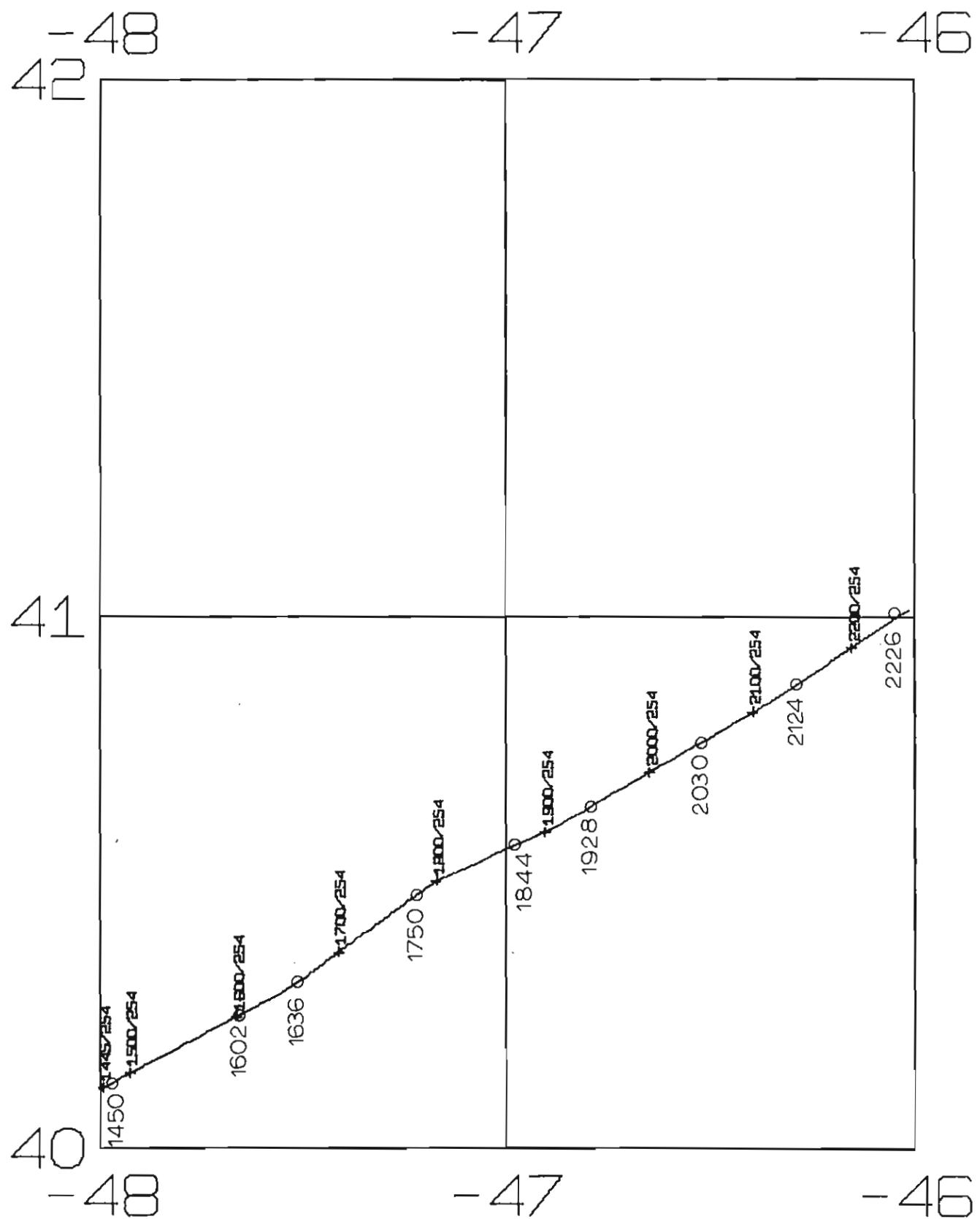
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3 - 6





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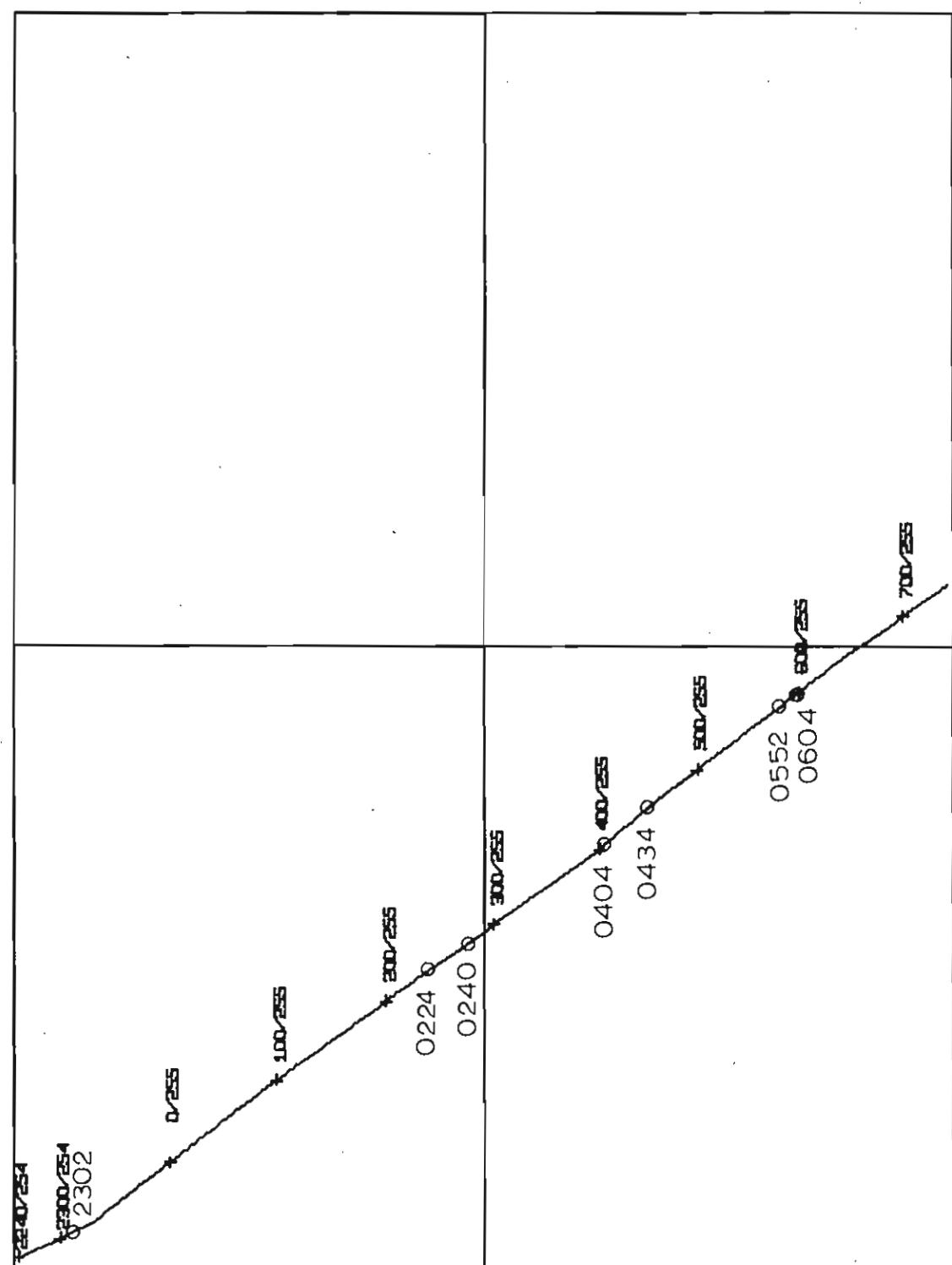
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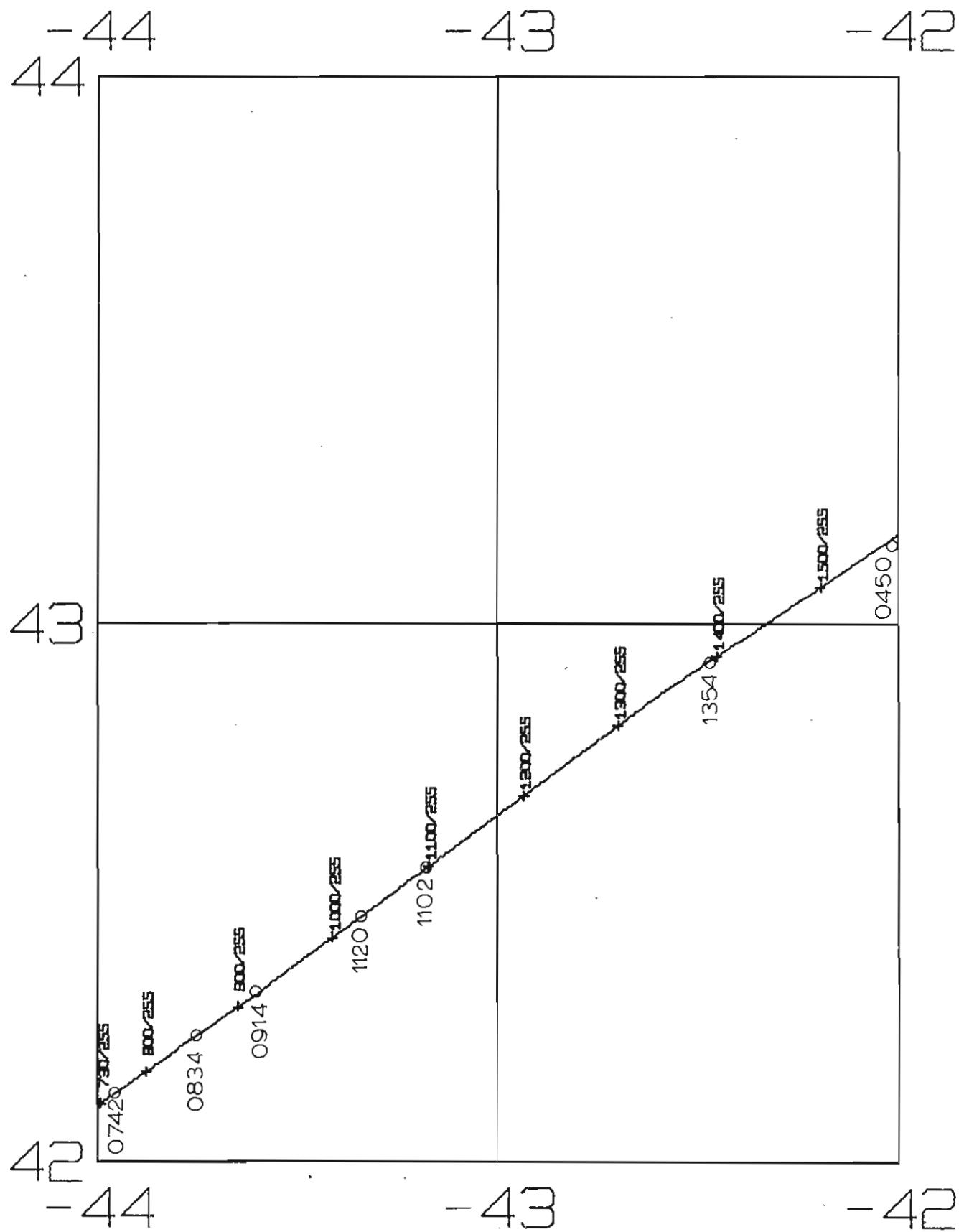
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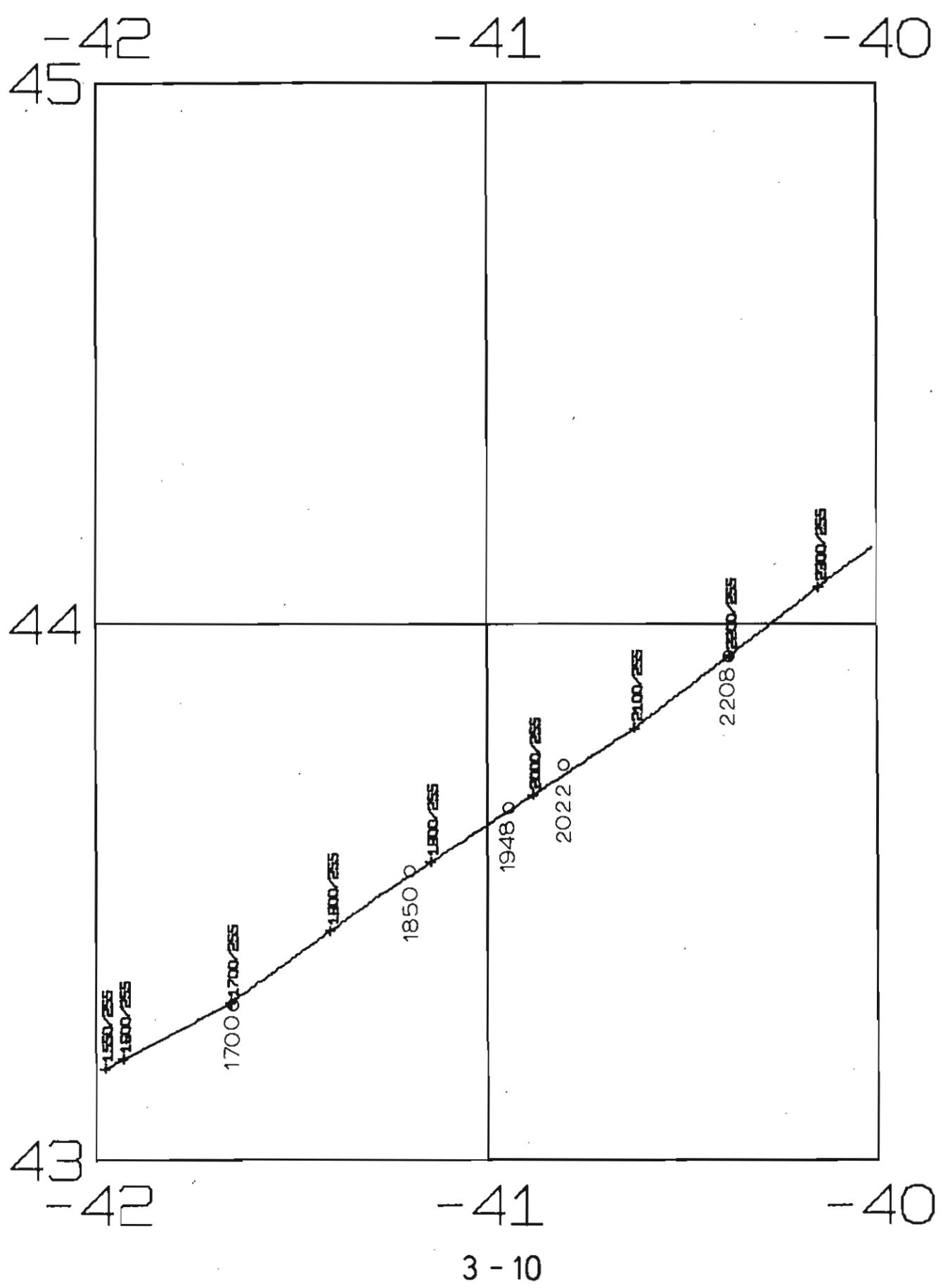
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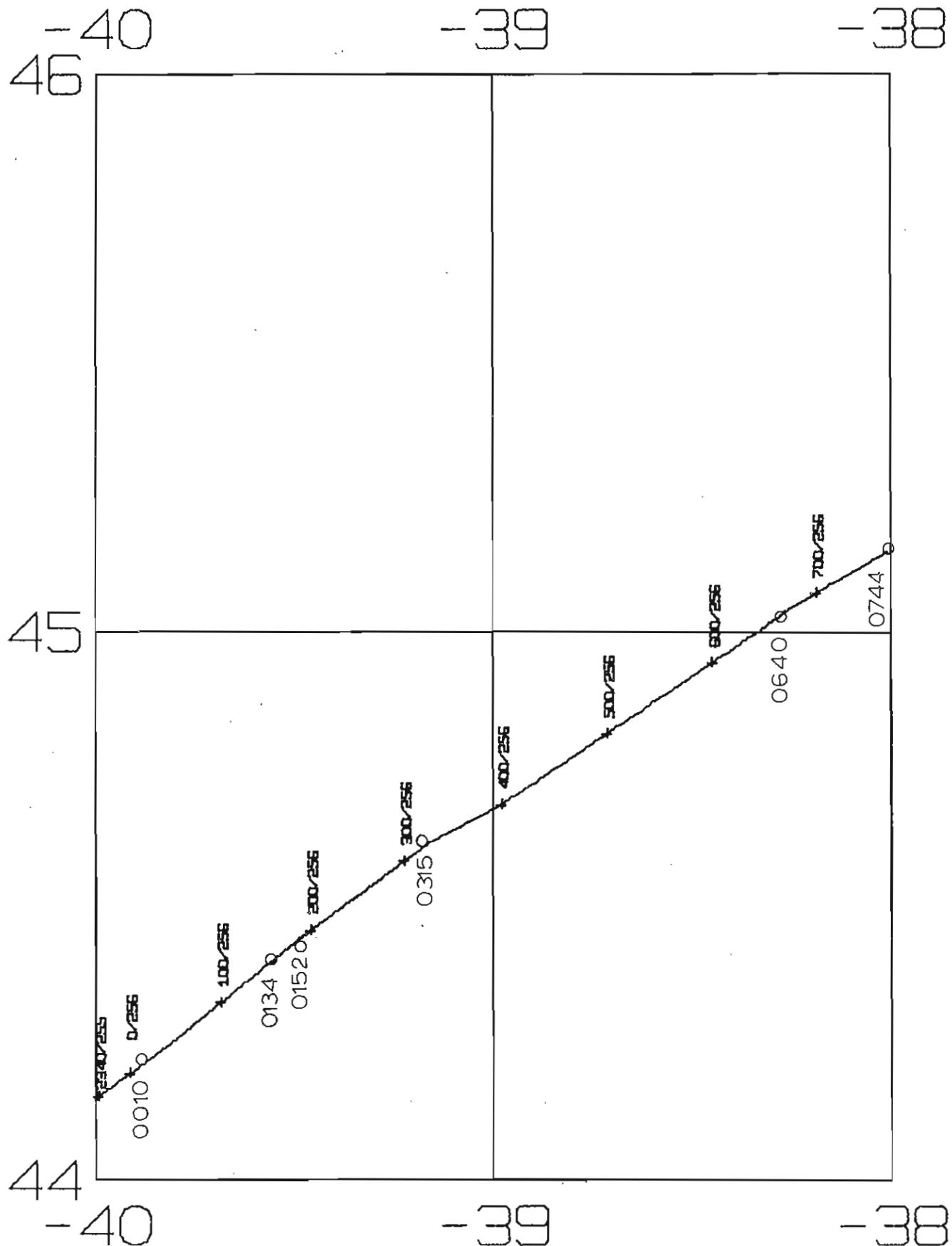
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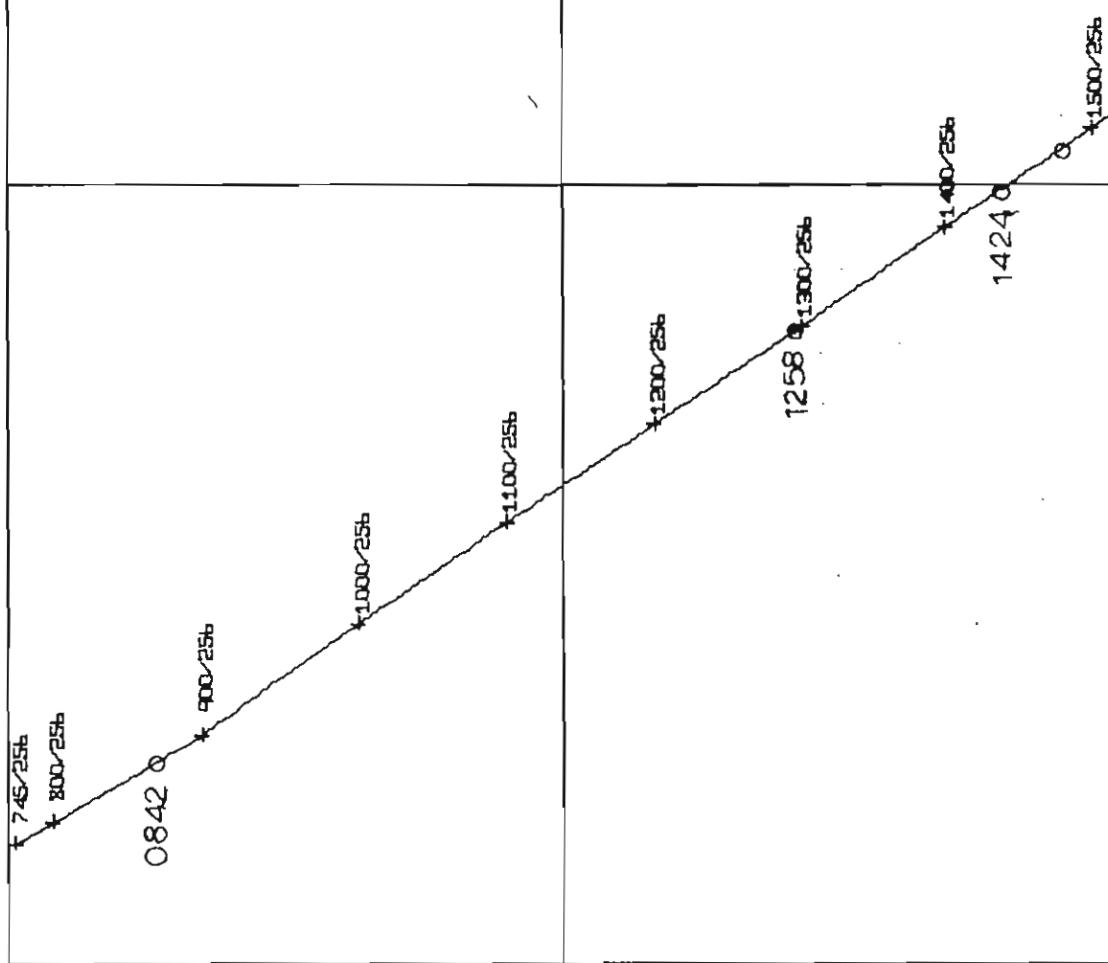
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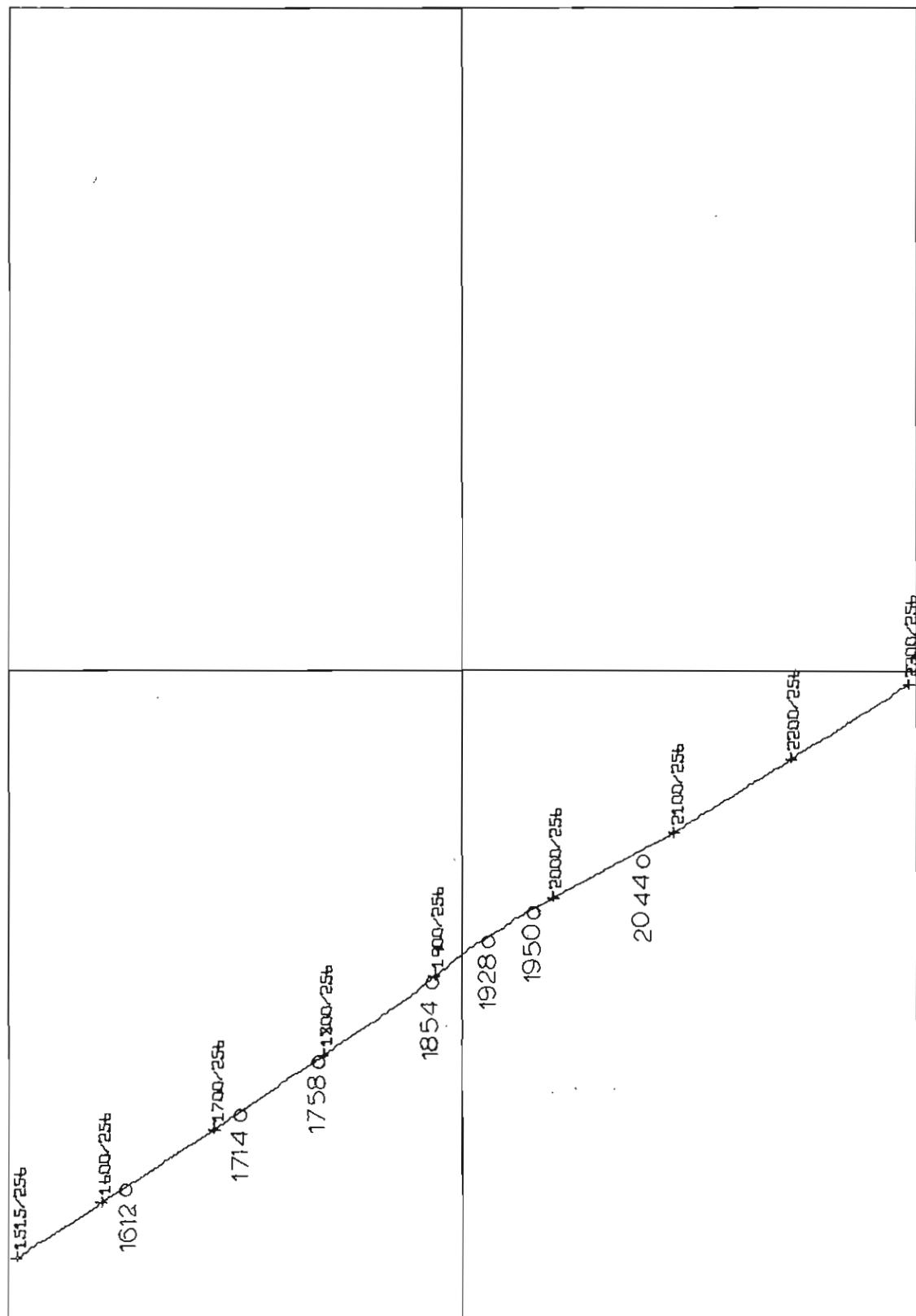
47

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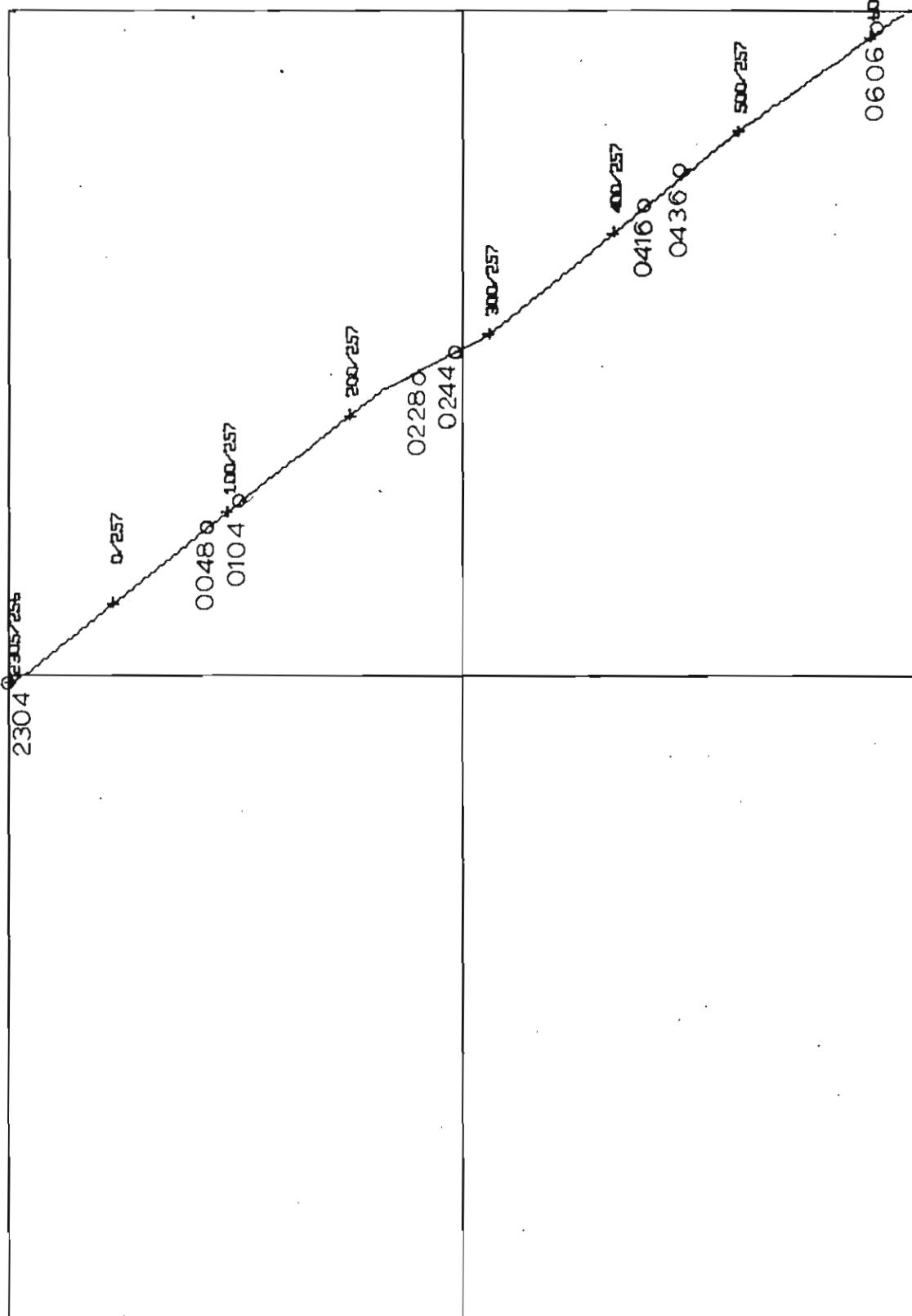
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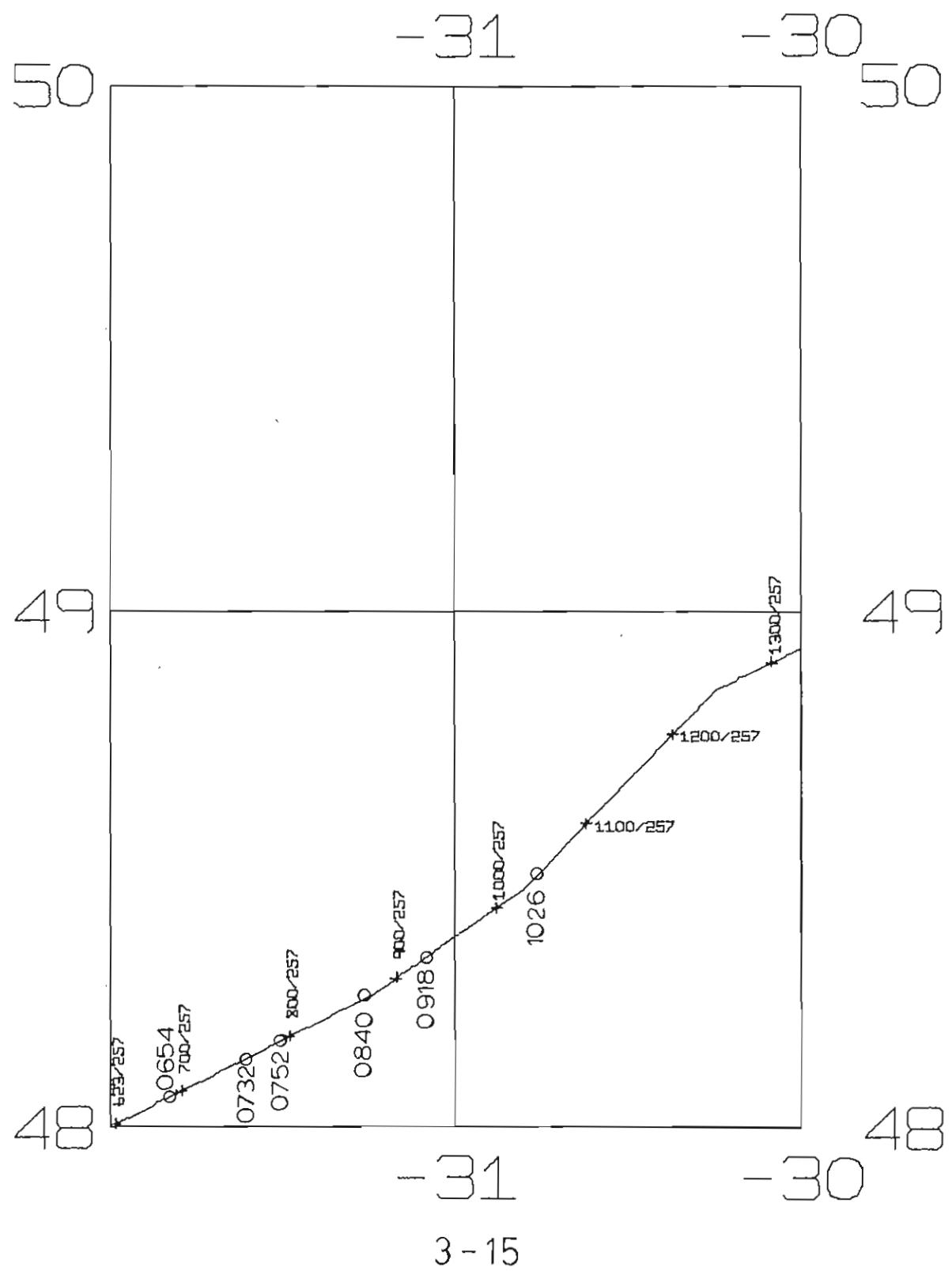
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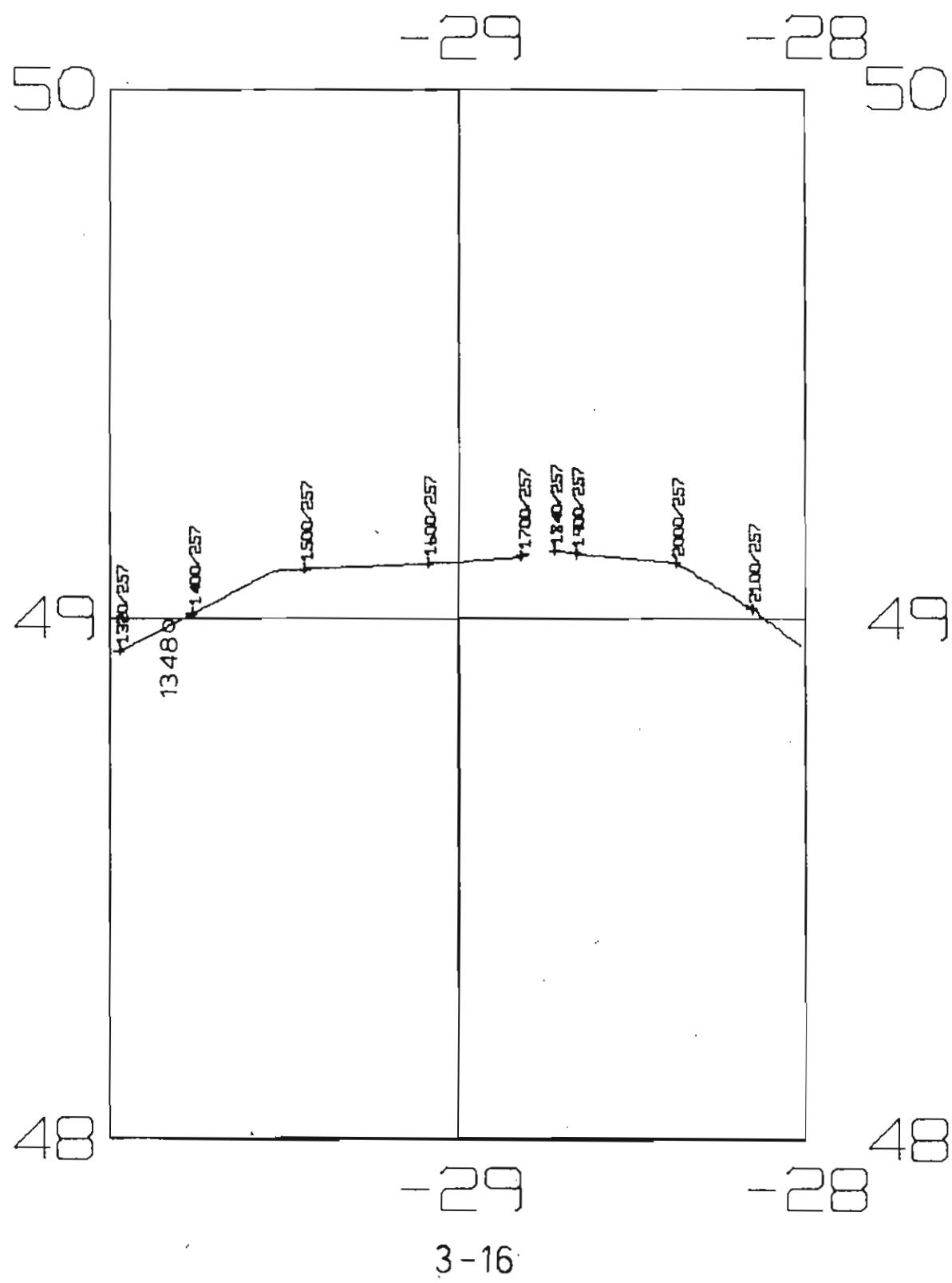
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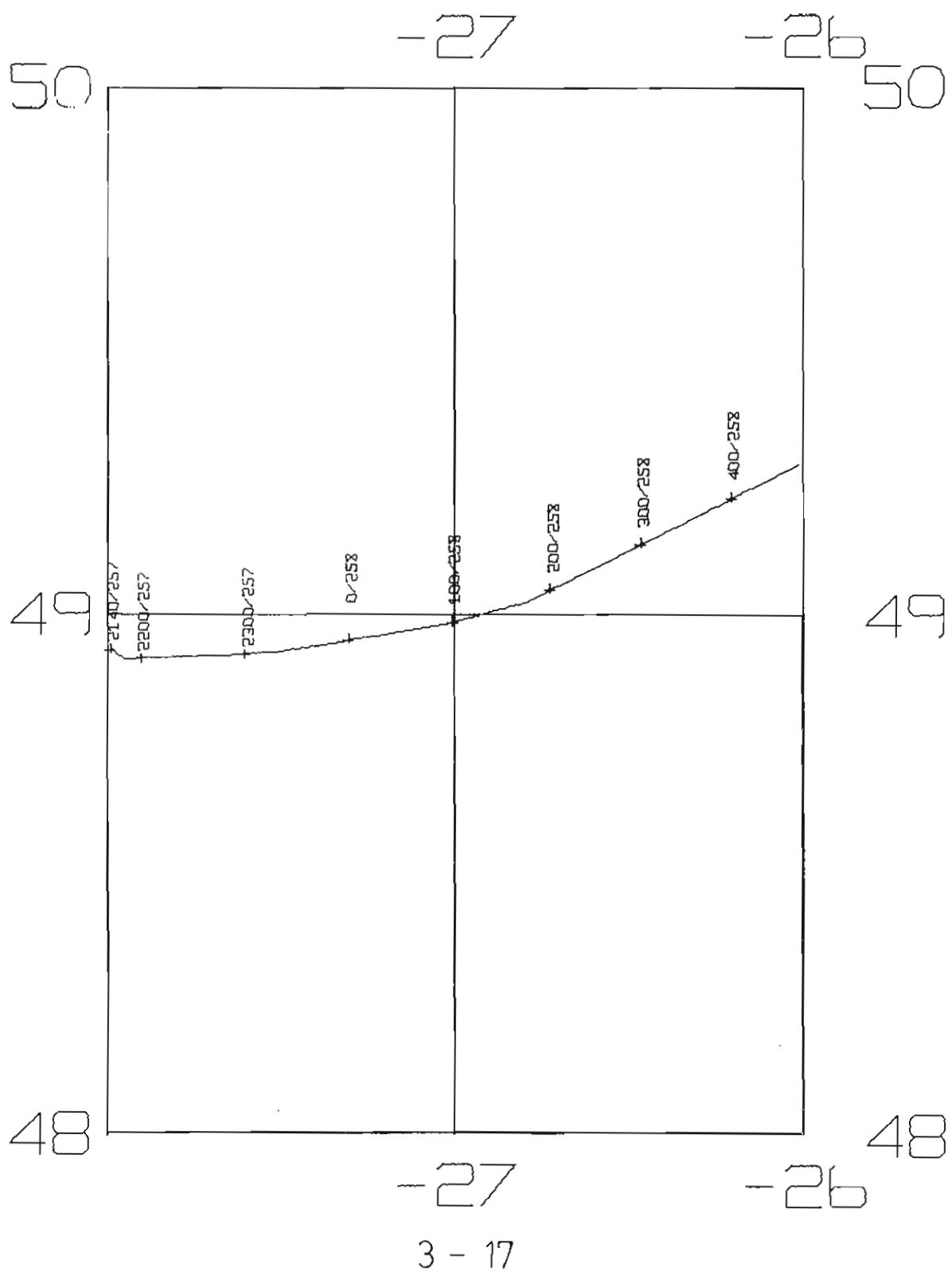
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3 - 14

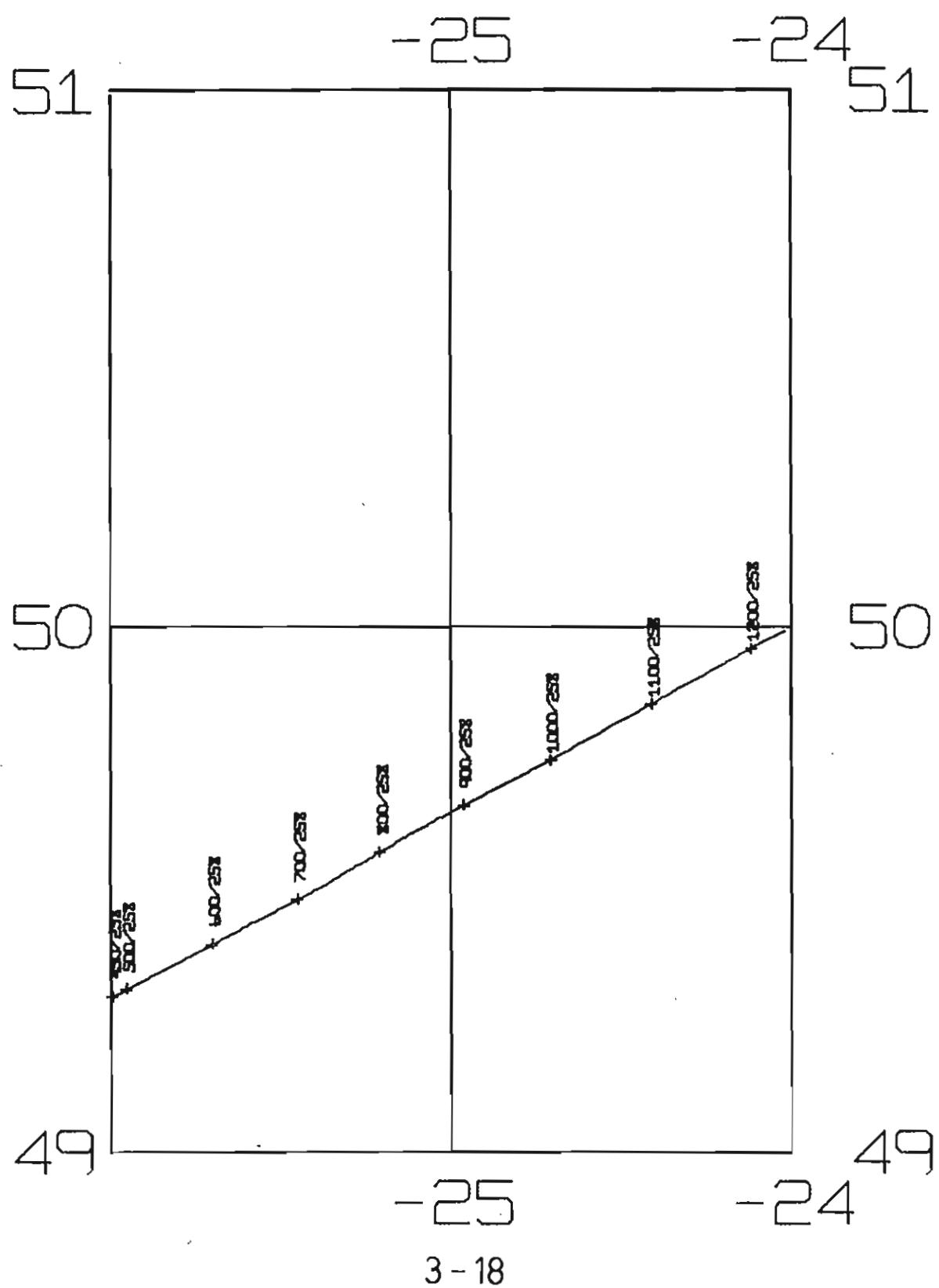


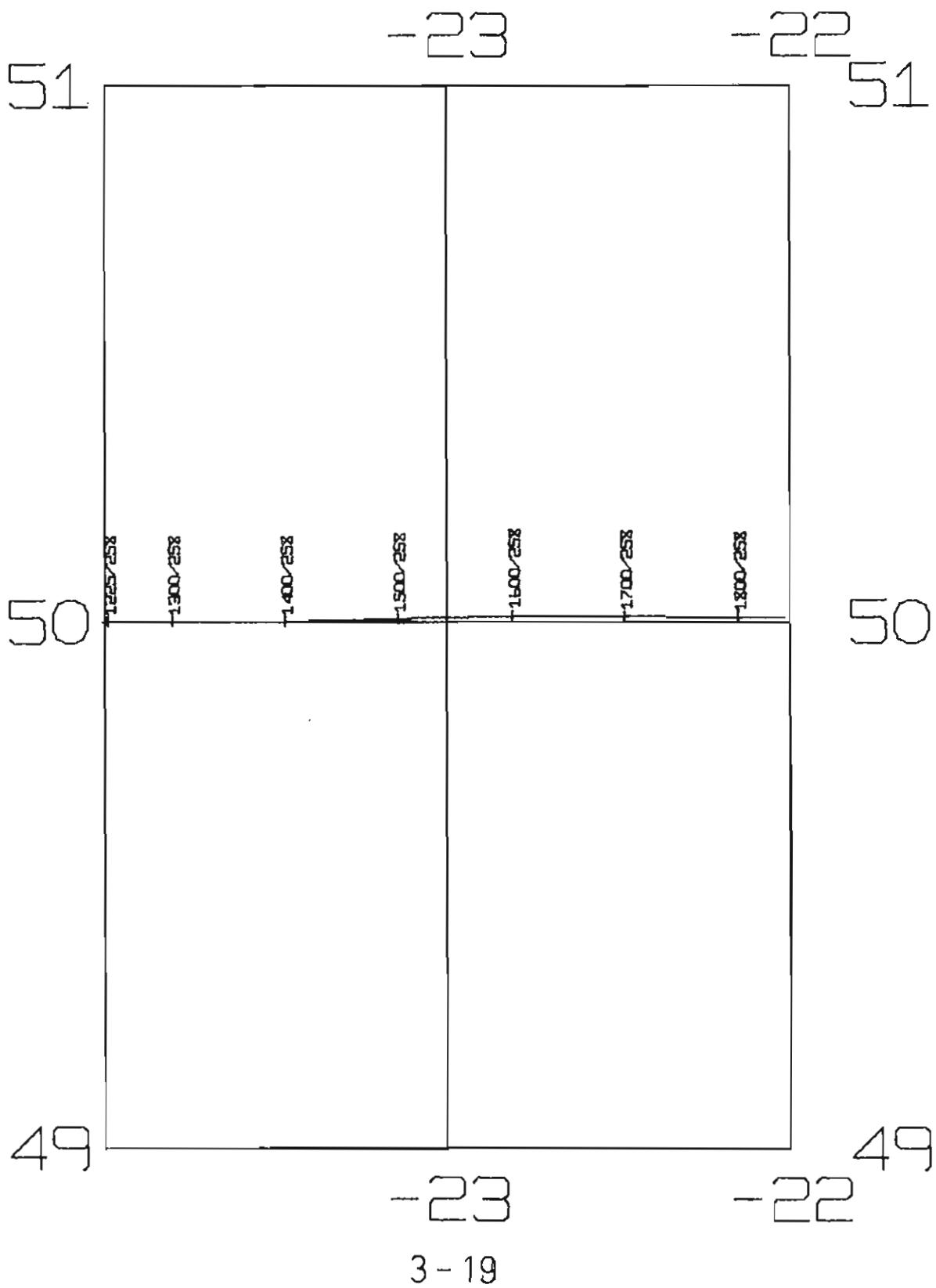




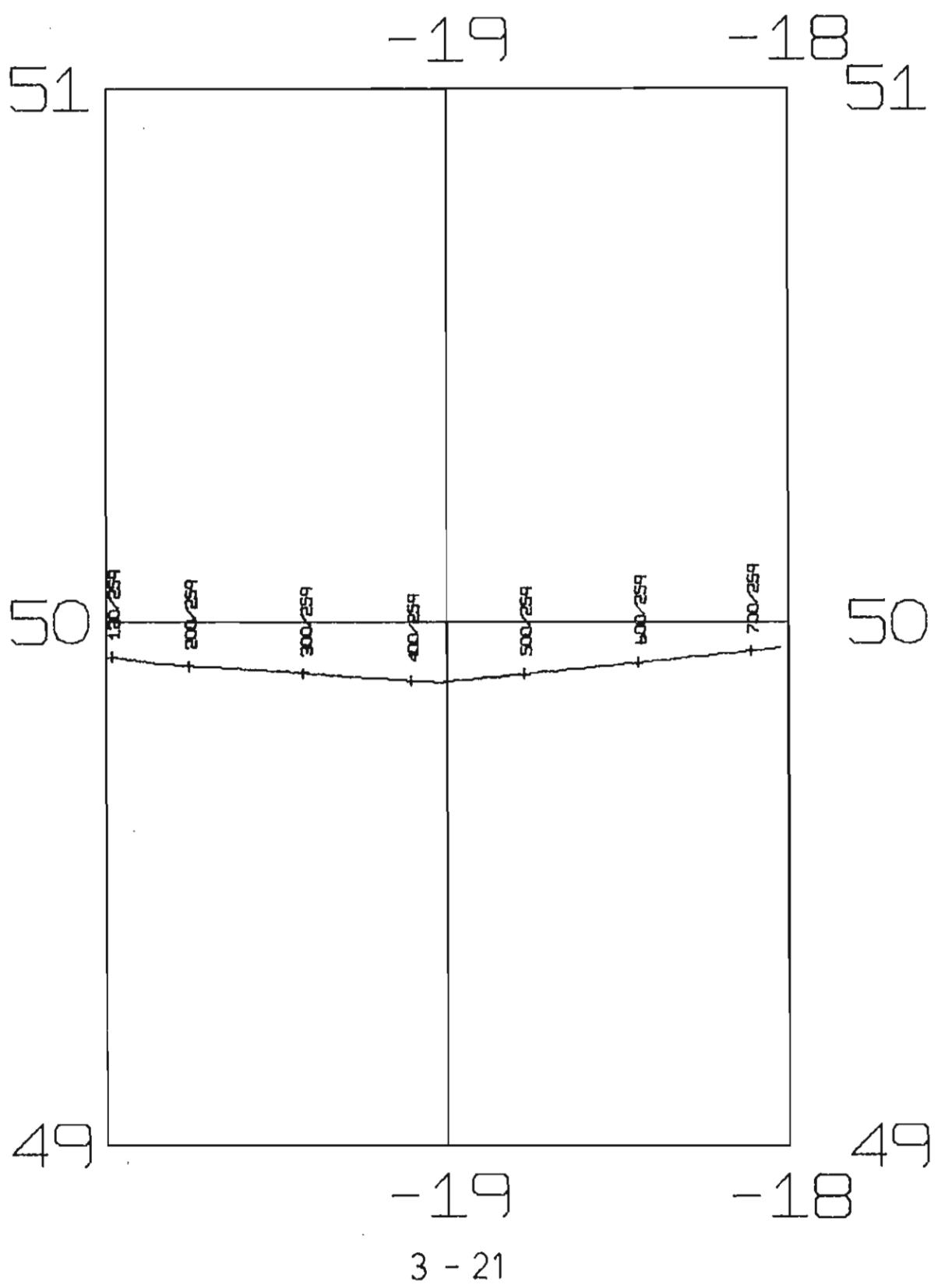


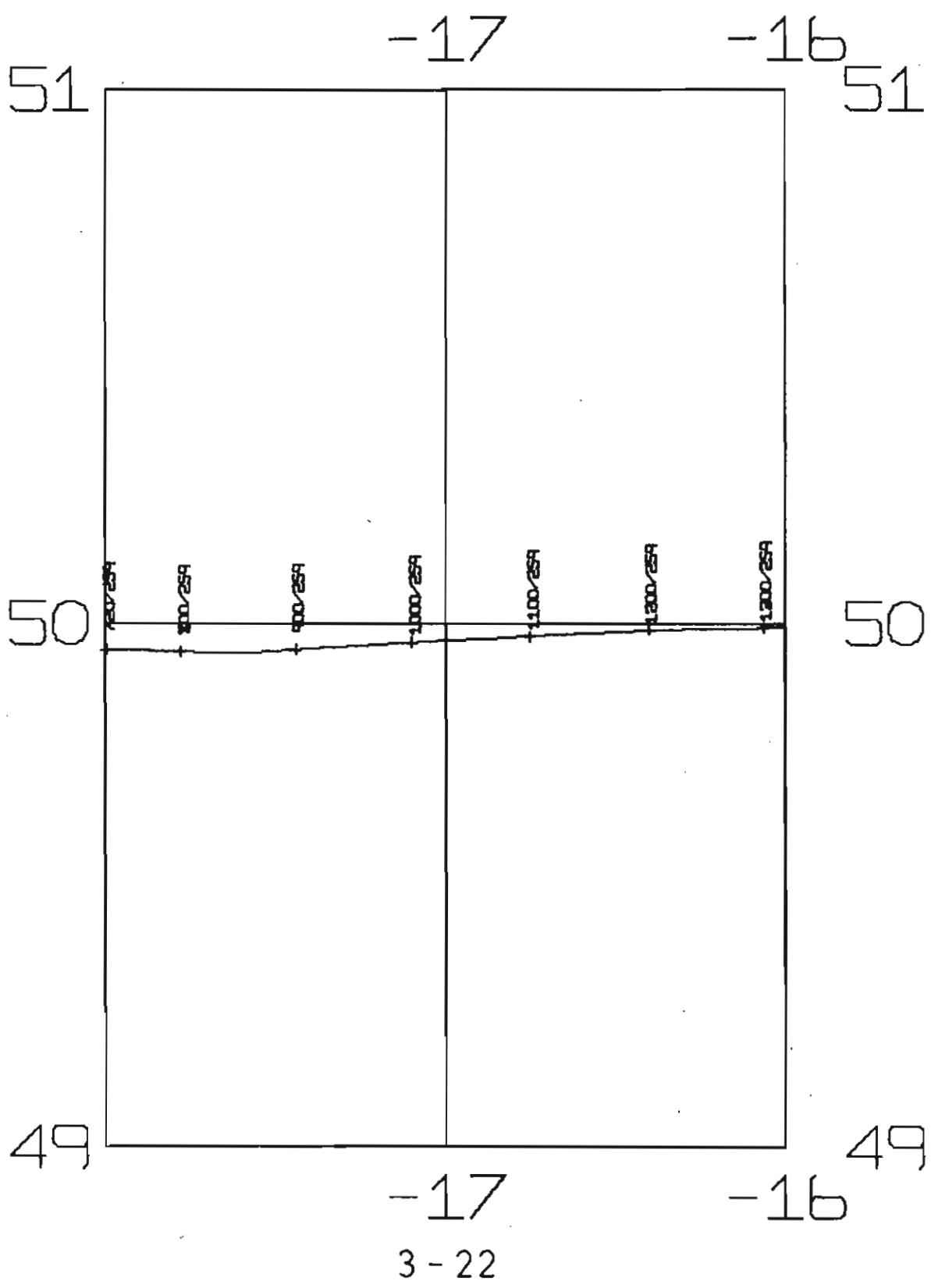
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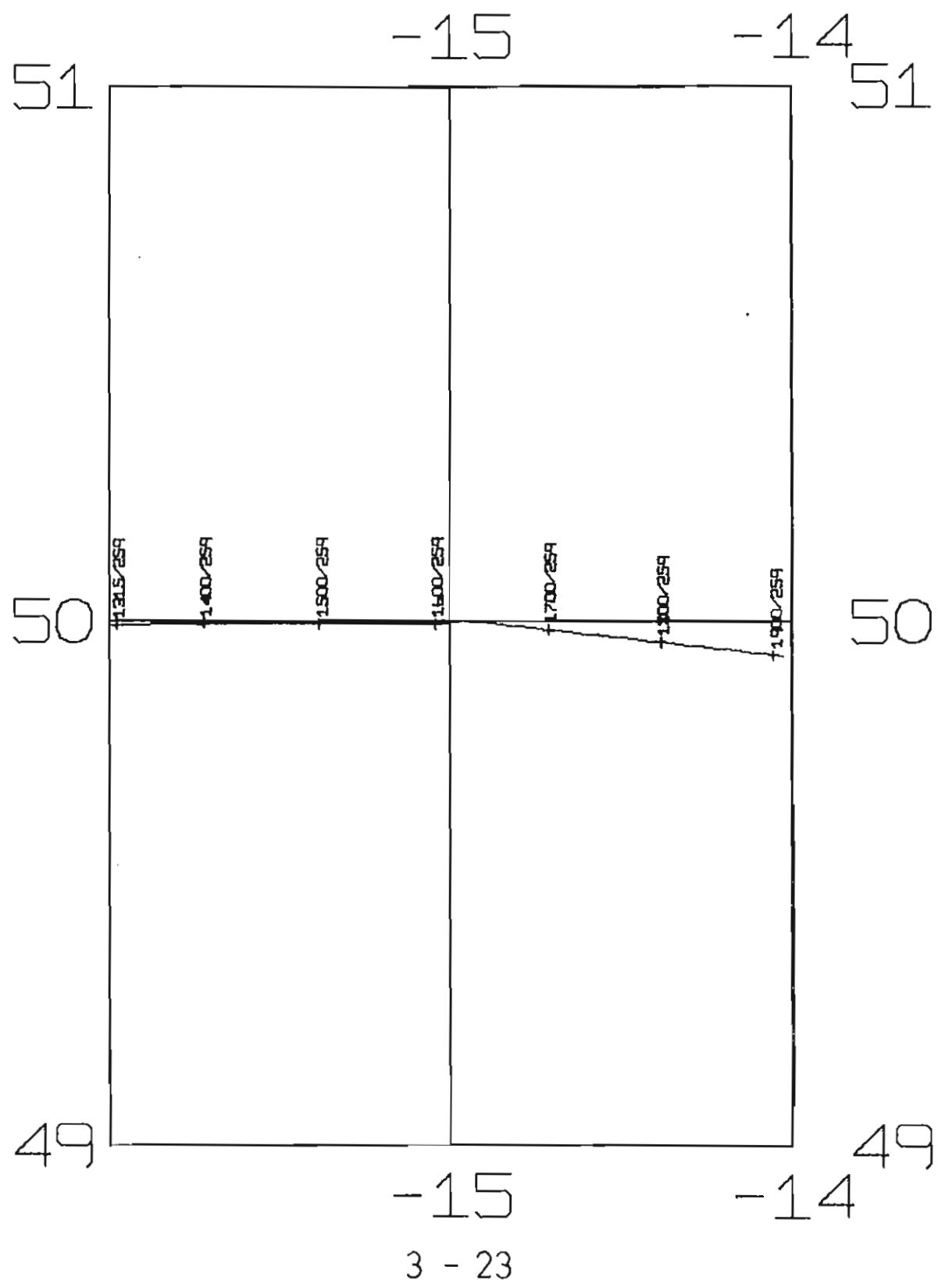


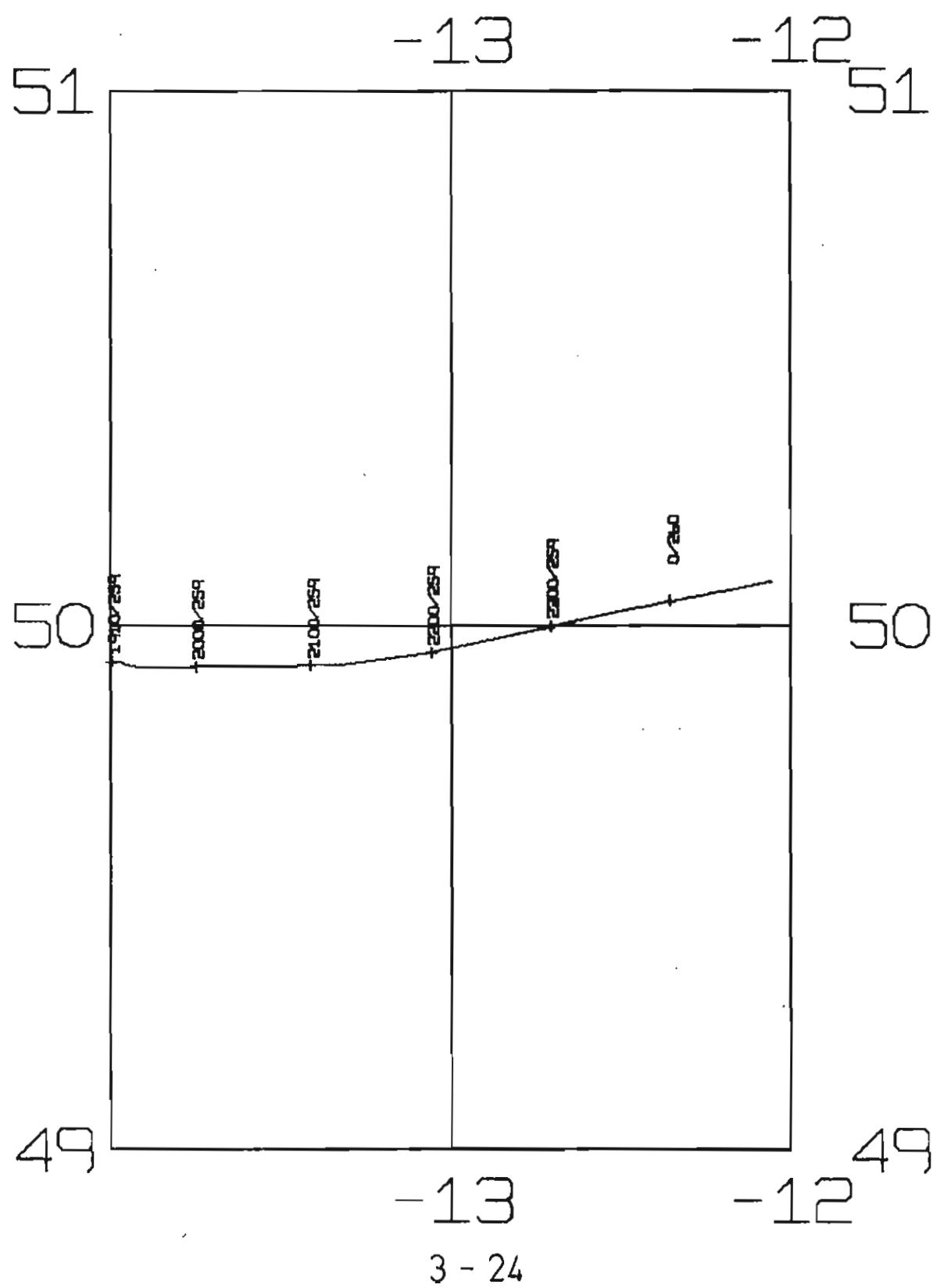












3 - 24

SECTION C

Tables of a) Total Magnetic Field
b) Uncorrected Depth in Fathoms (at 800 fms/sec).

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
 TOTAL MAGNETIC FIELD IN GAMMAS

	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	0.8	47767	47805	47764	477828	47836	47833	47829	47823	47572	47586	47620	47662
01	0.9	47773	47762	47785	47779	47781	47780	47793	47791	47810	47791	47810	47791
02	1.0	47782	47807	47825	47818	47808	47816	47767	47759	47824	47824	47824	47828
03	1.1	47795	47809	47823	47820	47824	47816	47776	47759	47764	47764	47764	47779
04	1.2	47814	47828	47828	47822	47802	47768	47701	47701	47800	47780	47780	47787
05	1.3	47816	47866	47586	47586	47592	47613	47652	47708	47732	47760	47760	47758
06	1.4	47860	47867	47863	47863	47857	47855	47854	47850	47860	47860	47860	47894
07	1.5	47860	47919	47928	47928	47910	47910	47884	47884	47839	47839	47839	47834
08	1.6	47830	47831	47856	47790	47909	47912	48017	48000	47962	47916	47916	47834
09	1.7	47852	47817	47774	47743	47733	47733	47737	47741	47764	47767	47767	47864
10	1.8	47911	47942	47972	47999	48030	48030	48059	48077	48061	48023	47975	47927
11	1.9	47898	47888	47891	47991	47911	47939	47979	48016	48061	48087	48084	48069
12	2.0	48048	48025	48025	48005	47997	47988	47984	47979	47957	47928	47893	47857
13	2.1	48048	48048	48048	48048	48048	48048	48048	48048	48048	48048	48048	48048
14	2.2	48042	48025	48013	48003	48000	48000	48000	48010	48032	48038	48040	48042
15	2.3	48044	48041	47850	47867	47923	48003	48023	48095	47960	47979	47979	47994
16	2.4	48119	48390	48358	48317	48243	48160	48160	48196	48285	48352	48398	48422
17	2.5	48132	48087	48044	48000	47969	47963	47963	48108	48135	48223	48218	48175
18	2.6	48366	48350	48298	48240	48202	48183	48183	48173	48173	48254	48349	48349
19	2.7	48133	48163	48200	48242	48283	48313	48313	48330	48330	48301	48301	48250
20	2.8	48232	48224	48226	48233	48248	48266	48266	48283	48346	48385	48385	48425
21	2.9	48353	48376	48389	48392	48384	48363	48363	48320	48320	48320	48320	48325
22	3.0	48233	48222	48220	48224	48236	48257	48257	48306	48327	48342	48353	48370
23	3.1	48392	48415	48434	48447	48453	48448	48448	48440	48436	48438	48439	48507
24	3.2	48449	48447	48453	48465	48532	48532	48532	48498	48500	48502	48502	48583
25	3.3	48515	48527	48532	48532	48532	48532	48532	48558	48573	48583	48583	48583
26	3.4	48589	48596	48600	48600	48600	48600	48600	48600	48600	48600	48600	48600

C 1

DATE 14- 6-1971 (DAY NO 165)

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
 TOTAL MAGNETIC FIELD IN GAMMAS

	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	0.0	47831	47813	47802	47810	47816	47814	47811	47803	47801	47803	47803	47803
01	0.1	47811	47809	47800	47781	47769	47789	47815	47854	47900	47940	47973	47973
02	0.2	47995	48003	47996	47976	47956	47948	47962	47973	47979	47984	47994	47994
03	0.3	48017	48048	48072	48086	48091	48091	48093	48093	48090	48081	48056	48056
04	0.4	48042	48025	48013	48003	48000	48000	48022	48022	48032	48038	48040	48042
05	0.5	48044	48041	47850	47867	47923	48003	48023	48095	47960	47960	47899	47879
06	0.6	47864	47844	47850	47845	47845	47845	47866	47866	48196	48285	48398	48422
07	0.7	48419	48390	48358	48317	48243	48243	48160	48160	48196	48186	48175	48175
08	0.8	48132	48087	48044	48000	47969	47963	47963	48108	48155	48173	48173	48173
09	0.9	48366	48350	48298	48240	48202	48183	48173	48163	48163	48147	48147	48147
10	1.0	48133	48163	48200	48242	48283	48313	48331	48330	48330	48301	48301	48301
11	1.1	48232	48224	48226	48233	48248	48266	48266	48283	48346	48385	48412	48425
12	1.2	48353	48376	48389	48392	48384	48363	48363	48320	48320	48320	48325	48325
13	1.3	48233	48222	48220	48224	48236	48257	48257	48306	48327	48342	48360	48360
14	1.4	48392	48415	48434	48447	48453	48448	48448	48440	48436	48438	48439	48439
15	1.5	48449	48447	48453	48465	48532	48532	48532	48498	48500	48502	48502	48583
16	1.6	48439	48447	48453	48465	48532	48532	48532	48558	48573	48583	48583	48583
17	1.7	48515	48527	48532	48532	48532	48532	48532	48558	48573	48583	48583	48583
18	1.8	48589	48596	48600	48600	48600	48600	48600	48600	48600	48600	48600	48600
19	1.9	48539	48533	48530	48529	48531	48536	48540	48541	48542	48555	48555	48555
20	2.0	48539	48533	48530	48529	48531	48536	48540	48541	48542	48555	48555	48555
21	2.1	48539	48533	48530	48529	48531	48536	48540	48541	48542	48555	48555	48555
22	2.2	48539	48533	48530	48529	48531	48536	48540	48541	48542	48555	48555	48555
23	2.3	48539	48533	48530	48529	48531	48536	48540	48541	48542	48555	48555	48555

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
TOTAL MAGNETIC FIELD IN GAMMAS

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	48581	48590	48595	48594	48592	48590	48587	48584	48581	48582	48594	48610
01	48628	48640	48643	48643	48643	48648	48653	48652	48655	48659	48642	48624
02	48618	48620	48627	48632	48633	48632	48634	48638	48645	48661	48681	48699
03	48712	48722	48733	48742	48743	48726	48701	48889	48879	48711	48722	48722
04	48721	48722	48733	48747	48760	48770	48785	48808	48808	48801	48801	48795
05	48783	48759	48721	48665	48608	48607	48631	48666	48677	48673		
06												
07												
08	48752	48753	48764	48772	48772	48760	48730	48710	48705	48597	48604	48730
09	48816	48804	48781	48753	48735	48727	48722	48716	48829	48693	48767	48819
10	48862	48863	48863	48868	48868	48810	48834	48829	48789	48667	48648	48632
11	48862	48863	48863	48868	48868	48861	48864	48860	48867	48722	48674	48641
12	48860	48858	48858	48858	48855	48808	48808	48799	48796	48708	48785	48809
13	48860	48869	48869	48869	48745	48766	48799	48759	48744	48732	48724	48713
14	48732	48768	48780	48766	48766	48766	48796	48765	48694	48720		
15												
16	48857*02	48882	48957	48977	48897	48887	48887	488963	48999*	48933	48840	48874
17	49028	48930	48870	48898	48888	48880	48880	48898	48961	49059*	48875	48900
18	49120	49110	49110	49120	49144	49161	49161	49172	49181	49040*	49047	48965
19	49142	49074	49020	48974	48917	48860	48824	48891	49195	49028	49049	49091
20	49123	49013	49013	48696*	48696	48902	49042	49059*	4913*	49095	49052	49062
21	49123	48860	48800	49015	49118	49137	49122	49019	48897	48922	48752	48541
22	488572	48964	49020	49111	49190	49201	49159	49041	48896	48862*	48953	48970
23												48917

C2

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
TOTAL MAGNETIC FIELD IN GAMMAS

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	48960	48999	49012	49001	48991	49022	49057	49049	49041	49062	49082	49087
01	49080	49069	49063	49066	49068	49070	49080	49098	49103	49084	49045	49005
02	48973	48951	48951	48940	48937	48944	48968	48994	49013	49021	49026	49037
03	49051	48969	48969	49085	49100	49117	49141	49153	49153	49121	49032	49009
04	48999	48993	48986	48986	48978	48958	48922	48883	48873	48882	48902	48926
05	48936	48941	48949	48949	48954	48959	48964	48947	48973	48913	48940	49008
06	49085	49133	49150	49162	49175	49178	49178	49178	49153	49115	49078	49059
07	49054	49057	49055	49048	49037	49028	49028	49038	49057	49072	-49085	
08	49042	49042	49005	48977	48962	48953	48953	48962	48897	48983	48985	
09	48990	49001	49001	49052	49121	49188	49222	49202	49170	49123	49071	49018
10	48992	48985	49019	49003	49036	49073	49101	49104	49101	49114	49105	49078
11	49046											
12												
13												
14												
15	48973	48911	49121	49105	49105	49028	49038	49040	49039	49049	49074	48980
16	49106	49234	49231	49217	49197	49168	49139	49115	49108	49126	49156	49189
17	49218	49078	49087	49100	49137	49150	49150	49162	49155	49072	49062	49174
18	49078	49162	49161	49151	49193	49248	49289	49180	49192	49193	49188	49359
19	49333	49293	49241	49201	49190	49196	49222	49165	49152	49336	49362	49158
20	49333	49169	49169	49216	49197	49221	49277	49168	49139	49121	49119	49135
21	49171	49171	49263	49263	49269	49269	49278	49265	49232	49197	49197	49154

DATE 17- 6-1971 (DAY NO 168)

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NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1										DATE 20- 6-1971 (OAY NO 171)									
TOTAL MAGNETIC FIELD IN GAMMAS		HOURS		MINUTES		MINUTES		HOURS		MINUTES		MINUTES		HOURS		MINUTES		HOURS	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	48985	48991	48975	48954	48936	48920	48904	48891	48874	48855	48836	48815	48804	48789	48774	48755	48745	48729	48711
01	48797	48770	48704	48667	48640	48616	48593	48570	48544	48516	48500	48484	48464	48442	48420	48397	48373	48354	48332
02	48713	48704	48813	48801	48873	48847	48844	48830	48825	48800	48803	48800	48800	48800	48800	48800	48800	48800	48800
03	48816	48818	48857	48852	48899	48871	48854	48830	48814	48800	48800	48800	48800	48800	48800	48800	48800	48800	48800
04	48621	48592	48644	48714	48760	48700	48760	48722	48712	48670	48650	48650	48650	48650	48650	48650	48650	48650	48650
05	48802	48600	48644	48714	48760	48700	48760	48722	48712	48670	48650	48650	48650	48650	48650	48650	48650	48650	48650
06	48698	48703	48718	48678	48667	48647	48667	48650	48630	48612	48600	48600	48600	48600	48600	48600	48600	48600	48600
07	48642	48681	48692	48699	48691	48673	48693	48689	48675	48650	48630	48630	48630	48630	48630	48630	48630	48630	48630
08	48742	48692	48920	48830	48813	48800	48842	48800	48752	48730	48704	48700	48700	48700	48700	48700	48700	48700	48700
09	48837	48810	48810	48813	48800	48752	48800	48730	48712	48704	48670	48672	48672	48672	48672	48672	48672	48672	48672
10	48810	48810	48813	48813	48800	48752	48800	48730	48712	48704	48670	48672	48672	48672	48672	48672	48672	48672	48672
11	48810	48810	48813	48813	48800	48752	48800	48730	48712	48704	48670	48672	48672	48672	48672	48672	48672	48672	48672
12	48659	48741	48811	48811	48800	48744	48800	48732	48712	48704	48670	48672	48672	48672	48672	48672	48672	48672	48672
13	48557	48513	48503	48501	48501	48497	48507	48491	48483	48472	48469	48467	48467	48467	48467	48467	48467	48467	48467
14	49018	48959	48783	48783	48783	48783	48783	48783	48782	48782	48782	48782	48782	48782	48782	48782	48782	48782	48782
15	49036	48988	48937	48937	48900	48900	48906	48906	48906	48906	48906	48906	48906	48906	48906	48906	48906	48906	48906
16	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036	49036
17	49118	49118	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119
18	49118	49118	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119	49119
19	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249	49249
20	48838	48838	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962
21	48966	49109	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134	49134
22	49020	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920	48920
23	48891	48979	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221	49221

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1										DATE 21- 6-1971 (OAY NO 172)									
TOTAL MAGNETIC FIELD IN GAMMAS		HOURS		MINUTES		MINUTES		HOURS		MINUTES		MINUTES		HOURS		MINUTES		HOURS	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	48965	48982	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962	48962
01	48916	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903	48903
02	49011	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908	48908
03	48516	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543	48543
04	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553	48553
05	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555	48555
06	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633
07	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633	48633
08	48753	48753	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763	48763
09	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687	48687
10	48703	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720	48720
11	48747	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762	48762
12	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947
13	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947	48947
14	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879
15	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879	48879
16	48905	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904	48904
17	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905	48905
18	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018	49018
19	49151	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201	49201
20	49072	49072	49072																

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
TOTAL MAGNETIC FIELD IN GAMMAS

DATE 22- 6-1971 (DAY NO 173)

	00	05	10	15	20	25	
HOURS	49110	48953*07	48977	49052	49092	49115	49189
	49148	49102	49088	49106	49189	49236	49258
	001	49044	49017	49029	49167	49250	49255
	002	49222	49165	49129	49144	49225	49271
	003	49240	49134*12	49034	49173	49231	49307
	004	49152	49112	49098	49098	49103	49163
	005	49122	49142	49113	49099	49111	49109
	006	49149	49149	49118	49123	49260	49062
	007	48930	48930	48931	49126	49175	49177
	008	49535	49604	49642	49728	49890	49369
	009	49020	49024	49032	49080	49503	49079
	10	49051	49020	49012	49037	49000	49085*33
	11	49445	49454	49410	49362	49324	49102
	12	49097	49123	49151	49163	49231	49125
	13	49223	49226	49223	49220	49162	49167
	14					49162	49162
	15					49215	49217
	16	49201	49199	49203	49212	49568	49259
	17	49258	49270	49273	49269	49229	49241
	18	49338	49314	49291	49265	49253	49340
	19	49257	49289	49320	49339	49233	49227
	20	49259	49273	49299	49311	49330	49309
	21	49323	49354	49358	49326	49300	49299
	22	49289	49249	49162	49062	49288	49233
	23	49247	49272	49284	49302	49447*32	49645

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
TOTAL MAGNETIC FIELD IN GAMMAS

DATE 23- 6-1971 (DAY NO 174)

	00	05	10	15	20	25		
HOURS	49608	49571	49527	49478	49462	49473	49508	
	001	49340	49345	49345	49304	49328	49440	49632
	002	49333	49303	49291	49238	49252	49382	49332
	003	49260	49238	49232	49237	49271	49279	49401
	004	49315	49319	49308	49288	49291	49307	49269
	005	49400	49379	49373*08	49403	49426	49420	49350
	006	49201	49195	49202	49222	49244	49272	49281
	007	49214	49198	49186	49186	49248	49256	49239
	008	49182	49173	49152	49138	49132	49130	49128
	009							49123
	10							49176
	11	49136	49093	49064	49055	49060	49070	49068
	12	49176	49242	49316	49356	49348	49318	49292
	13	48999	49022	49053	49081	49093	49100	49098
	14	49148	49212	49172	49091	49019	49103	49098
	15	4916	4914	48977	48936	48819	48859	48860
	16	49114	48977	48811	48873	48889	48869	48870
	17	49189	49223	49239	49205	49172	49152	49126
	18	49039*58	49054*03	49027	48989	48802	48858	48879
	19	48910*02	48922	48947	49002	48802	48871	48840
	20	48832	48812	48792	48791	48798	48769	48822
	21	48823	48810	48791	48791	48769	48782	48820
	22	488725	48810	48766	48733	48698	48743	48739
	23							48689

C5

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1		TOTAL MAGNETIC FIELD IN GAMMAS		MINUTES		DATE 24- 6-1971 (DAY NO 175)	
HOURS	MINUTES	00	05	10	15	20	25
00	48 720	48 805	48 889	48 902	48 958	48 872	48 646
01	48 713	48 655	48 605	48 593	48 593	48 672	48 644
02	48 763	48 752	48 740	48 719	48 738	48 675	48 674
03	48 613	48 632	48 641	48 628	48 597	48 759	48 649
04	48 660	48 687	48 689	48 716	48 792	48 851	48 653
05	48 721	48 696	48 691	48 700	48 715	48 793	48 757
06	48 700	48 673	48 645	48 587	48 703	48 730	48 719
07	48 553	48 557	48 562	48 571	48 581	48 569	48 559
08	48 581	48 574	48 558	48 548	48 576	48 594	48 589
09	48 510	48 504	48 501	48 486	48 540	48 539	48 521
10	48 524	48 511	48 512	48 496	48 497	48 510	48 537
11	48 520	48 512	48 512	48 490	48 490	48 510	48 541
12	48 520	48 512	48 512	48 490	48 490	48 510	48 541
13	48 520	48 512	48 512	48 490	48 490	48 510	48 541
14	48 520	48 512	48 512	48 490	48 490	48 510	48 541
15	48 520	48 512	48 512	48 490	48 490	48 510	48 541
16	48 520	48 512	48 512	48 490	48 490	48 510	48 541
17	48 520	48 512	48 512	48 490	48 490	48 510	48 541
18	48 520	48 512	48 512	48 490	48 490	48 510	48 541
19	48 520	48 512	48 512	48 490	48 490	48 510	48 541
20	48 520	48 512	48 512	48 490	48 490	48 510	48 541
21	48 520	48 512	48 512	48 490	48 490	48 510	48 541
22	48 520	48 512	48 512	48 490	48 490	48 510	48 541
23	48 520	48 512	48 512	48 490	48 490	48 510	48 541
24	48 520	48 512	48 512	48 490	48 490	48 510	48 541
25	48 520	48 512	48 512	48 490	48 490	48 510	48 541
26	48 520	48 512	48 512	48 490	48 490	48 510	48 541
27	48 520	48 512	48 512	48 490	48 490	48 510	48 541
28	48 520	48 512	48 512	48 490	48 490	48 510	48 541
29	48 520	48 512	48 512	48 490	48 490	48 510	48 541
30	48 520	48 512	48 512	48 490	48 490	48 510	48 541
31	48 520	48 512	48 512	48 490	48 490	48 510	48 541
32	48 520	48 512	48 512	48 490	48 490	48 510	48 541
33	48 520	48 512	48 512	48 490	48 490	48 510	48 541
34	48 520	48 512	48 512	48 490	48 490	48 510	48 541
35	48 520	48 512	48 512	48 490	48 490	48 510	48 541
36	48 520	48 512	48 512	48 490	48 490	48 510	48 541
37	48 520	48 512	48 512	48 490	48 490	48 510	48 541
38	48 520	48 512	48 512	48 490	48 490	48 510	48 541
39	48 520	48 512	48 512	48 490	48 490	48 510	48 541
40	48 520	48 512	48 512	48 490	48 490	48 510	48 541
41	48 520	48 512	48 512	48 490	48 490	48 510	48 541
42	48 520	48 512	48 512	48 490	48 490	48 510	48 541
43	48 520	48 512	48 512	48 490	48 490	48 510	48 541
44	48 520	48 512	48 512	48 490	48 490	48 510	48 541
45	48 520	48 512	48 512	48 490	48 490	48 510	48 541
46	48 520	48 512	48 512	48 490	48 490	48 510	48 541
47	48 520	48 512	48 512	48 490	48 490	48 510	48 541
48	48 520	48 512	48 512	48 490	48 490	48 510	48 541
49	48 520	48 512	48 512	48 490	48 490	48 510	48 541
50	48 520	48 512	48 512	48 490	48 490	48 510	48 541
51	48 520	48 512	48 512	48 490	48 490	48 510	48 541
52	48 520	48 512	48 512	48 490	48 490	48 510	48 541
53	48 520	48 512	48 512	48 490	48 490	48 510	48 541
54	48 520	48 512	48 512	48 490	48 490	48 510	48 541
55	48 520	48 512	48 512	48 490	48 490	48 510	48 541

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1						DATE 26- 6-1971 (DAY NO 177)			
			MINUTES	30	35	40	45	50	55
HOURS	00	05	10	15	20	25			
00	47581	47582	47589	47593	47599	47600	47605	47610	47615
01	47608	47609	47599	47598	47596	47592	47586	47570	47572
02	47582	47589	47590	47593	47596	47592	47589	47584	47582
03	47576	47574	47575	47572	47572	47569	47568	47566	47564
04	47564	47563	47561	47560	47560	47561	47565	47567	47571
05	47570	47571	47561	47560	47560	47565	47565	47557	47553
06	47551	47551	47556	47558	47569	47581	47598	47601	47624
07	47631	47640	47646	47650	47652	47657	47663	47666	47680
08	47691	47701	47693	47704	47733	47740	47749	47761	47753
09	47766	47777	47789						47763

C7

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2			MINUTES		
TOTAL MAGNETIC FIELD IN GAMMAS			20		
HOURS	00	05	10	15	20
00					
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14	47589	47585	47579	47568	47562
15	47559	47561	47566	47570	47574
16	47583	47580	47580	47579	47579
17	47597	47601	47603	47607	47610
18	47618	47613	47609	47607	47605
19	47600	47600	47600	47600	47600
20	47598	47599	47601	47601	47600
21	47645	47643	47641	47641	47639
22					
23	47612	47620	47628	47637	47646
INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2			MINUTES		
TOTAL MAGNETIC FIELD IN GAMMAS			20		
HOURS	00	05	10	15	20
00	47653	47676	47701	47734	47756
01	47753	47749	47752	47774	47805
02	47845	47838	47839	47843	47848
03	47781	47763	47750	47753	47760
04	47848	47836	47830	47829	47833
05	47577	47569	47573	47580	47584
06	47873	47878	47877	47875	47874
07	47850	47861	47874	47883	47891
08	47812	47803	47802	47802	47830
09	47941	47902	47868	47844	47833
10	47730	47730	47750	47790	47839
11	48040	48013	47975	47930	47895
12	48053	48077	48093	48104	48110
13	47973	47957	47943	47938	47932
14	47930	47924			
15	47789	47796	47804	47816	47821
16	47799	47800	47806	47812	47819
17	47849	47884	47921	47955	47982
18	47990	47982	47982	47993	48002
19	48080	48092	48100	48102	48103
20	48063	48051	48038	48027	48020
21	48051	48052	48053	48053	48053
22					
23	47988	47959	47923	47883	478902

		DATE	25-	8-1971	(DAY NO 237)				
30	35	40	45	50	55				
47552	47551	47550	47550	47552	47555				
47586	47596	47597	47593	47588	47585				
47530	47532	47534	47588	47592	47595				
47613	47617	47621	47622	47621	47620				
47602	47600	47600	47599	47600	47600				
47602	47602	47600	47600	47599	47597				
47610	47619	47628	47633	47641	47645				
47629	47629	47627	47621	47615	47612				
47670	47671	47663	47652	47641	47640				
		DATE	26-	8-1971	(DAY NO 238)				
30	35	40	45	50	55				
47776	47780	47785	47787	47779	47768				
47799	477940	477959	477944	477907	477869				
47832	47825	47806	47801	477998	477790				
47794	47838	47839	478507	47863	47860				
47848	47838	47802	47745	47674	47613				
47607	47631	47675	47733	477802	477850				
47860	47854	47850	47846	47840	47840				
47790	47793	47789	477849	477834	477823				
47781	477859	477912	477955	477974	477969				
47776	477761	47741	47731	47735	47737				
47779	47761	47740	47708	478045	48050				
47792	477961	477908	477939	477983	48020				
47785	477890	478088	478072	47931	47931				
47810	47801	478088	47932	47931	47930				
47793	47793	47788	47805	47798	47798				
47802	47802	478020	478016	478018	47821				
47803	47803	478008	478010	478009	480064				
47806	47806	478016	478010	478018	48047				
47803	47803	478030	478031	478039	48075				
47804	47804	478041	478042	478043	48039				
47843	47843	47843	47843	47850	48015				
477859	477859	477843	477843	477850	477923				

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 2	
TOTAL MAGNETIC FIELD IN GAMMAS		MINUTES	
00	49103	10	
01	49083	15	
02	49256	20	
03	49301	25	
04	49300	30	
05	49161	35	
06	49152	40	
07	49173	45	
08	49153	50	
09	49162	55	
10	49155	60	
11	49150	65	
12	49151	70	
13	49152	75	
14	49153	80	
15	49154	85	
16	49155	90	
17	49156	95	
18	49157	100	
19	49158	105	
20	49159	110	
21	49160	115	
22	49161	120	
23	49162	125	
24	49163	130	
25	49164	135	
26	49165	140	
27	49166	145	
28	49167	150	
29	49168	155	
30	49169	160	
31	49170	165	
32	49171	170	
33	49172	175	
34	49173	180	
35	49174	185	
36	49175	190	
37	49176	195	
38	49177	200	
39	49178	205	
40	49179	210	
41	49180	215	
42	49181	220	
43	49182	225	
44	49183	230	
45	49184	235	
46	49185	240	
47	49186	245	
48	49187	250	
49	49188	255	
50	49189	260	
51	49190	265	
52	49191	270	
53	49192	275	
54	49193	280	
55	49194	285	
56	49195	290	
57	49196	295	
58	49197	300	
59	49198	305	
60	49199	310	
61	49200	315	
62	49201	320	
63	49202	325	
64	49203	330	
65	49204	335	
66	49205	340	
67	49206	345	
68	49207	350	
69	49208	355	
70	49209	360	
71	49210	365	
72	49211	370	
73	49212	375	
74	49213	380	
75	49214	385	
76	49215	390	
77	49216	395	
78	49217	400	
79	49218	405	
80	49219	410	
81	49220	415	
82	49221	420	
83	49222	425	
84	49223	430	
85	49224	435	
86	49225	440	
87	49226	445	
88	49227	450	
89	49228	455	
90	49229	460	
91	49230	465	
92	49231	470	
93	49232	475	
94	49233	480	
95	49234	485	
96	49235	490	
97	49236	495	
98	49237	500	
99	49238	505	
100	49239	510	
101	49240	515	
102	49241	520	
103	49242	525	
104	49243	530	
105	49244	535	
106	49245	540	
107	49246	545	
108	49247	550	
109	49248	555	
110	49249	560	
111	49250	565	
112	49251	570	
113	49252	575	
114	49253	580	
115	49254	585	
116	49255	590	
117	49256	595	
118	49257	600	
119	49258	605	
120	49259	610	
121	49260	615	
122	49261	620	
123	49262	625	
124	49263	630	
125	49264	635	
126	49265	640	
127	49266	645	
128	49267	650	
129	49268	655	
130	49269	660	
131	49270	665	
132	49271	670	
133	49272	675	
134	49273	680	
135	49274	685	
136	49275	690	
137	49276	695	
138	49277	700	
139	49278	705	
140	49279	710	
141	49280	715	
142	49281	720	
143	49282	725	
144	49283	730	
145	49284	735	
146	49285	740	
147	49286	745	
148	49287	750	
149	49288	755	
150	49289	760	
151	49290	765	
152	49291	770	
153	49292	775	
154	49293	780	
155	49294	785	
156	49295	790	
157	49296	795	
158	49297	800	
159	49298	805	
160	49299	810	
161	49300	815	
162	49301	820	
163	49302	825	
164	49303	830	
165	49304	835	
166	49305	840	
167	49306	845	
168	49307	850	
169	49308	855	
170	49309	860	
171	49310	865	
172	49311	870	
173	49312	875	
174	49313	880	
175	49314	885	
176	49315	890	
177	49316	895	
178	49317	900	
179	49318	905	
180	49319	910	
181	49320	915	
182	49321	920	
183	49322	925	
184	49323	930	
185	49324	935	
186	49325	940	
187	49326	945	
188	49327	950	
189	49328	955	
190	49329	960	
191	49330	965	
192	49331	970	
193	49332	975	
194	49333	980	
195	49334	985	
196	49335	990	
197	49336	995	
198	49337	1000	

NC MARCEL BAYARD CANTAT TOTAL MAGNETIC FIELD IN GAMMAS		II OCEAN SURVEY CRUISE LEG 2		DATE 2- 9-1971 (DAY NO 245)		C 12	
HOURS	MINUTES	MINUTES	MINUTES	MINUTES	MINUTES	MINUTES	MINUTES
00	05	10	15	20	25	30	35
001	50048	50013	50018	50053	50096	50127	50130
002	50070	50062	50068	50078	50100	50153	50182
003	50290	50289	50283	50250	50243	50270	50273
004	50347	50370	50363	50423	50484	50574	50570
005	50583	50605	50733	50671	50746	50775	50773
006	50730	50953	50959	50736	50741	50941	50940
007	50953	50763	50779	50941	50767	50846	50846
008	50830	51304	51288	50769	50842	51023	51026
009	51140	50471	51113	50763	50870	51089	51157
010	51160	50461	50522	50540	50821	50837	50835
011	51147	50480	50819	50773	50821	51018	51011
012	51134	50792	50787	50769	50867	50915	51190
013	51134	50840	50819	50867	50848	51084	51294
014	51134	50840	50819	50928	50951	51139	51342
015	51017	51021	51030	51043	51061	51203	51253
016	51192	51193	51196	51198	51200	51239	51341
017	51313	51328	51333	51339	51342	51350	51573
018	51349	51362	51362	51380	51423	51454	51572
019	51580	51582	51582	51587	51590	51607	51669
020	51580	51588	51588	51598	51607	51618	51754
021	51803	51872	51872	51880	51884	51881	51884
022	51872	51872	51880	51889	51909	51928	51933
023	51964	51983	51983	51999	52011	52040	52106
NC MARCEL BAYARD CANTAT TOTAL MAGNETIC FIELD IN GAMMAS		II OCEAN SURVEY CRUISE LEG 2		DATE 3- 9-1971 (DAY NO 246)		C 12	
HOURS	MINUTES	MINUTES	MINUTES	MINUTES	MINUTES	MINUTES	MINUTES
00	00	05	10	15	20	25	30
001	52111	52053	52055	52097	52079	52089	52103
002	52113	52105	52062	52102	52158	52132	52138
003	52110	52098	52288	52248	52289	52333	52340
004	52108	52086	52474	52487	52440	52437	52440
005	52106	52462	52630	52639	52651	52669	52670
006	52104	52613	52700	52710	52648	52758	52758
007	52103	52673	52681	52799	52729	52852	52852
008	52099	52682	52881	52894	52817	52942	52942
009	52098	52951	52962	52983	52901	53082	53120
010	52098	52962	52973	52995	53021	53147	53167
011	52098	53123	53123	53139	53152	53212	53212
012	52098	53123	53123	53178	53177	53350	53350
013	52098	53236	53236	53262	53315	53461	53461
014	52098	53361	53361	53401	53420	53545	53545
015	52098	53452	53452	53517	53673	53700	53700
016	52098	53510	53510	53662	53833	53846	53846
017	52098	53623	53623	53798	53821	53856	53856
018	52098	53753	53753	53889	53973	53976	53976
019	52098	53880	53880	53973	54009	54018	54018
020	54060	54068	54068	54078	54106	54134	54134
021	54221	54221	54221	54242	54242	54421	54421
022							
023							

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3

TOTAL MAGNETIC FIELD IN GAMMAS

HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55	DATE	9- 9-1971 (DAY NO 252)
00															
01															
02															
03															
04															
05															
06															
07															
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3

TOTAL MAGNETIC FIELD IN GAMMAS

HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55	DATE	10- 9-1971 (DAY NO 253)
00															
01															
02															
03															
04															
05															
06															
07															
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															

C13

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3	TOTAL MAGNETIC FIELD IN GAMMAS	MINUTE 20	MINUTE 15	MINUTE 10	MINUTE 5	MINUTE 00	HOURS
50661	50606	50549	50505	50537	50669	50669	00
50498	50477	50477	50609	51280	51309	51309	01
50123	50123	50123	50861	50861	50852	50852	02
50829	50850	50850	50922	50922	50930	50930	03
50869	50898	50898	50691	50691	50723	50723	04
50651	50663	50526	50502	50252	50473	50473	05
50538	50526	50240	50252	50252	50271	50271	06
50235	50240	50043	50030	50030	50022	50022	07
50241	50069	50043	50042	50042	50098	50098	08
50103	50043	50181	50190	50190	50213	50213	09
50081	50191	50041	50003	49959	49959	49959	10
50209	50059	49891	49902	49918	49918	49918	11
50072	49881	49891	50519	50584	50534	50534	12
50342	50439	50757	50755	50840	50840	50840	13
50723	50754	49760	49614	49519	49519	49519	14
50083	49937	49825	49890	49930	49930	49930	15
49664	49752	49825	49944	49378	49378	49378	16
49669	49608	49523	49580	49561	49561	49561	17
49583	49603	49599	49715	49744	49744	49744	18
49751	49746	49719	49917	49970	49970	49970	19
50080	50002	49919	49937	49516	49503	49503	20
49581	49539	49528	49516	49575	49575	49575	21
49552	49539	49528	49516	49594	49594	49594	22
49561	49539	49528	49516	49601	49601	49601	23

NC MARCEL BAYARD CANTAT		OCEAN SURVEY CRUISE LEG 3
TOTAL MAGNETIC FIELD IN GAMMAS		MINUTE 20
HOURS	MINUTES	
00	49532	499544
01	49730	49722
02	49492	49491
03	49516	49516
04	49611	49638
05	49501	49502
06	49460	49472
07	49481	49498
08	49834	49842
09	49439	49449
10	49631	49571
11	49631	49825
12	49712	49801
13	49711	49690
14	49300	49297
15	49389	49410
16	49460	49460
17	49411	49421
18	49488	49519
19	49453	49411
20	49287	49263
21	49178	49179
22	49233	49243
23	49532	49559
		49554
		49701
		49489
		49510
		49660
		49507
		49493
		49515
		49844
		49459
		49512
		49520
		49521
		4984
		49464
		49464
		49900
		49751
		49571
		49357
		49459
		*17
		49453
		49488
		49437
		49549
		49392
		49248
		49184
		49260
		49583

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3		TOTAL MAGNETIC FIELD IN GAMMAS		DATE 13- 9-1971 (DAY NO 256)	
HOURS	MINUTES	20	25	30	35
00	49666	49591	49560	49528	49487
01	49164	49180	49200	49209	49207
02	49217	49252	49276	49280	49258
03	49233	49410	49440	49459	49442
04	49284	49180	49142	49150	49156
05	49330	49451	49619	49636	49621
06	49390	49409	49401	49390	49383
07	49147	49108	49281	49305	49352
08	49210	49203	49186	49187	49237
09	49239	49236	49231	49239	49241
10	49220	49212	49157	49152	49251
11	49359	49398	49173	49151	49145
12	49250	49303	49319	49240	49187
13	49209	49210	49233	49231	49220
14	49209	49108	49161	49170	49225
15	49209	49199	49142	49149	49173
16	49273	49131	49142	49184	49168
17	49118	49271	49287	49303	49387
18	49350	49109	49083	49062	49017
19	49209	49213	49236	49251	49172
20	49213	49205	49206	49201	49178
21	49387	49412	49418	49393	49330
22	49182	49162	49150	49153	49145
23	49151	49150	49159	49180	49304

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3		TOTAL MAGNETIC FIELD IN GAMMAS		DATE 14- 9-1971 (DAY NO 257)	
HOURS	MINUTES	20	25	30	35
00	49292	49317	49299	49281	49260
01	49152	49150	49160	49166	49201
02	49298	49264	49249	49216	49259
03	49218	49181	49179	49203	49239
04	49354	49322	49298	49299	49229
05	49090	49070	49063	49080	49269
06	49177	49105	49079	49076	49131
07	49263	49249	49241	49249	49212
08	49160	49139	49118	49107	49156
09	49166	49129	49122	49121	49340
10	49270	49235	49190	49172	49132
11	49169	49183	49193	49145	49131
12	49236	49142	49241	49219	49102
13	49160	49076	49063	49069	49109
14	49171	49233	49262	49255	49228
15	49065	49082	49101	49093	49122
16	49074	49042	49000	48958	49020
17	49012	49119	49148	49040	48941
18	49063	49033	49051	49201	49208
19	48989	48967*03	49017	49048	49054
20	48890	48725	48617	48578	48709
21	48883	48960	49015	48980	48827
22	48883	48960	49015	48867	48803
23	48883	48960	49015	48879*42	48803

C16

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3
TOTAL MAGNETIC FIELD IN GAMMAS

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	47593	47599	47600	47594	47582	47573	47569	47561	47557	47551	47549	47549

DATE 13-6-1971 (DAY NO 164)
 M/S SEC 35 40 45 50 55
 MINUTES 30 35
 SOUND VELOCITY OF 800 FMS/SEC
 LEG 1
 SURVEY CRUISE AT AN ASSUMED DEPTH IN UNCORRECTED FATHOMS

HOURS

III OCEAN SURVEY CRUISE LEG 1							DATE 14- 6-1971 (DAY NO 165)		
UNC MARCEL BAYARD CANTAT			AT AN ASSUMED SOUND VELOCITY OF		FMS/SEC				
DEPTH IN UNCORRECTED FATHOMS			MINUTES		30				
HOURS	00	05	10	15	20	25	30	35	40
00	1519	1552	1541	1575	1651	1629	1629	1629	1629
01	1629	1629	1629	1629	1629	1634	1634	1634	1634
02	1674	1662	1629	1624	1624	1608	1674	1740	1872
03	2026	2026	2037	2048	2054	2059	2070	2081	2092
04	2114	2114	2125	2136	2147	2147	2158	2191	2202

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC
 HOURS 00 05 10 15 20 25 30 35 40 45 50 55
 00 2509 2509 2509 2509 2460 2460 2400 2339 2295 2223 2190
 01 2136 2136 2146 2146 2102 2102 2069 2039 2086 2179 2119
 02 2119 2119 2146 2146 2146 2146 2129 2157 2245 2212 2202
 03 2235 2235 2256 2256 2268 2268 2278 2245 2235 2212 2212
 04 2268 2268 2289 2289 2311 2311 2344 2377 2400 2440 2416
 05 2442 2442 2433 2433 2410 2410 2438 2388 2268 2245 2245
 06 2102 2102 2086 2086 2003 2003 2025 2091 2025 2113 2113
 07 2091 2091 2091 2091 2102 2102 2058 2053 2053 2003 2136
 08 2091 2091 2091 2091 2069 2069 2195 2195 2169 2179 2185
 09 2147 2147 2137 2137 2157 2157 2042 2042 2047 2129 2169
 10 2179 2179 2069 2069 2204 2204 2223 2268 2268 2213 2113
 11 2136*58 2136*58 2191 2191 2207 2207 2235 2268 2268 2247 2179
 12 2273 2273 2169 2169 2268 2268 2289 2289 2289 2256 2268
 13 2268 2268 2268 2268 2268 2268 2289 2289 2289 2230 2230
 14 2295 2295 2289 2289 2289 2289 2245 2245 2245 2235 2235
 15 2278 2278 2289 2289 2289 2289 2289 2289 2289 2278 2278
 16 2289 2289 2256 2256 2256 2256 2256 2256 2256 2230 2230
 17 2289 2289 2223 2223 2223 2223 2223 2223 2223 2223 2223
 18 2223
 19
 20
 21 2212 2212 2212 2212 2212 2212 2202 2202 2202 2207 2207
 22 2185 2185 2174 2174 2069 2113 2169 2169 2136 2136 2157
 23
 C19

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC
 HOURS 00 05 10 15 20 25 30 35 40 45 50 55
 00 2162 2135 2091 2135 2157 2157 2135 2145 2112 2201 2190
 01 2145 2157 2168 2168 2168 2168 2168 2145 2168 2036 2098
 02 2003 2024 2069 2058 2058 2046*18 2058 2058 2091 2091 2079
 03 2069 2058 2079 2079 2069 2046*18 2024 2024 2091 2091 2079
 04 2157 2168 2178 2178 2178 2178 2157 2157 2135 2135 2024
 05 21958 2168 21914 21914 21953 21953 21947 21947 21838 21838
 06 1826
 07
 08 1798 1798 1964 1941 1947 1859 1805 1871*23 2003 1997 1958
 09 1991 1991 1942 1942 1947 1859 1892 1871*23 2914 1920 1947
 10 1942 1942 1871 1871 1871 1871 1706 1716 1892 1892 1887
 11 1871 1871 1865 1865 1865 1865 1881 1826 1887 1887 1881
 12 1876 1876 1755 1755 1755 1755 1848*17 1831 1805 1805 1894
 13 1755 1760 1698 1698 1698 1698 1463 1595 1673 1673 1606
 14 1760 1650 1650 1650 1650 1650 1606*22 1650 1650 1540 1540
 15 1606 1309 1309 1309 1309 1309 1298 1298 1298 1298 1298
 16 1298 1298 1298 1298 1298 1298 1298 1298 1298 1298 1298
 17 1298 1298 1298 1298 1298 1298 1298 1298 1298 1298 1298
 18 1265 1452*03 1640 1397*09 1507 1507 1562 1562 1496*32 1562 1430*43
 19 1265 1441 1838 2091 2013 2013 1567*18 1579 1496 1320 1210
 20 1859*02 1562*07 1342*12 1463 1463 1342*18 2036 2036 1848 1848
 21 1505 1505 1814 1408 1408 1408 1408 1408 1408 1408 1408
 22 1220*02 1220*02 1220*02 1220*02 1220*02 1220*02 1220*02 1220*02 1220*02 1220*02 1220*02
 23 1594 1594 1470*07 1470*07 1470*07 1470*07 1470*07 1470*07 1470*07 1470*07 1470*07
 DATE 15- 6-1971 (DAY NO 166)
 DATE 16- 6-1971 (DAY NO 167)
 2190 2179 2212 2212 2212 2212 2212 2212 2212 2212 2212 2212
 2157 2157 2157 2157 2157 2157 2157 2157 2157 2157 2157 2157
 2136 2136 2136 2136 2136 2136 2136 2136 2136 2136 2136 2136
 2159 2159 2159 2159 2159 2159 2159 2159 2159 2159 2159 2159

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 1	LEG 1	FMS/SEC				
DEPTH IN UNCORRECTED FATHOMS		AT AN ASSUMED SOUND VELOCITY OF 1500 M/SEC	OF 1400 M/SEC					
HOURS	MINUTES	00	05	10	15	20	25	30
00	1681	1561	1561*12	1516	1429	1351*23	1450	
01	1582	1627	1638	1671	1648	1627*24	1737	
02	1869	1879	1891	1846	1813	1615	1594	
03	1869	1879	1846	1869	1836	1803	1858	
04	1869	1879	1879	1869	1858	1803	1797	
05	1978	1962	1924	1893	1957	1951	1935	
06	1945	1978	1968	1968	1957	1951	1759*	32
07	1891	1874	1836	1836	1813	1792	1748	
08	1836	1846	1846	1803	1825	1813	1803	
09	1869	1874	1863	1863	1856	1759	1747	
10	1528*52	1643	1747	1759	1759	1756*	27	
	1374	1506	1473	1734*13	1748*22	1747*	1440*	32
	199	1561	1726	1770	1759	1760*	1726	
	1483	1572	2034	2056	1846	1660*	1780	
	1780	1803	1549	1693	1869	1780	1780	
	1780	1780	1780	1770	1780	1780	1770	
	1615	1417	138	1407	1374	1555	1621	
	1625	1648	1648	1720	1737	1660*	1714	
	1803	1846	1846	1858	1863	1846	1891	
	1935	1912	1924	1912	1891	1945	1945	
	1978	2001	2001	2015	2001	2023	2023	
	1924*58	1924	1869	1935	2011	1660	1594*	28
2032	2232	2011*04	2110	2242	2253	2220	2187	

DATE	19- 6-1971	(DAY NO 170)	40	45	50	55
16115	1582*43	1615	1549			
17479	1792	1792	1747			
1846	1846	1836*48	1858			
1803	1846	1945	1978			
1805	1714*47	1759	1825			
1885	1846	1846	1869			
1759	1792	1792	1803			
1753	1780*47	1869	1869			
1638	1780*47	1803	1638			
1733	1440	1803	1638			
1572	1440	1417*51	1473			
1714	1660	1632*52	1594			
1719	1660	1632	1594			
1714	2187	2187	2253			
*39	0*44	275	2464			
1726	1731	1506	1792			
1780	1792	1770*48	1792			
1627	1792	1714	1605			
1852	1638*43	1660	1605			
1902	1858	1858	1825			
1978	1924	1924	1935			
2001	1978	1978	1978			
2023	2001	1978	1957			
1825	1902	1924	1885			
1879	1792*47	1714	2034			
	1902	1902	2110			

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 1 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC		00	05	10	15	20	25	30
HOURS		MINUTES						
00	2132	2154	2132	2110	2099	2077	2099	2099
01	2192	2192	2176	2165	2088	2110	2110	2110
02	2044	2066	2104	2110	2110	2110	2116	2116
03	2066	2066	2060	2022	2005	1956	1868	1868
04	1450*01	1604	1637	1758	1846	1868	1857	1857
05	1978	1972	1956	1912	1901	1890	1890	1890
06	1934	1742	1868	1725*17	1780	1747	1604	1604
07	1582*58	1329	1334	1291	1450	1494*24	1604	1604
08	1846	1934	1937	1846	1846	1738*22	1802	1802
09	1873	1868	1857	1648	1417	1494*22	1615	1615
10	1538	1659	1659	1648	1648	1374*14	1681	1681
11	1593	1560	1384	1384	1374	1604*22	1571	1571
12	1433	1032	1741	906	851	615	2033	2033
13			1868	2143	2132	1890	1538	1538
14			1571	1516	1516	1527	1367	1367
15			1549	1197	1197	1318*22	1362	1362
16			1538	1516	1456	1461	1428	1428
17			1450	1423	1456	1461	1494	1494
18			1374	1280	1450	1407	1703	1703
19			1802	1736	1835	1923	1912	1912
20			1560	1538	1654	1846	1824	1824
21			1593*01	1824	1813	1703	1549*23	1549*23
22			1802*02	1802	1824	1802	1758	1758
23			1209*07	1252	1202	1202	1263	1263

DATE	20- 6-1971 - (DAY NO 171)			
	45	50	55	
0	2165	2176	2187	
+0	2110	2088	2044	
+3	2066	2000	2022	
+4	21604	21681	21582	*53
+5	1780	1725	1846	
+8	1868	1890	1923	
+9	1736	1743	1714	
+6	1886	1912	1868	
+7	1945	1912	1923	
+7	1890	1868	1868	
+9	1626	1571	1560	
+9	1407	1440	1362	*57
+7	1407	1461	1443	*54
+9	1407	1664	1433	*54
+6	1824	1670	1571	
+6	1362	1549	1560	
+5	1296	1374	1346	*52
+1	1296	1549	1417	
+1	1791	1780	1659	*57
+4	1934	1934	1593	
+9	1835	1873	1879	
+4	1857	1857	1857	
+6	1153	955	1164	

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NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC										DATE 23- 6-1971 (DAY NO 174)									
HOURS	00	05	10	15	20	25	30	35	40	45	50	55							
00	1932	1976	2152	2173	2163	2130	2086	2075	2042	1998	1489	1559							
01	2064	2053	2031	1822	1789	1723	1471*26	1504	1531	1478	1383*47	1359	1163						
02	1537	1547	1542	1361*21	1365	1537	1553	1537	1537	1514*44	1460*44	1570	11690						
03	1603*58	1657	1679	1561*21	1542	1561	1504	1537	1537	1514*44	1460*44	1570	11636						
04	1801	1789	1778	1766	1768	1756	1755	1755	1789	1801	1822	1850	1867						
05	1669	1756	1768	1768	1768	1756	1755	1755	1723	1636*37	1636*37	1801	1789*56						
06	1867	1860	1723	1846	1846	1784	1784	1784	1778	1636*37	1636*37	1801	1789*56						
07	1834	1839	1839	1811	1809	1789	1789	1789	1789	1801	1801	1801	1789						
08	1702	1592*06	1665	1665	1665	1976	1976	1976	1976	1888	1888	1888	1888						
09	1954	1954	1954	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965						
10	1954	1954	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965						
11	1959	1860	1723	1872	1872	1877	1877	1877	1877	1867	1867	1867	1844						
12	1839	1860	1844	1844	1844	1899	1899	1899	1899	1888	1888	1888	1888						
13	1844	1844	1844	1844	1844	1773*11	1773*17	1773*17	1773	1784	1782*29	1782*29	1735						
14	1910	1899	1899	1899	1899	1542*12	1542*12	1542*12	1542	1493*27	1493*27	1514*32	1514*32						
15	1383	1394*07	1448*06	1448*02	1448*06	1229*12	1322	1322	1322	1480*18	1480*18	1460*36	1460*36						
16	1471	1646	1625	1773	1773	1723*11	1723*11	1723*11	1723	1498*27	1498*27	1436*32	1436*32						
17	1773	1932*07	1932*07	1932*07	1932*07	1723*11	1723*11	1723*11	1723	1998	1998	2029*37	2029*37						
18	1460	1361*03	1460	1460	1460	1570	1570	1570	1570	1569	1569	1493*32	1493*32						
19	1460	1504*03	1504*03	1504*03	1504*03	1570	1570	1570	1570	1625	1625	1415*32	1415*32						
20	1421	1625*03	1625*03	1625*03	1625*03	1652	1652	1652	1652	1669	1669	1504	1504						
21	1646	1735	1702*03	1702*03	1702*03	1855	1855	1855	1855	1745	1745	1745	1745						
22	1855	1855	1855	1855	1855	1867	1867	1867	1867	1867	1867	1867	1867						
23	1855	1855	1855	1855	1855	1877	1877	1877	1877	1877	1877	1877	1877						
NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC										DATE 24- 6-1971 (DAY NO 175)									
HOURS	00	05	10	15	20	25	30	35	40	45	50	55							
00	1887	1833	1678	1602*13	1613	1772	1779	1779	1779	1779	1779	1779	1779						
01	1887	1882	1920	1920	1920	1887	1777	1777	1777	1777	1777	1777	1777						
02	1975	1998	1975	1800	1860	1887	1887	1887	1887	1887	1887	1887	1887						
03	1800	1887	1887	1953	1953	1958	2063	2063	2063	2063	2063	2063	2063						
04	2173	2173	2162	2063	2063	2057	2074	2074	2074	2074	2074	2074	2074						
05	2085	2085	2085	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019						
06	2008	2019	2019	1998	1986	2018	2018	2018	2018	2018	2018	2018	2018						
07	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019						
08	2140	2118	2118	2118	2118	2118	2118	2118	2118	2118	2118	2118	2118						
09	2206	2222	2222	2217	2217	2217	2217	2217	2217	2217	2217	2217	2217						
10	2074	1965*07	1986	2069	2069	2085	2129	2129	2129	2129	2129	2129	2129						
11	2151	2151	2151	2151	2151	2173	2134	2134	2134	2134	2134	2134	2134						
12	2184	2189	2129	2245	2245	2057	2057	2057	2057	2057	2057	2057	2057						
13	1876	1953	2019	2052	2052	2129	2162	2162	2162	2162	2162	2162	2162						
14	2063	2063	2096	2063	2063	2041	2041	2041	2041	2041	2041	2041	2041						
15	2195	2107	2074	2206	2206	2195	2195	2195	2195	2195	2195	2195	2195						
16	2217	2217	2228	2041	2041	2051	2051	2051	2051	2051	2051	2051	2051						
17	2217	2217	2217	2074	2074	2052	2052	2052	2052	2052	2052	2052	2052						
18	2096	2095	2095	2095	2095	2074	2074	2074	2074	2074	2074	2074	2074						
19	2200	2151	2151	2151	2151	2052	2052	2052	2052	2052	2052	2052	2052						
20	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057						
21	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057						
22	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057						
23	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057	2057						

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC

HOURS	00	05	10	15	20	25	30	35
00	2106	2117	2129	2084	2117	2073	2052	2040
01	2452*02	2447	2458	2458	2458	2458	2458	2458
02	2392	2425	2425	2414	2402	2381	2320	2315
03	2219	2260	2293	2249	2308	2195	2138	2172
04	2364	2216	2216	2195	2195	2195	2195	2195
05	2376	2364	2348	2326	2335	2301	2290	2295
06	2345	2345	2351	2362	2357	2350	2350	2345
07	2256	2256	2259	2259	2259	2259	2259	2256
08	2578	2557	2557	2557	2558	2558	2557	2567
09	2578	2578	2573	2573	2573	2573	2573	2567
10	2578	2578	2573	2573	2573	2573	2573	2573
11	2573	2573	2567	2567	2567	2567	2567	2567
12	2557	2557	2557	2557	2557	2557	2557	2557
13	2551	2545	2551	2545	2545	2534	2534	2534
14	2551	2551	2551	2551	2551	2524	2524	2501
15	2524	2524	2518	2518	2518	2458	2458	2442
16	2436	2468	2468	2468	2468	2447	2447	2430
17	2447	2447	2447	2447	2447	2430	2430	2419
18	2359	2359	2353	2353	2353	2397	2397	2364
19	2359	2359	2353	2353	2353	2331	2331	2304
20	2310	2299	2282	2282	2282	2271	2271	2228
21	2216	2216	2216	2216	2216	2216	2216	2150
22	2150	2117	2117	2117	2117	2117	2117	2063
23	2052	2040	2040	2040	2040	2040	2040	1854
	1744	1722	1722	1722	1722	1701	1701	1645

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC

HOURS	00	05	10	15	20	25	30	35
00	1623	1623	1618	1573	1557	1535	1513	1502
01	1447	1447	1447	1425	1425	1404	1381	1458
02	1359	1348	1338	1343	1343	1327	1315	1305
03	1299	1294	1288	1288	1288	1244	1239	1223
04	1216	1216	1206	1206	1206	1162	1145	1137
05	1129	1140	1151	1162	1173	1173	1170	1149
06	1151	1140	1140	1134	1124	1101	1091	1052
07	1030	1002	1986	1959	1937	871	844	1074
08	800	668	619	566	533	476	410	789
09	334	276	257	243	229	207	186	352

C 24

DATE 25- 6-1971 (DAY NO 176)

HOURS	00	05	10	15	20	25	30	35
00	2084	2058	2052	2040	2040	2040	2040	2040
01	2458	2320	2320	2315	2315	2315	2315	2315
02	2320	2262	2262	2262	2262	2262	2262	2262
03	2262	2187	2187	2187	2187	2187	2187	2187
04	2187	2138	2138	2138	2138	2138	2138	2138
05	2138	2071	2071	2071	2071	2071	2071	2071
06	2071	2017	2017	2017	2017	2017	2017	2017
07	2017	1953	1953	1953	1953	1953	1953	1953
08	1953	1876	1876	1876	1876	1876	1876	1876
09	1876	1656	1656	1656	1656	1656	1656	1656

DATE 26- 6-1971 (DAY NO 177)

HOURS	00	05	10	15	20	25	30	35
00	1491	1381	1381	1381	1381	1381	1381	1381
01	1371	1305	1305	1305	1305	1305	1305	1305
02	1321	1228	1228	1228	1228	1228	1228	1228
03	1233	1145	1145	1145	1145	1145	1145	1145
04	1239	1145	1145	1145	1145	1145	1145	1145
05	1239	1145	1145	1145	1145	1145	1145	1145
06	1170	1091	1091	1091	1091	1091	1091	1091
07	1170	1074	1074	1074	1074	1074	1074	1074
08	1085	904	904	904	904	904	904	904
09	904	377	377	377	377	377	377	377

22

23

C25

HOURS	NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC			30	
	00	05	10	15	
00	2183	2183	2183	2183	2103
01	21903	21873	21883	21873	2083
02	1828	1782	*12	1883	1983
03	2014	2004	4	2004	1863
04	1833	1883	1904	1983	1953
05	1898	1898	1893	1893	1883
06	18913	1913	1913	1908	1923
07	1898	1898	1898	1888	1883
08	1723	1728	1728	1758	1763
09	1723	1722	1722	1752	1762
10	1622	1653	1653	1622	1582
11	1442	1432	*11	1462	1402
12	1442	1452	*12	1447	1478
13	1432	1432	1432	1432	1454
14	1432	1432	1432	1432	1482
15	1432	1432	1432	1432	1482
16	1432	1432	1432	1432	1482
17	1432	1432	1432	1432	1482
18	1432	1432	1432	1432	1482
19	1432	1432	1432	1432	1482
20	1432	1432	1432	1432	1482
21	1432	1432	1432	1432	1482
22	1432	1432	1432	1432	1482
23	1432	1432	1432	1432	1482
00	1883	1883	1883	1883	1883

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC							DATE 29- 8-1971 (DAY NO 241)	DATE 30- 8-1971 (DAY NO 242)				
HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	1861	1881	1901	1921	1941	1961	1981	1992	1997	1972	1781	1811
01	1811	1821	1881	1921	1731	1841	1841	1951	1951	1841	1881	1846
02	1831	1741	1841	1421*18	1421	1421	1821	1821	1821	1972	1961	1951
03	1941	1841	1981	1921	1921	1921	1981	1991	1991	1927	1901	1901
04	1956	1927	1981	1921	1921	1921	1981	1991	1991	1922	1961	1951
05	1866	1861	1901	1901	1901	1901	1901	1901	1901	1951	1951	1951
06	1813	2092	2001	2001	2001	2001	2001	2001	2001	1951	1951	1951
07	2162	2122	2122	2122	2122	2122	2122	2122	2122	2122	2122	2122
08	2151*58	1951	1961	1962	1962	1962	1962	1962	1962	1962	1962	1961
09	2017	2087	2157	2157	2157	2157	2157	2157	2157	2157	2157	2157
10	2127	2202	2212	2212	2212	2212	2212	2212	2212	2176	2082	2082
11	2113	2151	2122	2122	2122	2122	2122	2122	2122	2122	2122	2122
12	2145	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151
13	2162	2162	2162	2162	2162	2162	2162	2162	2162	2162	2162	2162
14	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151
15	2157	2157	2157	2157	2157	2157	2157	2157	2157	2157	2157	2157
16	2307	2157	2157	2157	2157	2157	2157	2157	2157	2157	2157	2157
17	2307	2307	2307	2307	2307	2307	2307	2307	2307	2307	2307	2307
18	2392	2392	2392	2392	2392	2392	2392	2392	2392	2392	2392	2392
19	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397
20	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151	2151
21	2232	2232	2242	2242	2242	2242	2242	2242	2242	2242	2242	2242
22	2192	2242	2242	2242	2242	2242	2242	2242	2242	2242	2242	2242
23	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282
NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC							DATE 29- 8-1971 (DAY NO 241)	DATE 30- 8-1971 (DAY NO 242)				
HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	2200	2229	2240	2250	2259	2269	2275	2280	2285	2290	2295	2295
01	2250	2275	2240	2240	2240	2240	2240	2240	2240	2240	2240	2240
02	2240	2280	2269	2259	2259	2259	2259	2259	2259	2259	2259	2259
03	2259	2280	2280	2280	2280	2280	2280	2280	2280	2280	2280	2280
04	2269	2259	2259	2259	2259	2259	2259	2259	2259	2259	2259	2259
05	2259	2259	2259	2259	2259	2259	2259	2259	2259	2259	2259	2259
06	2395	2389	2389	2379	2379	2379	2379	2379	2379	2379	2379	2379
07	2395	2370	2370	2370	2370	2370	2370	2370	2370	2370	2370	2370
08	2490	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375
09	2360	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339
10	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
11	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
12	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
13	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
14	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
15	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
16	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349	2349
17	2120*	2189	2189	2189	2189	2189	2189	2189	2189	2189	2189	2189
18	2189	2059	2059	2059	2059	2059	2059	2059	2059	2059	2059	2059
19	2040	1799	1799	1799	1799	1799	1799	1799	1799	1799	1799	1799
20	1730	1799	1799	1799	1799	1799	1799	1799	1799	1799	1799	1799
21	1730	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699
22	2534	2534	2534	2534	2534	2534	2534	2534	2534	2534	2534	2534
23	2534	2534	2534	2534	2534	2534	2534	2534	2534	2534	2534	2534

NC MARCEL BAYARD CANTAT II OCEAN SURVEY		CRUISE LEG 2		FMS/SEC		DATE		31- 8-1971 (DAY NO 243)					
DEPTH	IN UNCORRECTED FATHOMS	CRUISE LEG 2	MINUTES	800	FMS/SEC	DEPTH	IN UNCORRECTED FATHOMS	CRUISE LEG 2	MINUTES	800	FMS/SEC	DATE	1- 9-1971 (DAY NO 244)
HOURS		ASSUMED	MINUTES	800	FMS/SEC	HOURS		ASSUMED	MINUTES	800	FMS/SEC	DATE	31- 8-1971 (DAY NO 243)
00	2527	2537	15	2537	2537	00	2595	2595	15	2595	2595	00	2595
01	2547	2547	10	2547	2547	01	2579	2579	10	2579	2579	01	2579
02	2547	2547	05	2547	2547	02	2579	2579	05	2579	2579	02	2579
03	2547	2547	00	2547	2547	03	2579	2579	00	2579	2579	03	2579
04	2547	2547	15	2547	2547	04	2579	2579	15	2579	2579	04	2579
05	2552	2552	10	2552	2552	05	2584	2584	10	2584	2584	05	2584
06	2557	2557	05	2557	2557	06	2584	2584	05	2584	2584	06	2584
07	2557	2557	00	2557	2557	07	2584	2584	00	2584	2584	07	2584
08	2557	2557	15	2557	2557	08	2584	2584	15	2584	2584	08	2584
09	2562	2562	10	2562	2562	09	2584	2584	10	2584	2584	09	2584
10	2567	2567	05	2567	2567	10	2584	2584	05	2584	2584	10	2584
11	2567	2567	00	2567	2567	11	2584	2584	00	2584	2584	11	2584
12	2567	2567	15	2567	2567	12	2584	2584	15	2584	2584	12	2584
13	2577	2577	10	2577	2577	13	2584	2584	10	2584	2584	13	2584
14	2577	2577	05	2577	2577	14	2584	2584	05	2584	2584	14	2584
15	2577	2577	00	2577	2577	15	2584	2584	00	2584	2584	15	2584
16	2577	2577	15	2577	2577	16	2584	2584	15	2584	2584	16	2584
17	2577	2577	10	2577	2577	17	2584	2584	10	2584	2584	17	2584
18	2577	2577	05	2577	2577	18	2584	2584	05	2584	2584	18	2584
19	2577	2577	00	2577	2577	19	2584	2584	00	2584	2584	19	2584
20	2577	2577	15	2577	2577	20	2584	2584	15	2584	2584	20	2584
21	2577	2577	10	2577	2577	21	2584	2584	10	2584	2584	21	2584
22	2577	2577	05	2577	2577	22	2584	2584	05	2584	2584	22	2584
23	2577	2577	00	2577	2577	23	2584	2584	00	2584	2584	23	2584
NC MARCEL BAYARD CANTAT II OCEAN SURVEY		CRUISE LEG 2		FMS/SEC		DATE		31- 8-1971 (DAY NO 243)		FMS/SEC		DATE	
DEPTH	IN UNCORRECTED FATHOMS	CRUISE LEG 2	MINUTES	800	FMS/SEC	DEPTH	IN UNCORRECTED FATHOMS	CRUISE LEG 2	MINUTES	800	FMS/SEC	DEPTH	IN UNCORRECTED FATHOMS
HOURS		ASSUMED	MINUTES	800	FMS/SEC	HOURS		ASSUMED	MINUTES	800	FMS/SEC	HOURS	
00	2595	2595	15	2595	2595	00	2595	2595	15	2595	2595	00	2595
01	2579	2579	10	2579	2579	01	2579	2579	10	2579	2579	01	2579
02	2579	2579	05	2579	2579	02	2579	2579	05	2579	2579	02	2579
03	2579	2579	00	2579	2579	03	2579	2579	00	2579	2579	03	2579
04	2579	2579	15	2579	2579	04	2579	2579	15	2579	2579	04	2579
05	2579	2579	10	2579	2579	05	2579	2579	10	2579	2579	05	2579
06	2579	2579	05	2579	2579	06	2579	2579	05	2579	2579	06	2579
07	2579	2579	00	2579	2579	07	2579	2579	00	2579	2579	07	2579
08	2579	2579	15	2579	2579	08	2579	2579	15	2579	2579	08	2579
09	2579	2579	10	2579	2579	09	2579	2579	10	2579	2579	09	2579
10	2579	2579	05	2579	2579	10	2579	2579	05	2579	2579	10	2579
11	2579	2579	00	2579	2579	11	2579	2579	00	2579	2579	11	2579
12	2579	2579	15	2579	2579	12	2579	2579	15	2579	2579	12	2579
13	2579	2579	10	2579	2579	13	2579	2579	10	2579	2579	13	2579
14	2579	2579	05	2579	2579	14	2579	2579	05	2579	2579	14	2579
15	2579	2579	00	2579	2579	15	2579	2579	00	2579	2579	15	2579
16	2579	2579	15	2579	2579	16	2579	2579	15	2579	2579	16	2579
17	2579	2579	10	2579	2579	17	2579	2579	10	2579	2579	17	2579
18	2579	2579	05	2579	2579	18	2579	2579	05	2579	2579	18	2579
19	2579	2579	00	2579	2579	19	2579	2579	00	2579	2579	19	2579
20	2579	2579	15	2579	2579	20	2579	2579	15	2579	2579	20	2579
21	2579	2579	10	2579	2579	21	2579	2579	10	2579	2579	21	2579
22	2579	2579	05	2579	2579	22	2579	2579	05	2579	2579	22	2579
23	2579	2579	00	2579	2579	23	2579	2579	00	2579	2579	23	2579

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMSS/SEC

DATE 2- 9-1971 (DAY NO 245)

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
001	2867	2861	2861	2861	2861	2861	2861	2861	2861	2861	2861	2861
002	28861	28861	28861	28861	28861	28861	28861	28861	28861	28861	28861	28861
003	28851	28851	28851	28851	28851	28851	28851	28851	28851	28851	28851	28851
004	28842	28837	28837	28837	28837	28837	28837	28837	28837	28837	28837	28837
005	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831
006	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831
007	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831
008	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831
009	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831	28831
10	2792	2792	2792	2792	2792	2792	2792	2792	2792	2792	2792	2792
11	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691
12	2792	2792	2792	2792	2792	2792	2792	2792	2792	2792	2792	2792
13	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776
14	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757	2757
15	2746	2746	2746	2746	2746	2746	2746	2746	2746	2746	2746	2746
16	2752	2752	2752	2752	2752	2752	2752	2752	2752	2752	2752	2752
17	2731	2731	2731	2731	2731	2731	2731	2731	2731	2731	2731	2731
18	2731	2731	2731	2731	2731	2731	2731	2731	2731	2731	2731	2731
19	2722	2722	2722	2722	2722	2722	2722	2722	2722	2722	2722	2722
20	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712
21	2707	2707	2707	2707	2707	2707	2707	2707	2707	2707	2707	2707
22	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691	2691
23	2682	2682	2682	2682	2682	2682	2682	2682	2682	2682	2682	2682

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMSS/SEC

DATE 3- 9-1971 (DAY NO 246)

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
001	2659	2669	2669	2669	2669	2669	2669	2669	2669	2669	2669	2669
002	2649	2639	2619	2614	2619	2614	2595	2589	2589	2589	2589	2589
003	2605	2589	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605
004	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605
005	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605
006	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605
007	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605
008	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605
009	2520	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490
10	2520	2525	2539	2539	2539	2539	2539	2539	2539	2539	2539	2539
11	2440	2430	2371	2371	2360	2360	2360	2360	2360	2360	2360	2360
12	2371	2271	2271	2271	2265	2265	2265	2265	2265	2265	2265	2265
13	2271	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265
14	2271	2271	2271	2271	2271	2271	2271	2271	2271	2271	2271	2271
15	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583
16	1463	1463	1463	1463	1463	1463	1463	1463	1463	1463	1463	1463
17	1394	1394	1394	1394	1394	1394	1394	1394	1394	1394	1394	1394
18	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222
19	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177	1177
20	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161
21	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134
22	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121	1121
23	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117	1117

C 29

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC
DATE 9-9-1971 (DAY NO 252)

1763	1832	1354	1394	1553	1633	1628*48	1713
1742	1842	1862	1782	1693	1623	1683	1718
2061	2061	1872	1912	1952	2002	2092	2082
		2061	2071	2092	2101	2111	2151

TIME	DEPTH IN UNCORRECTED FATHOMS	LEG 3 CANTAT II OCEAN SURVEY AT AN ASSUMED SOUND VELOCITY OF 1500 FMS/SEC
0000	2159	2298
0001	2209	2309
0002	2242	2242
0003	2248	2248
0004	2249	2249
0005	2252	2252
0006	2257	2257
0007	2260	2259
0008	2260	2258
0009	2260	2260
0010	2260	2260
0011	2261	2261
0012	2259	2259
0013	2262	2262
0014	2264	2264
0015	2270	2270
0016	2270	2270
0017	2275	2275
0018	2276	2276
0019	2276	2276
0020	2277	2277
0021	2277	2277
0022	2278	2278
0023	2278	2278
0024	2278	2278
0025	2278	2278
0026	2278	2278
0027	2278	2278
0028	2278	2278
0029	2278	2278
0030	2278	2278
0031	2278	2278
0032	2278	2278
0033	2278	2278
0034	2278	2278
0035	2278	2278
0036	2278	2278
0037	2278	2278
0038	2278	2278
0039	2278	2278
0040	2278	2278
0041	2278	2278
0042	2278	2278
0043	2278	2278
0044	2278	2278
0045	2278	2278
0046	2278	2278
0047	2278	2278
0048	2278	2278
0049	2278	2278
0050	2278	2278
0051	2278	2278
0052	2278	2278
0053	2278	2278
0054	2278	2278
0055	2278	2278
0056	2278	2278
0057	2278	2278
0058	2278	2278
0059	2278	2278
0060	2278	2278
0061	2278	2278
0062	2278	2278
0063	2278	2278
0064	2278	2278
0065	2278	2278
0066	2278	2278
0067	2278	2278
0068	2278	2278
0069	2278	2278
0070	2278	2278
0071	2278	2278
0072	2278	2278
0073	2278	2278
0074	2278	2278
0075	2278	2278
0076	2278	2278
0077	2278	2278
0078	2278	2278
0079	2278	2278
0080	2278	2278
0081	2278	2278
0082	2278	2278
0083	2278	2278
0084	2278	2278
0085	2278	2278
0086	2278	2278
0087	2278	2278
0088	2278	2278
0089	2278	2278
0090	2278	2278
0091	2278	2278
0092	2278	2278
0093	2278	2278
0094	2278	2278
0095	2278	2278
0096	2278	2278
0097	2278	2278
0098	2278	2278
0099	2278	2278
0100	2278	2278
0101	2278	2278
0102	2278	2278
0103	2278	2278
0104	2278	2278
0105	2278	2278
0106	2278	2278
0107	2278	2278
0108	2278	2278
0109	2278	2278
0110	2278	2278
0111	2278	2278
0112	2278	2278
0113	2278	2278
0114	2278	2278
0115	2278	2278
0116	2278	2278
0117	2278	2278
0118	2278	2278
0119	2278	2278
0120	2278	2278
0121	2278	2278
0122	2278	2278

DATE	9-	9-1971	(DAY	NO	252)
0	45	50			55

DATE	10-	9-1971	(DAY NO	253)
	40	2289	2309	2319
	40	2398	2418	2428
	45	2458	2468	2478
	50	2508	2518	2508
	55	2558	2568	2572
		2251	2256	2257
		2252	2256	2258
		2255	2260	2260
		2256	2260	2260
		2257	2260	2260
		2258	2260	2260
		2259	2260	2260
		2260	2260	2260
		2261	2261	2261
		2263	2263	2263
		2264	2264	2267
		2265	2265	2267
		2266	2266	2267
		2267	2267	2270
		2268	2268	2270
		2269	2269	2270
		2270	2270	2270
		2271	2271	2271
		2272	2272	2272
		2273	2273	2273
		2274	2274	2274
		2275	2275	2275
		2276	2276	2276
		2277	2277	2277
		2278	2278	2278

HOURS	00	05	10	15	20	25	30	300 FMS/SEC
								CRUISE LEG 3 AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC
00	2784	2794	2794	2784	2784	2784	2784	2784
01	2784	2794	2755	2744	2744	2744	2744	2744
02	2744	2755	2784	2824	2824	2824	2824	2824
03	2824	2844	2839	2854	2854	2854	2854	2854
04	2844	2844	2864	2864	2864	2864	2864	2864
05	2859	2859	2864	2864	2864	2864	2864	2864
06	2864	2864	2864	2864	2864	2864	2864	2864
07	2869	2879	2874	2874	2874	2874	2874	2874
08	2879	2875	2875	2875	2875	2875	2875	2875
09	2875	2865	2865	2865	2865	2865	2865	2865
10	2865	2856	2856	2856	2856	2856	2856	2856
11	2856	2847	2847	2847	2847	2847	2847	2847
12	2847	2838	2838	2838	2838	2838	2838	2838
13	2838	2829	2829	2829	2829	2829	2829	2829
14	2829	2820	2820	2820	2820	2820	2820	2820
15	2820	2811	2811	2811	2811	2811	2811	2811
16	2811	2802	2802	2802	2802	2802	2802	2802
17	2802	2793	2793	2793	2793	2793	2793	2793
18	2793	2784	2784	2784	2784	2784	2784	2784
19	2784	2775	2775	2775	2775	2775	2775	2775
20	2775	2766	2766	2766	2766	2766	2766	2766
21	2766	2757	2757	2757	2757	2757	2757	2757
22	2757	2748	2748	2748	2748	2748	2748	2748
23	2748	2739	2739	2739	2739	2739	2739	2739
24	2739	2730	2730	2730	2730	2730	2730	2730
25	2730	2721	2721	2721	2721	2721	2721	2721
26	2721	2712	2712	2712	2712	2712	2712	2712
27	2712	2703	2703	2703	2703	2703	2703	2703
28	2703	2694	2694	2694	2694	2694	2694	2694
29	2694	2685	2685	2685	2685	2685	2685	2685
30	2685	2676	2676	2676	2676	2676	2676	2676
31	2676	2667	2667	2667	2667	2667	2667	2667
32	2667	2658	2658	2658	2658	2658	2658	2658
33	2658	2649	2649	2649	2649	2649	2649	2649
34	2649	2640	2640	2640	2640	2640	2640	2640
35	2640	2631	2631	2631	2631	2631	2631	2631
36	2631	2622	2622	2622	2622	2622	2622	2622
37	2622	2613	2613	2613	2613	2613	2613	2613
38	2613	2604	2604	2604	2604	2604	2604	2604
39	2604	2595	2595	2595	2595	2595	2595	2595
40	2595	2586	2586	2586	2586	2586	2586	2586
41	2586	2577	2577	2577	2577	2577	2577	2577
42	2577	2568	2568	2568	2568	2568	2568	2568
43	2568	2559	2559	2559	2559	2559	2559	2559
44	2559	2550	2550	2550	2550	2550	2550	2550
45	2550	2541	2541	2541	2541	2541	2541	2541
46	2541	2532	2532	2532	2532	2532	2532	2532
47	2532	2523	2523	2523	2523	2523	2523	2523
48	2523	2514	2514	2514	2514	2514	2514	2514
49	2514	2505	2505	2505	2505	2505	2505	2505
50	2505	2496	2496	2496	2496	2496	2496	2496
51	2496	2487	2487	2487	2487	2487	2487	2487
52	2487	2478	2478	2478	2478	2478	2478	2478
53	2478	2469	2469	2469	2469	2469	2469	2469
54	2469	2460	2460	2460	2460	2460	2460	2460
55	2460	2451	2451	2451	2451	2451	2451	2451
56	2451	2442	2442	2442	2442	2442	2442	2442
57	2442	2433	2433	2433	2433	2433	2433	2433
58	2433	2424	2424	2424	2424	2424	2424	2424
59	2424	2415	2415	2415	2415	2415	2415	2415
60	2415	2406	2406	2406	2406	2406	2406	2406
61	2406	2397	2397	2397	2397	2397	2397	2397
62	2397	2388	2388	2388	2388	2388	2388	2388
63	2388	2379	2379	2379	2379	2379	2379	2379
64	2379	2370	2370	2370	2370	2370	2370	2370
65	2370	2361	2361	2361	2361	2361	2361	2361
66	2361	2352	2352	2352	2352	2352	2352	2352
67	2352	2343	2343	2343	2343	2343	2343	2343
68	2343	2334	2334	2334	2334	2334	2334	2334
69	2334	2325	2325	2325	2325	2325	2325	2325
70	2325	2316	2316	2316	2316	2316	2316	2316
71	2316	2307	2307	2307	2307	2307	2307	2307
72	2307	2298	2298	2298	2298	2298	2298	2298
73	2298	2289	2289	2289	2289	2289	2289	2289
74	2289	2280	2280	2280	2280	2280	2280	2280
75	2280	2271	2271	2271	2271	2271	2271	2271
76	2271	2262	2262	2262	2262	2262	2262	2262
77	2262	2253	2253	2253	2253	2253	2253	2253
78	2253	2244	2244	2244	2244	2244	2244	2244
79	2244	2235	2235	2235	2235	2235	2235	2235
80	2235	2226	2226	2226	2226	2226	2226	2226
81	2226	2217	2217	2217	2217	2217	2217	2217
82	2217	2208	2208	2208	2208	2208	2208	2208
83	2208	2199	2199	2199	2199	2199	2199	2199
84	2199	2190	2190	2190	2190	2190	2190	2190
85	2190	2181	2181	2181	2181	2181	2181	2181
86	2181	2172	2172	2172	2172	2172	2172	2172
87	2172	2163	2163	2163	2163	2163	2163	2163
88	2163	2154	2154	2154	2154	2154	2154	2154
89	2154	2145	2145	2145	2145	2145	2145	2145
90	2145	2136	2136	2136	2136	2136	2136	2136
91	2136	2127	2127	2127	2127	2127	2127	2127
92	2127	2118	2118	2118	2118	2118	2118	2118
93	2118	2109	2109	2109	2109	2109	2109	2109
94	2109	2100	2100	2100	2100	2100	2100	2100
95	2100	2091	2091	2091	2091	2091	2091	2091
96	2091	2082	2082	2082	2082	2082	2082	2082
97	2082	2073	2073	2073	2073	2073	2073	2073
98	2073	2064	2064	2064	2064	2064	2064	2064
99	2064	2055	2055	2055	2055	2055	2055	2055
100	2055	2046	2046	2046	2046	2046	2046	2046
101	2046	2037	2037	2037	2037	2037	2037	2037
102	2037	2028	2028	2028	2028	2028	2028	2028
103	2028	2019	2019	2019	2019	2019	2019	2019
104	2019	2010	2010	2010	2010	2010	2010	2010
105	2010	2001	2001	2001	2001	2001	2001	2001
106	2001	1992	1992	1992	1992	1992	1992	1992
107	1992	1983	1983	1983	1983	1983	1983	1983
108	1983	1974	1974	1974	1974	1974	1974	1974
109	1974	1965	1965	1965	1965	1965	1965	1965
110	1965	1956	1956	1956	1956	1956	1956	1956
111	1956	1947	1947	1947	1947	1947	1947	1947
112	1947	1938	1938	1938	1938	1938	1938	1938
113	1938	1929	1929	1929	1929	1929	1929	1929
114	1929	1920	1920	1920	1920	1920	1920	1920
115	1920	1911	1911	1911	1911	1911	1911	1911
116	1911	1902	1902	1902	1902	1902	1902	1902
117	1902	1893	1893	1893	1893	1893	1893	1893
118	1893	1884	1884	1884	1884	1884	1884	1884
119	1884	1875	1875	1875	1875	1875	1875	1875
120	1875	1866	1866	1866	1866	1866	1866	1866
121	1866	1857	1857	1857	1857	1857	1857	1857
122	1857	1848	1848	1848	1848	1848	1848	1848
123	1848	1839	1839	1839	1839	1839	1839	1839
124	1839	1830	1830	1830	1830	1830	1830	1830
125	1830	1821	1821	1821	1821	1821	1821	1821
126	1821	1812	1812	1812	1812	1812	1812	1812
127	1812	1803	1803	1803	1803	1803	1803	1803
128	1803	1794	1794	1794	1794	1794	1794	1794
129	1794	1785	1785	1785	1785	1785	1785	1785
130	1785	1776	1776	1776	1776	1776	1776	1776
131	1776	1767	1767	1767	1767	1767	1767	1767
132	1767	1758	1758	1758	1758	1758	1758	1758
133	1758	1749	1749	1749	1749	1749	1749	1749
134	1749	1740	1740	1740	1740	1740	1740	1740
135	1740	1731	1731	1731	1731	1731	1731	1731
136	1731	1722	1722	1722	1722	1722	1722	1722
137	1722	1713	1713	1713	1713	1713	1713	1713
138	1713	1704	1704	1704	1704	1704	1704	1704
139	1704	1695	1695	1695	1695	1695	1695	1695
140	1695	1686	1686	1686	1686	1686	1686	1686
141	1686	1677	1					

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 3	DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC		
HOURS	MINUTES	20	25	30	35
000	00	2382	2342	2332	2283
001	2422	2263	2263	2253	2253
002	2055	2085	1866	2144	2144
003	2104	1966	2154	2239	2239
004	2244	2239	2244	2253	2253
005	2244	2233	2174	2204	2204
006	2303	2308	2308	2204	2204
007	2134	2283	2303	2342	2342
008	2382	2382	2372	2342	2342
009	2293	2293	2303	2342	2342
010	2303	2303	2303	2303	2303
011	2363	2348	2342	2342	2342
012	2372	2348	2342	2342	2342
013	2372	2403	2432	2442	2442
014	2413	2442	2442	2442	2442
015	2348	2348	2342	2342	2342
016	2293	2303	2283	2263	2263
017	2293	2293	2263	2263	2263
018	2288	2288	2303	2303	2303
019	2342	2342	2342	2342	2342
020	2348	2348	2342	2342	2342
021	2263	2263	2244	2244	2244
022	2263	2263	2253	2253	2253
023	2263	2263	2242	2242	2242
024	2263	2263	2235	2235	2235
025	2263	2263	2233	2233	2233
026	2263	2263	2233	2233	2233
027	2263	2263	2233	2233	2233
028	2263	2263	2233	2233	2233
029	2263	2263	2233	2233	2233
030	2263	2263	2233	2233	2233
031	2263	2263	2233	2233	2233
032	2263	2263	2233	2233	2233
033	2263	2263	2233	2233	2233
034	2263	2263	2233	2233	2233
035	2263	2263	2233	2233	2233
036	2263	2263	2233	2233	2233
037	2263	2263	2233	2233	2233
038	2263	2263	2233	2233	2233
039	2263	2263	2233	2233	2233
040	2263	2263	2233	2233	2233
041	2263	2263	2233	2233	2233
042	2263	2263	2233	2233	2233
043	2263	2263	2233	2233	2233
044	2263	2263	2233	2233	2233
045	2263	2263	2233	2233	2233
046	2263	2263	2233	2233	2233
047	2263	2263	2233	2233	2233
048	2263	2263	2233	2233	2233
049	2263	2263	2233	2233	2233
050	2263	2263	2233	2233	2233
051	2263	2263	2233	2233	2233
052	2263	2263	2233	2233	2233
053	2263	2263	2233	2233	2233
054	2263	2263	2233	2233	2233
055	2263	2263	2233	2233	2233
056	2263	2263	2233	2233	2233
057	2263	2263	2233	2233	2233
058	2263	2263	2233	2233	2233
059	2263	2263	2233	2233	2233
060	2263	2263	2233	2233	2233
061	2263	2263	2233	2233	2233
062	2263	2263	2233	2233	2233
063	2263	2263	2233	2233	2233
064	2263	2263	2233	2233	2233
065	2263	2263	2233	2233	2233
066	2263	2263	2233	2233	2233
067	2263	2263	2233	2233	2233
068	2263	2263	2233	2233	2233
069	2263	2263	2233	2233	2233
070	2263	2263	2233	2233	2233
071	2263	2263	2233	2233	2233
072	2263	2263	2233	2233	2233
073	2263	2263	2233	2233	2233
074	2263	2263	2233	2233	2233
075	2263	2263	2233	2233	2233
076	2263	2263	2233	2233	2233
077	2263	2263	2233	2233	2233
078	2263	2263	2233	2233	2233
079	2263	2263	2233	2233	2233
080	2263	2263	2233	2233	2233
081	2263	2263	2233	2233	2233
082	2263	2263	2233	2233	2233
083	2263	2263	2233	2233	2233
084	2263	2263	2233	2233	2233
085	2263	2263	2233	2233	2233
086	2263	2263	2233	2233	2233
087	2263	2263	2233	2233	2233
088	2263	2263	2233	2233	2233
089	2263	2263	2233	2233	2233
090	2263	2263	2233	2233	2233
091	2263	2263	2233	2233	2233
092	2263	2263	2233	2233	2233
093	2263	2263	2233	2233	2233
094	2263	2263	2233	2233	2233
095	2263	2263	2233	2233	2233
096	2263	2263	2233	2233	2233
097	2263	2263	2233	2233	2233
098	2263	2263	2233	2233	2233
099	2263	2263	2233	2233	2233
100	2263	2263	2233	2233	2233
101	2263	2263	2233	2233	2233
102	2263	2263	2233	2233	2233
103	2263	2263	2233	2233	2233
104	2263	2263	2233	2233	2233
105	2263	2263	2233	2233	2233
106	2263	2263	2233	2233	2233
107	2263	2263	2233	2233	2233
108	2263	2263	2233	2233	2233
109	2263	2263	2233	2233	2233
110	2263	2263	2233	2233	2233
111	2263	2263	2233	2233	2233
112	2263	2263	2233	2233	2233
113	2263	2263	2233	2233	2233
114	2263	2263	2233	2233	2233
115	2263	2263	2233	2233	2233
116	2263	2263	2233	2233	2233
117	2263	2263	2233	2233	2233
118	2263	2263	2233	2233	2233
119	2263	2263	2233	2233	2233
120	2263	2263	2233	2233	2233
121	2263	2263	2233	2233	2233
122	2263	2263	2233	2233	2233
123	2263	2263	2233	2233	2233

HOURS		DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 1450 FT SEC			CRUISE LEG 3			LEG 1			LEG 2		
		00	05	10	15	20	25	30	35	40	45	50	
00	2172	2192	2212	2202	2152*22	2182	2182	2212	2231	2221	2212	2212	
01	2271	2281	2291	2273	2192	2192	2192	2182	2192	2182	2192	2192	
02	2142	2142	2142	2102	2162	2162	2162	2142	2123	2123	2123	2123	
03	2152	2152	2152	2073	2142	2142	2142	2172	2152	2152	2152	2152	
04	2043	2043	2043	2078	2009	2252	2252	2216	2216	2216	2216	2216	
05	2291	2291	2291	1998*16	2083	2043**23	2043**23	1998	1998	1998	1998	1998	
06	2271	2247	2247	2242	2197	2083	2083	2043	2043	2043	2043	2043	
07	2242	2203	2203	2023	2088	2078	2078	2083	2083	2083	2083	2083	
08	2199	2193	2193	2018	2023	2057	2057	2093	2093	2093	2093	2093	
09	2023	1945	1945	1835	1959	1964*19	1964*19	1745*	1745*	1745*	1745*	1745*	
10	1924	1895	1895	1864	1824	1745	1745	1696	1696	1696	1696	1696	
11	1804	1815	1815	1696*12	1736	1824	1824	1934	1934	1934	1934	1934	
12	1835	1835	1835	1805*08	1978	1964	1964	1983	1983	1983	1983	1983	
13	1855	1855	1855	1904	1895	1884	1884	1874	1874	1874	1874	1874	
14	1705	1705	1705	*03	1904	1885	1885	1785	1785	1785	1785	1785	
15	1726	1726	1726	*07	1785	1666*13	1666*13	1785	1785	1785	1785	1785	
16	1577	1577	1577	*08	1427	1546	1546	1487	1487	1487	1487	1487	
17	1210	1210	1210	1348	1348	1324	1324	1324	1324	1324	1324	1324	
18	1420	1546	1577*12	1502	1448	1448	1448	1427	1427	1427	1427	1427	
19	1676	1785	1785	1785	1736	1736	1736	1696	1696	1696	1696	1696	
20	1904	1964	1964	1914	1745	1745	1745	1617	1617	1617	1617	1617	
21	1646	1577	1577	1596	1537	1537	1537	1448	1448	1448	1448	1448	
22	1586	1646	1646	1646	1626	1398*17	1398*17	1467	1467	1467	1467	1467	

DATE	14- 9-1971	(DAY NO 257)
40	45	50
41	2242	2252
42	2172	2172
43	2192	2182
44	2083	2068
45	2193	2236
46	2237	2236
47	2195	2195
48	2073	2043
49	2062	2073
50	1824	1824
51	1790	1974
52		1934
53		1765
54		1864
55		1840
56		1924
57		1458
58		1279
59		119
60		38
61		43
62		46
63		86
64		329
65		46
66		1546
67		1467
68		1586
69		2053
70		1458
71		1329
72		1427
73		11507
74		11656
75		1388
76		1607
77		1934
78		1567
79		11507
80		11656

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITIES OF 800 FMS/SEC										DATE 15- 9-1971 (DAY NO 258)				
HOURS		00	05	10	15	20	25	30	35	40	45	50	55	
00	1664	1655	1674	1635	1664	1704	1734	1734	1734	1734	1734	1734	1734	1734
01	1714	1734	1764	1764	1764	1664	1664	1664	1664	1664	1664	1664	1664	1664
02	1858	1893	1907	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902
03	1902	1902	1924	1893	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902
04	1714	1674	1684	1798	1772	1942	1942	1942	1942	1942	1942	1942	1942	1942
05	1942	1932	1922	1902	1942	1902	1902	1902	1902	1902	1902	1902	1902	1902
06	2012	2021	1972	1833	1862	1883	1883	1883	1883	1883	1883	1883	1883	1883
07	2021	1972	2061	2071	2071	2140	2140	2140	2140	2140	2140	2140	2140	2140
08	2200	2190	2180	2191	2191	2131	2131	2131	2131	2131	2131	2131	2131	2131
09	2110	2100	2150	2150	2150	2140	2140	2140	2140	2140	2140	2140	2140	2140
10	2160	2160	2081	2150	2150	2061	2061	2061	2061	2061	2061	2061	2061	2061
11	2121	2121	2135	2135	2135	2126	2126	2126	2126	2126	2126	2126	2126	2126
12	2061*	58	2121	2121	2150	2100	2100	2100	2100	2100	2100	2100	2100	2100
13	2101	2121	2081	2121	2121	2110	2110	2110	2110	2110	2110	2110	2110	2110
14	2081	2170	2200	2170	2170	2160	2160	2160	2160	2160	2160	2160	2160	2160
15	2180	2180	2170	2170	2170	2160	2160	2160	2160	2160	2160	2160	2160	2160
16	1972	1962	1942	1942	1942	1922	1922	1922	1922	1922	1922	1922	1922	1922
17	1932	1931	1961	1931	1931	1833	1833	1833	1833	1833	1833	1833	1833	1833
18	1932	1932	1981	1981	1981	2071	2071	2071	2071	2071	2071	2071	2071	2071
19	1932	1932	1972	1972	1972	1991	1991	1991	1991	1991	1991	1991	1991	1991
20	1912	1912	1764	1764	1764	2061	2061	2061	2061	2061	2061	2061	2061	2061
21	2091	2091	1981	1981	1981	2061	2061	2061	2061	2061	2061	2061	2061	2061
22	1991	1991	1986	1986	1986	1962	1962	1962	1962	1962	1962	1962	1962	1962
23														

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3 DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITIES OF 800 FMS/SEC										DATE 16- 9-1971 (DAY NO 259)				
HOURS		00	05	10	15	20	25	30	35	40	45	50	55	
00	1881	1900	1931	1936	1960	2000	2019	2059	2079	2079	2119	2119	2119	2119
01	2277	2376	2346	2356	2376	2307	2406	2296	2415	2415	2406*	2406*	2386	2386
02	2376	2336	2336	2336	2336	2336	2296	2317	2317	2317	2262	2262	2238	2238
03	2336	2188	2168	2168	2168	2168	2168	2158	2307	2307	2238	2238	2312	2312
04	2158	2134	2134	2134	2134	2134	2134	2134	2158	2158	2138	2138	2168	2168
05	2287	2327	2319	2319	2319	2089	2079	2129	2158	2158	2227	2227	2444	2444
06	2544	2544	2544	2544	2544	2367	2367	2406	2465	2465	2515	2515	2539	2539
07	2534	2554	2554	2554	2554	2544	2544	2539	2549	2549	2544	2544	2554	2554
08	2534	2554	2554	2554	2554	2554	2554	2554	2565	2565	2594	2594	2604	2604
09	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594
10	2584	2584	2584	2584	2584	2574	2574	2574	2574	2574	2565	2565	2560	2560
11	2554	2554	2554	2554	2554	2549	2549	2549	2549	2549	2534	2534	2534	2534
12	2544	2530	2530	2530	2530	2505	2505	2505	2425	2425	2475	2475	2465	2465
13	2455	2451	2451	2451	2451	2446	2446	2446	2415	2415	2475	2475	2396	2396
14	2396	2396	2396	2396	2396	2356	2356	2356	2346	2346	2346	2346	2336	2336
15	2336	2336	2336	2336	2336	2336	2336	2336	2327	2327	2296	2296	2287	2287
16	2277	2277	2277	2277	2277	2257	2257	2257	2227	2227	2222	2222	2217	2217
17	2198	2198	2198	2198	2198	2193	2193	2193	2178	2178	2109	2109	2098	2098
18	2103	2103	2103	2103	2103	2098	2098	2098	2079	2079	2029	2029	2010	2010
19	1861	1781	1781	1781	1781	1702	1702	1702	1733	1733	1673	1673	1653	1653
20	1564	1544	1544	1544	1544	1464	1464	1464	1464	1464	1435	1435	1406	1406
21	1385	1385	1385	1385	1385	1287	1287	1287	1287	1287	1297	1297	1306	1306
22	1297												1158	
23														

C 33

DATE 17- 9-1971 (DAY NO 260)

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3					
DEPTH IN UNCORRECTED FATHOMS AT AN ASSUMED SOUND VELOCITY OF 800 FMS/SEC					
HOURS	00	05	10	15	20
MINUTES				25	30
SECONDS					35
00	1146	1127	1122	1127	1137
01					1146
02					1157
03					1167
04					1157
05					1157
06					1157
07					1157
08					1157
09					1157
10					1157
11					1157
12					1157
13					1157
14					1157
15					1157
16					1157
17					1157
18					1157
19					1157
20					1157
21					1157
22					1157

SECTION D

- Tables of a) Magnetic Anomaly
 b) Corrected Depth in Fathoms
 c) Corrected Depth in Metres

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 1										DATE 14- 6-1971 (DAY NO 165)									
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF MINUTES																			
HOURS	00	05	10	15	20	25	30	35	40	45	50	55							
00	-22	26	14	16	29	51	93	84	162	188	191	164	-77	-44					
01	09	-10	14	46	29	23	83	123	53	59	191	162	116	116					
02	01	11	74	64	54	24	28	43	0	-8	-8	168	66	66					
03	02	12	25	62	48	41	42	11	-26	-20	-23	-4	-4						
04	03	13	38	43	55	19	14	-59	-152	-152	-183	-23	29						
05	04	14	25	48	-203	-198	-178	-139	-111	-116	-137	-195	-200						
06	05	15	-201	-200	-63	50	46	-84	-38	-35	-44	-195	-200						
07	06	16	59	97	104	103	83	34	38	35	-4	61	61	75					
08	07	17	85	97	104	103	83	55	170	149	-1	-4	-4						
09	08	18	-9	-10	64	126	163	-128	-118	-110	-102	-27	-7						
10	09	19	-5	-42	-86	-130	-130	-128	-125	-119	-102	-46	-6						
11	10	20	36	66	94	150	178	178	175	176	136	87	38						
12	11	21	8	-3	17	44	80	117	117	117	183	179	162						
13	12	22	8	-3	17	44	73	73	73	73	184	175	-69						
14	13	23	9	139	115	93	83	50	50	50	107	109	106						
NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 1										DATE 15- 6-1971 (DAY NO 166)									
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF MINUTES																			
HOURS	00	05	10	15	20	25	30	35	40	45	50	55							
00	-97	-116	-129	-130	-124	-120	-120	-124	-124	-124	-139	-143	-145						
01	-138	-142	-153	-174	-188	-188	-188	-188	-172	-172	-110	-66	-28						
02	22	28	19	19	24	34	34	34	-24	-33	-15	-12	-9						
03	19	48	48	70	81	84	82	82	80	80	74	63	48						
04	18	0	-15	-16	-23	-32	-32	-34	-26	-26	-17	-5	-5						
05	-5	-11	-21	-23	-26	-26	-26	-28	-28	-28	-108	-147	-173						
06	-213	-229	-236	-236	-163	-163	-163	-85	-85	-85	-189	-254	-297						
07	312	280	245	201	125	125	125	-190	-190	-190	102	56	82						
08	-8	-56	-102	-102	-149	-183	-183	-190	-149	-149	-78	9	176						
09	190	172	117	117	156	156	156	-21	-21	-32	-32	-51	-88						
10	-76	-49	-115	-115	23	62	89	104	104	104	87	66	39						
11	-10	-20	-100	-100	-17	-4	10	49	49	49	82	119	143						
12	151	132	100	69	48	35	35	29	29	29	24	21	23						
13	146	166	76	77	66	42	42	16	16	16	-34	-56	-74						
14	-107	-121	-126	-124	-115	-97	-97	-76	-76	-54	-37	-36	-24						
15	15	37	53	53	63	58	58	58	47	39	37	36	-16						
16	28	30	36	45	51	51	56	65	65	65	64	64	63						
17	68	77	80	77	74	74	74	74	74	74	116	117	106						
18	110	114	116	116															
19																			
20																			
21																			
22																			
23	32	23	18	14	14	16	16	16	16	16	16	16	16	33					

D1

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1										NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1									
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF					MINUTES					MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF					MINUTES				
DATE	18-	6-1971	(DAY NO)	169)	DATE	19-	6-1971	(DAY NO)	170)	DATE	18-	6-1971	(DAY NO)	169)	DATE	19-	6-1971	(DAY NO)	170)
HOURS	00	05	10	15	20	25	30	35	40	HOURS	00	05	10	15	20	25	30	35	40
00	1.3	1.5	-1.3	4.4	-5.7	4.0	8.5	10.0	-1.2	00	1.3	1.5	-1.3	4.4	-5.7	4.0	8.5	10.0	-1.2
01	-3.3	-4.4	2.42	-1.98	-1.59	-1.95	1.06	-1.6	-3.22	01	-3.3	-4.4	2.42	-1.98	-1.59	-3.22	1.06	-1.6	-3.22
02	2.64	2.42	-2.64	-0.97	-3.0	2.6	83**1.8	2.85	334**28	02	2.64	2.42	-2.64	-0.97	-3.0	2.6	83**32	2.85	334**28
03	-3.1**58	-3.1**58	03	-1.61	2.11	2.23	2.63	-2.3	-2.7*	03	-3.1**58	-3.1**58	03	-1.61	2.11	2.23	2.63	-2.3	-2.7*
04	6.2**58	1.33	2.70	3.18	-1.15	-1.35	2.87	2.73	328**27	04	6.2**58	1.33	2.70	3.18	-1.15	-1.35	2.87	2.73	328**27
05	1.33	-4.7	-4.7	-3.8	-1.87	-1.87	-2.37	-2.37	322**28	05	1.33	-4.7	-4.7	-3.8	-1.87	-1.87	-2.37	-2.37	322**28
06	-5.9	-2.2	-2.2	-5	-1.3	-1.3	-4.4	-7.5	-8.9	06	-5.9	-2.2	-2.2	-5	-1.3	-1.3	-4.4	-7.5	-8.9
07	4.0	4.0	-7.3	8.6	-8.0	-8.0	-7.5	-6.9	-7.7	07	4.0	4.0	-7.3	8.6	-8.0	-8.0	-7.5	-6.9	-7.7
08	1.1	-7	-7	-1.6	-7.3	-7.3	-8.4	-8.9	-7.7	08	1.1	-7	-7	-1.6	-7.3	-7.3	-8.4	-8.9	-7.7
09	1.2	3.9	9.1	10.8	11.7	11.7	11.1	11.3	11.1	09	1.2	3.9	9.1	10.8	11.7	11.7	11.1	11.3	11.1
10	1.6	4.6	1.6	1.26	1.79	1.79	2.11	2.81	2.81	10	1.6	4.6	1.6	1.26	1.79	1.79	2.11	2.81	2.81
11	1.34	1.34	1.34	1.16	1.16	1.16	2.41	2.103	2.103	11	1.34	1.34	1.34	1.16	1.16	1.16	2.41	2.103	2.103
12	1.5	3.9	9.1	10.8	11.7	11.7	11.1	11.3	11.1	12	1.5	3.9	9.1	10.8	11.7	11.7	11.1	11.3	11.1
13	1.4	4.6	1.4	1.26	1.79	1.79	2.73	3.35	3.35	13	1.4	4.6	1.4	1.26	1.79	1.79	2.73	3.35	3.35
14	1.52	2.02	2.02	2.31	2.97	2.97	3.35	3.65	3.65	14	1.52	2.02	2.02	2.31	2.97	2.97	3.35	3.65	3.65
15	1.7	1.6	1.6	1.6	2.11	2.11	2.41	2.103	2.103	15	1.7	1.6	1.6	1.6	2.11	2.11	2.41	2.103	2.103
16	1.8	1.52	1.52	2.02	2.31	2.31	2.97	3.07**18	3.07**18	16	1.8	1.52	1.52	2.02	2.31	2.31	2.97	3.07**18	3.07**18
17	1.9	1.47	1.47	1.68	2.16	2.16	2.28	2.92	2.92	17	1.9	1.47	1.47	1.68	2.16	2.16	2.28	2.92	2.92
18	2.0	1.31	1.31	2.51	2.95	2.95	1.26	1.85	1.85	18	2.0	1.31	1.31	2.51	2.95	2.95	1.26	1.85	1.85
19	2.1	1.66	-1.34	-1.34	-1.33	-1.33	-1.33	-1.04	-1.04	19	2.1	1.66	-1.34	-1.34	-1.33	-1.33	-1.04	-1.04	-1.04
20	2.2	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	20	2.2	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32
21	2.3	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	21	2.3	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32
22	2.3	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	22	2.3	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32
23	2.3	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	23	2.3	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32	-1.32

D3

HOURS	NC MARCEL BAYARD MAGNETIC ANOMALY	CANTAT ¹¹ IN GAMMAS	OCEAN	SURVEY	CRUISE	LEG
			AFTER	REMOVAL	OF IGRF	MINUTES
00	00	05	10	15	20	
00	48	-110*07	-87	-13	25	
01	68	20	4	20	53	
02	-57	-36	-76	-25	58	
03	98	35	-6	2	34	
04	124	31	-69*12	-56	15	
05	145	35	6	-8	-8	
06	16	47*07	44	21	6	
07	-173	-263	-172	68	261*22	
08	410	517	-480	404	339	
09	-106	-108	-105	-63	322	
10	0	0	0	314	325	
11	-117	-148	-156	-131	786	
12	279	292*03	244	197	159	
13	-66	-40	-12	0	4	
14	60	63	60	57	53	
15	37	34	38	46	406	
16	88	100	102	98	54	
17	150	124	99	71	82	
18	44	73	102	173	43	
19	20	32	56	66	211	
20	89	122	129	100	74	
21	77	37	-49	-149	77	
22	32	57			-128	
23					-186	

DATE	22- 6-1971 (DAY NO 173)			
30	35	40	45	50
81	118	160	198	181
148*32	143	122	97	57
180	185	171	154	151
88	99	135	177	191
209	251	225	164	102
-3	5	5	3	2
66	155	187	149	73
-16	163	-226	-182	29
385*33	385	276	108	42
167	165	190	250	281
186	186	118	51	124
-250	-250	-14	34	-84
-38	-38	-109	-100	50
-82*	33	-82	-19	67
-93	-93	-109	-100	55
3	3	20	137	96
52	52	226	137	96
55	55	41	44	61
427	362	41	44	72
64	54	72	81	139
80	72	72	110	154
69	128	153	102	16
290	301*33	258	176	93
71	50	37	44	61
234*32	78	77	73	80
2258	215	108	-36	88
8	8	-23	425	427

NC MARCEL BAYARD MAGNETIC ANOMALY	CANTAT II IN GAMMAS	OCEAN SURVEY AFTER REMOVAL OF 1GFM	CRUISE LEG 1
HOURS			MINUTES
00	05	1.0	15
00	3.49	302	250
01	5.04	514*08	441
02	7.9	78	86
03	2.8	-15	27
04	-4.6	-53	-49
05	-2.0	23	-9
06	1.24	105	134
07	-4.6	-50	-18
08	-5	-18	-25
09	3	0	-27
10			-28
11			
12	9	-31	-65
13	7.0	136	-58
14	-6.5	-211	252
15	8.7	161*06	-1
16	0	-30	-25
17	1.64	3.3	-83
18	3.08	348	-126
19	2.22*58	240*03	341
20	1.34*02	1.48	-16
21	9.5	1.76	235
22		55	58
23		78	-13

DATE	23- 6-1971	(DAY NO 174)
30	40	45
35	318	367
37	100	72
40	181	161
42	129	139
45	-103	-21
47	-10	19
50	158	52
52	136	93
55	50	64
58	38	19
61	51	8
64	-22	2
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NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1										NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1									
AFTER REMOVAL OF GAMMAS					AFTER REMOVAL OF GAMMAS					AFTER REMOVAL OF GAMMAS					AFTER REMOVAL OF GAMMAS				
DATE	20-	6-1971	(DAY NO 171)	DATE	21-	6-1971	(DAY NO 172)	DATE	20-	6-1971	(DAY NO 171)	DATE	21-	6-1971	(DAY NO 172)				
HOURS	00	05	10	15	20	25	30	35	40	45	50	55	50	55	55	50	45	40	
00	236	247	236	220	207	196	185	177	164	150	136	119	137	126	111	106	94	227	254**48
01	125	82	52	45	38	32	32	23	23	22	22	191	170	170	16	190	212	212	125
02	72	197	192	179	162	144	123	92	56	56	11	11	11	11	11	11	184	184	186
03	195	-61	-61	-85	-100	-97	-73	-40	-8	-8	91	91	67	67	67	67	78	78	86
04	-4	-35	03	67	111	109	84	-24	-24	-24	-53	-53	11	11	11	11	10	10	107
05	-39	-46	27	39	55	111	139	-7	-7	-7	70	70	117	117	117	117	117	117	117
06	-26	-32	-38	-49	-55	72	220	37	37	37	302	302	173	173	173	173	173	173	146
07	-58	-55	-24	-45	47	41	74	127	160	160	165	165	128	128	128	128	128	128	69
08	133	128	106	75	50	33	31	35	34	34	235	235	31	31	31	31	31	31	31
09	34	128	141	54	60	86	88	82	82	82	131	131	-19	-19	-19	-19	-19	-19	-44
10	115	119	7	61	92	92	86	82	82	82	283	283	97	97	97	97	97	97	83
11	112	-84	-17	61	14	*22	57	354	510**34	510**34	106**47	106**47	124	124	124	124	124	124	156
12	-162	-305	-351*03	107	101	-41	-41	266	27*	27	310	310	133	133	133	133	133	133	103
13	126	179	17	12	-162	204	204	239	-283	-283	172	172	146	146	146	146	146	146	120
14	63	12	-41	-124	-124	-81	-81	76	-42	-42	175	175	120	120	120	120	120	120	120
15	12	28	46	35	35	-3	-3	64	-36	-36	56	56	-52	-52	-52	-52	-52	-52	-14
16	77	158*07	142	59	59	-13	-13	59	-22	-22	28	28	51	51	51	51	51	51	37
17	18	369	142	59	59	-13	-13	41	-69	-69	83	83	-21	-21	-21	-21	-21	-21	22
18	91	163	203	209	209	179	179	135	97	97	80	80	119	119	119	119	119	119	171
19	20	136	70	16	16	59	59	23	-23	-23	54	54	-28	-28	-28	-28	-28	-28	-133
20	22	-220*59	79	198	198	205	205	95	40	40	40	40	110	110	110	110	110	110	-68
21	-143*58	-52	177	204*08	164	-2	-2	246	-357	-357	-459*37	-459*37	289	289	289	289	289	289	131
22	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	131
23	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	131
00	70	10	26	37	300*18	-228*27	-180	0	0	0	94	94	45	45	45	45	45	45	45
01	60	131	153*08	131*13	210	264	264	235	235	235	212	212	184	184	184	184	184	184	186
02	192	-238	-92	102	53	30	36	62	62	62	73	73	-10	-10	-10	-10	-10	-10	-207
03	-267	-198*59	-93	-140	-179	-201*23	-121	-121	-121	-121	-78	-78	-151	-151	-151	-151	-151	-151	-162
04	-155	-155	-43	53	145	137	113	113	113	113	43	43	-5	-5	-5	-5	-5	-5	-16
05	-120	-50	44	114	164	120	196	196	196	196	69	69	50	50	50	50	50	50	-87
06	-79	-79	-7	-1	-1	-51	113	113	113	113	61	61	-55	-55	-55	-55	-55	-55	6
07	116	126	113	-2	-2	-51	62	105	105	105	149	149	8	8	8	8	8	8	93
08	50	-37	65	65	106	114*23	88	88	88	88	65	65	-56	-56	-56	-56	-56	-56	56
09	69	86	85	45	-11	-33*23	2	2	2	2	41	41	61	61	61	61	61	61	92
10	79	89	111	111	98	98	96	96	96	96	102	102	127	127	127	127	127	127	104
11	224	218	198	183	159	127	194	65	65	65	144	144	33	33	33	33	33	33	19
12	216	216	120	49	159	-16	-16	-16	-16	-16	-103	-103	28	28	28	28	28	28	41
13	14	14	7	7	45	68	101	101	101	101	158	158	232*43	232*43	232*43	232*43	232*43	232*43	166
14	15	15	31	31	134	118	103	106	113	113	73	73	44	44	44	44	44	44	43
15	152	143	143	7	37	-55	-44	-44	-44	-44	47	47	63	63	63	63	63	63	57
16	56	51	46	42	31	31	16	12	12	12	21	21	37	37	37	37	37	37	45
17	167	216	120	49	23	16	16	16	16	16	31	31	34	34	34	34	34	34	36
18	167	216	120	-6	-22*13	49	174	265	205	205	28	28	-80*47	-80*47	-80*47	-80*47	-80*47	-80*47	27*57
19	66	-290	-342	-406	-293	-293	-293	-293	-293	-293	-131	-131	-155	-155	-155	-155	-155	-155	312
20	66	-367	-333	-300	-298	-205	-41	-41	-41	-41	-158	-158	-162	-162	-162	-162	-162	-162	-184
21	58	-356	-369	-333	-199*18	-199*18	-199*18	-199*18	-199*18	-199*18	-155	-155	-110	-110	-110	-110	-110	-110	-181*53
22	22	-356	-369	-333	-348	-348	-348	-348	-348	-348	-155	-155	-155	-155	-155	-155	-155	-155	-155
23	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155	-155

NC MARCEL BAYARD CANTAT II SURVEY CRUISE LEG 1										DATE 24- 6-1971 (DAY NO 175)																	
OCEAN REMOVAL OF IGRF MINUTES										OCEAN REMOVAL OF IGRF MINUTES																	
HOURS		00		05		10		15		20		25		30		35		40		45		50		55			
00	00	77	162	246	264**13	216	141	61	6	-13	5	105	5	43	130	137	85**57										
01	00	75	118	-30	-54*	-49	-22	27	6	67	115	-120	-86	-120	-120	-120	-29										
02	00	119	108	96	79	-13	-76	95	-43	-79	174	181	172	153	153	153	-30										
03	00	-28	-9	47	49	53	76	-13	-25	113	66	66	77	94	94	94	119										
04	00	19	59	54	63	74	42	-10	-14**23	178	42	42	51	66	66	66	194										
05	00	83	58	36	8	-10	-34	42	4	42	51	51	51	66	66	66	-5										
06	00	80	7	15	26	24	44	38	4	42	51	51	51	66	66	66	-6										
07	00	-2	67	62	56	10	11	17	4	42	51	51	51	66	66	66	72										
08	00	67	22	16	11	-33	-68	-22	-6	-64	-76	-76	-76	-51	-51	-51	76										
09	00	25	58	40	6	-8	-19	-22	-8	-64	-76	-76	-76	-51	-51	-51	-2										
10	00	69	69	6	3	-11	-19	-22	-8	-64	-76	-76	-76	-51	-51	-51	-17										
11	00	4	12	-19	0	26	52	71	7	77	81	81	81	70	70	70	18										
12	00	3	14	15	58	67	128	162	152	119	188	190	190	41	41	41	-19										
13	00	10	15	120	108	112	144	162	175	159	145	145	145	156	156	156	142										
14	00	130	16	235	235	298**17	287	205	97	10	35	103	95	58	58	58	75										
15	00	17	17	169	169	-42	-45	-62	-88	-103	-200	235	220	190	190	190	78										
16	00	-63	-63	125	125	144	144	170	187	220	220	196	196	207	207	207	-46										
17	00	118	114	-107	-107	-155	-155	-139	-168	-161	-154	-154	-161	210	210	210	87										
18	00	19	19	-80	-80	-120	-120	-172	-195	-195	-172	-172	-172	168	168	168	326										
19	00	20	20	-84	-84	-144	-144	-131	-143	-135	-135	-135	-135	169	169	169	85										
20	00	21	21	281	281	200	9	-31	-56	-55	-55	-55	-55	281	281	281	325										
21	00	22	22	281	281	200	9	-31	-56	-55	-55	-55	-55	281	281	281	325										
22	00	23	23	281	281	200	9	-31	-56	-55	-55	-55	-55	281	281	281	325										
NC MARCEL BAYARD CANTAT II SURVEY CRUISE LEG 1										DATE 25- 6-1971 (DAY NO 176)																	
OCEAN REMOVAL OF IGRF MINUTES										OCEAN REMOVAL OF IGRF MINUTES																	
HOURS		00		05		10		15		20		25		30		35		40		45		50		55			
00	00	286	253	180	37	-98	-173	-63	-62	-173	-38	-34	-1	-10	-10	-12	-12	-233	-171	-104	-38	-33					
01	00	-44	29	23	20	55	21	63	56	56	37	18	18	-13	-13	-12	-12	-14	37	13	3	25	25				
02	00	37	33	59	25	8	-9	-18	-18	-18	-17	-17	-17	-121	-121	-121	-121	-139	-139	-137	-132	-132					
03	00	33	-57	-65	-65	-68	-74	-87	-87	-100	-100	-100	-100	-100	-100	-100	-100	-86	-86	-86	-74	-74					
04	00	-57	-131	-132	-132	-137	-147	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-107	-107	-107	-113	-113					
05	00	-131	7	38	145	110	62	58	-58	-58	-58	-58	-58	-58	-58	-58	-58	-86	-86	-86	-133	-133					
06	00	07	159	-151	-151	-129	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-86	-86	-86	-133	-133					
07	00	08	145	145	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115					
08	00	09	151	-151	-151	-129	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-86	-86	-86	-133	-133					
09	00	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11					
10	00	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12					
11	00	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13					
12	00	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14					
13	00	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15					
14	00	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16					
15	00	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17					
16	00	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18					
17	00	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19					
18	00	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20					
19	00	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21					
20	00	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22					
21	00	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23					
22	00	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23					
23	00	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23					

NC MARCEL BAYARD CANTABRIAN GAMMAS AFTERSURVEY CRUISE LEG 1
 MAGNETIC ANOMALY IN GAMMAS REMOVAL OF TGRF MINUTES
 HOURS 00 05 10 15 20 25 30 35 40 45 50 55
 00 -112 -110 -103 -99 -93 -91 -86 -83 -80 -81
 01 -81 -88 -89 -89 -86 -88 -92 -94 -91 -93
 02 -99 -93 -92 -92 -89 -88 -112 -114 -116 -115
 03 -107 -109 -108 -108 -108 -112 -112 -114 -116 -115
 04 -120 -121 -123 -123 -124 -124 -123 -123 -121 -120
 05 -109 -109 -109 -109 -109 -110 -110 -110 -110 -110
 06 -121 -121 -117 -117 -115 -115 -113 -113 -113 -113
 07 -42 -42 -33 -33 -27 -27 -23 -23 -23 -23
 08 23 23 33 33 26 26 21 21 21 21
 09 103 103 115 115 127 127 127 127 127 127
 10 11 11 12 12 13 13 13 13 13 13
 11 12 12 13 13 14 14 14 14 14 14
 12 13 13 14 14 15 15 15 15 15 15
 13 14 14 15 15 16 16 16 16 16 16
 14 15 15 16 16 17 17 17 17 17 17
 15 16 16 17 17 18 18 18 18 18 18
 16 17 17 18 18 19 19 19 19 19 19
 17 18 18 19 19 20 20 20 20 20 20
 18 19 19 20 20 21 21 21 21 21 21
 19 20 20 21 21 22 22 22 22 22 22
 20 21 21 22 22 23 23 23 23 23 23

TIME	DEPTL.	ACTIVITY
00	0000	SEARCHING FOR GAMMAS
05	0000	SEARCHING FOR GAMMAS
10	0000	SEARCHING FOR GAMMAS
15	0000	SEARCHING FOR GAMMAS
20	0000	SEARCHING FOR GAMMAS

-90	-100	-110	-116	-121	-125	-128	-127	-124
-92	-104	-110	-110	-101	-95	-85	-94	-97
-94	-103	-104	-104	-105	-154	-152	-97	-90
-96	-83	-80	-77	-75	-75	-71	-67	-68
-98	-81	-84	-86	-87	-90	-92	-94	-93
-100	-75	-72	-72	-97	-98	-98	-102	-108
-102	-96	-94	-94	-105	-102	-94	-86	-72
-104	-83	-80	-80	-110	-110	-96	-98	-115
-106	-92	-83	-83	-91	-91	-70	-79	-91
-108	-100	-100	-100	-79	-79	-60	-68	-92

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF

SURVEY CRUISE LEG 2				DATE 25- 8-1971 (DAY NO 237)			
REMOVAL OF IGRF	MINUTES	15	30	35	40	45	50
-110	-116	-121	-125	-127	-128	-127	-124
-104	-106	-105	-95	-85	-84	-89	-97
-80	-77	-76	-154	-152	-150	-93	-90
-84	-86	-90	-75	-71	-67	-68	-69
-97	-98	-98	-92	-93	-94	-93	-93
-108	-110	-105	-102	-103	-105	-108	-108
-80	-83	-91	-96	-86	-82	-75	-72
-92	-83	-70	-60	-68	-98	-111	-115
SURVEY CRUISE LEG 2				DATE 26- 8-1971 (DAY NO 238)			
REMOVAL OF IGRF	MINUTES	15	20	25	30	35	40
0	20	35	39	43	47	49	40
33	63	108	156	197	215	200	162
96	99	93	81	68	52	46	42
-9	-3	-7	27	47	70	86	92
54	58	65	71	61	24	-33	-104
-202	-199	-193	-179	-156	-13	-57	-10
74	71	64	54	46	40	34	26
61	67	73	74	64	40	16	0
-40	-44	-45	-31	-31	61	102	119
-18	-31	-44	-70	-108	-130	-141	-139
-93	-45	-1	-33	-71	108	136	150
34	1	-17	-21	-18	-1	27	70
184	189	185	178	164	147	119	90
6	0	0	0	-1	-2	-2	-2
-128	-124	-126	-130	-137	-145	-150	-141
-147	-142	-149	-162	-173	-179	-178	-154
-24	1	4	28	34	32	28	18
82	82	80	81	84	88	20	36
-12	-20	-29	-31	-25	-73	65	51
-8	-9	-13	-19	-19	-17	-17	42
-181	-202	-216	-230	-242	-250	-246	-14

	DATE	26-	8-1971	(DAY NO 238)
25	30	35	40	45
	39	43	47	49
108	156	197	215	200
193	181	68	52	46
65	27	47	70	86
-193	-71	-156	-61	24
-193	-179	-156	-113	-33
-44	-64	-46	-40	34
-45	-73	-74	64	40
-17	-31	-31	9	61
-17	-33	-108	-108	102
-17	-21	-71	-18	-1
-185	178	164	147	119
0	0	-1	-2	-2
				-2
25	30	35	40	45
	35	43	47	49
108	156	197	215	200
193	181	68	52	46
65	27	47	70	86
-193	-71	-156	-61	24
-193	-179	-154	-140	-140
-44	-64	-73	-64	40
-45	-73	-31	9	61
-17	-31	-108	-108	102
-17	-21	-71	-18	-1
-185	178	164	147	119
0	0	-1	-2	-2
				-2
25	30	35	40	45
	35	43	47	49
108	156	197	215	200
193	181	68	52	46
65	27	47	70	86
-193	-71	-156	-61	24
-193	-179	-154	-140	-140
-44	-64	-73	-64	40
-45	-73	-31	9	61
-17	-31	-108	-108	102
-17	-21	-71	-18	-1
-185	178	164	147	119
0	0	-1	-2	-2
				-2
25	30	35	40	45
	35	43	47	49
108	156	197	215	200
193	181	68	52	46
65	27	47	70	86
-193	-71	-156	-61	24
-193	-179	-154	-140	-140
-44	-64	-73	-64	40
-45	-73	-31	9	61
-17	-31	-108	-108	102
-17	-21	-71	-18	-1
-185	178	164	147	119
0	0	-1	-2	-2
				-2

DATE	27-8-1971	(DAY NO 239)	
	55	55	
	50	50	
	45	341	279
	40	343	236
	35	201	195
	30	-122	72
	25	-14	-19
	20	-52	-46
	15	51	2
	10	115	10
	5	56	164
	0	43	152
	-5	-78	-3
	-10	-37	-68
	-15	25	-45
	-20	14	10
	-25	14	40
	-30	43	60
	-35	44	75
	-40	70	72
	-45	18	74
	-50	3	4
	-55	3	10
	-60	40	33
	-65	68	34
	-70	74	77
	-75	88	86
	-80	825	827
	-85	207	78
	-90	23	79
	-95	295	29
	-100	59	31
	-105	85	85
	-110	90	90

D9

INITIAL OCEAN GAMMAS		SURVEY REMOVAL OF 16RF		CRUISE LEG 2	
05	10	15	20	25	30
-67 211 -65 166 -36 103 -1 164 64 -45 -34 -43 39 15 80 72 1 25 25 69 66 28 49 66	-12 159 -4 190 -53 119 115 142 77 -54 -26 34 21 42 47 72 8 13 32 25 70 59 26 60 66	48 102 -69 198 -68 126 125 115 113 185 -59 -17 23 29 47 72 78 80 71 -3 32 25 70 59 26 60 66	117 62 -130 181 -79 122 125 37 91 91 -65 -12 -17 16 16 16 49 67 67 59 0 -2 41 28 73 49 20 72 72	188 53 -168 136 -84 110 55 65 65 82 -75 -75 -7 12 13 37 46 46 48 1 1 43 31 78 43 13 83 3 42 47 89 37 13 12 2	255 80 -179 85 -83 94 82 -79 0 11 139 42 67 38 3 46 38 84 43 1 45 47 89 33 13 12 94 91 81

INC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 2	MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF 16RF MINUTES	25
00	-121	188
01	-249	53
02	211	-168
03	134	136
04	126	-784
05	-25	110
06	166	122
07	-36	37
08	103	125
09	164	91
10	-1	-79
11	142	113
12	77	85
13	-54	91
14	-26	-65
15	-34	-59
16	-43	-17
17	15	-12
18	39	-12
19	80	16
20	72	17
21	7	25
22	17	32
23	18	43
	19	43
	20	16
	21	83
	22	74
	23	81

3

1

ATE	28- 8-19	45	104 -54 -1 58 78 -21 45 38 33	19 132 193 -241 -232 -26 -171*43 88 52 37 11 176
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+ 52
+ 59
+ 43
+ 00
- 24
- 65
- 93
- 22
. 69
. 12
54

$$\begin{array}{r}
 35 \\
 -154 \\
 -101 \\
 -77 \\
 73 \\
 117 \\
 -9 \\
 112 \\
 120 \\
 -15 \\
 15 \\
 \\
 -110 \\
 311*33 \\
 -35 \\
 -47 \\
 -23 \\
 116 \\
 95 \\
 -63 \\
 93 \\
 11 \\
 28
 \end{array}$$

30	171 -84 -68 89 137 -2 139 3 -40 30	-136 -180 299 59 125 -25 -59 90 -67 102 22
25	179 -47 -42 101 153 9 149 -16 -51 -30	153 194 269 115 217*23 -29 12 72 -40 107 -5 -18

9 01 81 46 21 56 33 19 42 70 20 43

DAYARD OMALY	CANTAT IN GAM	00	05	4	7*	58
19	144	167	167	19	87	58
72	71	279	279	8	73	38
6	2	572	572	-274	49	49
16	105	57	57	-107	47	47
21	151	08	08	-150	80	80
64	64	49	49	-50	75	75
23	92	75	75	75	98	198
-22	-39	53	53	-33	35	-35
62	85	85	85	-44	37	-37
77						

$$\frac{1}{2} \quad -\frac{1}{4} \quad -\frac{1}{2}$$

NAME	ADDRESS	PHONE	TIME	ITEMS	QUANTITY	PRICE	TOTAL
MCNALLY, MARCEL	1000 BOSTON AVENUE	4-1000	10:00 A.M.	1	1	\$1.00	\$1.00
				2	1	\$1.00	\$1.00
				3	1	\$1.00	\$1.00
				4	1	\$1.00	\$1.00
				5	1	\$1.00	\$1.00
				6	1	\$1.00	\$1.00
				7	1	\$1.00	\$1.00
				8	1	\$1.00	\$1.00
				9	1	\$1.00	\$1.00
				10	1	\$1.00	\$1.00
				11	1	\$1.00	\$1.00
				12	1	\$1.00	\$1.00
				13	1	\$1.00	\$1.00
				14	1	\$1.00	\$1.00
				15	1	\$1.00	\$1.00
				16	1	\$1.00	\$1.00
				17	1	\$1.00	\$1.00
				18	1	\$1.00	\$1.00
				19	1	\$1.00	\$1.00
				20	1	\$1.00	\$1.00
				21	1	\$1.00	\$1.00
				22	1	\$1.00	\$1.00
				23	1	\$1.00	\$1.00

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2 MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF		DATE 29- 8-1971 (DAY NO 241)	
HOURS	MINUTES	00	05
00	00	-74	-29
00	01	133	118
00	02	142	104
00	03	158	69
00	04	32	81
00	05	291	38
00	06	267	190
00	07	60	168
00	08	19	-23
00	09	87	116
00	10	84*58	117
00	11	63	-8
00	12	20	-88
00	13	121	124
00	14	120	-97
00	15	62	-65
00	16	62	113
00	17	202	203
00	18	14	186
00	19	14	179
00	20	50	59
00	21	50	64
00	22	5	-36
00	23	17	115
00	24	14	158
00	25	19	-123
00	26	52	49
00	27	39	32
00	28	31	68
00	29	79	50
00	30	14	-124
00	31	112	-69
00	32	49	99
00	33	39	117
00	34	8	112
00	35	79	-22
00	36	50	19
00	37	14	-103
00	38	52	120
00	39	39	117
00	40	31	117
00	41	8	117
00	42	79	-63
00	43	50	-103
00	44	19	-103
00	45	79	-103
00	46	50	-103
00	47	14	-103
00	48	19	-103
00	49	52	-103
00	50	39	-103
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00	52	8	-103
00	53	79	-103
00	54	50	-103
00	55	14	-103
00	56	19	-103
00	57	52	-103
00	58	39	-103
00	59	31	-103
00	60	8	-103
00	61	79	-103
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00	65	52	-103
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00	68	8	-103
00	69	79	-103
00	70	50	-103
00	71	14	-103
00	72	19	-103
00	73	52	-103
00	74	39	-103
00	75	31	-103
00	76	8	-103
00	77	79	-103
00	78	50	-103
00	79	14	-103
00	80	19	-103
00	81	52	-103
00	82	39	-103
00	83	31	-103
00	84	8	-103
00	85	79	-103
00	86	50	-103
00	87	14	-103
00	88	19	-103
00	89	52	-103
00	90	39	-103
00	91	31	-103
00	92	8	-103
00	93	79	-103
00	94	50	-103
00	95	14	-103
00	96	19	-103
00	97	52	-103
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00	101	79	-103
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00	109	79	-103
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00	131	31	-103
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00	133	79	-103
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00	142	50	-103
00	143	14	-103
00	144	19	-103
00	145	52	-103
00	146	39	-103
00	147	31	-103
00	148	8	-103
00	149	79	-103
00	150	50	-103
00	151	14	-103
00	152	19	-103
00	153	52	-103
00	154	39	-103
00	155	31	-103
00	156	8	-103
00	157	79	-103
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00	165	79	-103
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00	187	31	-103
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00	196	8	-103
00	197	79	-103
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00	199	14	-103
00	200	19	-103
00	201	52	-103
00	202	39	-103
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00	211	31	-103
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00	217	52	-103
00	218	39	-103
00	219	31	-103
00	220	8	-103
00	221	79	-103
00	222	50	-103
00	223	14	-103
00	224	19	-103
00	225	52	-103
00	226	39	-103
00	227	31	-103
00	228	8	-103
00	229	79	-103
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00	237	79	-103
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00	254	50	-103
00	255	14	-103
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00	258	39	-103
00	259	31	-103
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00	307	31	-103
00	308	8	-103
00	309	79	-103
00	310	50	-103
00	311	14	-103
00	312	19	-103
00	313	52	-103
00	314	39	-103
00	315	31	-103
00	316	8	-103
00	317	79	-103
00	318	50	-103
00	319	14	-103
00	320	19	-103
00	321	5	

HOURS	SURVEY CRUISE LEG 2			
	OCEAN CANTAT III AFTER REMOVAL OF 1GRF	MINUTES	20	15
00	-9	-3	5	24
01	-8	-111	-133	-184
02	-269	-269	-265	-263
03	-291	-295	-302	-318
04	-224	-195	-163	-99
05	-56	42	0	-103
06	88	125	124	97
07	28	-5	-22	-28
08	-106	-117	-131	-145
09	-122	-111	-112	-162
10	-171	-156	-142	-135
11	-134	-130	-113	-210
12	-186	-153	-99	-19
13	150	108	57	-36
14	-2	38	73	-83
15	-223	-252	-268	-268
16	-185	-191	-199	-176
17	-15	-20	-28	-65
18	7	28	40	74
19	25	-20	-76	-160
20	-107	-110	-126	-177
21	-165	-146	-133	-124
22	-183	-179	-170	-154
23	-6	1	-15	-36

D11

DATE 1= 9-1971 (DAY NO 244)

1

DATE	1- 9-1971	(DAY	ND	244)	
30	-152 -188 -175 -54 -183 -188 -142 -153 -177 -126 -305 -168 -132 -160 -309 -456 -175	-160 -186 -156 -85 -188 -196 -133 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -729 -866 -606 -137 -175	-166 -185 -130 -109 -196 -196 -133 -203 -124 -262 -161 -148 -214 -190 -196 -471 -66 -291 -206 -230 -742 -878 -520 -169 -131	-176 -185 -97 -128 -206 -206 -126 -217 -133 -231 -136 -148 -210 -217 -217 -313 -481 -94 -366 -366 -147 -729 -833 -436 -187 -101 -46	-189 -187 -66 -143 -212 -126 -223 -148 -123 -123 -123 -123 -171 -211 -211 -308 -480 -118 -418 -454 -76 -722 -806 -362 -200 -82 -34 -10 -80
35	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -729 -866 -606 -137 -175	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -742 -878 -520 -169 -131	-176 -185 -97 -128 -206 -206 -126 -217 -133 -231 -136 -148 -210 -217 -217 -313 -481 -94 -366 -366 -147 -729 -833 -436 -187 -101 -46	-189 -187 -66 -143 -212 -126 -223 -148 -123 -123 -123 -123 -171 -211 -211 -308 -480 -118 -418 -454 -76 -722 -806 -362 -200 -82 -34 -10 -80	
40	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -729 -866 -606 -137 -175	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -742 -878 -520 -169 -131	-176 -185 -97 -128 -206 -206 -126 -217 -133 -231 -136 -148 -210 -217 -217 -313 -481 -94 -366 -366 -147 -729 -833 -436 -187 -101 -46	-189 -187 -66 -143 -212 -126 -223 -148 -123 -123 -123 -123 -171 -211 -211 -308 -480 -118 -418 -454 -76 -722 -806 -362 -200 -82 -34 -10 -80	
45	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -729 -866 -606 -137 -175	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -742 -878 -520 -169 -131	-176 -185 -97 -128 -206 -206 -126 -217 -133 -231 -136 -148 -210 -217 -217 -313 -481 -94 -366 -366 -147 -729 -833 -436 -187 -101 -46	-189 -187 -66 -143 -212 -126 -223 -148 -123 -123 -123 -123 -171 -211 -211 -308 -480 -118 -418 -454 -76 -722 -806 -362 -200 -82 -34 -10 -80	
50	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -729 -866 -606 -137 -175	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -742 -878 -520 -169 -131	-176 -185 -97 -128 -206 -206 -126 -217 -133 -231 -136 -148 -210 -217 -217 -313 -481 -94 -366 -366 -147 -729 -833 -436 -187 -101 -46	-189 -187 -66 -143 -212 -126 -223 -148 -123 -123 -123 -123 -171 -211 -211 -308 -480 -118 -418 -454 -76 -722 -806 -362 -200 -82 -34 -10 -80	
55	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -729 -866 -606 -137 -175	-160 -186 -156 -85 -188 -196 -142 -153 -191 -123 -288 -161 -190 -196 -313 -471 -66 -291 -206 -230 -742 -878 -520 -169 -131	-176 -185 -97 -128 -206 -206 -126 -217 -133 -231 -136 -148 -210 -217 -217 -313 -481 -94 -366 -366 -147 -729 -833 -436 -187 -101 -46	-189 -187 -66 -143 -212 -126 -223 -148 -123 -123 -123 -123 -171 -211 -211 -308 -480 -118 -418 -454 -76 -722 -806 -362 -200 -82 -34 -10 -80	

NC MARCEL BAYARD CANTAT II SURVEY CRUISE LEG 2

DATE 2- 9-1971 (DAY NO 245)

	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	-233	-276*07	-272	-241	-202	-175	-169	-181	-204	-222	-240	-253	-253
01	-264	-276	-282	-280	-276	-259	-241	-218	-194	-165	-140	-119	-119
02	-113	-127	-127	-169	-182	-186	-183	-183	-171	-143	-144	-129	-129
03	-116	-99	-57	-31	-7	-14	29	29	39	43	46	43	43
04	-51	-81	91	121	156	185	205	209	200	178	154	137	137
05	128	123	120	117	116	124	139	161	194	229	259	274	274
06	231	292	271	26	33	42	192	163	134	104	76	59	32
07	21	24	24	28	52	42	47	58	64	63	58	46	46
08	431	435*03	409	378	349	322	302	288	280	268	261	248	402
09	233	208	177	137	88	34	28	93	163	260	392	492	492
10	-544*02	-538	-494	-432	-374	-356	-373	-419	-477	-533	-579	-609	-609
11	-620	-613	-593	-566	-533	-502	-476	-453	-438	-424	-411	-394	-394
12	-374	-353	-330	-319	-326	-353	-386	-405	-409	-408	-413	-413	-413
13	-415	-410	-396	-379	-359	-343	-330	-323	-320	-325	-327	-330	-330
14	-332	-336	-334	-329	-319	-304	-283	-264	-251	-247	-240	-244	-244
15	-250	-256	-261	-267	-272	-275	-271	-264	-271	-258	-258	-231	-231
16	-220	-212	-214	-216	-223	-230	-238	-243	-243	-265	-272	-272	-272
17	-272	-266	-256	-243	-227	-207	-191	-171	-156	-139	-132	-128	-128
18	-19	-128	-133	-135	-139	-144	-150	-161	-174	-188	-197	-205	-205
19	-204	-200	-195	-191	-190	-187	-182	-174	-163	-149	-103	-110	-110
20	-102	-90	-74	-63	-56	-52	-57	-64	-75	-85	-128	-131	-123
21	-117	-122	-121	-121	-118	-118	-118	-119	-121	-126	-126	-55	-58
22	-115	-104	-91	-91	-87	-87	-87	-87	-87	-82	-109	-116	-115
23	-	-	-	-	-	-	-	-	-	-	-	-	-

NC MARCEL BAYARD CANTAT II SURVEY CRUISE LEG 2

DATE 3- 9-1971 (DAY NO 246)

	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	-61	-66	-76	-89	-105	-105	-128	-132	-133	-133	-148	-148	-148
01	-191	-218	-234	-232	-232	-222	-212	-203	-195	-195	-201	-201	-201
02	-233	-251	-269	-278	-282	-275	-264	-248	-231	-231	-174	-174	-174
03	-167	-169	-173	-179	-187	-194	-201	-209	-213	-213	-208	-208	-197
04	-185	-173	-164	-156	-151	-150	-153	-156	-162	-172	-181	-181	-181
05	-193	-189	-185	-189	-180	-176	-172	-165	-159	-165	-172	-172	-172
06	-139	-137	-134	-132	-132	-131	-136	-138	-142	-142	-147	-147	-147
07	-152	-151	-148	-146	-146	-143	-142	-143	-143	-143	-147	-147	-147
08	-152	-150	-152	-152	-158	-158	-157	-158	-159	-159	-153	-153	-153
09	-153	-154	-153	-153	-153	-155	-160	-161	-161	-161	-162	-162	-162
10	-160	-161	-160	-161	-161	-161	-147	-145	-145	-145	-133	-133	-133
11	-111	-104	-103	-107	-116	-131	-144	-157	-167	-167	-174	-174	-174
12	-188	-193	-197	-204	-206	-209	-211	-207	-203	-203	-199	-199	-199
13	-188	-186	-187	-187	-178	-165	-160	-158	-158	-158	-159	-159	-159
14	-160	-157	-157	-157	-158	-159	-158	-157	-157	-157	-146	-146	-146
15	-135	-135	-135	-135	-123	-123	-120	-120	-119	-119	-117	-117	-116
16	-129	-129	-129	-129	-88	-88	-82	-82	-79	-79	-75	-75	-75
17	-102	-92	-92	-92	-96	-96	-106	-112	-112	-112	-116	-116	-116
18	-84	-82	-82	-82	-92	-92	-106	-113	-113	-113	-98	-98	-98
19	-104	-104	-104	-104	-113	-113	-112	-112	-112	-112	-116	-116	-115
20	-113	-113	-113	-113	-113	-113	-112	-112	-112	-112	-91	-91	-76
21	-65	-65	-65	-65	-65	-65	-65	-65	-65	-65	-83	-83	-83
22	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-

D12

23

INC MARCE' BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IRON

DATE 9-9-1971 (DAY NO 252).
 CANTAT II SURVEY CRUISE LEG 3
 IN GAMMAS AFTER REMOVAL OF IGRF
 MINUTES 25
 30 35 40 45 50 55

INC MARCEL BAYARD CANTAT II SURVEY CRUISE LEG 3										INC MARCEL BAYARD CANTAT II SURVEY CRUISE LEG 3															
OCEAN REMOVAL OF GAMMAS AFTER ANOMALY					OCEAN REMOVAL OF GAMMAS AFTER ANOMALY					OCEAN REMOVAL OF GAMMAS AFTER ANOMALY					OCEAN REMOVAL OF GAMMAS AFTER ANOMALY										
HOURS	00	05	10	15	20	25	30	35	40	45	50	55	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00													00	-8.6	-9.0	-9.5	-9.9	-10.2	-10.7	-11.0	-11.1	-11.2	-11.3	-11.4	-11.5
01													01	-10.5	-10.4	-9.9	-10.3	-10.6	-11.0	-11.3	-11.5	-11.6	-11.7	-11.8	-11.9
02													02	-13.7	-13.3	-12.3	-11.3	-10.3	-10.7	-11.1	-11.5	-11.6	-11.7	-11.8	-11.9
03													03	-12.5	-12.4	-12.4	-12.4	-12.8	-13.2	-13.6	-13.7	-13.8	-13.9	-14.0	-14.1
04													04	-13.7	-15.1	-15.1	-15.1	-16.1	-16.5	-16.7	-17.0	-17.2	-17.4	-17.7	-17.7
05													05	-17.9	-17.6	-16.3	-15.7	-15.2	-14.7	-14.0	-13.1	-12.0	-11.6	-11.7	-11.7
06													06	-8.2	-8.0	-8.2	-9.2	-10.1	-11.1	-12.0	-13.1	-13.3	-13.9	-14.2	-14.2
07													07	-15.0	-14.9	-14.8	-14.6	-14.4	-14.3	-14.4	-14.7	-15.0	-15.3	-15.4	-15.4
08													08	-15.7	-15.5	-15.5	-14.9	-14.9	-15.2	-15.1	-14.8	-14.8	-14.5	-14.0	-14.0
09													09	-13.8	-14.0	-13.9	-14.1	-14.1	-14.1	-14.0	-13.4	-13.4	-13.1	-13.0	-13.0
10													10	-13.1	-13.3	-13.5	-13.5	-13.6	-14.5	-15.2	-16.8	-17.4	-17.4	-18.2	-18.8
11													11	-19.1	-19.3	-18.6	-17.8	-16.9	-16.5	-16.0	-17.4	-17.4	-17.4	-17.8	-18.2
12													12	-2.9	-2.35	-2.28	-2.17	-2.03	-1.90	-1.80	-1.78	-1.78	-1.71	-1.66	-1.66
13													13	-28.3	-29.7	-30.0	-30.0	-29.2	-27.6	-25.4	-22.4	-22.7	-22.7	-24.0	-25.6
14													14	-6.6	-6.3	-4.4	-4.4	-7.0	-7.9	-8.9	-10.9	-12.0	-12.7	-12.7	-9.5
15													15	-8.6	-7.8	-7.5	-7.6	-7.6	-7.9	-8.9	-9.6	-9.6	-7.4	-12.8	-12.8
16													16	-1.9	-1.08	-0.99	-0.97	-0.97	-0.99	-1.00	-1.00	-1.00	-6.5	-6.6	-6.6
17													17	-7.8	-9.9	-11.7	-13.5	-13.5	-14.5	-15.2	-21.0	-21.0	-23.3	-23.5	-23.5
18													18	-23.6	-23.6	-23.1	-23.1	-18.2	-16.9	-16.9	-15.7	-15.7	-14.9	-14.7	-14.9
19													19	-15.6	-17.8	-19.8	-21.7	-23.7	-25.0	-25.7	-26.0	-26.0	-24.3	-24.3	-22.5
20													20	-21.5	-20.5	-19.6	-19.1	-19.6	-20.7	-20.7	-23.3	-23.3	-24.4	-24.4	-23.4
21													21	-22.5	-21.8	-21.0	-20.7	-20.7	-22.0	-22.0	-26.1	-26.1	-29.3	-29.3	-28.9
22													22	-28.8	-28.6	-28.1	-28.0	-27.9	-28.4	-28.4	-31.3	-31.3	-35.6	-35.6	-34.9
23													23	-33.8	-32.9	-31.5	-28.4	-28.4	-24.5	-24.5	-31.1	-31.1	-35.0	-35.0	-35.0

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF

	DATE	11- 9-1971 (DAY NO 254)	DATE	11- 9-1971 (DAY NO 254)								
HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	-4.02	-4.43	-4.89	-5.37	-5.72	-5.9	-5.49	-4.84	-5.11	-3.49	-3.21	-3.57
01	-4.34	-4.93	-5.08*09	-5.35	-5.93	-1.36	-1.10	-1.15	-1.73	-2.16	-2.57	-2.91
02	-3.22	3.48	3.77	4.06	4.47*22	4.44	3.89	2.57	1.47	3.8	-2.4	-3.6
03	-2	3.7	6.6	8.6	8.5	7.5	6.7	1.45	1.45	6.1	6.1	9.0
04	1.33	1.74	2.11	2.43	2.59	2.57	2.38	2.10	1.62	1.10	7.0	5.1
05	1.48	1.52	1.72	1.08	1.48	1.74	1.74	1.47	1.07	1.64	3.7	2.6
06	2.25	2.8	2.3	1.15	-1.0	-1.0	-1.0	-1.18	-1.18	-1.40	-1.60	-1.79
07	-1.91	-1.90	-1.78	-1.59	-1.33	-1.13	-1.00	-1.02	-1.19	-1.46	-1.74	-2.07
08	-2.46	-2.73	-2.92	-2.98	-2.88	-2.74	-2.53	-2.28	-2.28	-2.04	-1.82	-1.79
09	-2.00	-2.33	-2.44	-2.26	-1.66	-1.66	-1.66	-1.29	-1.29	-2.22	-1.13	0
10	-1.15	-2.8	-3.3	-1.29	-1.29	-1.29	-1.29	-1.29	-1.29	-1.29	-1.29	-85
11	-1.90	-1.98	-1.11	-1.44	-1.82	-2.33	-2.33	-2.87	-2.91	-2.86	-2.73	-2.51
12	-2.28	-2.11	-1.96	-1.79	-1.58	-1.29	-1.29	-1.29	-1.29	-1.29	-1.29	-2.10
13	-3.09	-4.12	-4.12	-5.68	-5.23	-6.82	-7.50	-7.98	-8.11	-8.06	-7.94	-7.76
14	7.62	7.94	8.02	8.36	8.96	9.40	9.21	8.32	7.01	5.54	4.16	2.92
15	1.75	1.31	-1.43	-2.86	-3.79	-4.37	-4.65	-4.70*33	-4.45	-4.12	-3.69	-3.04
16	-1.25	-1.25	-1.49	-1.76	-1.71	-1.64	-1.47	-1.49	-1.49	-1.48	-1.38	-97
17	-1.69	-2.50	-3.34	-4.16	-4.77	-5.15	-5.24	-5.12	-4.88	-4.48	-3.89	-3.21
18	-2.65	-2.42	-2.43	-2.59	-2.75	-2.82	-2.82	-2.76	-2.60	-2.28	-1.76	-1.06
19	-5.8*02	-5.8*12	-6.4	-6.91	-6.0	-5.1	-3.9	-1.11	-1.11	-2.07	-3.17	-3.27
20	2.90	2.90	1.32	1.62	1.62	-1.2	-1.2	-1.2	-1.2	-1.65	-1.83	-2.01
21	-2.16	-2.26	-2.35	-2.46	-2.57	-2.79	-2.79	-3.17	-3.54	-3.67	-3.55	-2.70
22	-2.24	-1.90	-1.74	-1.74	-1.26	-1.88	-1.88	-2.30	-2.30	-2.21	-2.08	-1.84
23	-1.78	-1.59	-1.42	-1.26	-1.26	-1.18	-1.18	-1.23	-1.60	-1.77	-1.87	-1.88

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF IGRF

	DATE	12- 9-1971 (DAY NO 255)	DATE	12- 9-1971 (DAY NO 255)								
HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	-1.82	-1.69	-1.50	-1.41	-1.24	-1.24	-1.05	-0.91	-0.78	-0.57	-2.21	5
01	-2.23	-1.6	-3	-3.34	-7.7	-1.22	-1.62	-1.86	-1.98	-2.03	-2.02	-2.07
02	-2.02	-2.02	-2.03	-2.05	-2.09	-2.14	-2.14	-2.16	-2.08	-1.96	-1.96	-1.73
03	-1.67	-1.66	-1.71	-1.77	-1.78	-1.75	-1.62	-1.48	-1.36	-1.21	-1.01	-81
04	-6.1	-3.4	-1.12	-1.2	-1.3	-1.44	-1.84	-1.18	-1.40	-1.40	-1.67	-5.68
05	-1.67	-1.66	-1.66	-1.55	-1.50	-1.49	-1.51	-1.51	-1.56	-1.66	-1.85	-1.83
06	-2.02	-1.89	-1.68	-1.40	-1.18	-1.04	-1.06	-1.19	-1.19	-1.14	-1.14	-1.60
07	-1.71	-1.53	-1.39	-1.28	-1.17	-0.99	-0.74	-0.74	-0.74	-1.22	-1.45	-1.68
08	-1.94	-1.87	-1.47	-1.47	-1.92	-2.8	-2.3	-1.28	-1.28	-1.28	-3.9	95
09	-1.78	-1.66	-1.66	-1.45	-1.62	-1.42	-1.42	-1.14	-1.14	-1.14	-2.8	2.25
10	-1.14	-1.44	-1.02	-1.49	-2.96	3.27	3.38	3.26	3.07	2.92	2.73	2.50
11	2.19	2.58	2.04	1.87	1.55	1.77	1.77	1.60	1.61	1.76	1.76	1.76
12	2.14	2.14	1.00	1.51	1.92	-1.53	-1.53	-1.50	-2.30	-2.40	-2.41	-2.61
13	-2.78	-2.79	-2.17	-1.75	-1.04	-1.04	-1.04	-1.16	-1.61	-1.76	-1.91	-1.72
14	-1.73	-1.51	-1.22	-9.9*17	-4.9	-6.4	-6.4	-8.9	-8.4	-8.9	-10.3	-4.4
15	-1.16	-1.56	-1.56	-7.8	-7.8	-8.2	-8.2	-10.0	-11.0	-8.1	-15	-16.9
16	-1.06	-9.5	-9.5	-6.7	-6.7	-7.6	-7.6	-7.0	-6.1	-3.9	-1.5	-1.5
17	-1.67	-1.4	-1.4	-4.5	-4.5	-6.5	-6.5	-6.6	-6.6	-8.2	-10	-14.2
18	-3.9	-8.0	-8.0	-2.9	-2.9	-2.9	-2.9	-2.9	-2.9	-2.9	-2.9	-2.83
19	-1.90	-2.12	-2.12	-2.76	-2.76	-2.63	-2.63	-2.66	-2.23	-2.33	-2.36	-2.30
20	-2.34	-2.84	-2.84	-1.94	-1.94	-1.66	-1.66	-1.33	-2.34	-2.34	-2.36	-2.30
21	-2.22	-2.83	-2.83	-2.11	-2.11	-1.35	-1.35	-1.93	-2.44	-2.44	-3.47	3.46
22	-2.22	-2.83	-2.83	-2.11	-2.11	-1.35	-1.35	-1.93	-2.44	-2.44	-3.47	3.46
23	-2.22	-2.83	-2.83	-2.11	-2.11	-1.35	-1.35	-1.93	-2.44	-2.44	-3.47	3.46

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NC MARCEL BAYARD MAGNETIC ANOMALY	OCEAN GAMMAS	CANTAT III	SURVEY REMOVAL	CRUISE LEG 3	
HOURS	00	05	10	15	MINUTES
00	308	260	227	189	153
01	-223	-244	-269	-272	-253
02	-219	-211	-212	-200	-176
03	-178	-138	-88	-45	-9
04	-47	-74	-118	-167	-221
05	-14	20	59	98	160
06	-14	20	28	32	31
07	-224	-278*07	-260	-196	-127
08	-142	-147	-150	-58	-162
09	-93	-96	-93	-94	-99
10	-103	-101	-109	-139	-162
11	-82	-47	-12	-80	-135
12	-51	2	52	69	21
13	-90	79	67	-57	-54
14	-73	-82	-90	-100	-116
15	-150	-140	-127	-127	-119
16	-112	-111	-28	50	74
17	-131	-139	-164	-184*17	-175
18	-110	65	32	13	-15
19	-23	-19	3	64	112
20	-11	-17	-15	-19	-28
21	178	204	211	187	156
22	-15	-34	-46	-47	-41
					-26

DATE	13-	9-1971	(DAY NO 256)
30	35	40	45
91	51	11	-33
-223	-231	-242	-251
-147	-168	-196	-216
43	28	-2	-54
-249	-222	-201	-165
247	193	104	41
6	6	-5	-24
-55	-85	-85	-116
-122	-102	-76	-74
-89	-86	-84	-87
-147	-116	-64	9
-161	-162	-156	-144
-108	-133	-139	-125
-66	-65	-59	-62
-107	-103	-107	-121
4	79	122	116
78	49	15	36
-72	39	111	155**47
150	149	-103	-83
-47	-23	121	82
100	75	31	85
-33	-41	-45	-47
4	119	119	113
84	119	106	132

HOURS	00	OCEAN SURVEY CRUISE LEG 3		
		CANTAT II IN GAMMAS	AFTER REMOVAL OF IGRE	MINUTES
NC MARCEL BAYARD MAGNETIC ANOMALY	00	05	10	15
001	107	132	131	114
002	-31	-33	-23	-21
003	115	99	81	67
004	151	113	2	111
005	185	153	129	129
006	-80	-99	-106	-99
007	111	-59	-85	-85
008	113	101	94	104
009	29	10	-9	-18
010	51	14	8*08	55
011	160	126	81	55
012	49	62	71	58
013	102	108	104	91
014	27	118	-53	-65
015	53	116	146	144
016	-28	-1	115	20
017	32	4	-33	-70
018				
019				
020				
021				
022				
023				

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS	AFTER REMOVAL OF TGR	MINUTES
00	05	10
00	71	63
01	89	75
02	134	108
03	146	139
04	69	154
05	48	66
06	-71	-55
07	62	113
08	91	72
09	94	87
10	78	87
11	34	33
12	39	46
13	-49	-78
14	59**58	-11*
15	116	168
16	-141	-134
17	17	-187
18	254	-127
19	-126	-130
20	-186	-178
21	95	-49
22	19	114
23	203	-90
		234

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS	AFTER REMOVAL OF TGR	MINUTES
00	05	10
00	71	63
01	89	75
02	134	105
03	146	72
04	69	94
05	48	92
06	-71	-66
07	62	-6
08	91	116
09	94	118
10	78	116
11	34	115
12	39	122
13	-49	123
14	59**58	124
15	116	125
16	-141	125
17	17	125
18	254	125
19	-126	125
20	-186	125
21	95	125
22	19	125
23	203	125
		125
		30
		25
		20
		15
		10
		5
		0

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS	AFTER REMOVAL OF TGR	MINUTES
00	05	10
00	99	170
01	-136	91
02	-64	-68
03	18	-3
04	-63	-119
05	-140	-148
06	-166	-153
07	112	141
08	106	106
09	-7	-48
10	126	104
11	62	60
12	-21	-50
13	-238	-20
14	25	25
15	9	1
16	51	23
17	6	6
18	53	35
19	20	-115
20	-106	-116
21	-120	-120
22	-101	-123
23	-94	-116
		-106
		-96
		-88
		-83
		-81
		-79
		-93
		35
		30
		25
		20
		15
		10
		5
		0

D16

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3
MAGNETIC ANOMALY IN GAMMAS AFTER REMOVAL OF TGRF

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	-88	-82	-80	-86	-98	-106	-110	-117	-121	-127	-128	-128

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1							DATE 13- 6-1971 (DAY NO 164)							
DEPTH IN CORRECTED FATHOMS	HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55
00	00													
01	334	334	334	336	336	305	326	340	342	334	342	342	342	334
02	344	359	394	427	454	483	528	559	580	585	580	568	562	562
03	564	568	568	568	564	905	613	675	758	758	758	782	782	782
04	944	1045	1052	1058	1074	1091	910	944	968	1006	1024	1045	1045	1045
05	1045	1096	1102	1096	1096	1094	1096	1096	1096	1096	1096	1096	1096	1096
06	112	113	114	112	112	112	112	112	112	112	112	112	112	112
07	114	115	116	117	116	1058	1058	1058	1058	1058	1058	1058	1058	1058
08	115	115	116	117	116	116	116	116	116	116	116	116	116	116
09	116	116	116	117	116	116	116	116	116	116	116	116	116	116
10	117	117	118	118	118	118	118	118	118	118	118	118	118	118
11	118	118	119	119	119	119	119	119	119	119	119	119	119	119
12	119	119	120	120	120	120	120	120	120	120	120	120	120	120
13	120	120	121	121	121	121	121	121	121	121	121	121	121	121
14	121	121	122	122	122	122	122	122	122	122	122	122	122	122
15	122	122	123	123	123	123	123	123	123	123	123	123	123	123
16	123	123	124	124	124	124	124	124	124	124	124	124	124	124
17	124	124	125	125	125	125	125	125	125	125	125	125	125	125
18	125	125	126	126	126	126	126	126	126	126	126	126	126	126
19	126	126	127	127	127	127	127	127	127	127	127	127	127	127
20	127	127	128	128	128	128	128	128	128	128	128	128	128	128
21	128	128	129	129	129	129	129	129	129	129	129	129	129	129
22	129	129	130	130	130	130	130	130	130	130	130	130	130	130
23	130	130	131	131	131	131	131	131	131	131	131	131	131	131
NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1							DATE 14- 6-1971 (DAY NO 165)							
DEPTH IN CORRECTED FATHOMS	HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55
00	00	1554	1588	1577	1612	1690	1690	1668	1668	1668	1668	1668	1668	1668
01	1668	1668	1668	1668	1668	1668	1668	1680	1680	1673	1673	1673	1690	1690
02	1714	1702	1702	1702	1702	1662	1662	1646	1714	1783	1919	1988	2046	2050
03	2079	2079	2079	2091	2102	2102	2102	2114	2126	2137	2148	2154	2171	2183
04	2171	2171	2171	2183	2194	2194	2194	2206	2217	2226	2264			
05														
06														
07														
08														
09														
10	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264
11	2287	2287	2287	2287	2287	2310	2310	2310	2310	2310	2310	2310	2310	2310
12	2391	2391	2403	2403	2403	2403	2403	2403	2403	2403	2414	2414	2449	2455
13	2438	2455	2455	2455	2455	2473	2473	2473	2473	2473	2478	2478	2495	2499
14	2499	2499	2499	2499	2499	2509	2509	2509	2509	2509	2518	2518	2542	2552
15	2552	2552	2552	2559	2559	2559	2559	2559	2559	2559	2565	2565	2571	2571
16	2622	2622	2629	2629	2629	2629	2629	2629	2629	2629	2617	2617	2640	2652
17	2652	2652	2652	2652	2652	2657	2657	2657	2657	2657	2657	2657	2657	2657
18	2657	2657	2657	2657	2657	2657	2657	2657	2657	2657	2657	2657	2657	2657
19	2657	2657	2657	2657	2657	2665	2665	2665	2665	2665	2682	2682	2682	2682
20	2657	2657	2669	2669	2669	2669	2669	2669	2669	2669	2483	2483	2414	2414
21	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2657	2657	2665	2665
22	2665	2665	2669	2669	2669	2669	2669	2669	2669	2669	2669	2669	2669	2669
23	2675	2675	2675	2675	2675	2675	2675	2675	2675	2675	2593	2593	2571	2571

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NC MARCEL BAYARD DEPTH [IN CORRECTED FATHOMS]	CANTAT II	OCEAN SURVEY	CRUISE LEG 1	MINUTE 20
HOURS	00	05	10	15
00	258.6	258.6	258.6	253.5
01	221.1	219.4	218.7	217.0
02	219.7	217.4	220.5	220.5
03	227.4	229.8	232.0	233.3
04	229.8	233.3	235.5	237.7
05	248.2	249.5	250.6	249.5
06	215.9	214.7	214.2	205.5
07	215.9	214.7	214.7	215.9
08	207.8	210.1	210.7	212.5
09	219.9	219.9	219.4	225.6
10	224.0	221.0	221.7	221.7
11	217.0	214.7	214.7	214.7
12	219.4*	58	222.9	222.9
13	233.8	233.3	233.3	233.3
14	233.3	233.3	233.3	233.3
15	236.1	236.1	235.5	235.5
16	234.3	235.5	235.5	235.5
17	235.5	235.5	235.5	235.5
18	228.6	228.6	228.6	228.6

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 1	MINUTE 20	
DEPTH IN CORRECTED FATHOMS				
HOURS	00	05	10	15
00	22221	2192	2146	2192
01	2203	2216	2227	2227
02	2054	2076	2123	2112
03	2123	2112	2134	2123
04	2216	2227	2238	2238
05	2007	2054	1985	1961
06	1870			
07	1841	1841	1841	1848
08	2042	2042	2014	1956
09	1987	1987	1993	1742
10	1913	1913	1913	1924
11	1919	1919	1907	1889
12	1919	1907	1733	1435
13	1792	1798	1684	*17
14	1639	1650	1684	1639
15	1356			*22
16	1326			
17	1423	1480	*03	1322
18	1288	1469	1423	*09
19	1901	1879	1593	*07
20	1627	1593	1366	*12
21	1242	1062	1491	1254
22	1214	1293	1113	*22
23	1564	1435	1174	1370

	DATE	16-	6-1971	(DAY	NO	167)
3.0	35	40	45	50	55	
2203	2168	2262	2250	2203	2227	
2203	2227	2089	2007	1961	2030	
2112	2146	2146	2146	2146	2134	
2076	2123	2146	2158	2152	2203	
2226	2175	2192	2192	2123	2076	
1961	1917	1892	1882	1848**49	1870	
					1870	
2054	2048	2007	1996	1961	1917	*53
1961	1968	1956	1913	1845	1930	
1855	1935	1935	1930	1924	1895	
1941	1930	1924	1958	1953	1935	
1845	1798	1639**38	1674	1639	1502	
1708	1684	1730	1742	1742	1679**57	
1661	1570	1412	1299	1333	1384	
1322			1322		1384	
1322		1333	1344	1366	1526**57	
1526**32		1593	1502	1599	1570	
1526		1344	1106**42	1457**43	1526	
2085		1935	1899	1901	1901	
1231		1051**37	1140	1378	1389**48	
1254**28		1084**36	1174	1164	1067**48	
1843		1480**36	1310	1537	1423	
1845		1616**34	1776	1798	1866**48	

NC MARCEL BAYARD CANTAT¹¹
DEPTH IN CORRECTED FATHOMS

	00	05	10	15	20	25	30	35	40	45	50	55
00	1844 1690	1491 1615	1707*08 1593	1639*17 1610	1627*22 1570	1661 1667	1639 1656*28	1741 1707	1844 1810	1844 1820	1827 1844	1775 1866
01	1901 1935	1901 1820*03	1935 1411*07	1889 1581	1935 1570	1957 1844	1952 1537	1957 1854	1964 1878	1974 1751	1974 1759	1952 1751
02												
03	1615	1411*07	1581	1570	1575	1981	1981	1957	2038	2072	2078	1969
04	1974	1981	1981	1981	1981	1981	1981	1947	1930	1930	2004	1717
05	1615	1730*07	1798	1798	1798	1981	1981	1947	1938	2072	2078	2004
06	2020	2027	2027	2027	2038	2038	2038	1930*28	1981	2004	2004	2009
07	1930	1901*03	1981	1981	1987	1987	1987	1909*24	1981	2009	2009	2009
08	2211	2136*06	2164	2096	2089	2089	2089	2038	2096	2027*38	2027	2164
09	2016	2084	2084	2096	2055	2055	2055	1935*16	1999	2067*41	2067	2164
10	2061	2078						2061	1999	1957	1957	1957
11								2072	2118	2055	2055	2055
12								2072	2112	2084	2084	2084
13								2072	2089			
14												
15	2107 2096	2084 2084	2061 2020	2078 2020	2107 2132	2004 2164	1969 2210	2096 2141	2107 2078	2096 2078	2096 2078	2118 2102
16								2049 2130	2118 2130	2096 2072	2096 2072	2096 2072
17								2118 2130	2118 2130	2096 2072	2096 2072	2096 2072
18	1935	1901*03	1883	1923	1923	1949	1949	1904	1904	1904	1904	1904
19								2118 2130	2118 2130	2096 2072	2096 2072	2096 2072
20	1730	1605*03	1981	1957	1957	1889	1889	1901	1901	1904	1904	1904
21	1964	1969	1969	1969	1969	1889	1889	1775	1775	1820	1820	1820
22	1901	2004	2061	2061	2061	1889	1889	1730	1730	1820	1820	1820
23	1935	1889	1923	1923	1923	1889	1889	1866	1866	1866	1866	1866

OCEAN SURVEY CRUISE LEG 1

	00	05	10	15	20	25	30	35	40	45	50	55
00	1900 1889 1900 1889 1920 1889 1934 1911 1581*12	1865 1889 1660 1298 1231 1287 1434 1524 1524 1479 1084 1615 1638 1621*01	1831 1836 1934 1434 1303 1513 1808 1547 1547 1808 1230*22 1615 1728 1764 1740	1865 1854 1957 1957 1626 1213*28 1581 1706 1706 2037 1230*22 1535 1553 1502*37	1900 1843 1934 1934 1649 1224*42 1706 2083 2083 2014 1162 1377 1451*37	1911 1751 1923 1923 1287 1695 1649 2014 2014 1100 1512 1388 1400	1911 1934 1923 1923 1010 1167*51 1287 1649 1649 1843*44 927 1300*52 1529 1529	1911 1934 1923 1923 1219 1253 1638*57 2003 2003 1934 927 1300*52 1615 1615				
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OCEAN SURVEY CRUISE LEG 1

	00	05	10	15	20	25	30	35	40	45	50	55
00	1900 1889 1900 1889 1920 1889 1934 1911 1581*12	1865 1889 1660 1298 1231 1287 1434 1524 1524 1479 1084 1615 1638 1621*01	1831 1836 1934 1934 1626 1213*28 1547 1581 1581 2037 1230*22 1535 1553 1502*37	1865 1854 1957 1957 1626 1224*42 1706 2083 2083 2014 1162 1377 1451*37	1900 1843 1934 1934 1287 1695 1649 2014 2014 1100 1512 1388 1400	1911 1751 1923 1923 1219 1253 1638*57 2003 2003 1934 927 1300*52 1615 1615						
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D 20

DATE 17- 6-1971 (DAY NO 168)

DATE 18- 6-1971 (DAY NO 169)

NC MARCEL BAYARD CANTAT¹¹ OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED FATHOMS

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	1716	1592	1592*12	1546	1456	1376*23	1478	1648	1643	1643	1580	
01	1614	1660	1672	1706	1683	1750	1774	1785	1831	1831	1785	
02	1911	1921	1921	1934	1853	1660*24	1626	1888	1900	1888	1877*48	1900
03	1911	1921	1921	1888	1888	1843	1900	1911	1938	1888	1877*48	1904
04	2024	2008	1968	1877	1877	1900	1946	1865	1865	1750*47	1797	1865
05	1990	2024	2014	2014	1877	1853	1996	1956	1927	1888	1888	1911
06	1934	1917	1917	1877	1888	1853	1980	1797*32	1797	1831	1831	1843
07	1877	1877	1877	1888	1888	1831	1648	1695	1750	1750	1750	1911
08	1877	1877	1877	1888	1888	1831	1683	1768	1750	1750	1750	1911
09	1911	1917	1917	1905	1877	1865	1843	1797	1797	1819*47	1819*47	1911
10	1558*58	1535	1502	1400*13	1785	1797	1797	1785	1763	1604	1468	1502
11	1400	1400	1400	1400*13	1785	1797	1797	1785	1763	1604	1468	1502
12	2255	12128*03	1592	1400*13	1763	1808	1735*22	1735	1750	2255	2243	2335
13	1512	1677	1677	1797	1797	1797	1797	1797	1797	1750	1750	1762
14	1819	1843	1843	1843	1808	1808	1808	1808	1808	1808	1808	1831
15	1648	1444	1444	1444	1742	1434	1400	1586	1654	1660	1672*43	1638
16	1660	1683	1683	1683	1740	1756	1756	1695	1695	1695	1695	1706*57
17	1843	1888	1888	1888	1900	1905	1905	1888	1934	1911	1900	1865
18	1980	1956	1956	1956	1968	1956	1934	1990	1990	1946	1968	1980
19	2024	2048	2048	2048	2048	2048	2048	2048	2048	2024	2024	2024
20	1968*58	2059	2059	2059	1980	2048	2048	2048	2048	2048	2048	2003
21	2072	2059	2059	2059	2152	1951	1951	1695	2072	2072	1968	1927*53
22	2290	2290	2290	2300	2312	2277	2277	2243	2140	1946	1831*47	2083
23												2163

DATE 19- 6-1971 (DAY NO 170)

DATE D 21

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	2189	2212	2189	2166	2155	2131	2155	2224	2224	2224	2235	2247
01	2252	2252	2235	2244	2143	2166	2166	2166	2166	2143	2097	
02	2097	2120	2120	2166	2166	2172	2172	2189	2201	2120	2052	2075
03	2120	2120	2120	2075	2057	2005	1914	1868	1754	1640	1720	1775
04	1481*01	1640	1640	1890	1891	1914	1902	1868	1822	1822	1766	1891
05	2028	2022	2005	1948	1948	2052	2057	2057	2028	1914	1933	1967
06	1979	1956	1956	1762*17	1819	1910	1933	1979	1967	1773	1727	1750
07	1614*58	1780	1780	1842	1842	1785	1637	1421	1319	1207	1162*48	1342
08	1353	1376	1376	1315	1478	1523	1580	1580	1898	1990	1956	1967
09	1888	1979	1979	1888	1882	1773*24	1842	1910	1910	1933	1910	1910
10	1915	1910	1910	1705	1410*22	1523	1614*33	1580	1580	1659	1603	1603
11	1569	1693	1683	1683	1444	1400	1716	1716	1319	1434	1468	1387*57
12	1625	1591	1410	1400*14	1637*22	1648	1603	1603	1218*38	1434	1473	
13	1460	1049	752	921	864	680	624	624	1230*42	1167	982*49	1460*54
14	2197	2197	2197	2186	1933	2082	2059	2082	1888	1888	1705	1603
15	1534	1580	1603	1546	1546	1569	1569	1569	1512*37	1548	1580	1591
16	1569	1580	1546	1218*13	1342*22	1393	1387	1387	1257*42	1319	1371*53	
17	1478	1450	1484	1484	1489	1455	1557	1557	1365	1400	1400	1444
18	1400	1303*03	1478	1478	1489	1523	1739	1739	1830	1819	1819	1693*57
19	1840	1773	1876	1956	1967	1956	1956	1956	1979	1979	1979	1625
20	1591	1569*03	1689	1865	1888	1865	1865	1898	1807	1876	1876	1915
21	1625*01	1865	1853	1739	1739	1597*23	1597*23	1597*23	1750	1898	1898	1898
22	1842*02	1865	1842	1842	1842	1842	1796	1693	1478*33	1546	1546	1308
23	1534	1230*07	1274*11	1223*17	1184*22	1286	1286	1286	1230*29	1173	1173	971

DATE 20- 6-1971 (DAY NO 171)

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	2189	2212	2189	2166	2155	2131	2155	2224	2224	2224	2235	2247
01	2252	2252	2235	2244	2143	2166	2166	2166	2166	2143	2097	
02	2097	2120	2120	2166	2166	2172	2172	2189	2201	2120	2052	2075
03	2120	2120	2120	2075	2057	2005	1914	1868	1754	1640	1720	1775
04	1481*01	1640	1640	1890	1891	1914	1902	1868	1822	1822	1766	1891
05	2028	2022	2005	1948	1948	2052	2057	2057	2028	1914	1933	1967
06	1979	1956	1956	1762*17	1819	1910	1933	1979	1967	1773	1727	1750
07	1614*58	1780	1780	1842	1842	1785	1637	1421	1319	1207	1162*48	1342
08	1353	1376	1376	1315	1478	1523	1580	1580	1898	1990	1956	1967
09	1888	1979	1979	1888	1882	1773*24	1842	1910	1910	1933	1910	1910
10	1915	1910	1910	1705	1410*22	1400	1716	1716	1319	1434	1468	1387*57
11	1569	1693	1683	1683	1444	1489	1455	1557	1365	1400	1400	1444
12	1625	1591	1410	1400*14	1637*22	1648	1603	1603	1830	1819	1819	1693*57
13	1460	1049	752	921	864	680	624	624	1230*42	1167	982*49	1460*54
14	2197	2197	2197	2186	2186	1933	2082	2082	1888	1888	1705	1603
15	1534	1580	1603	1546	1546	1569	1569	1569	1512*37	1548	1580	1591
16	1569	1580	1546	1218*13	1342*22	1393	1387	1387	1257*42	1319	1371*53	
17	1478	1450	1484	1484	1489	1455	1557	1557	1365	1400	1400	1444
18	1400	1303*03	1478	1478	1489	1434*18	1523	1739	1739	1830	1819	
19	1840	1773	1876	1956	1967	1956	1956	1956	1979	1979	1979	1625
20	1591	1569*03	1689	1865	1888	1865	1865	1865	1898	1807	1876	1915
21	1625*01	1865	1853	1739	1739	1597*23	1597*23	1597*23	1750	1898	1898	1898
22	1842*02	1865	1842	1842	1842	1842	1842	1842	1230*29	1173	1173	971
23	1534	1230*07	1274*11	1223*17	1184*22	1286	1286	1286	1230*29	1173	1173	971

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1 DEPTH IN CORRECTED FATHOMS										NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1 DEPTH IN CORRECTED FATHOMS									
HOURS	00	05	10	15	20	25	30	35	40	45	50	00	05	10	15	20	25	30	35
00	1083	1021*04	858*17	1112*21	1054*27	1049*32	1049*36	993*42	1021	1049	1010	1083	1021	943*07	943*07	1021	1049	1083	1049
01	1094*58	943*07	1027	1060	1184*18	1331	1449	1386	1761	1767	1705	1876*46	1876*46	1876*46	1876*46	1876*46	1876*46	1876*46	1876*46
02	1262	2092	2058	1886	1761	1773	1782	1791	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797
03	1658	1671	1681	1371	1184*18	1353	1438*28	1523*32	1341*37	1433	1331*46	1409	1421	1421	1421	1421	1421	1421	1421
04	1438	1375	1517	1591	1421*22	1375*27	1523*32	1477*33	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637	1637
05	1433	1534	1613	1658	1658	1569	1681	1681	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671	1671
06	1477*58	1692	1681	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692
07	1433	1364*07	1569	1795	1897	1897	1897	1897	1910	1910	1910	1910	1910	1910	1910	1910	1910	1910	1910
08	1795	1852	1876	1876	1897	1897	1897	1897	1897	1897	1897	1897	1897	1897	1897	1897	1897	1897	1897
09	1829	1813	1798	1798	1685	1685	1685	1685	1787	1787	1787	1787	1787	1787	1787	1787	1787	1787	1787
10	1948	1821	1719	1719	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
11	1798	1879	1930	1930	1959*12	1970	1984	2001	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989
12	2052	1773	1773	1773	1773	1784*21	1807	1784*28	1852	1852	1852	1852	1852	1852	1852	1852	1852	1852	1852
13	1773	1773	1773	1773	1784	1984	2035	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
14	1979	1955	1966	1966	1966	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15	1966	2001	2018	2018	1955	1932	1892	1892	1892	1892	1892	1892	1892	1892	1892	1892	1892	1892	1892
16	1966	1801	1801	1801	1795	1790	1773	1726	1557	1557	1557	1557	1557	1557	1557	1557	1557	1557	1557
17	1801	1083	926*06	1078	1078	1302	1421	1421	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705	1705
18	1083	1523	1523	1466	1466	1399*13	1489	1489	1511*27	1511*32	1511*32	1511*32	1511*32	1511*32	1511*32	1511*32	1511*32	1511*32	1511*32
19	1624	1133*07	1303	1303	1303	1303	1303	1303	1353*18	1409*33	1409*33	1409*33	1409*33	1409*33	1409*33	1409*33	1409*33	1409*33	1409*33
20	1660*58	2104	2104	2104	1637	1637	1657	1657	1591	1455	1523	1523	1523	1523	1523	1523	1523	1523	1523
21	2104	1569	1637	1637	1637	1637	1637	1637	1657	1773	1331*27	1624	1624	1624	1624	1624	1624	1624	1624
22	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1 DEPTH IN CORRECTED FATHOMS										NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1 DEPTH IN CORRECTED FATHOMS									
HOURS	00	05	10	15	20	25	30	35	40	45	50	00	05	10	15	20	25	30	35
00	1379	1556*07	1527*11	1545	1602	1704	1738*32	1681	1386*42	1477	1477	1590	1590	1590	1590	1590	1590	1590	1590
01	1533	1954	1954	1944	1692	1829	1885	1885	1897	1624	1624	1761	1761	1761	1761	1761	1761	1761	1761
02	1954	1670	1522	1500	1795*22	1772	1812	1812	1812	1602	1602	1726	1726	1726	1726	1726	1726	1726	1726
03	1784	1978	1961	1954	1954	1954	1870	1870	1870	1692	1692	1726	1726	1726	1726	1726	1726	1726	1726
04	1488	1533	1433*08	1602*17	1602*17	1670	1750	1750	1750	1602*31	1602*31	1750	1750	1750	1750	1750	1750	1750	1750
05	1750	1772	1624*11	1738	1806	1806	1806	1806	1806	1675	1675	1750	1750	1750	1750	1750	1750	1750	1750
06	1602*58	1488	1307	1280*14	1280*14	1280*14	1280*14	1280*14	1280*14	1054	1054	920*33	920*33	920*33	920*33	920*33	920*33	920*33	920*33
07	1062	1386	1386	1251*16	1251*16	1251*16	1251*16	1251*16	1422	1422	1850	1850	1850	1850	1850	1850	1850	1850	1850
08	1784	1726	1726	1795	1909	1909	1909	1909	1909	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
09	2057	2086	2086	2047	2047	2047	2047	2047	1978	1015*	1015*	1213	1213	1213	1213	1213	1213	1213	1213
10	1635	1590	1658	1488	1488	1318*22	1341	1533	1726	1726	1726	1726	1726	1726	1726	1726	1726	1726	1726
11	1816	1829	1816	1681	1681	1738	1750	1750	1750	1511	1511	1456	1456	1456	1456	1456	1456	1456	1456
12	1816	1806	1806	1681	1681	1738	1681	1681	1681	1533	1533	1399*36	1399*36	1399*36	1399*36	1399*36	1399*36	1399*36	1399*36
13	1704	1704	1704	1670	1670	1500	1568	1568	1568	1488	1488	1352	1352	1352	1352	1352	1352	1352	1352
14	1784	1772	1772	1734	1734	1670	1590	1590	1590	1409	1409	1602	1602	1602	1602	1602	1602	1602	1602
15	1851	1851	1851	1841	1841	1806	1454	1454	1454	1511	1511	1435	1435	1435	1435	1435	1435	1435	1435
16	1772	1761	1761	1680	1680	1454	1454	1454	1454	1386	1386	1285	1285	1285	1285	1285	1285	1285	1285
17	1835	1875	1875	1875	1875	1875	1875	1875	1875	1875	1875	1868	1868	1868	1868	1868	1868	1868	1868
18	1772	1772	1772	1692	1692	1816	1816	1816	1816	1863	1863	1868	1868	1868	1868	1868	1868	1868	1868
19	1500	1420	1420	1386	1386	1897	1897	1897	1897	1909	1909	1795	1795	1795	1795	1795	1795	1795	1795
20	1875	1875	1875	1885	1885	1542	1542	1542	1542	1643	1643	1725	1725	1725	1725	1725	1725	1725	1725
21	1885	1624	1624	1500	1500	1341	1341	1341	1341	1541	1541	1750	1750	1750	1750	1750	1750	1750	1750
22	1635	1635	1635	1624	1624	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
23	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750

D 22

DATE E 21- 6-1971 (DAY NO 172)										DATE E 22- 6-1971 (DAY NO 173)									
HOURS	00	05	10	15	20	25	30	35	40	45	50	00	05	10	15	20	25	30</th	

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DATE E 23- 6-1971 (DAY NO 174)

DEPTH IN CORRECTED FATHOMS	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
1977	00	1977	2023	2206	2228	2228	2183	2183	2137	2126	2046	2091	
2079	01	2114	2102	2079	1862	1862	1760	1675	1507	1409*47	1518	1590	
1635*58	02	1611	1578	1714	1386*21	1386	1398	1533	1568	1544*47	1384	1783	
1568	03	1841	1828	1794	1816	1680	1568	1573	1584	1488*44	1602	1726	
1704	04	1726	1794	1806	1806	1794	1828	1841	1862	1602	1602	1670	
1909	05	1902	1760	1880	1884	1884	1760	1760	1670	1341	1891	1909	
1875	06	1880	1880	1714	1851	1841	1822	1816	1670	1341	1841	1841	
1738	07	1624*06	1704	1704	1772	1772	1828	1875	1909	1691	1568*46	1714	1772
2000	09	2000	2000	2011	2023	2023	2023	2023	2023	2023	2023	2000	
2005	10	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2000	
1830	11	1902	1920	1920	1920	1920	1914	1914	1914	1914	1914	1931	
1885	12	1926*11	1943	1943	1812	1828	1698*23	1875	1862	1862	1816	1772	
1954	13	1943	1943	1772*17	1772	1828	1698*23	1816	1828	1454	1522*48	1517	
1409	14	1423	1423	1544	1544	1604	1522*27	1556	1556	1454	1352*47	1375	
1425	15	1476*06	1451*12	1346	1201*18	1459	1459*	1532	1463	1285*36	1602	1551*57	
1499	16	1680	1680	1533	1510*18	1510	1510	1467	1467	1285*34	1398	1558	
1977*07	17	1977	1760*11	1791	2046	2046	2046	2046	2069	2069	1535	1611	
1812	18	1386*03	1488	1488	1488	1488	1590	1544	2149*37	1931	1931	1827	
1488	19	1533	1602	1602	1602	1602	1590	1590	1590	1432*42	1590	1675	
1680	20	1658*03	1686	1686	1686	1686	1658	1658	1658	1479*42	1432	1364*57	
1738*03	21	1760	1760	1783	1783	1783	1783	1783	1783	1663	1760	1749	
1772	22	1782	1782	1896	1896	1896	1896	1896	1896	1880	1735	1841	
1896	23	1896	1896	1920	1920	1920	1920	1920	1920	1841*37	1885	1926	

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DATE D 23- 6-1971 (DAY NO 174)

DEPTH IN CORRECTED FATHOMS	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
1930	00	1874	1713	1635*13	1646	1810	1810	1816	1794	1680*47	1816	1828	
1933	01	1999	1968	1968	1956	1956	1968	1968	1968	1763	1763	1853	
2025	02	1929	2042	2049	1843	1933	1819	1888	1929	1985	2025	2025	
1843	03	2049	2025	2025	1905	1905	1946	1951	1951	1843*43	1853	1899	
2193	04	2193	2221	2221	2007	2113	2113	2163	2163	2244	2244	2244	
2232	05	2232	2140	2140	2186	2186	2129	2129	2106	2094	2071	2129	
2140	06	2071	2066	2117	2117	2071	2071	2071	2071	2049	2037	2049	
2014	07	2037	2037	2071	2071	2083	2106	2117	2129	2123	2083	2071	
2198	08	2175	2175	2175	2175	2198	2198	2209	2209	2152	2158	2163	
2168	09	2285	2285	2250*22	2250	2285	2285	2285	2285	2226	2199	2279	
2168	10	2038	2125	2141	2141	2187	2187	2187	2187	2141	2141	2118	
2130	11	2210	2210	2233	2193	2193	2193	2193	2193	2193	2193	2199	
2245	12	2250	2250	2309	2309	2309	2309	2309	2309	2309	2309	2256	
1924	13	2004	2072	2107	2112	2112	2112	2112	2112	2141	2141	2141	
2118	14	2118	2153	2187	2222	2222	2222	2222	2222	2268	2279	2279	
2256	15	2256	2222	2268	2349	2349	2349	2349	2349	2360	2360	2360	
2164	16	2164	2130	2095	2095	2095	2095	2095	2095	2072	2072	2118	
2279	17	2279	2291	2268	2256	2256	2256	2256	2256	2153	2153	2153	
2268	18	2268	2262	2256	2256	2256	2256	2256	2256	2057	2057	2057	
2164	19	2164	2141	2141	2141	2141	2141	2141	2141	2141	2141	2141	
2112	20	2112	2112	2112	2112	2112	2112	2112	2112	2112	2112	2112	
2210	21	2210	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	
2118	22	2118	2118	2118	2118	2118	2118	2118	2118	2118	2118	2118	
2210	23	2210	2118	2118	2118	2118	2118	2118	2118	2118	2118	2118	

DATE D 23- 6-1971 (DAY NO 174)

DEPTH IN CORRECTED FATHOMS	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
1930	00	1874	1713	1635*13	1646	1810	1810	1816	1794	1680*47	1816	1828	
1933	01	1999	1968	1968	1956	1956	1968	1968	1968	1763	1763	1861	
2025	02	1929	2042	2049	1843	1843	1888	1888	1929	1985	2025	2025	
1843	03	2049	2025	2025	1905	1905	1946	1946	1951	1843*43	1853	1899	
2193	04	2193	2221	2221	2007	2007	2113	2113	2163	2244	2244	2244	
2232	05	2232	2140	2140	2071	2071	2106	2106	2106	2094	2094	2094	
2140	06	2059	2071	2071	2071	2071	2117	2117	2117	2129	2129	2129	
2014	07	2037	2037	2071	2071	2083	2106	2106	2106	2140	2140	2140	
2198	08	2175	2175	2175	2175	2198	2198	2209	2209	2209	2152	2152	2198
2285	09	2285	2285	2250*22	2250	2285	2285	2285	2285	2226	2226	2226	
2168	10	2130	2038	2125	2141	2187	2187	2187	2187	2141	2141	2141	
2210	11	2210	2210	2233	2309	2309	2309	2309	2309	2309	2309	2309	
2245	12	2245	2250	2307	2107	2112	2112	2112	2112	2141	2141	2141	
1924	13	1924	2004	2072	2072	2187	2187	2187	2187	2245	2245	2245	
2118	14	2118	2118	2153	2222	2222	2222	2222	2222	2268	2268	2268	
2256	15	2256	2222	2222	2268	2349	2349	2349	2349	2349	2349	2349	
2164	16	2164	2130	2095	2095	2095	2095	2095	2095	2072	2072	2072	
2279	17	2279	2291	2268	2256	2210	2210	2210	2210	2141	2141	2141	
2268	18	2268	2262	2256	2256	2256	2256	2256	2256	2072	2072	2072	
2112	19	2112	2112	2112	2112	2112	2112	2112	2112	2141	2141	2141	
2210	20	2210	2026	2026	2026	2026	2026	2026	2026	2057	2057	2057	
2118	21	2118	2118	2118	2118	2118	2118	2118	2118	2061	2061	2061	
2262	22	2262	2262	2256	2256	2256	2256	2256	2256	2072	2072	2072	
2112	23	2112	2112	2112	2112	2112	2112	2112	2112	2141	2141	2141	

DATE D 23- 6-1971 (DAY NO 174)

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DEPTH IN CORRECTED FATHOMS

HOURS	00	05	10	15	20	25	30
00	2163	2174	2187	2140	2129	2107	2279
01	2526*02	2521	2532	2532	2532	2532	2371
02	2463	2498	2486	2474	2457	2387	2508
03	2336	2324	2359	2313	2301	2222	2382
04	2256	2279	2266	2256	2256	2301	2399
05	2433	2446	2433	2417	2394	2578	2624
06	2624	2624	2631	2631	2637	2532	2624
07	2624	2672	2671	2672	2672	2637	2648
08	2648	2613*07	2637	2642	2666	2654	2648
09	2659	2659	2654	2654	2659	2648	2648
10	2659	2659	2654	2654	2659	2654	2654
11	2659	2654	2654	2654	2648	2648	2648
12	2654	2648	2642	2648	2642	2648	2637
13	2631	2624	2624	2624	2613	2613	2613
14	2602	2596	2596	2596	2602	2591	2578
15	2578	2543	2543	2543	2532	2521	2516
16	2508	2521	2521	2532	2521	2503	2492
17	2486	2486	2486	2468	2463	2451	2433
18	2428	2428	2428	2405	2399	2382	2371
19	2376	2365	2365	2347	2336	2301	2291
20	2279	2279	2279	2279	2273	2232	2215
21	2209	2174	2174	2187	2174	2163	2129
22	2107	2094	2094	2094	2094	2060	2004
23	1786	1764	1764	1742	1742	1708	1695

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DEPTH IN CORRECTED FATHOMS

HOURS	00	05	10	15	20	25	30
00	1651	1661	1656	1610	1593	1570	1537
01	1480	1480	1457	1457	1457	1435	1412
02	1339	1378	1368	1373	1373	1368	1345
03	1328	1323	1316	1316	1310	1289	1271
04	1243	1243	1232	1232	1226	1216	1266
05	1153	1165	1176	1176	1188	1199	1199
06	1176	1165	1165	1165	11204	11204	1170
07	1052	1024	1007	1007	1159	1148	1148
08	817	632	633	579	957	924	879
09	341	282	262	248	545	520	487

DATE 25- 6-1971 (DAY NO 176)

HOURS	00	05	10	15	20	25	30
00	2107	2107	2107	2107	2107	2107	2107
01	2532	2532	2532	2532	2532	2532	2532
02	2387	2387	2387	2387	2387	2387	2387
03	2222	2222	2222	2222	2222	2222	2222
04	2301	2301	2301	2301	2301	2301	2301
05	2352	2352	2352	2352	2352	2352	2352
06	2347	2347	2347	2347	2347	2347	2347
07	2202	2202	2202	2202	2202	2202	2202
08	2251	2251	2251	2251	2251	2251	2251
09	2256	2256	2256	2256	2256	2256	2256
10	2251	2251	2251	2251	2251	2251	2251
11	2249	2249	2249	2249	2249	2249	2249
12	2243	2243	2243	2243	2243	2243	2243
13	2238	2238	2238	2238	2238	2238	2238
14	2233	2233	2233	2233	2233	2233	2233
15	2228	2228	2228	2228	2228	2228	2228
16	2223	2223	2223	2223	2223	2223	2223
17	2218	2218	2218	2218	2218	2218	2218
18	2213	2213	2213	2213	2213	2213	2213
19	2208	2208	2208	2208	2208	2208	2208
20	2203	2203	2203	2203	2203	2203	2203
21	2198	2198	2198	2198	2198	2198	2198
22	2193	2193	2193	2193	2193	2193	2193
23	2188	2188	2188	2188	2188	2188	2188

DATE 26- 6-1971 (DAY NO 177)

HOURS	00	05	10	15	20	25	30
00	1548	1548	1548	1548	1548	1548	1548
01	1537	1537	1537	1537	1537	1537	1537
02	1526	1526	1526	1526	1526	1526	1526
03	1512	1512	1512	1512	1512	1512	1512
04	1504	1504	1504	1504	1504	1504	1504
05	1491	1491	1491	1491	1491	1491	1491
06	1401	1401	1401	1401	1401	1401	1401
07	1334	1334	1334	1334	1334	1334	1334
08	1345	1345	1345	1345	1345	1345	1345
09	1351	1351	1351	1351	1351	1351	1351
10	1260	1260	1260	1260	1260	1260	1260
11	1249	1249	1249	1249	1249	1249	1249
12	1245	1245	1245	1245	1245	1245	1245
13	1271	1271	1271	1271	1271	1271	1271
14	1266	1266	1266	1266	1266	1266	1266
15	1266	1266	1266	1266	1266	1266	1266
16	1266	1266	1266	1266	1266	1266	1266
17	1266	1266	1266	1266	1266	1266	1266
18	1266	1266	1266	1266	1266	1266	1266
19	1266	1266	1266	1266	1266	1266	1266
20	1266	1266	1266	1266	1266	1266	1266
21	1266	1266	1266	1266	1266	1266	1266
22	1266	1266	1266	1266	1266	1266	1266
23	1266	1266	1266	1266	1266	1266	1266

DATE 26- 6-1971 (DAY NO 177)

HOURS	00	05	10	15	20	25	30
00	1548	1548	1548	1548	1548	1548	1548
01	1537	1537	1537	1537	1537	1537	1537
02	1526	1526	1526	1526	1526	1526	1526
03	1512	1512	1512	1512	1512	1512	1512
04	1504	1504	1504	1504	1504	1504	1504
05	1491	1491	1491	1491	1491	1491	1491
06	1401	1401	1401	1401	1401	1401	1401
07	1334	1334	1334	1334	1334	1334	1334
08	1345	1345	1345	1345	1345	1345	1345
09	1351	1351	1351	1351	1351	1351	1351
10	1260	1260	1260	1260	1260	1260	1260
11	1249	1249	1249	1249	1249	1249	1249
12	1245	1245	1245	1245	1245	1245	1245
13	1271	1271	1271	1271	1271	1271	1271
14	1266	1266	1266	1266	1266	1266	1266
15	1266	1266	1266	1266	1266	1266	1266
16	1266	1266	1266	1266	1266	1266	1266
17	1266	1266	1266	1266	1266	1266	1266
18	1266	1266	1266	1266	1266	1266	1266
19	1266	1266	1266	1266	1266	1266	1266
20	1266	1266	1266	1266	1266	1266	1266
21	1266	1266	1266	1266	1266	1266	1266
22	1266	1266	1266	1266	1266	1266	1266
23	1266	1266	1266	1266	1266	1266	1266

DATE 26- 6-1971 (DAY NO 177)

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2

DEPTH IN CORRECTED FATHOMS	00	05	10	15	20	25	30	35	40	45	50	55
00												
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11	918	881	862	984*17	493	521	554	579	605	641	697	764
12												
13												
14												
15	1097	1097	1106	1108	1110	1047	1047	1056	1067	1077	1087	
16	1185	1185	1180	1170	1149	1147	1149	1139	1149	1170	1180	
17	1185	1190	1211	1229	1231	1252	1252	1257	1271	1283	1298	
18	1303	1312	1314	1319	1324	1334	1345	1355	1360	1365	1365	
19	1376	1386	1391	1401	1412	1432	1440	1453	1463	1473	1479	
20	1505	1521	1530	1551	1598	1607	1644	1660	1675	1680	1686	
21	1684	1634	1644	1624*13	1666	1707	1744	1895	2041	2061	2066	
22	2072	2082	2101	2108	2103	2134	2146	2155	2166	2177	2188	
23	2193	2188	2207	2219	2224	2234	2240	2260	2271	2282	2282	

DATE 25- 8-1971 (DAY NO 237)

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00												
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
13												
14												
15	2586	2586	2597	2586	2511*13	2544*18	2555	2544	2586	2586	2597	2575
16	2597	2586	2523	2207	2196	2460	2460	2438	2417	2396	2375	
17	2291	2228	2207	2160	2185	2196	2196	2165	2143	2133	2123	
18	2123	2139	2148	2207	2239	2254	2254	2202	2217	2217	2223	
19	2117	2196	2207	2228	2332	2344	2344	2259	2280	2306	2312	
20	2322	2322	2327	2332	2364	2396	2396	2317	2312	2306	2259	
21	2291	2322	2349	2351	2501	2511	2511	2460	2438	2470	2486	
22	2486	2486	2491	2501	2511	2511	2511	2492	2511	2481	2438	
23	2359	2344	2270	2270	2270	2270	2270	2143	2143	2060	2071	

DATE 26- 8-1971 (DAY NO 238)

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00												
01	2291	2291	2312	2332	2396	2407	2412	2344	2344	2353	2353	
02	2364	2375	2386	2396	2407	2481	2481	2481	2481	2428	2428	
03	2438	2454	2460	2470	2523	2523	2523	2528	2492	2492	2492	
04	2501	2501	2511	2523	2560	2560	2563	2571	2544	2544	2549	
05	2560	2560	2613	2613	2613	2613	2613	2624	2581	2581	2602	
06	2606	2606	2650	2650	2650	2650	2650	2655	2655	2655	2634	
07	2655	2655	2672	2672	2661	2661	2661	2672	2672	2672	2672	
08	2672	2661	2661	2650	2650	2650	2650	2661	2650	2650	2666	
09	2661	2661	2666	2666	2661	2661	2661	2661	2661	2661	2661	
10	2650	2492*07	2533	2523	2544	2630	2630	2672	2672	2672	2672	
11	2651	2661	2661	2661	2661	2661	2661	2661	2661	2661	2661	
12	2661	2672	2661	2661	2672	2661	2661	2672	2672	2672	2672	
13	2650	2639	2639	2639	2639	2639	2639	2661	2661	2661	2661	
14	2586	2586	2597	2511*13	2460	2460	2460	2438	2417	2396	2375	
15	2597	2586	2523	2207	2196	2185	2185	2165	2143	2133	2123	
16	2291	2228	2207	2160	2185	2196	2196	2202	2217	2217	2223	
17	2123	2139	2148	2207	2239	2254	2254	2259	2280	2302	2312	
18	2117	2196	2207	2228	2327	2344	2344	2332	2317	2312	2259	
19	2322	2322	2327	2332	2364	2396	2396	2407	2428	2438	2486	
20	2291	2322	2349	2351	2501	2511	2511	2501	2511	2511	2511	
21	2486	2486	2491	2501	2511	2511	2511	2501	2511	2511	2511	
22	2359	2344	2270	2270	2270	2270	2270	2270	2270	2270	2270	

DATE 25- 8-1971 (DAY NO 237)

D 25

NC MARCEL BAYARD DEPTH IN	CANTATI CORRECTED FATHOMS	OCEAN SURVEY	CRUISE LEG 2	MINUTES
HOURS				20
00	00	05	10	15
00	2058	2079	2100	2142
01	2079	2089	2058	2026
02	2089	2089	2100	2111
03	2153	2173	2173	2194
04	2226	2226	2224	2226
05	2241	2241	2241	2236
06	2242	2242	2241	2113
07	2205*58	2236	2246	2283
08	2336	2315	2331	2331
09	2315	2352	2352	2336
10	2363	2352	2300	2363
11	2310	2278	2289	2268
12	2352	2352	2352	2352
13	2341	2352	2352	2352
14	2289	2300	2289	2340
15	2258	2278	2268	2268
16	2267	2245	2235	2288
17	2235	2245	2235	2204
18	2204	2204	2267	2245
19	2245	2235	2230	2225
20	2088	2068	1973	1994
21	2078	2078	2068	2078
22	2130	2110	2105	2098
23				2172

NC MARCEL BAYARD CANTAT II	OCEAN SURVEY CRUISE LEG 2	M1 MINUTES
DEPTH IN CORRECTED FATHOMS		20
00	00	2244
01	2244	2244
02	2244	2244
03	2244	2244
04	2244	2244
05	2244	2244
06	2244	2244
07	2244	2244
08	2244	2244
09	2244	2244
10	2244	2244
11	2244	2244
12	2244	2244
13	2244	2244
14	2244	2244
15	2244	2244
16	2244	2244
17	2244	2244
18	2244	2244
19	2244	2244
20	2244	2244
21	2244	2244
22	2244	2244
23	2244	2244

DATE	28-8-1971	(DAY NO 240)	55
DATE	28-8-1971	(DAY NO 240)	50
30	35	40	45
2159	2140	2044	2024
21919	21909	1971	1971
2034	2024	2003	1939
1909	1930	1971	1919*
2000	1958	1821	1724
1926	1916	1936	1936
1967	1979	1984	1979
1906	1885	1864	1724
1802	1770	1760	1750
1607	1672	1636	1708
1429	145	1388	1429
1615	1615	1480	1636
1651	1625	1607	1439
1760	1936	2020	1407
1967	1853	*42	1491
1802	1638	1516	1926
1574	1244	1306	1885
1429	1424	1388	1812
1557	1439	1378	1791
1817	1817	1770	1791
1962	1962	1967	1791
1948	1812	1802	1429
1906	1906	1905	1906
1916	1864	1853	1895

NC MARCEL BAYARD DEPTH IN CO-RECTED FATHOMS	HOURS	OCEAN SURVEY CRUISE LEG 2 MINUTES 20
00	1904	1924
01	1851	1862
02	1851	1780
03	1873	1882
04	1987	1914
05	2002	1972
06	1909	1904
07	2186	2143
08	2065	2055
09	1955	*58
10	2127	2139
11	2170	2259
12	2175	2175
13	2164	2175
14	2206	2186
15	2122	2112
16	2212	2212
17	2236	2190
18	2490	2490
19	2463	2427
20	2206	2222
21	2291	2301
22	2253	2263
23	2347	2347

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 2			
DEPTH	IN CORRECTED FATHOMS	HOURS	MINUTES	20	15
00	2605	2605	00	2616	2616
01	2621	2626	05	2626	2626
02	2626	2626	10	2626	2626
03	2626	2626	15	2626	2626
04	2632	2632	20	2626	2626
05	2632	2637	25	2632	2632
06	2637	2642	30	2637	2637
07	2637	2642	35	2637	2637
08	2637	2642	40	2637	2637
09	2626	2637	45	2637	2637
10	2637	2637	50	2637	2637
11	2537	2648	55	2637	2637
12	2648	2659	00	2637	2637
13	2659	2663	05	2637	2637
14	2659	2659	10	2637	2637
15	2654	2643	15	2637	2637
16	2648	2643	20	2637	2637
17	2632	2632	25	2637	2637
18	2674	2674	30	2637	2637
19	2674	2674	35	2637	2637
20	2669	2674	40	2637	2637
21	2664	2669	45	2637	2637
22	2674	2674	50	2637	2637
23	2674	2669	55	2637	2637

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 2			
DEPTH	IN CORRECTED FATHOMS	HOURS	MINUTES	20	15
00	2626	2626	00	2626	2626
01	2626	2626	05	2626	2626
02	2626	2626	10	2626	2626
03	2626	2626	15	2626	2626
04	2632	2632	20	2626	2626
05	2632	2637	25	2632	2632
06	2637	2642	30	2637	2637
07	2637	2642	35	2637	2637
08	2637	2642	40	2637	2637
09	2626	2637	45	2637	2637
10	2637	2637	50	2637	2637
11	2637	2648	55	2637	2637
12	2648	2659	00	2637	2637
13	2659	2663	05	2637	2637
14	2659	2659	10	2637	2637
15	2643	2643	15	2637	2637
16	2643	2648	20	2637	2637
17	2632	2632	25	2637	2637
18	2674	2674	30	2637	2637
19	2674	2674	35	2637	2637
20	2669	2674	40	2637	2637
21	2664	2669	45	2637	2637
22	2674	2674	50	2637	2637
23	2674	2669	55	2637	2637

NC MARCEL BAYARD CANTAT II		OCEAN SURVEY CRUISE LEG 2			
DEPTH	IN CORRECTED FATHOMS	HOURS	MINUTES	20	15
00	2672	2672	00	2672	2672
01	2656	2656	05	2661	2661
02	2650	2645	10	2650	2650
03	2650	2625	15	2630	2630
04	2598	2598	20	2608	2608
05	2577	2577	25	2587	2587
06	2546	2546	30	2566	2566
07	2546	2514	35	2561	2561
08	2498	2498	40	2536	2536
09	2451	2462	45	2504	2504
10	2409	2398	50	2476	2462
11	2158	2137	55	2456	2456
12	1971	1971	00	2435	2429
13	1939	1961	05	2106	2116
14	2054	2075	10	2032	2044
15	2148	2127	15	2106	2116
16	2137	2127	20	2106	2116
17	2231	2247	25	2231	2241
18	2241	2241	30	2231	2241
19	2377	2357	35	2377	2377
20	2429	2409	40	2429	2429
21	2572	2507	45	2572	2572
22	2715	2692	50	2715	2715
23	2967	2957	55	2967	2967

D 28

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NC MARCEL BAYARD CANTAT I
DEPTH IN CORRECTED FATHOMS

	HOURS	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES
00	2877	2888	2888	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877
01	2877	2888	2888	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877
02	2847	2847	2847	2835	2835	2835	2835	2835	2835	2835	2835	2835	2835	2835	2835
03	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920
04	2941	2941	2941	2935	2935	2941	2941	2941	2947	2947	2947	2947	2947	2952	2952
05	2958	2958	2958	2952	2952	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958
06	2953	2953	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963
07	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963
08	2968	2968	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973
09	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978
10	2852	2789	2789	2772	2772	2772	2772	2772	2736	2736	2709	2699	2684	2652	2652
11	2631	2619	2619	2610	2610	2599	2557	2557	2547	2547	2537	2521	2505	2484	2484
12	2452	2452	2452	2452	2452	2442	2442	2442	2442	2442	2432	2432	2421	2410	2410
13	2410	2410	2410	2405	2405	2410	2410	2410	2369	2369	2317	2317	2317	2286	2286
14	2286	2286	2265	2265	2275	2275	2275	2286	2286	2286	2244	2244	2223	2140	2140
15	2057	2067	2067	2119	2119	2145	2145	2145	2161	2171	2171	2171	2176	2171	2171
16	2171	2171	2171	2166	2166	2166	2166	2166	2161	2161	2161	2161	2156	2119	2119
17	2098	2098	2098	2077	2077	2067	2067	2057	2057	2057	2025	2025	2016	1995	1995
18	1934	1934	1953	1943	1943	1943	1943	1932	1922	1922	1943	1943	1974	1974	1995
19	2016	2016	2062	2062	2088	2088	2088	2119	2119	2119	2192	2192	2202	2244	2244
20	2280	2280	2317	2317	2358	2358	2358	2400	2400	2400	2458	2458	2499	2484	2484
21	2484	2484	2484	2484	2484	2495	2495	2495	2495	2495	2495	2495	2505	2515	2515
22	2515	2515	2515	2515	2526	2526	2526	2526	2526	2526	2537	2537	2537	2557	2557
23	2557	2557	2557	2557	2567	2567	2567	2567	2567	2567	2579	2579	2579	2579	2579

NC MARCEL BAYARD CANTAT III
DEPTH IN CORRECTED FATHOMS

	HOURS	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES
00	2597	2607	2618	2618	2618	2618	2618	2618	2618	2618	2618	2618	2618	2639	2639
01	2639	2639	2649	2649	2649	2649	2649	2649	2660	2660	2660	2660	2660	2670	2670
02	2670	2670	2670	2670	2670	2670	2670	2670	2670	2670	2670	2670	2670	2675	2680
03	2675	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680
04	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680
05	2697	2697	2697	2697	2697	2697	2697	2697	2697	2697	2697	2697	2697	2697	2697
06	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702
07	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702
08	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702	2702
09	2691	2691	2691	2691	2691	2691	2691	2691	2680	2680	2680	2680	2680	2680	2680
10	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680	2680
11	2691	2691	2691	2691	2691	2691	2691	2691	2670	2670	2670	2670	2670	2670	2670
12	2670	2670	2670	2670	2670	2670	2670	2670	2680	2680	2680	2680	2680	2680	2680
13	2675	2680	2680	2680	2680	2680	2680	2680	2660	2660	2660	2660	2660	2660	2660
14	2680	2680	2680	2680	2680	2680	2680	2680	2665	2665	2665	2665	2665	2669	2669
15	2684	2684	2684	2684	2684	2684	2684	2684	2633	2633	2633	2633	2633	2633	2633
16	2685	2685	2685	2685	2685	2685	2685	2685	2644	2644	2644	2644	2644	2644	2644
17	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644
18	2633	2633	2633	2633	2633	2633	2633	2633	2633	2633	2633	2633	2633	2633	2633
19	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644
20	2644	2644	2644	2644	2644	2644	2644	2644	2638	2638	2638	2638	2638	2633	2633
21	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644	2644
22	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654
23	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654

NC MARCEL BAYARD CANTAT III
DEPTH IN CORRECTED FATHOMS

	HOURS	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES
00	35	40	45	50	55	55	55	55	35	40	45	50	50	55	55
01	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877	2877
02	2782	2782	2782	2782	2782	2782	2782	2782	2782	2782	2782	2782	2782	2782	2782
03	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920
04	2941	2941	2941	2941	2941	2941	2941	2941	2947	2947	2947	2947	2952	2952	2952
05	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958	2958
06	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963
07	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963	2963
08	2968	2968	2968	2968	2968	2968	2968	2968	2968	2968	2968	2968	2968	2968	2968
09	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973	2973
10	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978	2978
11	2789	2789	2789	2789	2789	2789	2789	2789	2789	2789	2789	2789	2789	2789	2789
12	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
13	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
14	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
15	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
16	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
17	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
18	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
19	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
20	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
21	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
22	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631
23	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631	2631

D31

	HOURS	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES
00	35	40	45	50	55	55	55	55							

NC MARCEL BAYARD CANTAT II		OCEAN	SURVEY	CRUISE	LEG 3
DEPTH IN	CORRECTED FATHOMS				
HOURS	MINUTE	20	15	10	05
00	2537	2495	2453	2495	2453
01	2130	2108	2140	2328	2328
02	2223	2160	2016	1871	2307
03	2317	2307	2301	2244	2233
04	2312	2307	2296	2375	2349
05	2370	2370	2375	2381	2443
06	2287	2193	2349	2370	2370
07	2428	2360	2453	2443	2391
08	2370	2370	2360	2370	2391
09	2328	2391	2370	2411	2391
10	2443	2433	2417	2411	2538
11	2443	2475	2475	2505	2391*22
12	2548	2538	2516	2496	2391
13	2363	2381	2381	2381	2410
14	2410	2417	2417	2410	2410
15	2359	2369	2328	2348	2359
16	2307	2328	2307	2328	2328
17	2432	2427	2427	2400	2359
18	2410	2390	2410	2410	2396
19	2410	2432	2432	2427	2400
20	2313	2281	2281	2251*13	2271
21	2292	2292	2276	2261	2251
22	2199	2209	2240	2458	2458
23	2532	2532	2543	2532	2532
NC MARCEL BAYARD CANTAT II		OCEAN	SURVEY	CRUISE	LEG 3
DEPTH IN	CORRECTED FATHOMS				
HOURS	MINUTE	20	15	10	05
00	2227	2249	2269	2259	2207*22
01	2332	2332	2341	2155	2207
02	2197	2197	2176	2217	2249
03	2192	2097	2217	2127	2197
04	2093	2093	2124	2129	2197
05	2332	2352	2239	2046*16	2057
06	2301	2306	2301	2254	2135
07	2041	2051	2072	2140	2155
08	2072	2041	2067	2072	2108
09	1968	1991	1877	2005	1953
10	1968	1938	1907	1885	1784
11	2062	1855	1732*12	1773	1865
12	1877	1877	1845*08	2025	2010
13	1896	1917	1948	1938	1927
14	1814	1742*03	1948	1938	1896
15	1968	1763*07	1825	1702*13	1825
16	1578	1609	1455*08	1578	1516
17	1231	1425	1374	1349	1476
18	1448	1578	1609*12	1532	1865*22
19	1711	1825	1825	1784	1773
20	1948	2010	1959	1668	1455*21
21	1680	1609	1629	1660	1425*17
22	1619	1680	1619	1660	1496
23					

NC MARCEL BAYARD CANTAT II OCÉAN SURVEY CRUISE LEG 3
DEPTH IN CORRECTED FATHOMS

DATE 15- 9-1971 (DAY NO 258)

MINISTERIAL STATEMENT

INC MARCEL BAYARD CANTAT II OC EAN SURVEY CRUISE LEG 3
DEPTH 11N CORRECTED EATHOMS

HOURS	MINUTES	25
00	1929	2053
01	2342	2478
02	2447	2363
03	2405	2405
04	2250	2228
05	2218	2146
06	2353	2405
07	2624	2630
08	2614	2634
09	2677	2651
10	2666	2645
11	2677	2677
12	2666	2677
13	2624	2656
14	2603	2656
15	2530	2634
16	2467	2634
17	2405	2640
18	2342	2640
19	2259	2640
20	2150	2630
21	1909	2630
22	1601	2630
23	1417	2630
24	1326	2630

DATE	16- 9-1971	(DAY NO 259)	
40	2135 2488 2280 2374 2218 2291 22572 2630 2634 2677 2677 2645 2645 2614 2551 2467 2416 2358 2363	2177 2478 2250*43 2327 2198 2302 2292 2302 22593 26247 2677 2677 2677 2686 2686 2640 2640 2540 2463 2405 2363 2286	55 55 2198 2457 2363 2302 2218 2280 22619 2624 2686 2686 2686 2677 2677 2634 2614 2540 2463 2405 2363 2286
45	2135 2488 2280 2374 2218 2291 22572 2630 2634 2677 2677 2645 2645 2614 2551 2467 2416 2358 2363	2447 2380 2286 2286 2218 2280 22619 2593 2677 2686 2686 2677 2677 2609 2530 2467 2405 2353 2353	
50	2135 2488 2280 2374 2218 2291 22572 2630 2634 2677 2677 2645 2645 2614 2551 2467 2416 2358 2363	2302 2447 2380 2286 2286 2218 2280 22619 2593 2677 2686 2686 2677 2677 2609 2530 2467 2405 2363 2286	
55	2135 2488 2280 2374 2218 2291 22572 2630 2634 2677 2677 2645 2645 2614 2551 2467 2416 2358 2363	2302 2447 2380 2286 2286 2218 2280 22619 2593 2677 2686 2686 2677 2677 2609 2530 2467 2405 2363 2286	

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3

DEPTH IN CORRECTED FATHOMS

HOURS	00	05	10	15	MINUTES	25	30	35	40	45	50	55
00	1172	1152	1147	1152	1162	1172	1183	1193	1193	1183	1183	1172
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
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16												
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19												
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21												
22												
23												

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NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1				DATE 13- 6-1971 (DAY NO 164)			
DEPTH IN CORRECTED METRES	HOURS	MINUTES	20	DEPTH IN CORRECTED METRES	HOURS	MINUTES	20
00	00	00	00	611	611	611	611
01	01	00	00	612	626	626	626
02	02	00	00	613	1027	1038	10430
03	03	00	00	614	1060	1060	1060
04	04	00	00	615	1121	1121	1121
05	05	00	00	616	1170	1170	11912
06	06	00	00	617	11840	11840	12005
07	07	00	00	618	2005	2005	2006
08	08	00	00	619	2005	2005	2129
09	09	00	00	620	2034	2034	2398
10	10	00	00	621	2034	2034	2552
11	11	00	00	622	2035	2035	2791
12	12	00	00	623	2035	2035	2779
13	13	00	00	624	2035	2035	2779
14	14	00	00	625	2035	2035	2779
15	15	00	00	626	2035	2035	2779
16	16	00	00	627	2035	2035	2779
17	17	00	00	628	2035	2035	2779
18	18	00	00	629	2035	2035	2779
19	19	00	00	630	2035	2035	2779
20	20	00	00	631	2035	2035	2779
21	21	00	00	632	2035	2035	2779
22	22	00	00	633	2035	2035	2779
23	23	00	00	634	2035	2035	2779
NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1				DATE 14- 6-1971 (DAY NO 165)			
DEPTH IN CORRECTED METRES	HOURS	MINUTES	20	DEPTH IN CORRECTED METRES	HOURS	MINUTES	20
00	00	00	00	596	596	596	596
01	01	00	00	601	601	601	601
02	02	00	00	602	602	602	602
03	03	00	00	603	603	603	603
04	04	00	00	604	604	604	604
05	05	00	00	605	605	605	605
06	06	00	00	606	606	606	606
07	07	00	00	607	607	607	607
08	08	00	00	608	608	608	608
09	09	00	00	609	609	609	609
10	10	00	00	610	610	610	610
11	11	00	00	611	611	611	611
12	12	00	00	612	612	612	612
13	13	00	00	613	613	613	613
14	14	00	00	614	614	614	614
15	15	00	00	615	615	615	615
16	16	00	00	616	616	616	616
17	17	00	00	617	617	617	617
18	18	00	00	618	618	618	618
19	19	00	00	619	619	619	619
20	20	00	00	620	620	620	620
21	21	00	00	621	621	621	621
22	22	00	00	622	622	622	622
23	23	00	00	623	623	623	623

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DATE 15- 6-1971 (DAY NO 166)

DEPTH IN CORRECTED METRES	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
4044	00	4729	4729	4729	4636	4550	4520	4393	4397	4403	4318	4180	4117
3999	01	4013	3999	3969	3948	3886	3874	3874	3874	3874	3948	3981	3981
4159	02	4243	4033	4033	4033	3999	4033	4033	4033	4054	4054	4096	4140
4203	03	4267	4243	4267	4267	4285	4297	4297	4297	4222	4203	4159	4159
4539	04	4348	4306	4348	4348	4412	4476	4476	4520	4520	4539	4550	4550
4562	05	4583	4562	4562	4539	4593	4497	4497	4267	4267	4297	3969	3969
3948	06	3927	3927	3927	3865	3865	3927	3927	3969	3969	3969	3969	3969
3948	07	3843	3843	3843	3854	3854	3843	3843	3865	3865	3865	3865	3865
3801	08	3843	3843	3843	3886	3886	4126	4126	4077	4077	4054	3999	3886
4096	09	4022	4022	4013	4054	4054	4054	4054	4096	4096	3999	3969	4096
3969	10	3927	3927	3886	3886	3886	3886	3886	4077	4077	4054	3990	3990
4013	11	4054	4054	4054	4054	4054	4054	4054	4096	4096	3999	3969	4096
3969	12	4013*58	4077	4077	4077	4140	4140	4140	4243	4243	4253	4253	4276
4267	13	4267	4267	4267	4267	4267	4267	4267	4267	4267	4253	4253	4267
4318	14	4318	4267	4267	4267	4267	4267	4267	4267	4267	4267	4330	4330
4285	15	4285	4306	4306	4306	4306	4306	4306	4234	4234	4234	4285	4306
4306	16	4306	4243	4243	4243	4243	4243	4243	4203	4203	4203	4285	4285
4180	17	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180
4180	18	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180
4180	19	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180
4180	20	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180	4180
4180	21	4159	4105	4105	4159	4084	3883	3963	4159	4159	4149	4138	4115
4105	22	4105	4105	4105	4105	4084	3883	3963	4105	4105	4011	4011	4052
4105	23	4105	4105	4105	4105	4084	3883	3963	4105	4105	4011	4011	4052

DATE 16- 6-1971 (DAY NO 167)

DEPTH IN CORRECTED METRES	HOURS	00	05	10	15	20	25	30	35	40	45	50	55
4061	00	4061	4052	3925	4009	4052	4009	4029	3965	4136	4115	4029	4073
4029	01	4052	3797	4073	4073	4073	4073	4073	3820	3820	3587	3587	3713
3797	02	3797	3883	3883	3840*18	3863	3863	3925	3925	3925	3925	3925	3902
3883	03	3863	3863	3883	3883	3840	3840	3879	3879	3879	3946	3946	4029
3802	04	3802	3902	4092	4092	4092	4092	4052	4052	4009	4009	3883*49	3797
3902	05	3671	4073	3757	3757	3651	3651	3506	3506	3461	3442	3442	3420
3671	06	3420	3757	3757	3757	3757	3757	3757	3757	3757	3651	3587	3506*53
3757	07	3367	3367	3367	3367	3367	3367	3380	3506*23	3587	3671	3651	3530
3367	08	3367	3683	3683	3578	3545	3545	3587	3587	3599	3578	3574	3518
3683	09	3634	3634	3644	3477	3477	3477	3477	3539	3539	3581	3581	3466
3634	10	3499	3499	3499	3499	3499	3499	3499	3530	3530	3518	3518	3539
3499	11	3488	3488	3488	3488	3488	3488	3488	3530	3530	3289	3289	3289
3488	12	3289	3289	3289	3289	3289	3289	3289	3289	3289	3289	3289	3289
3289	13	3278	3278	3278	3278	3278	3278	3278	3278	3278	3278	3278	3274
3278	14	3299	3299	3299	3299	3299	3299	3299	3299	3299	3299	3299	3299
3299	15	2447	2447	2447	2447	2447	2447	2447	2447	2447	2447	2447	2447
2447	16	2706*03	3061	2997	3018	2913	2913	2913	2913	2913	2438	2438	2790*57
2706*03	17	2688	2688	2603*09	2810	2924*18	2945	2790*32	2790*32	2790*32	2458	2458	2924
2688	18	3435	3435	3435	3769	3769	3813	3813	3813	3813	2458	2458	3289*57
3435	19	2976	2976	2913*07	2499*12	2727	2499*18	3539	3539	3539	3455	3455	3289*57
2976	20	2271*02	1952	1512	2036	2036	2036	2036	1923	1923	3477	3477	3477
2271*02	21	2364*07	2364*07	2147	2293	2293	2293	2293	2293	2293	2128	2128	2067*57
2364*07	22	2624	2624	3143	3100	3404	3393	3393	3393	3393	2147	2147	2014*57
2624	23	2861	2861	2861	3143	3143	3143	3143	3143	3143	2147	2147	2160*53

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NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED METRES

	00	05	10	15	20	25	30	35	40	45	50	55
HOURS	00	3372	2727	3122*08	2997*17	2976*22	3038	2997	3184	3372	3342	3246
	01	3091	2954	2944	2872	3048	3079	3029*28	3122	3310	3328	3413
	02	3477	3477	3454	3539	3569	3579	3579	3579	3611	3616	3569
	03	3539	3328*03	3454	3372	3372	3310	3328	3434	3203	3203	3203
	04	2954	2581*07	2891	2881	2810	3790	3790	3790	3454	3530	3601
	05	3611	3622	3622	3622	3622	3622	3560	3560	3800	3800	3665
	06	2954	3163*07	3289	3404	3539	3539	3530*28	3692	3644	3665	3674
	07	3695	3707	3727	3727	3727	3672	3530*28	3623	3644	3665	3674
	08	3530	3477*03	3633	3633	3633	3611	3611	3612	3707*38	3718*52	3497
	09	4043	3907*06	3958	3665*16	3769	3695	3695	3695	3656	3579	3579
	10	3686	3812	3833	3821	3758	3863	3863	3874	3812	3758	3665
	11	3769	3800	3833	3833	3758	3821	3790	3812	3812	3812	3812
	12											
	13											
	14											
	15	3854	3812	3854	3854	3665	3601	3601	3644	3833	3833	3833
	16	3833	3769	3800	3790	3748	3748	3748	3665	3644	3844	3844
	17	3727*02	3812	3695	3907	3958	3895	3895	3790	3727	3707	3748
	18	3539	3444	3444	3516	3579	3748	3748	3874	3686	3560	3539
	19	3163	2935*03	3622	3579	3454	3434	3434	3474	3286	3286	3665
	20	3163	3601	3497	3497	3454	3454	3454	3474	3390	3390	3539
	21	3592	3665	3769	3769	3769	3769	3769	3769	3413	3413	3328
	22	3477	3539	3516	3516	3516	3516	3516	3516	3516	3516	3579
	23											3611

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NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED METRES

	00	05	10	15	20	25	30	35	40	45	50	55
HOURS	00	3537	3537	3475	3411	3349	3411	3475	3495	3495	3495	3475
	01	3454	3495	3495	3454	3358	3390	3370	3203	3203	3537	3537
	02	3475	3454	3454	3036	3537	3537	3537	3516	3516	3349	3349
	03	3328	3171	3057	2849	2622	2509	2974	3016	2353	1849*52	2230
	04	2343	2373	2219	2383	2383	2477	2219*28	2399	2353	2135*51	2291*57
	05	2271*02	2167	2253	2788	2767	2829	2147	2447	2447	2447	2447
	06	2274	2162	2788	3071	3071	3120	3120	3084	3084	3016*	3016*
	07	3203*02	2704	2995	2601	2500*22	2312	2044	2126	2126	2102	1695*52
	08	1806	1982	2373*12	2497	2954*17	2808	2840*31	2518	2518	2395*52	1572*53
	09	2788	1954	2474	2546*22	2794	2840*31	2654*37	2560	2560	2253	2253
	10	2995*01	3120	3182	3161*22	3161	3161	3161	3224	3224	2797	2954
	11	2965	3120	3224	3402	3444	3444	3475	3454	3454	3145	3036
	12		3079	3079	3057	3475	3475	3475	3454	3454	3390	3390
	13	3089	2944	2870*08	3057	3495	3495	3495	3454	3454	3244	3244
	14	3233	3224	3214	3203	3244	3244	3244	3244	3244	3161	3224
	15	2878	2891*03	3027	2746*16	2622	2622	2622	2507	2507	2601	2610
	16	2083	2592*07	2788	2654*16	2518*22	2518*22	2518*22	2560*37	2560*37	2601	2610
	17	2023	2383	2353	2353	2495*18	2373	2373	2321	2321	2312	23558
	18	3642*58	3328	3579	3663	3495*18	3454	3454	2808	2808	3141	3141
	19	3016	2870	3099	3099	3120	3120	3120	2808	2808	3016	3016
	20	2259	2167	2425	2271*13	1921*21	2259	2259	2259	2259	2259	2746
	21	2274	2695	3475	2735	2954	2954	2954	3141	3141	3433	3390
	22	3484	3484	3475	3454	3454	3454	3454	3057	3057	3057	3141
	23	3161	3120*07	3182	3224	3475	3475	3475	3495	3495	3495	2891*53

DATE 17- 6-1971 (DAY NO 168)

DATE 18- 6-1971 (DAY NO 169)

MERCY MARCEL BAYARD CANTAT II DEPTH IN CORRECTED METRES

DATE 19- 6-1971 (DAY NO 170)

HOURS		MINUTES	
00	00	00	00
00	01	2663	20
01	02	3077	
02	03	3288	
03	04	3452	
04	05	3433	
05	06	3475	
06	07	3663	
07	08	3388	
08	09	3349	
09	10	3414	
10	11	3287	
11	12	2454	*22
12	13	3287	
13	14	3452	
14	15	3287	
15	16	3495	
16	17	3326	
17	18	3250	
18	19	3244	
19	20	3353	
20	21	3746	
21	22	3621	
22	23	3484	
23	24	3357	
24	25	3599	
25	26	3742	
26	27	3955	
27	28	4228	
28	29	3955	
29	30	3766	*04
30	31	4188	
31	32	3789	
32	33	3599	
33	34	3789	
34	35	3599	
35	36	3789	
36	37	3599	
37	38	3789	
38	39	3599	
39	40	3789	
40	41	3599	
41	42	3789	
42	43	3599	
43	44	3789	
44	45	3599	
45	46	3789	
46	47	3599	
47	48	3789	
48	49	3599	
49	50	3789	
50	51	3599	
51	52	3789	
52	53	3599	
53	54	3789	
54	55	3599	
55	56	3789	
56	57	3599	
57	58	3789	
58	59	3599	
59	60	3789	
60	61	3599	
61	62	3789	
62	63	3599	
63	64	3789	
64	65	3599	
65	66	3789	
66	67	3599	
67	68	3789	
68	69	3599	
69	70	3789	
70	71	3599	
71	72	3789	
72	73	3599	
73	74	3789	
74	75	3599	
75	76	3789	
76	77	3599	
77	78	3789	
78	79	3599	
79	80	3789	
80	81	3599	
81	82	3789	
82	83	3599	
83	84	3789	
84	85	3599	
85	86	3789	
86	87	3599	
87	88	3789	
88	89	3599	
89	90	3789	
90	91	3599	
91	92	3789	
92	93	3599	
93	94	3789	
94	95	3599	
95	96	3789	
96	97	3599	
97	98	3789	
98	99	3599	
99	100	3789	

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED METRES

DATE	20-	6-1971	(DAY NO 171)
		55	
35	40	45	50
4067	4067	4067	4088
3962	3962	3962	3919
4025	3878	3752	48
3207	2999	3145	
3332	3332	3229	
3370	3500	3159	
3598	3243	3159	
2413	2207	2126	48
3472	3640	3677	
3493	3535	3493	
3286	3034	2931	
3278	3262	2684	
2228	3222	2622	
2218	38	2179	49
2413	2250	2135	
3766	3452	3410	
2765	37	3118	
2454	2827	2537	*47
2827	2298	2413	
3305	2497	2497	
3577	3347	3347	
3472	3619	3619	
3077	3305	3431	
2703	3201	3472	
2145	3201	2827	

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED METRES

	HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55
00	1980	1867*04	1939	1570*17	1939	033*21	2110*27	1928*32	1919*36	1816*42	1867*46	1848	1919	1995
01	2001*58	1725*07	1878	1764	1450	65*18	2165*27	2134	2107	2220	2232	2322	2356	2397
02	3033	3826	3075	2774	2506	165*18	2165*27	2475	2629	2527	2599	2599	2744	2650
03	2629	3055	2910	2905	2975	599*22	2599*22	2515*27	2786*	2452*37	2620	2434*46	2452	2452
04	2620	2806	3095	3095	3095	033	2869	2993	2701*33	2701*33	2993	2433*46	2433	2452
05	2701*58	3283	3470	3470	3470	095	2950	2950	2056	2056	2920	3056	3056	3075*54
06	2620	3495*07	2869	3431	3470	87	3470	3493	3470	3470	3470	3450	3262	3118
07	3283	3387	3283	3283	3283	17	3289	3289	3289	3289	3289	3289	3289	3283
08	3345	3215	3215	3215	3215	17	3081	3082	3268	3268	3268	3268	3268	3282
09	3356	3330	3249	3249	3249	12	3603	3628	3659	3638	3387	3243	3283	3283
10	3347	3530	3530	3530	3530	12	3603	3628	3305	3305	3305	3305	3305	3303
11	3289	3447	3447	3447	3447	12	3243	3262	3619	3512	3450	3220	3220	3224
12	3243	3118	3118	3118	3118	12	3118	3118	3619	3619	3450	3294	3294	3294
13	3243	3638	3638	3638	3638	21	3262	3262	3619	3619	3450	3294	3294	3294
14	3638	3619	3619	3619	3619	21	3619	3619	3619	3619	3619	3619	3619	3619
15	3596	3575	3575	3575	3575	19	3682	3682	3596	3596	3596	3596	3596	3606
16	3691	3596	3596	3596	3596	19	3682	3682	3461	3461	3461	3461	3461	3445
17	3596	3575	3575	3575	3575	19	3273	3273	3157	3157	3157	3157	3157	3157
18	3283	3283	3283	3283	3283	18	2971	2971	2559	2559	2559	2559	2559	2559
19	1980	1693*06	1693*06	1693*06	1693*06	18	2558*13	2558*13	2558*13	2558*13	2558*13	2558*13	2558*13	2558*13
20	2970	2786	2786	2786	2786	18	2681	2681	2558*18	2558*18	2558*18	2558*18	2558*18	2558*18
21	1939*58	2072*07	2072*07	2072*07	2072*07	12	2381	2381	2724	2724	2724	2724	2724	2727
22	3847	3682	3682	3682	3682	12	3470	3470	2910	2910	2910	2910	2910	2900
23	2869	2993	2993	2993	2993	12	2712	2712	3243	3243	3243	3243	3243	2405

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED METRES

	HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55
00	1980	1867*04	1939	1570*17	1939	033*21	2110*27	1928*32	1919*36	1816*42	1867*46	1848	1919	1995
01	2001*58	1725*07	1878	1764	1450	65*18	2165*27	2134	2107	2220	2232	2322	2356	2397
02	3033	3826	3075	2774	2506	165*18	2165*27	2475	2629	2527	2599	2599	2744	2650
03	2629	3055	2910	2905	2975	599*22	2599*22	2515	2786	2629	2629	2629	2775	2775
04	2620	2806	3095	3095	3095	095	2869	2993	2701*33	2701*33	2993	2433*46	2433	2452
05	2701*58	3283	3470	3470	3470	17	3470	3470	3054	3054	3054	3054	3054	3075
06	2620	3495*07	2869	3241	3241	11	3292	3292	3292	3292	3292	3292	3292	3292
07	2929*58	3200	3241	3241	3241	11	3198*14	3198*14	2904	2904	2904	2904	2904	2904
08	1942	2253	2391	2391	2391	16	2287	2287	2015	2015	2015	2015	2015	2015
09	3262	3157	3283	3283	3283	16	2491	2491	2638*	2638*	2638*	2638*	2638*	2638
10	3762	3815	3868	3868	3868	17	3743	3743	3659	3659	3659	3659	3659	3659
11	1795	1795	1795	1795	1795	17	1509	1509	1467	1467	1467	1467	1467	1467
12	2908	3242	3242	3242	3242	12	2722	2722	2411	2411	2411	2411	2411	2411
13	3345	3303	3303	3303	3303	12	3178	3178	3200	3200	3200	3200	3200	3200
14	3222	3107	3107	3107	3107	16	2975	2975	2904	2904	2904	2904	2904	2904
15	3162	3162	3162	3162	3162	16	3178	3178	3178	3178	3178	3178	3178	3178
16	3262	3262	3262	3262	3262	16	3054	3054	2744	2744	2744	2744	2744	2744
17	3355	3355	3355	3355	3355	17	3292	3292	3075	3075	3075	3075	3075	3075
18	3241	3241	3241	3241	3241	17	3178	3178	2867	2867	2867	2867	2867	2867
19	3244	3244	3244	3244	3244	17	3178	3178	3075	3075	3075	3075	3075	3075
20	3448	3429	3429	3429	3429	12	3470	3470	3470	3470	3470	3470	3470	3470
21	3448	2970	2970	2970	2970	16	2245	2245	3005	3005	3005	3005	3005	3005
22	2991	2820	2820	2820	2820	16	2245	2245	2815	2815	2815	2815	2815	2815
23	3200	3200	3200	3200	3200	16	2245	2245	2815	2815	2815	2815	2815	2815

D 39 DATE 21- 6-1971 (DAY NO 172)

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1
DEPTH IN CORRECTED METRES

	HOURS	00	05	10	15	MINUTES	20	25	30	35	40	45	50	55
00	2523	2846*07	2793*11	2701*11	2825	013*21	3116	3116	3178*32	3075	2535*42	2701	2908	2908
01	2804	3073	3573	3573	3573	11	3054	3054	3448	3448	3448	3511	3555	3555
02	3054	3617	3587	3587	3587	11	3283	3283	3314	3314	3314	3429	3533	3533
03	3262	3617	3617	3617	3617	11	3573	3573	3292	3292	3292	3292	3292	3292
04	3272	3272	3272	3272	3272	11	3573	3573	3204	3204	3204	3204	3204	3204
05	2929*58	3200	3241	3241	3241	11	3198	3198	3054	3054	3054	3054	3054	3054
06	1942	2253	2391	2391	2391	16	2287	2287	2015	2015	2015	2015	2015	2015
07	3262	3157	3283	3283	3283	16	3178	3178	3075	3075	3075	3075	3075	3075
08	3762	3815	3868	3868	3868	17	3178	3178	3054	3054	3054	3054	3054	3054
09	1990	1990	1990	1990	1990	17	1509	1509	1467	1467	1467	1467	1467	1467
10	2908	3322	3322	3322	3322	12	2722	2722	2411	2411	2411	2411	2411	2411
11	3345	3303	3303	3303	3303	12	3178	3178	3200	3200	3200	3200	3200	3200
12	3222	3162	3162	3162	3162	16	3178	3178	3075	3075	3075	3075	3075	3075
13	3448	3448	3448	3448	3448	17	3178	3178	3075	3075	3075	3075	3075	3075
14	3241	3241	3241	3241	3241	17	3178	3178	3075	3075	3075	3075	3075	3075
15	3244	3244	3244	3244	3244	17	3178	3178	3075	3075	3075	3075	3075	3075
16	3355	3355	3355	3355	3355	17	3178	3178	3075	3075	3075	3075	3075	3075
17	3241	3241	3241	3241	3241	17	3178	3178	3075	3075	3075	3075	3075	3075
18	3244	3244	3244	3244	3244	17	3178	3178	3075	3075	3075	3075	3075	3075
19	3448	3448	3448	3448	3448	12	3470	3470	3470	3470	3470	3470	3470	3470
20	3448	3448	3448	3448	3448	16	3178	3178	3075	3075	3075	3075	3075	3075
21	3448	2970	2970	2970	2970	16	2245	2245	3005	3005	3005	3005	3005	3005
22	2991	2820	2820	2820	2820	16	2245	2245	3005	3005	3005	3005	3005	3005
23	3200	3200	3200	3200	3200	16	2245	2245	3005	3005	3005	3005	3005	3005

D 39 DATE 22- 6-1971 (DAY NO 173)

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DEPTH IN CORRECTED METRES

	00	05	10	15	20	25	30	35	40	45	50	55
HOURS	3615	3699	4035	4075	4056	3992	3064	3099	3741	3888	2577	3824
001	3803	3867	3093	3803	3406	3218	2804	2756	2776	2777	2532	2908
002	2991*	58	2957	3135	3344	2747	2867	2856	2824	2822	2722	2104
003	2886	2886	3344	2535*	21	2867	2867	2867	2929	2929	2929	3156
004	3367	3367	3281	3072	3072	2867	3385*	332	3344	3344	3344	3054
005	3116	3156	3281	303	303	3281	3344	3367	3406	3406	3459	3491
006	3491	3478	3218	3072	3072	3218	3054*	37	3367	3367	3367	3344**56
007	3429	3438	3438	3385	3385	3323	3491	3491	3093	3093	3135	3341
008	3178	2970*	06	3116	3135	3241	3429	3429	3532	3532	3594	3615
009	3657	3657	3657	3677	3699	3699	3699	3699	3657	3657	3657	3657
010	3667	3667	3677	3677	3677	3677	3677	3677	3677	3677	3677	3677
011	3478	3478	3511	3511	3511	3501	3468	3468	3491	3491	3406	3448
012	3438	3448	3556*	11	3314	3344	3406	3406	3054	3054	3594	3585
013	3573	3553	3553	3241*	17	3344	3105*	23	3344	3344	2774	2774
014	2577	2597	2597	2991*	12	2824	2783*	27	2824	2824	2489	2515
015	2235*	02	2699*	06	2287*	12	2462	2669*	32	2722*	36	2836**57
016	2742	3072	3072	3035	3035	2804	2793*	27	2676	2676	2886*	2886
017	3314	3615*	07	3218*	11	3207	3741	3783*	32	3930*	34	3033
018	3314	3615*	07	3218*	11	3207	3741	3783*	32	3930*	37	3064
019	2722	2535*	03	2722	2929	2929	2824	2824	2473*	42	2970	2494**57
020	2648	2804	2804	3093	3093	3033	2908	2908	3042	3042	3198	3198
021	3072	3033*	03	3018	3260	3260	3116	3116	3260	3260	3178	3367
022	3241	3178*	03	3248	3468	3468	3491	3491	3344*	32	3406	3522
023	3468	3468	3468	3468	3468	3468	3468	3468	3367*	37	3448	3522

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 1

DEPTH IN CORRECTED METRES

	00	05	10	15	20	25	30	35	40	45	50	55
HOURS	3530	3427	3133	2990*	13	3010	3311	3344	3281	3072*	47	321
001	3536	3656	3599	3599	3578	3578	3578	3599	3302	3224	3224	3344
002	3704	3527	3734	3748	3536	3327	3452	3327	3527	3704	3704	3389
003	3371	3748	3704	3662	3684	3484	3556	3556	3631	4373	4373	3404
004	3371	3536	4082	4082	3997	3997	3872	3872	4103	4103	4103	4103
005	4082	3914	3872	3872	3860	3860	3787	3787	3829	3829	3829	3893
006	3914	3766	3914	3787	3787	3787	3851	3851	3785	3785	3785	3748
007	3684	3748	3725	3787	3787	3810	3893	3893	3916	3916	3916	3787
008	4019	4147	4178	3977	3977	3977	4019	4040	4071	4071	4071	4019
009	4147	3895	4147	4178	4178	4178	4178	4178	4168	4168	4168	4147
010	3895	3686*	07	3727	3886	3916	3999	3999	4021	4021	4021	4021
011	4042	4042	4042	4084	4010	4222	4021	4021	4010	4052	4052	4021
012	4115	3665	3790	3853	3863	3874	3916	3916	3958	3958	3958	3958
013	4105	3518	3874	3937	3993	4063	4147	4147	4168	4168	4168	4126
014	4126	4126	4063	4253	4253	4295	4105	4105	4380	4380	4380	4380
015	3958	3895	4147	3831	3831	3831	3790	3790	3750	3750	3750	3750
016	4168	4168	4190	4147	4126	4042	4042	4042	3916	3916	3916	3916
017	3937	3937	3916	3895	3895	3831	3769	3769	3750	3750	3750	3750
018	4168	4168	4190	4147	4126	4042	4042	4042	3916	3916	3916	3916
019	4168	4168	4190	4147	4126	4042	4042	4042	3769	3769	3769	3769
020	3937	3937	3916	3895	3895	3831	3769	3769	3750	3750	3750	3750
021	3863	3863	3874	3874	3874	3916	3916	3916	3822	3822	3822	3822
022	4042	4042	3988	3958	3958	3958	3958	3958	3958	3958	3958	3958

D 40
DATE 23- 6-1971 (DAY NO 174)

	00	05	10	15	20	25	30	35	40	45	50	55
HOURS	3530	3427	3133	2990*	13	3010	3311	3344	3281	3072*	47	321
001	3536	3656	3599	3599	3578	3578	3578	3599	3302	3224	3224	3344
002	3704	3527	3734	3748	3536	3327	3452	3327	3527	3704	3704	3389
003	3371	3748	3704	3662	3684	3484	3556	3556	3631	4373	4373	3404
004	3371	3536	4082	4082	3997	3997	3872	3872	4103	4103	4103	4103
005	4082	3914	3872	3872	3860	3860	3787	3787	3829	3829	3829	3893
006	3914	3766	3914	3787	3787	3810	3851	3851	3883	3883	3883	3883
007	3684	3748	3725	3787	3787	3810	3851	3851	3916	3916	3916	3916
008	4019	4147	4178	3977	3977	3977	4019	4019	4040	4040	4040	4040
009	4147	3895	4147	4178	4178	4178	4178	4178	4168	4168	4168	4168
010	3895	3686*	07	3727	3886	3916	3999	3999	4021	4021	4021	4021
011	4042	4042	4042	4084	4010	4222	4021	4021	4010	4052	4052	4021
012	4115	3665	3790	3853	3863	3874	3916	3916	3958	3958	3958	3958
013	4105	3518	3874	3937	3993	4063	4147	4147	4168	4168	4168	4168
014	4126	4126	4063	4253	4253	4295	4316	4316	4380	4380	4380	4380
015	3958	3895	4147	3831	3831	3831	3790	3790	3750	3750	3750	3750
016	4168	4168	4190	4147	4126	4042	4042	4042	3916	3916	3916	3916
017	3937	3937	3916	3895	3895	3831	3769	3769	3750	3750	3750	3750
018	4168	4168	4190	4147	4126	4042	4042	4042	3916	3916	3916	3916
019	4168	4168	4190	4147	4126	4042	4042	4042	3769	3769	3769	3769
020	3937	3937	3916	3895	3895	3831	3769	3769	3750	3750	3750	3750
021	3863	3863	3874	3874	3916	4126	4126	4126	3750	3750	3750	3750
022	4042	4042	3988	3958	3958	3958	3958	3958	3958	3958	3958	3958

DATE 24- 6-1971 (DAY NO 175)

DATE	25-	6-1971	(DAY NO 176)
35	50	55	55
3853	3830	3914	4336
4631	4631	4631	4587
4399	4366	4366	4357
4103	4063	4063	4082
4126	4209	4309	4387
4631	4715	4759	4789
4822	4822	4778	4799
4842	4863	4863	4842
4854	4863	4842	4842
4842	4842	4854	4854
4854	4854	4842	4854
4842	4842	4822	4822
4842	4738	4778	4778
4759	4759	4715	4715
4620	4620	4610	4557
4578	4578	4568	4462
4504	4504	4483	4450
4357	4357	4357	4336
4209	4209	4209	4190
4082	4082	4082	4040
3937	3937	3937	3874
3767	3767	3767	3309
3123	3123	3123	3080

NC MARCEL BAYARD CANTAT III	OCEAN SURVEY CRUISE LEG 1	MINUTES 20
DEPTH IN CORRECTED METRES		
00	00	2913
00	00	2944
00	05	2665
00	10	2511
01	00	2396
01	05	2407
01	10	2244
02	00	2242
02	05	2192
02	10	2172
03	00	2192
03	05	2131
03	10	2119
04	00	2131
04	05	2131
04	10	1750
05	00	1750
05	05	1058
05	10	1967
06	00	1480
06	05	1480
06	10	1480
07	00	1480
07	05	1480
07	10	1480
08	00	1480
08	05	1480
08	10	1480
09	00	1480
09	05	1480
09	10	1480

DATE	26- 6-1971 (DAY NO 177)	55			
30	35	40	45	50	55
31	2810	2790	2750	2727	
25	2625	2582	2563	2563	
2	2481	2459	2459	2439	
5	2325	2316	2305	2296	2285
12	2192	2186	2174	2131	2124
21	2192	2186	2172	2156	2147
29	2057	2038	2027	2007	1966
8	1608	1577	1569	1474	1423
17	1600	1566	1557	1495	1423

D41

DATE 25- 6-1971 (DAY NO .176)

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
DEPTH IN CORRECTED METRES

1678	1612	1575	1799*17	1650	899	951	1013	1058	1106	1171	1274	1398
2005	2005	2021	2025	1855	1913	1874	1913	1930	1951	1799	1838	1855
2165	2165	2140	2029	2025	2100	2081	2100	2109	2140	1725	1743	1799
2215	2215	2246	2120	2050	2063	2081	2063	2081	2140	1799	1838	1855
2382	2382	2402	2246	2240	2289	2289	2289	2289	2346	1799	1838	1855
2515	2515	2543	2421	2421	2459	2468	2459	2468	2496	1799	1838	1855
2779	2779	2799	2582	2582	2633	2658	2633	2658	2693	1799	1838	1855
2836	2836	2861	2618	2618	2693	2674	2693	2674	2724	1799	1838	1855
2968	2968	3006	2582	2582	2633	2658	2633	2658	2693	1799	1838	1855
3087	3087	3084	2292	2292	2938	2938	2938	2938	3084	1799	1838	1855
3788	3788	3842	3044	3044	3139	3244	3139	3244	3709	1799	1838	1855
4010	4010	4057	3845	3845	3902	3941	3902	3941	3960	1799	1838	1855
4036	4036	4066	4066	4066	4077	4094	4066	4094	4133	1799	1838	1855

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
DEPTH IN CORRECTED METRES

DATE 25- 8-1971 (DAY NO 237)

4.0	45	50	55
1106	1171	1274	1398
11743	1799	1838	1855
11930	1951	1969	1988
2109	2140	2156	2156
2100	2140	2156	2156
22081	2346	2372	2372
22297	2496	2496	2496
22477	2496	2496	2496
22674	2704	2724	2724
23034	3072	3084	3084
33709	3769	3778	3778
33941	3981	3999	3999
40994	4153	4172	4172

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NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
DEPTH IN CORRECTED METRES

	DATE	27- 8-1971 (DAY NO 239)	DATE	28- 8-1971 (DAY NO 240)
	00	05	00	05
00 HOURS	3764	3801	3858	3858
01	3801	3821	3668	3697
02	3821	3973	3858	3905
03	3955	3973	3994	4052
04	4071	4066	4052	4088
05	4098	4098	4088	3964
06	3918	3868	3868	3919
07	4031*58	4088	4088	4119
08	4272	4234	4234	4262
09	4234	4234	4241	4281
10	4320	4301	4253	4241
11	4224	4165	4324	4241
12	4301	4301	4301	4301
13	4281	4281	4241	4281
14	4186	4186	4186	4186
15	4165	4147	4165	4147
16	4145	4147	4145	4145
17	4105	4087	4184	4105
18	4087	4087	4029	4050
19	4105	4105	4105	4105
20	4029	4078	4069	4069
21	3665	3608	3694	3723
22	3819	3782	3782	3856
23	3799	3837	3849	3837
	3895	3875	3916	3916
	3895	3875	3916	4105
	35	40	35	40
	3821	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	30	35	30	40
	3821	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301
	4281	4281	4281	4281
	4186	4186	4186	4186
	4165	4165	4165	4165
	4145	4145	4145	4145
	4105	4105	4105	4105
	4029	4078	4069	4069
	3608	3608	3694	3713
	3782	3782	3799	3799
	3837	3837	3849	3849
	3895	3875	3916	3916
	3895	3875	3916	4096
	25	25	25	25
	3858	3858	3858	3858
	3668	3668	3668	3668
	3858	3858	3858	3858
	3973	3994	3994	3994
	4071	4071	4071	4071
	4098	4098	4098	4098
	3868	3868	3868	3868
	3918	3918	3918	3918
	4031	4088	4088	4088
	4272	4234	4234	4234
	4234	4234	4241	4241
	4320	4320	4320	4320
	4301	4301	4301	4301

NC MARCEL BAYARD CANTAT	11 OCEAN SURVEY CRUISE LEG 2	MINUT
DEPTH IN CORRECTED METRES		20
00	00	15
00	3518	3651
01	3404	3556
02	3245	3556
03	3242	3214
04	3233	3404
05	3661	3261
06	3489	3709
07	3997	3594
08	3775	3746
09	38790*58	3767
10	3651	3746
11	3911	3746
12	4131	4070
13	3978	4070
14	3997	4070
15	3861	4070
16	3880	4070
17	4045	4070
18	4332	4070
19	4552	4070
20	4505	4070
21	4033	4070
22	4119	4070
23	4138	4070

NC MARCEL BAYARD DEPTH IN METRES	CANTAT II CORRECTED METRES	OCEAN SURVEY	CRUISE LEG 2	MINUT 20
HOURS	00	05	10	15
00	4134	4189	4210	4230
01	4230	4278	4288	4288
02	4210	4210	4143	4210
03	4247	4288	4288	4288
04	4267	4247	4267	4267
05	4249	4290	4279	4290
06	4325	4345	4366	4366
07	4510	4499	4480	4480
08	4694	4443	4664	4566
09	4443	4422	4385	4412
10	4422	4403	4403	4403
11	4422	4403	4366	4366
12	4279	4239	4172	4115
13	4212	4316	4362	4162
14	4290	4309	4309	4325
15	4232	4222	4191	4155
16	4290	4309	4290	4172
17	3981	4307	4199	4279
18	4113	4113	4094	4076
19	3828	3864	3797	3780
20	3238	3369	3483	3596
21	4230	4267	4346	4402
22	4777	4808	4808	4787
23	4751	4787	4770	4751

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2
DEPTH IN CORRECTED METRES

DATE 31- 8-1971 (DAY NO 243)

MARC BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2

DATE	1- 9-1971	(DAY NO 244)
	40	50
	45	55
	4875	4865
	4845	4845
	4809	4809
	4751	4768
	4731	4731
	4674	4674
	4614	4614
	4578	4578
	4510	4501
	4453	4443
	4041	3964
	4042	3699
	4072	3509
	4025	3716
	3749	3849
	3499	3849
	3888	3909
	38059	4079
	4098	4098
	4079	4098
	4357	4357
	4405	4405
	46054	4710
	4964	4964
	5426	5426

35	4865 4845 4809 4768 4731 4691 4636 4578 4529 4491 4474 4312 3879 3833 3888 4107 4089 4089 4309 4366 4624 4905 5349
30	4865 4845 4809 4768 4742 4691 4636 4578 4529 4491 4474 4312 3879 3833 3888 4107 4089 4089 4309 4366 4624 4905 5349

NAME	DEPTH IN METRES	HOURS	TIME
MARCEL BAYARD	0 5	4886	48 00
CANTABRIQUE	0 5	4855	48 01
IN CORRECTED METRES	0 0	4845	48 02
48799	0 0	4751	48 03
47751	0 0	4710	48 04
46567	0 0	4597	48 05
4568	0 0	4482	48 06
4482	0 0	4405	48 07
4405	0 0	3945	48 08
3945	0 0	3603	48 09
3603	0 0	3546	48 10
3546	0 0	3576	48 11
3576	0 0	3688	48 12
3688	0 0	3955	48 13
3955	0 0	4079	48 14
4079	0 0	4165	48 15
4165	0 0	4366	48 16
4366	0 0	4482	48 17
4482	0 0	4787	48 18
4787	0 0	5078	48 19
5078	0 0	5123	48 20
5123	0 0	5123	48 21
5123	0 0	5123	48 22
5123	0 0	5123	48 23

D 45

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 2

DATE 2- 9-1971 (DAY NO 245)

DEPTH IN CORRECTED METRES	HOURS	MINUTES	MINUTES
00	5413	5401	5420
01	5431	5431	5411
02	5411	5411	5411
03	5411	5411	5420
04	5411	5392	5392
05	5392	5375	5375
06	5375	5352	5352
07	5352	5343	5343
08	5343	5343	5343
09	5343	5343	5343
10	5431	5411	5411
11	5411	5411	5411
12	5392	5392	5392
13	5375	5375	5375
14	5352	5352	5352
15	5343	5343	5343
16	5277	5277	5277
17	5277	5277	5277
18	5169	5169	5169
19	5152	5152	5152
20	5133	5133	5133
21	5123	5123	5123
22	5091	5091	5091
23	5074	5074	5074

DATE 3- 9-1971 (DAY NO 246)

DEPTH IN CORRECTED METRES	HOURS	MINUTES	MINUTES
00	5029	5049	5049
01	5010	5010	5010
02	4952	4952	4952
03	4924	4924	4924
04	4893	4893	4893
05	4894	4894	4894
06	4924	4924	4924
07	4915	4915	4915
08	4915	4915	4915
09	4915	4915	4915
10	4915	4915	4915
11	4915	4915	4915
12	4915	4915	4915
13	4915	4915	4915
14	4915	4915	4915
15	4915	4915	4915
16	4916	4916	4916
17	4731	4731	4731
18	4731	4731	4731
19	4731	4731	4731
20	4731	4731	4731
21	4721	4721	4721
22	4721	4721	4721
23	4721	4721	4721

D46

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3

DATE 11- 9-1971 (DAY NO 254)

INC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3
DEPTH IN CORRECTED METRES

NC MARCEL BAYARD CANTAT III OCEAN SURVEY CRUISE LEG 3
DEPTH IN CORRECTED METRES

	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES
HOURS	4638	4561	4484	4561	4484	4551	4484	4407	4236	4236	4194	4194	4159	4159	4027	4178	4178	4198	4219	4219	4209	4209	4159	4159	4027	4142	4142	4198							
01	3895	3856	3914	4255	3425	4219	4219	4209	3979	4209	4142	4142	4159	4159	4168	4168	4178	4178	4190	4190	4205	4205	4159	4159	4168	4168	4142	4142	4198						
02	4065	3950	3686	4209	4219	4198	4103	4084	4046	4142	4159	4159	4237	4237	4148	4148	4180	4180	4219	4219	4209	4209	4159	4159	4205	4205	4255	4255							
03	4236	4219	4219	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200						
04	4228	4219	4198	4103	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084	4084						
05	4334	4334	4343	4353	4343	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295	4295						
06	4180	4010	4295	4334	4295	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466	4466						
07	4439	4434	4314	4314	4314	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334	4334						
08	4257	4257	4372	4334*12	4372	4408	4408	4372	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408	4408						
09	4466	4448	4448	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420	4420						
10	4466	4526	4526	4601	4601	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639	4639						
11	4659	4639	4304	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353	4353						
12	4304	4304	4407	4407	4407	4418	4418	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407						
13	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407						
14	4312	4312	4323	4323	4323	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255	4255						
15	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219	4219						
16	4447	4447	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437	4437						
17	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407						
18	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407	4407						
19	4228	4228	4170	4170	4170	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13	4115*13						
20	4190	4190	4190	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096	4096						
21	4020	4020	4020	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038	4038						
22	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629	4629						
23																																			

-NC MARCEL 8AYARD CANTAT III OCEAN SURVEY CRUISE LEG 3
DEPTH IN CORRECTED METRES

	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES	00	05	10	15	20	25	MINUTES
HOURS	4073	4112	4149	4131	4035*22	4092	4092	4092	4167	4186	4112	4092	4167	4167	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207	4207					
01	4263	4263	4263	3979	3939	4054	4054	4054	4112	4112	4112	4112	4112	4112	4112	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073	4073				
02	4015	4015	4035	4035	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884	3884						
03	3808	3826	4301	4207	4216	4207	4216	4216	3762	3762	3762	3762	3762	3762	3762	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23	3741*23					
04	4263	4263	4263	3750	3750	3789	3789	3789	3912	3912	3912	3912	3912	3912	3912	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793	3793				
05	4207	4207	4207	3732	3732	3778	3778	3778	3769	3769	3769	3769	3769	3769	3769	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854	3854				
06	3732	3732	3732	3599	3599	3544	3544	3544	3562	3562	3562	3562	3562	3562	3562	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450				
07	3789	3789	3789	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599						
08	3778	3778	3778	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599	3599						
09	3599	3599	3599	3599	3																														

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3

DATE 15- 9-1971 (DAY NO 258)

DEPTH IN CORRECTED METRES	HOURS	00	05	10	15	20	25	MINUTES	DATE
3107	00	3089	3125	3052	3107	3239	3239	55	
3201	01	3239	3256	3296	3296	3107	3332		
3541	02	3558	3558	3567	3653	3644	3417		
3567	03	3596	3558	3558	3558	3548	3558		
3201	04	3145	3145	3691	3598	3475	3621		
3640	05	3603	3640	3755	3774	3640	3660		
3774	06	3691	3488	3529	3640	3669	3621		
3698	07	3698	3868	4057	4096	4096	4134		
3868	08	3868	4115	4096	4002	3887	3868		
3962	09	3942	3925	3962	3983	3942	3906		
4057	10	4057	4057	3906	4019	4247	4002		
4002	11	3983	3962	3909	4057	4247	4076		
3868	12	3868	*58	4009	4009	3942	3715		
3962	13	3962	3983	4038	4084	4048	3593		
3906	14	3906	3962	3942	3962	3910	3595		
4306	15	4136	4136	4021	3944	3851	3584		
4098	16	4078	4059	4021	3944	3870	3909		
3700	17	3681	3643	3975	3695	3653	3436		
3813	18	3718	3567	3436	3436	3643	3484		
3624	19	3700	3889	4040	4117	4249	4249		
3587	20	3700	3736	3736	3736	3718	3567		
3305	21	3927	3870	3794	3794	3727	3324		
3736	22	3727	3681	3718	3700	3681	3944		
	23						3567		

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3

DATE 16- 9-1971 (DAY NO 259)

DEPTH IN CORRECTED METRES	HOURS	00	05	10	15	20	25	MINUTES	DATE
3564	00	3622	3631	3677	3754	3904	3981	55	
4473	01	4473	4473	4341	4397	4237	4549		
4436	02	4436	4416	4397	4075	4360	4473		
4397	03	4397	4397	4397	4075	4055	4228		
4112	04	4075	4075	3923	3904	4112	4055		
4055	05	4010	3981	3950	4457	4531	4209		
4302	06	4380	4360	4380	4397	4645	4787		
4797	07	4797	4797	4797	4797	4797	4797		
4778	08	4817	4817	4817	4838	4838	4894		
4894	09	4894	4894	4894	4894	4894	4894		
4875	10	4894	4894	4894	4894	4894	4894		
4875	11	4875	4875	4875	4855	4855	4838		
4797	12	4817	4817	4817	4808	4808	4787		
4761	13	4771	4741	4741	4722	4703	4778		
4626	14	4618	4618	4608	4568	4559	4512		
4512	15	4492	4492	4492	4456	4454	4503		
4397	16	4397	4397	4397	4397	4397	4397		
4283	17	4283	4283	4246	4246	4209	4178		
4132	18	4132	4132	4122	4122	4094	4168		
3950	19	3950	3950	3941	3904	3876	3962		
3489	20	3337	3337	3204	3246	3207	3187		
2889	21	2927	2889	2889	2797	2738	2684		
2590	22	2590	2590	2590	2554	2536	2441		
2405	23	2405	2376	2376	2354	2350	2163		

D50

NC MARCEL BAYARD CANTAT II OCEAN SURVEY CRUISE LEG 3

DEPTH IN CORRECTED METRES

HOURS	00	05	10	15	20	25	30	35	40	45	50	55
00	2142	2106	2097									
01												
02												
03												
04												
05												
06												
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21												
22												
23												

DATE 17- 9-1971 (DAY NO 260)

D51