2199

A GEOLOGICAL, GEOPHYSICAL, AND GEOCHEMICAL REPORT

ON THE

DONNA AND KAREN CLAIMS

OMINECA MINING DIVISION

54° 126° NE

38 MILES EAST OF SMITHERS, B.C.

FOR

WHITESAIL MINES LTD.

AND

MERCURY EXPLORATIONS LTD.

BY

R.E. CHAPLIN, P.ENG.

AND

R.W. WOOLVERTON, P.ENG.

BETWEEN

MAY 1st, AND OCTOBER 13, 1969

JANUARY 8th, 1969

VANCOUVER, B.C.

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INTRODUCTION

The Donna and Karen Claims are south of and adjoin the southeast corner of Fulton Lake about 4 miles west of Topley Landing, on Babine Lake, and about 38 miles east of Smithers at longitude 126° 13' and latitude 54° 47'. About a mile south of the property, a branch from a good all weather road between Topley and Topley Landing crosses the property to give access to Fulton Lake. The new Bowater Logging Road from Topley Landing to Houston also crosses the claims.

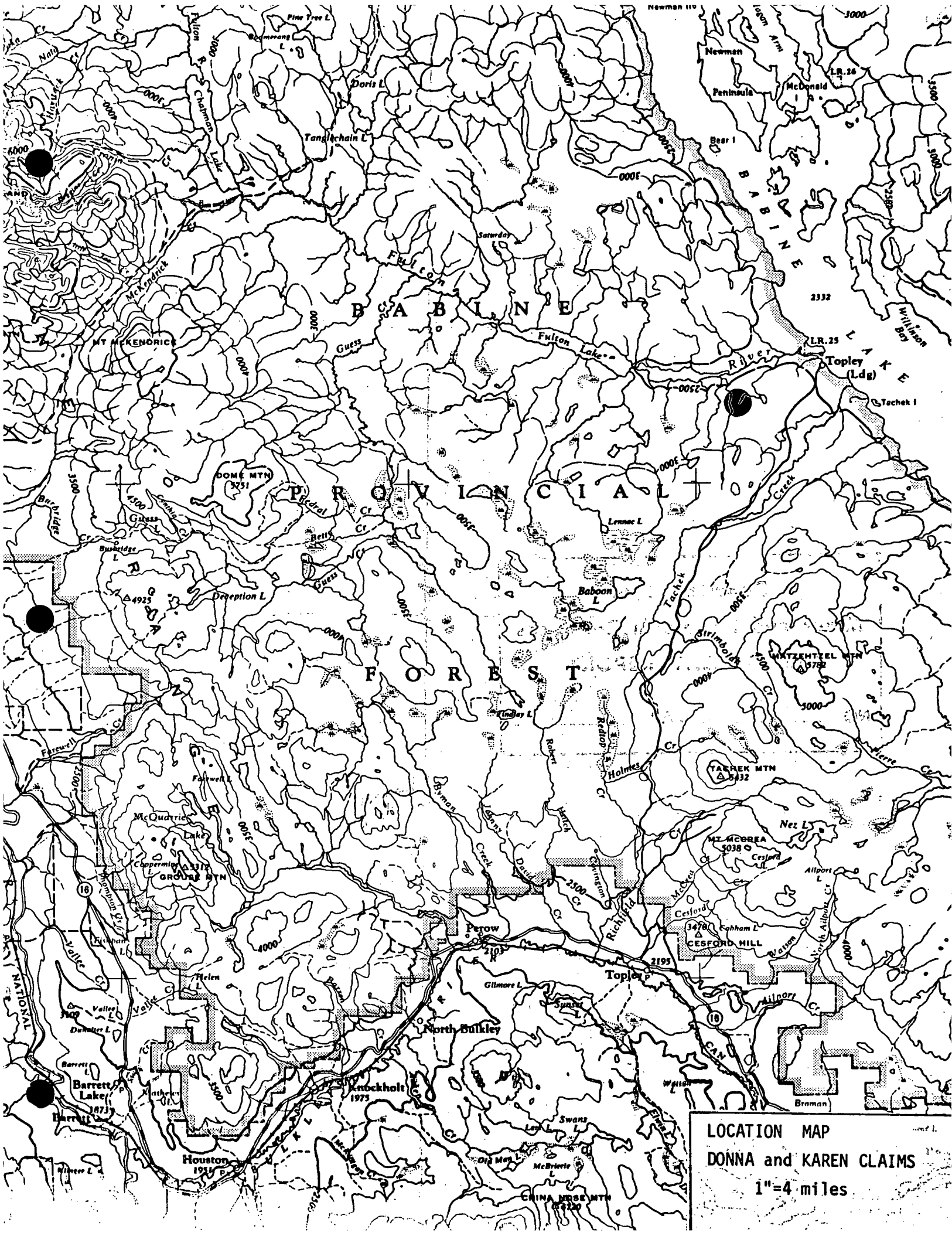
Elevations on the property range from 2500 to 3100 feet. Considerable poplar is present as well as the common evergreens. Patches of thick alder and local areas of devil's club were encountered.

1969 PROGRAM

A helicopter mag-EM survey was flown in May to outline areas of possible porphyry mineralization. Ground follow-up of the airborne survey involved 14 line miles of radem and magnetometer surveying, 8 line miles of variable frequency induced polarization, and the collection of 273 soil samples.

Grid lines were established by compass and flagged but because of the extreme magnetic variability they were badly deflected. This necessitated cutting and picketing 2 miles of tie line.

The I.P. survey was supervised and interpreted by R.E. Chaplin, P. Eng., of Professional Geologic Services of Vancouver, B.C. The airborne field work was done by Lockwood Survey Limited of Toronto, all other work was done by Evergreen Explorations Ltd., of Burnaby, under the supervision of R.W. Woolverton, P. Eng.



LOCATION MAP
DONNA and KAREN CLAIMS
1"=4 miles

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2199 MAP #1

GEOLOGY

REGIONAL GEOLOGY

The Jurassic Topley Granites and Hazelton Volcanics and sediments are the two major rock units. The granites underly most of the area south of Topley Landing with the younger (?) overlying Hazelton forming many of the prominent hills. The Topley Landing region marks the northern limit of exposure of the Topley Granites which form a batholith stretching some one hundred and fifty miles to the southeast. A relatively thin layer of glacial drift covers the claim group.

Disseminated and fracture filling chalcopyrite and molybdenite in Topley Granite was found in the canyon of Tachek Creek, about 3 miles east of the claim group in August 1968. The claims were optioned by Noranda Explorations Limited in September and have since been extensively explored.

The mineralization appears to be related to introduced biotite and possibly secondary potash felspar associated with felspar porphyry dykes in the Topley Granites. The presence of biotization, characteristic of the Tertiary porphyry deposits of the Babine Camp, suggests a Tertiary age for the Topley Landing porphyry mineralization as well. An examination of the 1969 aeromagnetic maps of the area also supports this view. Magnetite has apparently been injected or remobilized adjacent to regional north trending shear and alteration structures. The resulting magnetite concentrations appear to be in both the granites and volcanics so that the associated porphyry mineralization is at least younger than the Hazelton Volcanics.

Copper, associated with calcite veins in the volcanics of the area, has been known for many years. There may also be copper minerals associated with flow top structures within the Hazelton.

The regional geology is generalized on the Smithers - Fort St. James G.S.C. Map 971A and on the B.C. Department of Mines Map 69-1 by Carter and Kirkham.

LOCAL GEOLOGY

Only two areas of outcrop were noted on the grid. However, fair exposure was found northeast of the grid.

The medium grained equigranular Topley Granite exposed on the 38 and 40 north lines is extensively propylitized. The mafics are well chloritized. No biotization was noted although secondary felspar may be present. Most specimens contain disseminated magnetite.

Northeast of the grid, fair exposure of Hazelton Volcanics and limestone were located. The volcanic is a reddish to dark andesite. The limestone is mainly dark colored with local shale zones.

GEOCHEMISTRY

SOIL SURVEY

SAMPLING PROCEDURE AND ANALYSIS

Soil samples were collected at 200 foot stations on the grid. They were taken from the "B" horizon using a grub hoe and then shipped to Barringer Research Laboratory in Vancouver where they were analyzed for total Cu. The results are plotted on Map #1 which accompanies this report. The analytical procedure used by Barringer is described in appendix II.

RESULTS

Using the standard frequency distribution method a background value of 15 ppm. for copper was obtained. Thus, over 30 ppm. Cu can be considered anomalous.

Several anomalous areas were outlined by the survey as shown on Map #1. However, only two of these areas appear to be of interest. Because of the extensive cover, the geochem results tend to be sporadic.

The first area of interest runs from 80N/10E to 64N/20E. This is adjacent to airborne conductor 4A. The highest copper value obtained was 125 ppm but a subsequent Induced Polarization survey failed to detect the possible presence of sulfides.

The second geochem area of interest is on line on at 28E. Only one sample was anomalous. However, it is coincident with a singularly sharp irregularity on the ground mag profile.

GEOPHYSICS

AIRBORNE MAG - EM SURVEY

EQUIPMENT, SURVEY, AND DATA REDUCTION

On April 30th, and May 1st, 1969,a 26 line mile airborne magnetic and electromagnetic survey of about 25 square miles was completed. The survey area included the Donna and Karen claims as shown on Map #4 in the pocket. The equipment and crew were supplied by Lockwood Survey Corporation Limited of Toronto.

Readings of the in and out of phase components of the resultant electromagnetic field plus the vertical intensity were taken from an FH-1100 helicopter platform. The equipment included a 4300 c.p.s. electromagnetic system and a Gulf Mark III magnetometer. The receiver coils and magnetometer head were carried in in a 30 foot long bird suspended beneath the helicopter on a 100 foot cable. Flying height was maintained at about 220 feet above the ground and the bird travelled at about 100 feet above the ground. Terrain clearance was measured by a Bonzar radio altimeter and recorded on the E.M. tapes. A Gulf recorder was used for the magnetometer and the E.M. system was linked to a Taylor recorder in which the conductors were recorded in negative values.

Flight lines were oriented east-west at one half mile line spacing with fill-in lines at one quarter mile spacing. A continuous 35mm film record was kept of the flight lines so that they were easily plotted on a photo mosaic.

The picking of the 35 mm film for location points and the data reduction was done by Versatile Drafting Ltd. of Vancouver. The data was drafted at 1" = ½ mile and is included as Map #4 with this report.

RESULTS

Twenty-five conductors were indicated on the E.M. tapes. Profiles of these conductors with the corresponding magnetic profiles are included as appendix I of this report. Of the twenty-five anomalies, three of them (1, 3, and 13) probably reflect bedrock conductors and seven of them (4, 4B, 4C, 4E, 5, 11 and 18) are probably overburden conductors but should be investigated on the ground. The remaining conductors are almost certainly surficial.

Conductor #1 is sharp and strong with a 120 ppm in phase and 75 ppm out of phase response. It is between a 100 gamma low and an 80 gamma positive pimple on the flank of a strong high. The anomaly appears to be a reflection of a bedrock conductor, probably sulfides.

Conductor #1A is very broad with a 50 ppm in phase and 125 ppm out of phase response. There is no significant correlating magnetics. The anomaly is probably caused by conductive overburden.

Conductor #1B is not only broad but also slightly weaker than 1A. Although it is adjacent to a 120 gamma high, it also probably due to conductive overburden.

Anomaly #2 is a moderately sharp conductor with both an in and out of phase response of about 60 ppm and no correlating magnetics. It is probably a surface conductor.

Conductor #3 is on the flank of a 200 gamma sharp mag high. It is a reltively weak conductor with in and out of phase components of 35 ppm. It may be caused by sulfides.

Conductor #4 is relatively broad with 70 ppm in and out of phase components. It is almost coincident with a 100 gamma mag high. Although it is probably a surface conductor it should be investigated by ground surveys.

Four "A" gave a broad response but is on the flank of a 300 gamma high. However, it is at the end of the line and so may be spurious.

Four "B" is also a broad conductor and has a poor ratio. The in phase response is about 25 ppm whereas the out of phase is about 90 ppm. Although this anomaly appears to be surficial it is within an anomalously hashy magnetic variation of plus or minus 100 gammas and so warrants follow-up.

Four "C" is a broad conductor but is on the flank of a 140 gamma sharp peak. Although both the conductor and the associated magnetics appear to be formational, the complex warrants follow-up.

Four "D" gave a negative in phase but positive out of phase response. However, it was recorded during a turn and so is probably spurious.

Four "E" gave an in phase and an out of phase response of 30 ppm. Although the conductor appears somewhat broad, it is coincident with a 380 gamma sharp mag high. It may be caused by a conductive bedrock phenomenon but it unfortunately lies under a small lake.

Anomaly #5 is a fairly strong but slightly broad conductor which is on the flank of a 1700 gamma high. The in phase response was 50 ppm and the out of phase was 75 ppm. It could be caused by bedrock conductivity and requires follow-up.

Anomalies 6, 7, 8, 9, and 10 are all verybroad conductors probably reflecting conductive overburden. However, they are all more or less associated with the strongest magnetic feature outlined by the survey.

Anomaly 11 is the only conductor with a positive out of phase (80 ppm) and negative in phase (50 ppm) response. It is coincident with a 240 gamma magnetic complex. Although the conductor is adjacent to a power line, an examination of the film strip showed it was not coincident with the power line. This type of response can be caused by spurious effects such as lightning or by a conductor

parallel to the flight line. The latter appears to be the best interpretation and because of the magnetic correlation, the anomaly should be further investigated.

Conductor #12 is very broad and weak and is probably due to overburden effects. It is, however, coincident with a 120 gamma mag high.

Anomaly #13 is relatively broad with an in phase and out of phase response of 30 ppm. It lies between two sharp mag peaks of about 300 gammas. An examination of the film strip shows it is not caused by the power line. It may reflect sulfide mineralization, possibly a porphyry environment.

Conductors #14, 15, 16 and 17 are all broad and probably caused by conductive overburden. All but 15, which is on the flank of a 600 gamma high, do not have any correlating magnetics.

Anomaly #18 has a sharp in phase within a broader out of phase response. Both are about 30 ppm. It is adjacent to a mag high of 100 gammas. However, the background variations in magnetics are of similar magnitude. The conductor warrants ground investigation.

RADEM SURVEY

EQUIPMENT AND SURVEY

The Radem unit used in the survey is a one-man EM radio receiver utilizing the 12 to 24 kilocycle United States Naval Communications Broadcast Stations. It was built by Crone Geophysics Limited, 979 Lakeshore Road East, Port Credit, Ontario. The instrument utilizes higher than normal EM frequencies and is capable of detecting disseminated sulfides. However, due to the high frequency, it is affected by clay and conductive overburden. Some type curves and specifications are included as Appendix III of this report. VLF

Readings were taken using the Hawaii station (23.4kc) except on lines 16 and 24 N where the Cutler Maine station (17.8kc) was used. The results are plotted on Map #2 which accompanies this report.

SURVEY AND RESULTS

The Radem profiles (map 2) are extremely irregular. A comparison with the magnetic profiles shows that most of the wide variations in the radem curves are associated with the magnetically high areas, particularly the flanks of these areas. Only three of the more obviously interesting radem areas are not related to the magnetics.

The first of these is a sharp peak at 64N/40E which may be an expression of a shear structure or geologic contact. It is not due to topography but is coincident with a magnetic low feature associated with the assumed geologic feature.

An unusual low with both a positive and a negative cross over at 56N/38E is coincident with a fairly sharp mag low. It may also be related to a shear structure. A possible extension of this structure may be responsible for the sharp irregularity in the profile at 48N/38E. However, this may also be a reflection of mineralized fractures.

Four areas of probable fracturing which could have associated mineralization are indicated at 80N/22E, 80N/45E, 64N/15E and 64N/33E. Interestingly, the second area mentioned has a weak soil anomaly and is adjacent to airborne anomaly #3. The last two areas lie on either side of the most interesting geochemical anomaly and are adjacent to airborne anomaly 4A.

MAGNETOMETER SURVEY

EQUIPMENT AND SURVEY

Readings were taken every two hundred feet along the grid lines using a Jaylander fluxgate vertical component magnetometer. Readings were adjusted for daily fluctuations by tying into the base station twice daily. The magnetic profiles obtained are included as Map #3 in the pocket of this report.

RESULTS

The gross features outlined by the airborne magnetic survey are also present on the ground magnetic profiles. The ratio of ground to airborne results averages less than 2:1. This eliminates the possibility of the mag high areas being due to patches of Tertiary Volcanic cover. The mag highs must be therefore due either to disseminated magnetite or rock type changes. Since disseminated magnetite was noted in Topley Granite adjacent to one of the mag highs, it is the most probable cause of the magnetics.

A singularly jagged mag profile is present at ON/25E which could be due to shearing or faulting. Interestingly, there is a coincident increase in the resistivity (see I.P. results) as well as an anomalous soil sample. However, the I.P. survey indicated only a very slight increase in the percent frequency effect.

INDUCED POLARIZATION SURVEY

EQUIPMENT AND SURVEY

An Induced Polarization survey was conducted with a Geoscience Incorporated frequency domain I.P. unit powered by a 1500 watt homelite generator. Measurements were made of the apparent resistivity (ρ_a) and of the percent frequency effect (P.F.E.) for a frequency range of 3.0 and 0.1 cps. A pole-dipole configuration was used with a four hundred foot separation between the travelling current electrode and the first potential electrode which was separated from the second potential electrode by a further four hundred feet. To insure a pole-dipole response, the current electrodes were separated by a minimum of 2000 feet.

Stainless steel rods were used as current electrodes. Porous pots filled with a supersaturated copper sulphate were used as potential electrodes.

Drift as determined from a daily receiver to transmitter P.F.E. calibration check was minimal during the survey. Uncertain P.F.E.'s are shown as a range of possible values.

The following personnel worked on the survey:

R.E. Chaplin, P. Eng.

R.G. Currie, MSc.

R. O'Brien

D. Gillespie

K. Dyck

F. Bland

NOTE: R. Chaplin and R. Currie worked as the I.P. Contractor and the remaining personnel were supplied by the client. (Evergreen Explorations Ltd.)

CONTRACTOR'S QUALIFICATIONS

Robert E. Chaplin, P. Eng., B.C. - Geological Engineer

Seventeen years experience in mineral exploration. Owns and has operated I.P. equipment over a four year period and has completed over 250 line miles of I.P. surveys to date.

Ralph G. Currie, M.Sc (Geophysics U.B.C.)

Has worked on field programs in gravity, magnetometer and induced polarization for two years. Has extensive experience in electronic circuitry both while attending university and while employed by the U.B.C. Geophysics Department.

SURVEY RESULTS

Induced polarization data is presented on two maps showing P.F.E. and apparent resistivity line profiles. A P.F.E. background of 2.0 is observed in this area with percent frequency effects greater than four considered anomalous. Anomalous P.F.E. values were observed between stations 32W and 44W on the Fulton Lake line.

The apparent resistivity data appears to be of use in understanding the geology.

CONCLUSIONS

A porphry complex southwest of Topley Landing was first indicated by the discovery of the Tachek creek property. The outer limits of the area of interest were delineated on the subsequently released government aeromagnetic maps. The northwest quarter of this area of interest is covered by the Donna and Karen claims.

A helicopter mounted magnetometer-E.M. system was used to initially evaluate the claim groups. Several complexes indicating possible mineralization were outlined. Subsequent ground magnetometer,Radem and soil sampling surveys outlined areas of possible interest near airborne anomalies 3 and 4A. Only a few scattered outcrops of altered Topley granite were found on the grid. Except for the Southern third of the grid, the overburden is probably quite thin.

A subsequent induced polarization survey outlined one area of possible sulfides. This anomaly is south of airborne anomaly one which was not tested by the other ground surveys. Further I.P. and soil sampling will be required to determine the extent and importance of this anomaly.

Respectfully submitted,

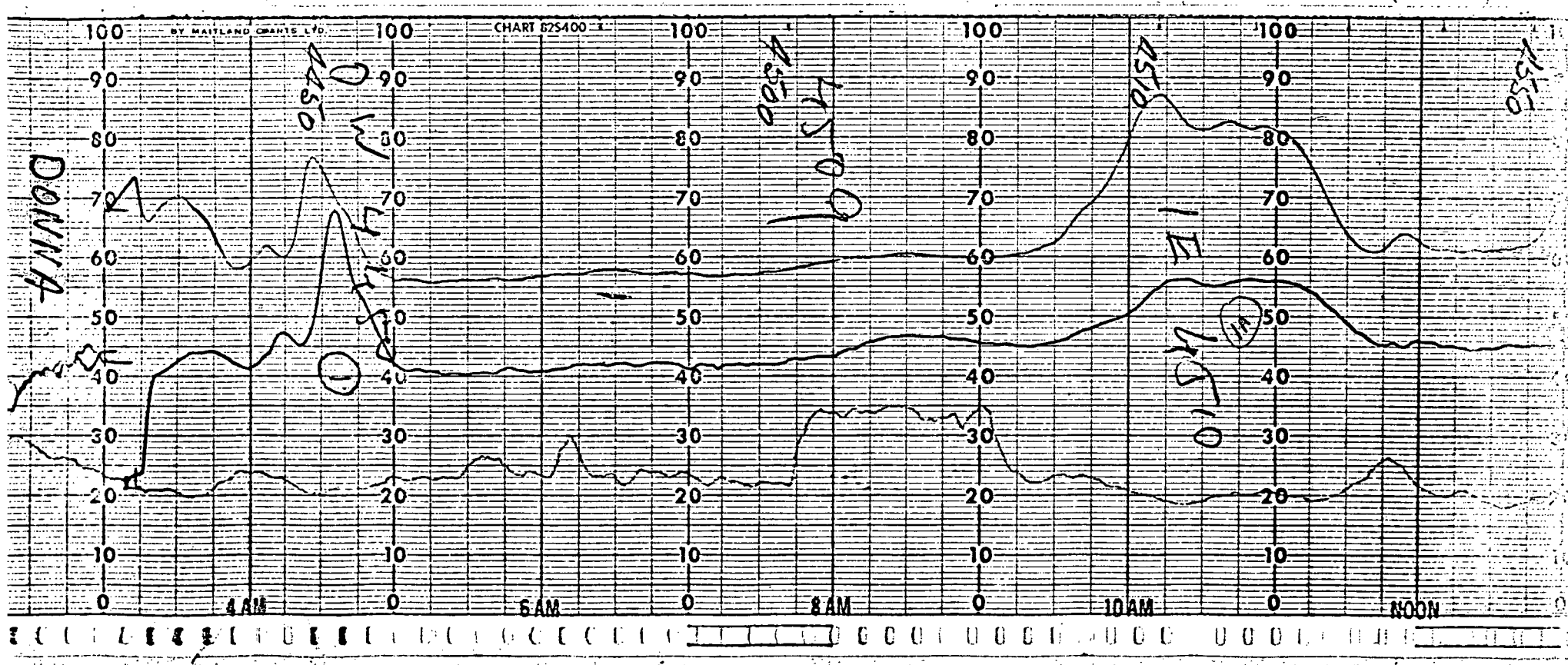
R.E. Chaplin, P.Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
ROBERT E. CHAPLIN

R.W. Woolverton, P.Eng.

APPENDIX I

AIRBORNE MAG - EM PROFILES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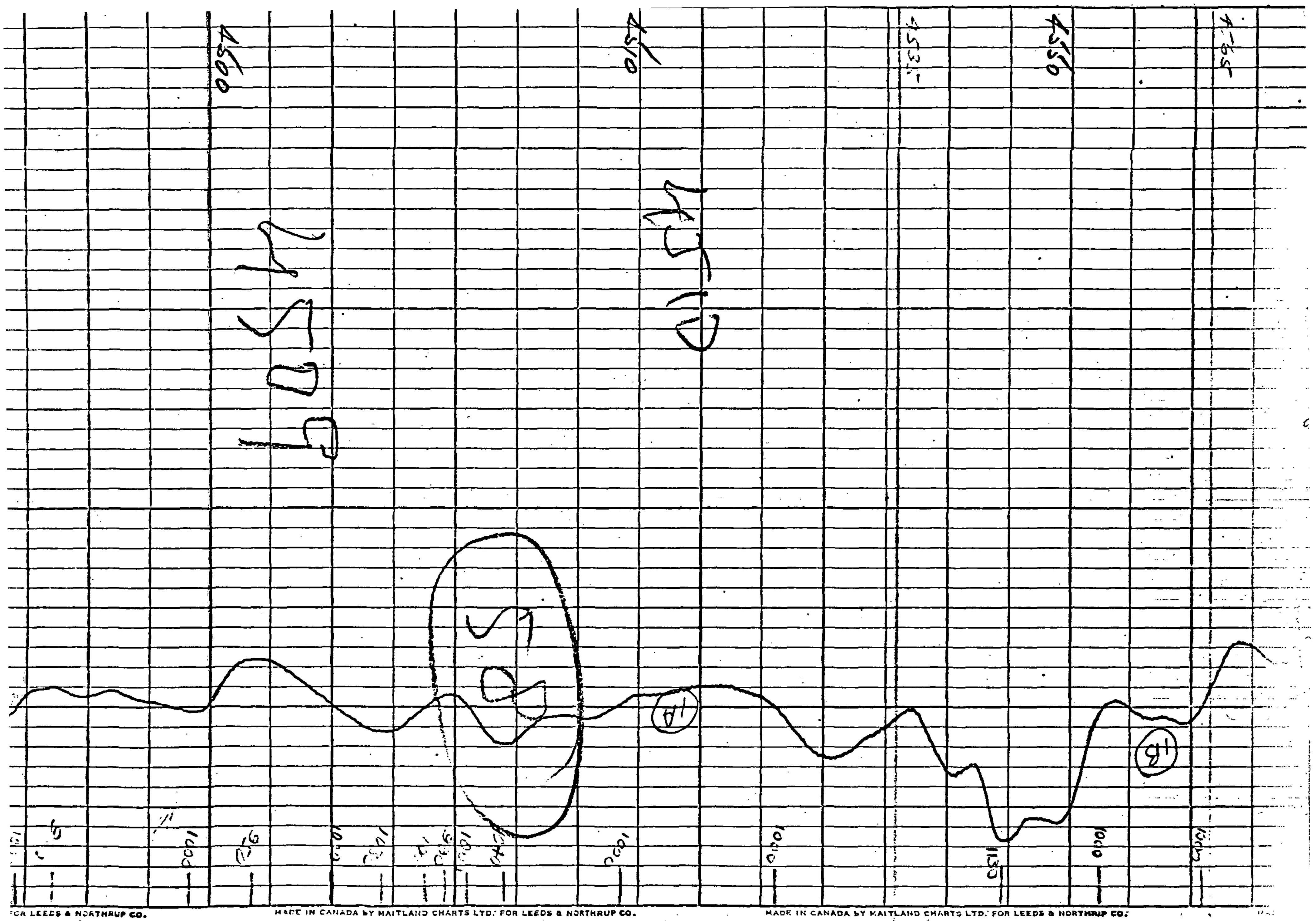

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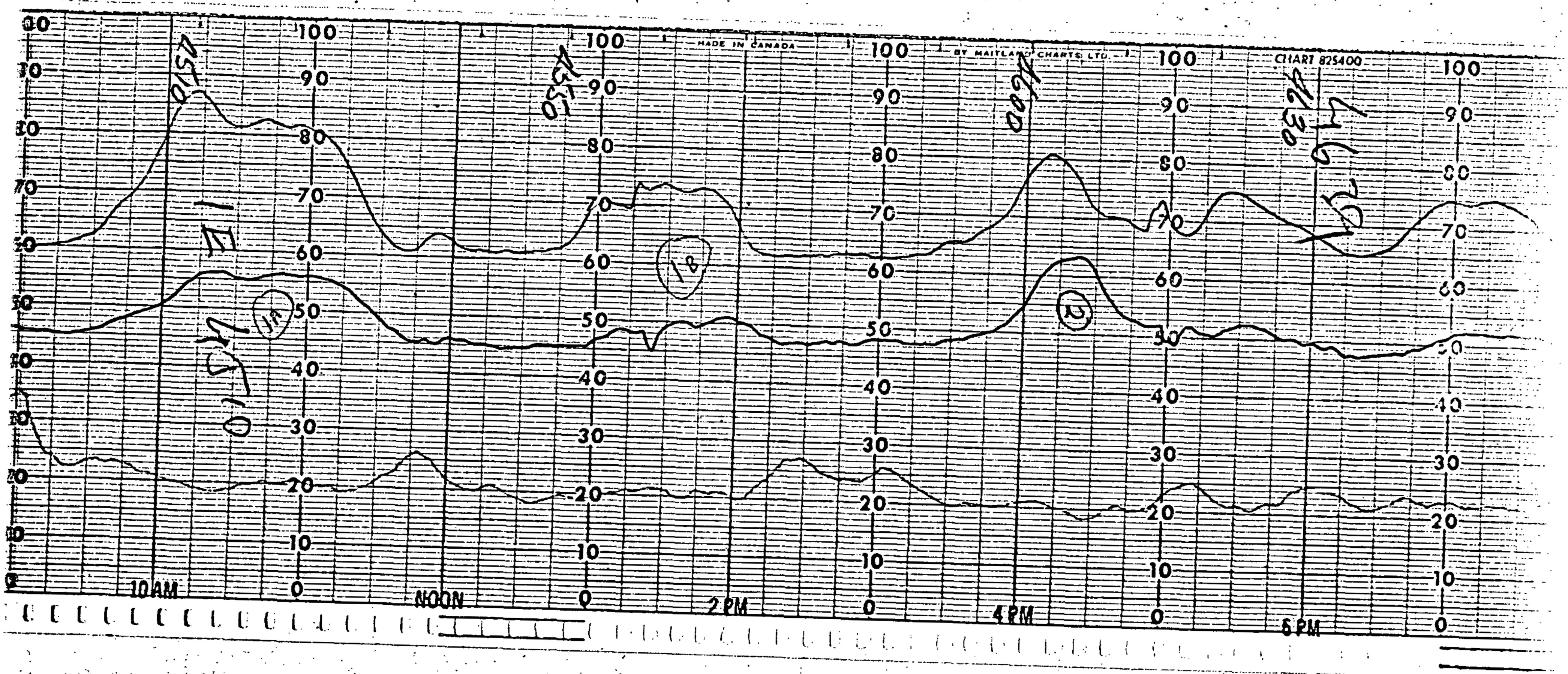
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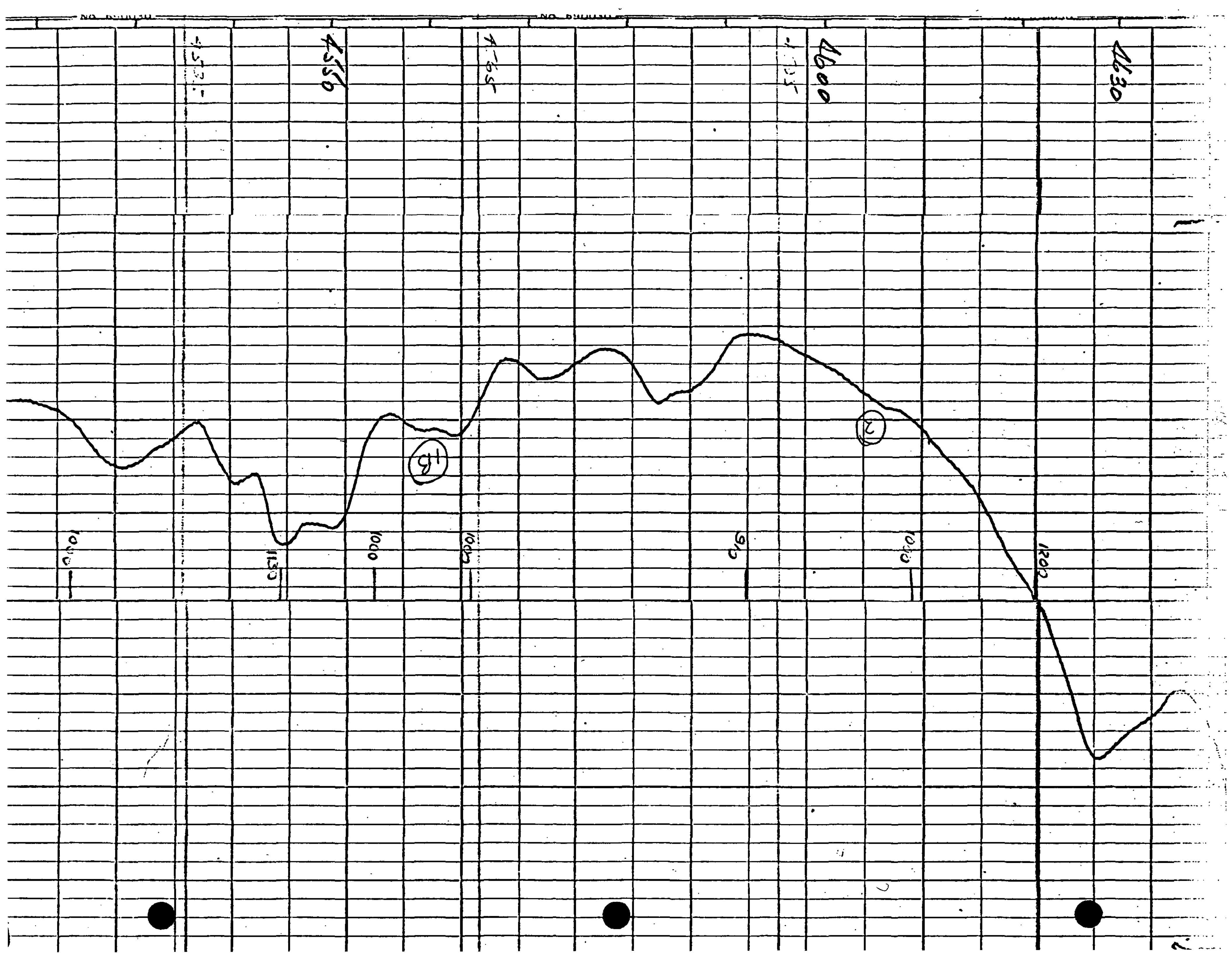
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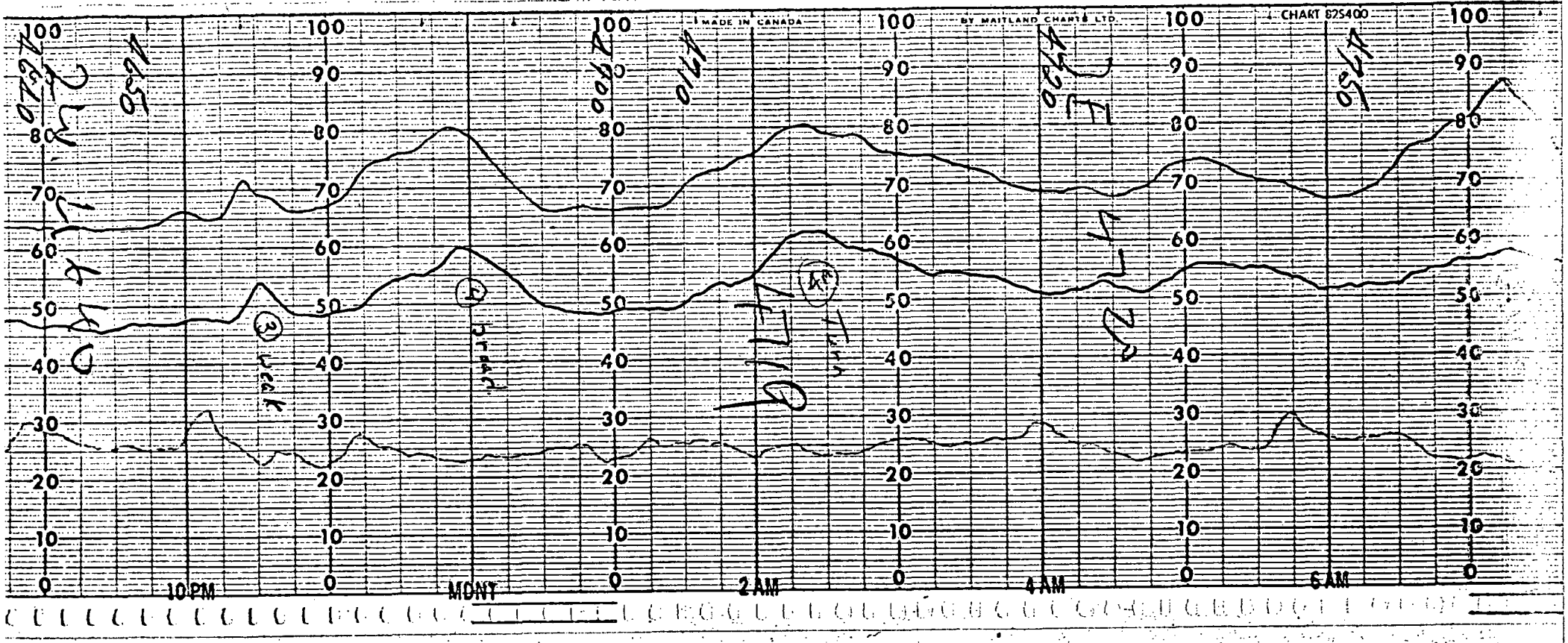
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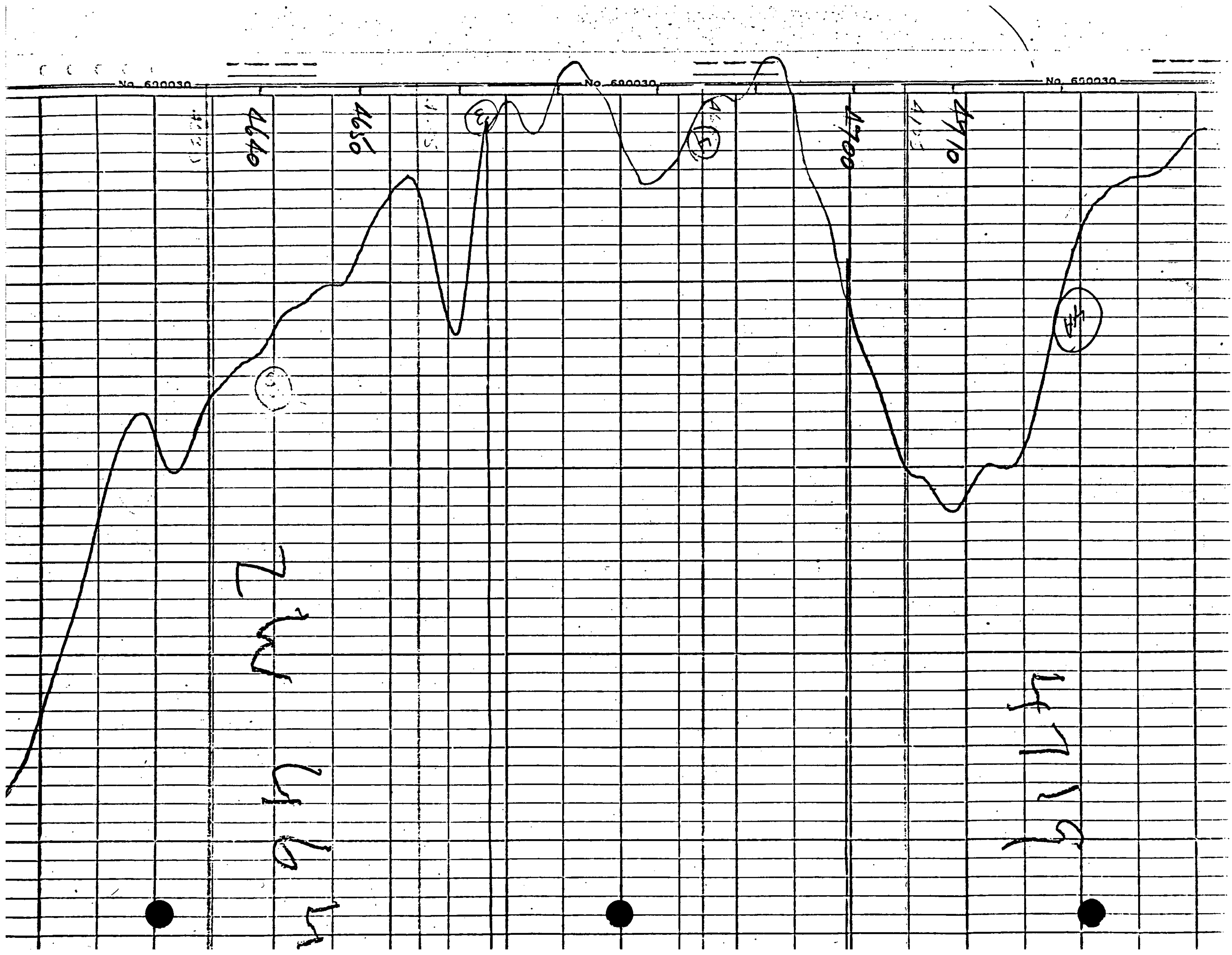

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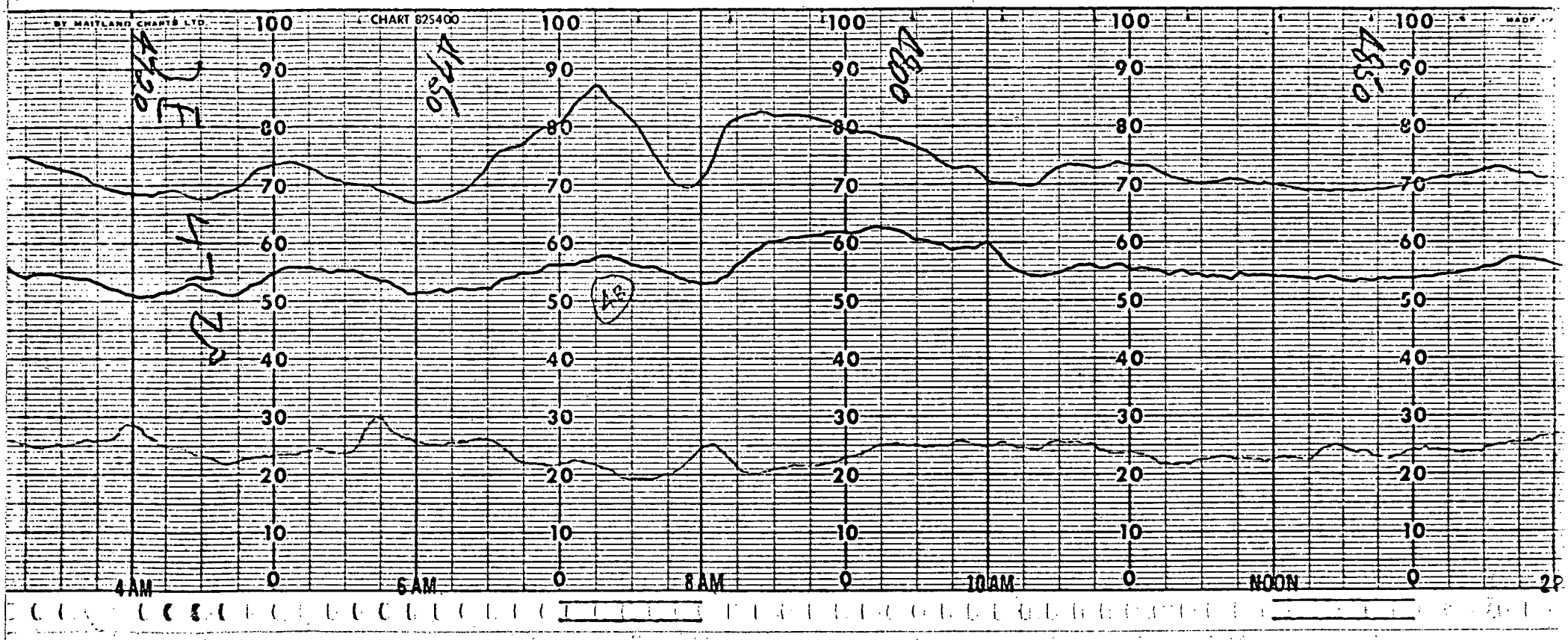
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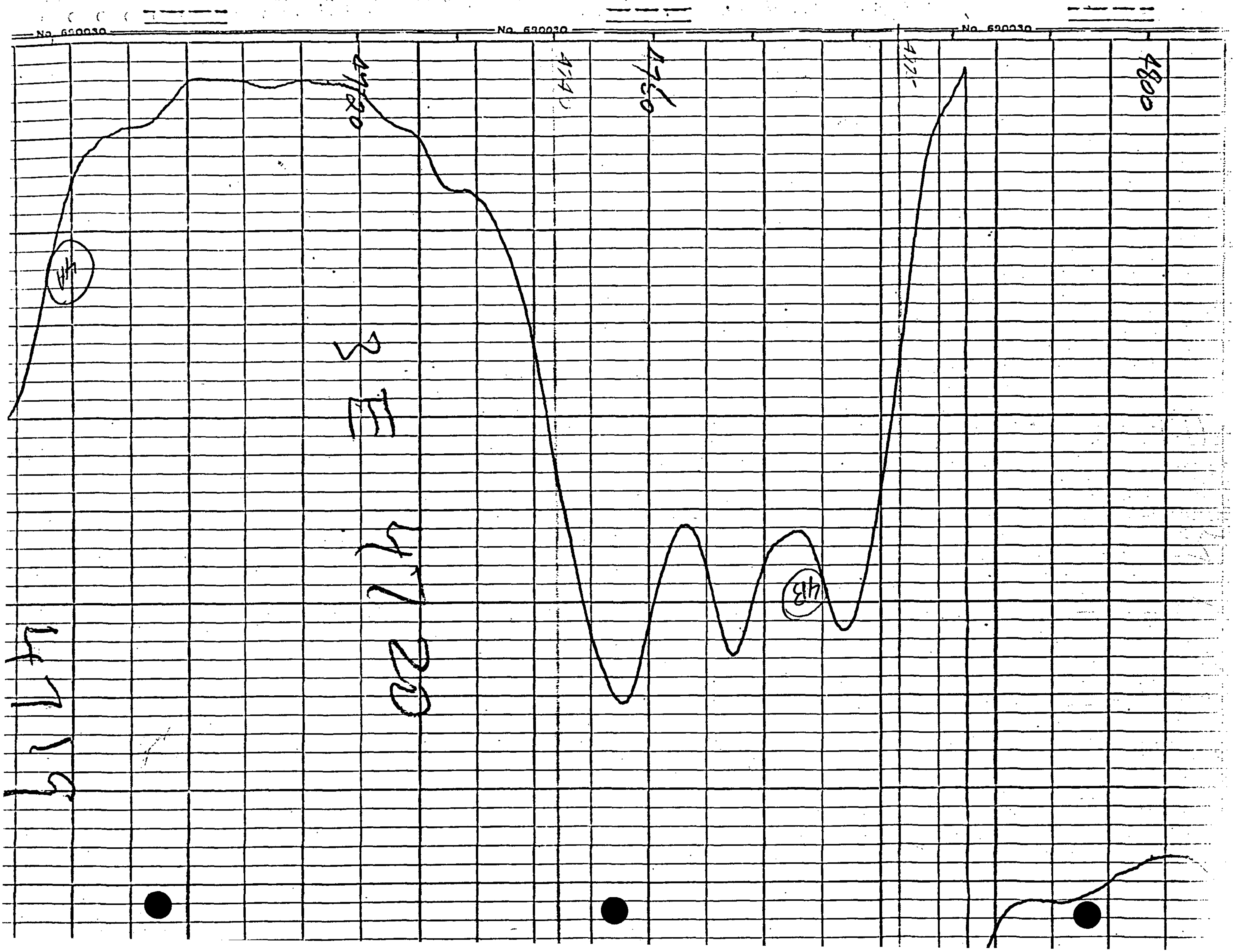
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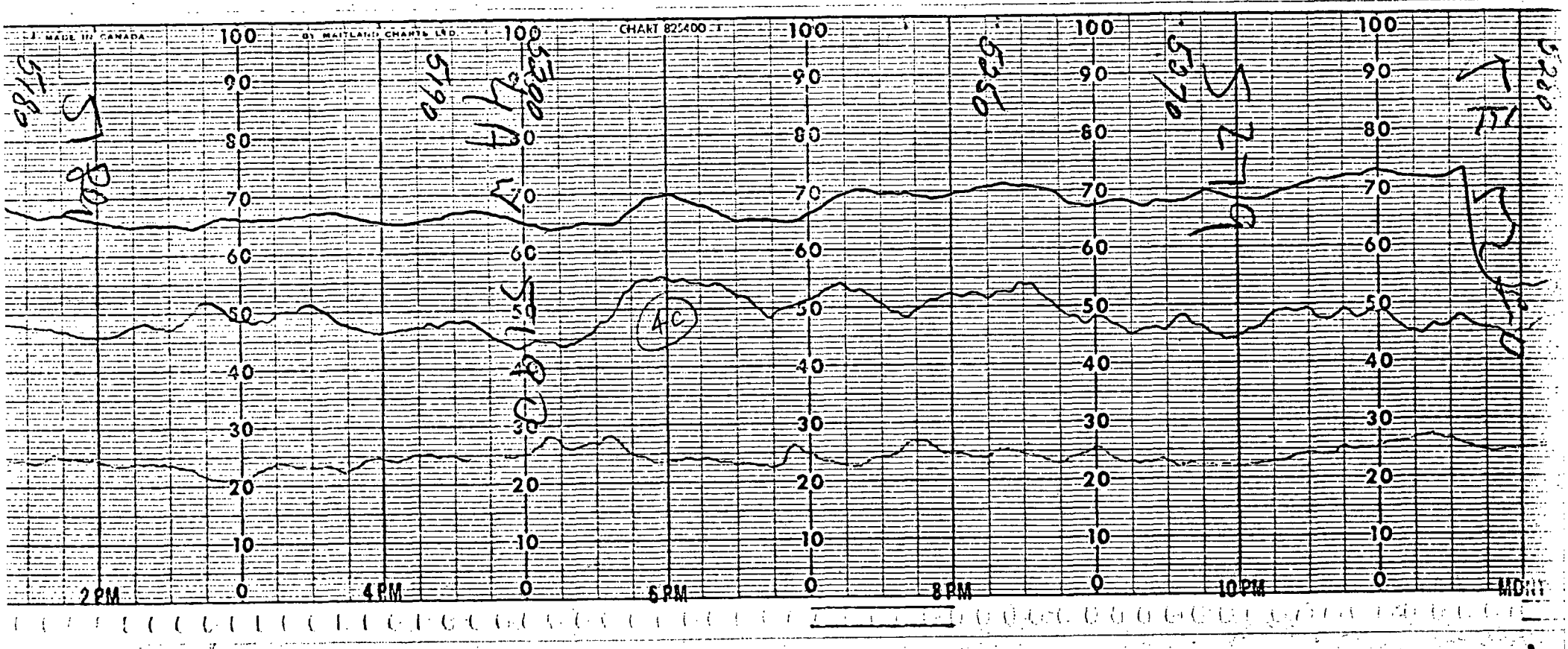
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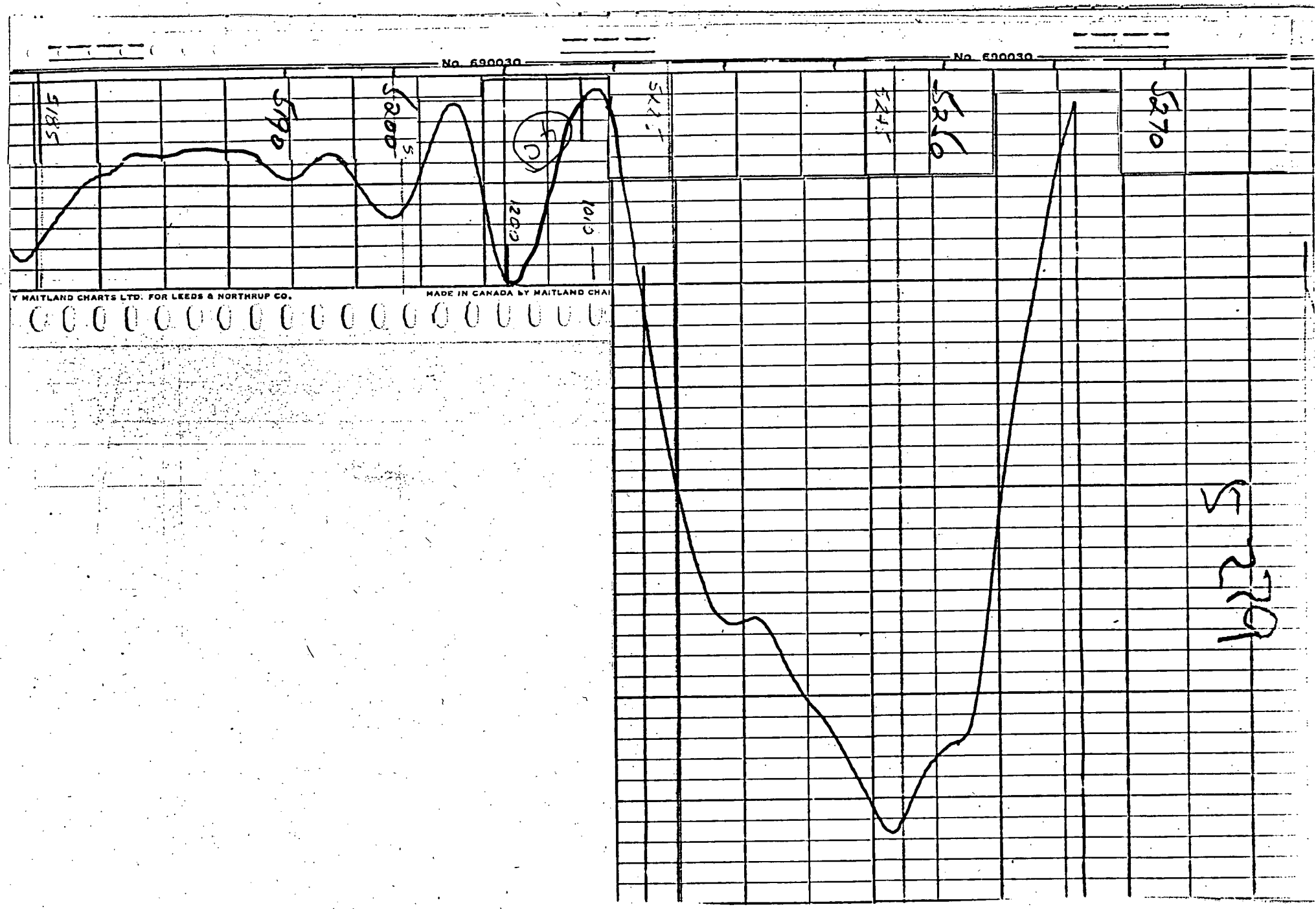
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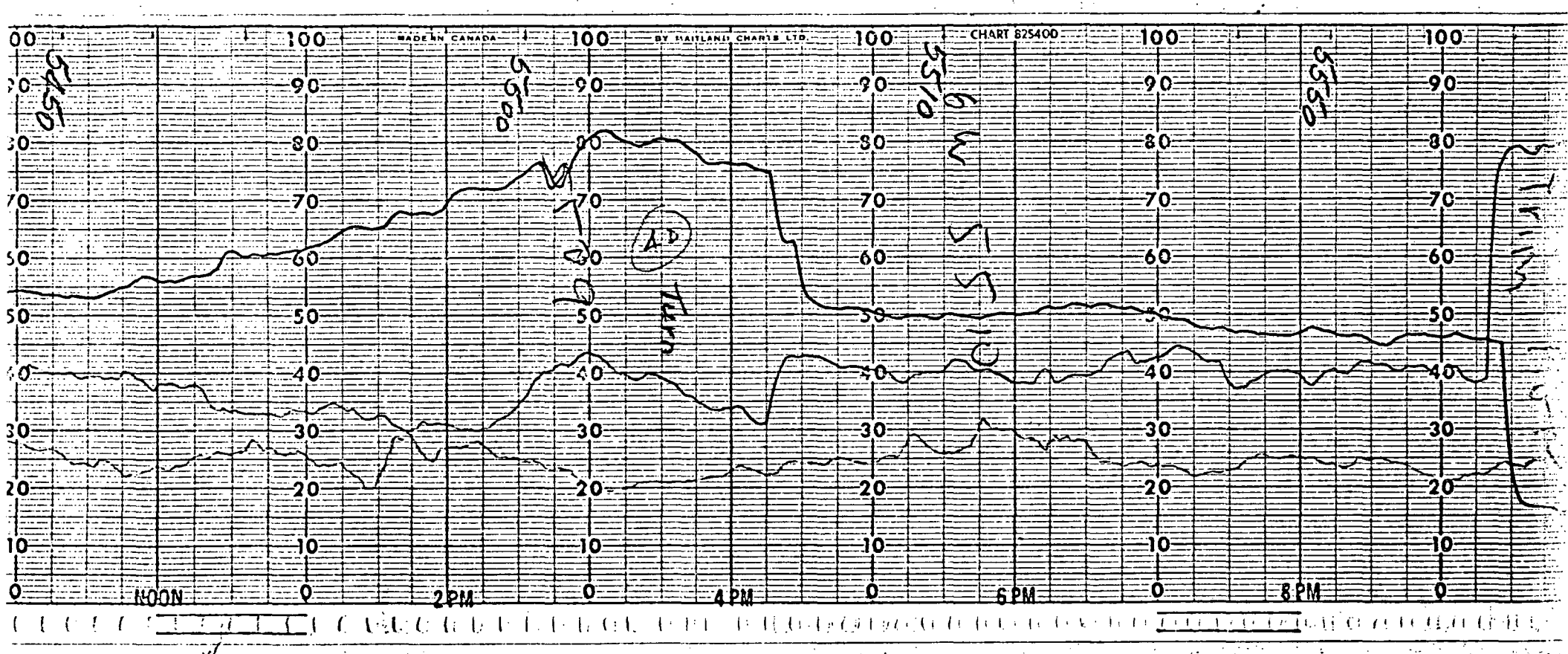
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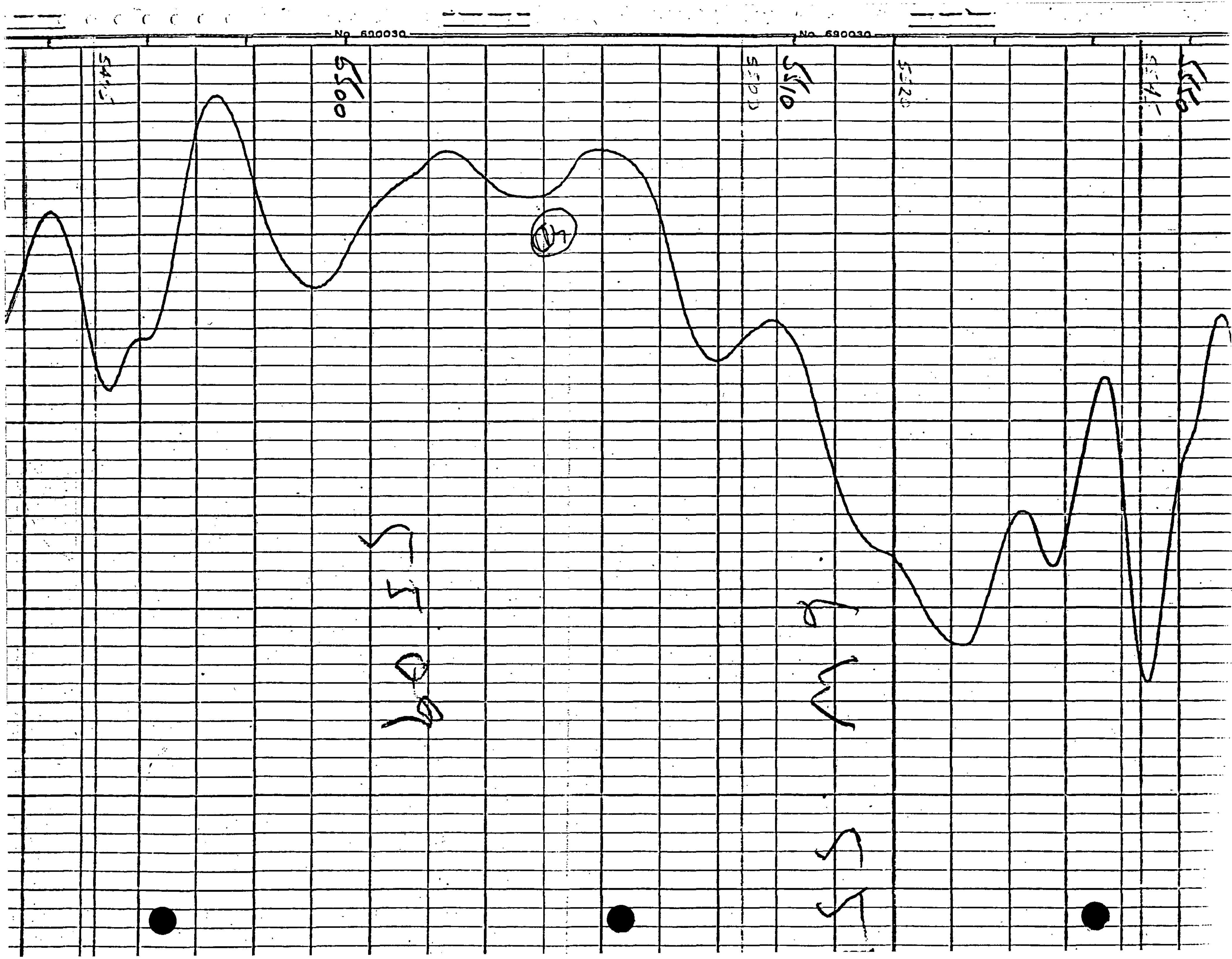
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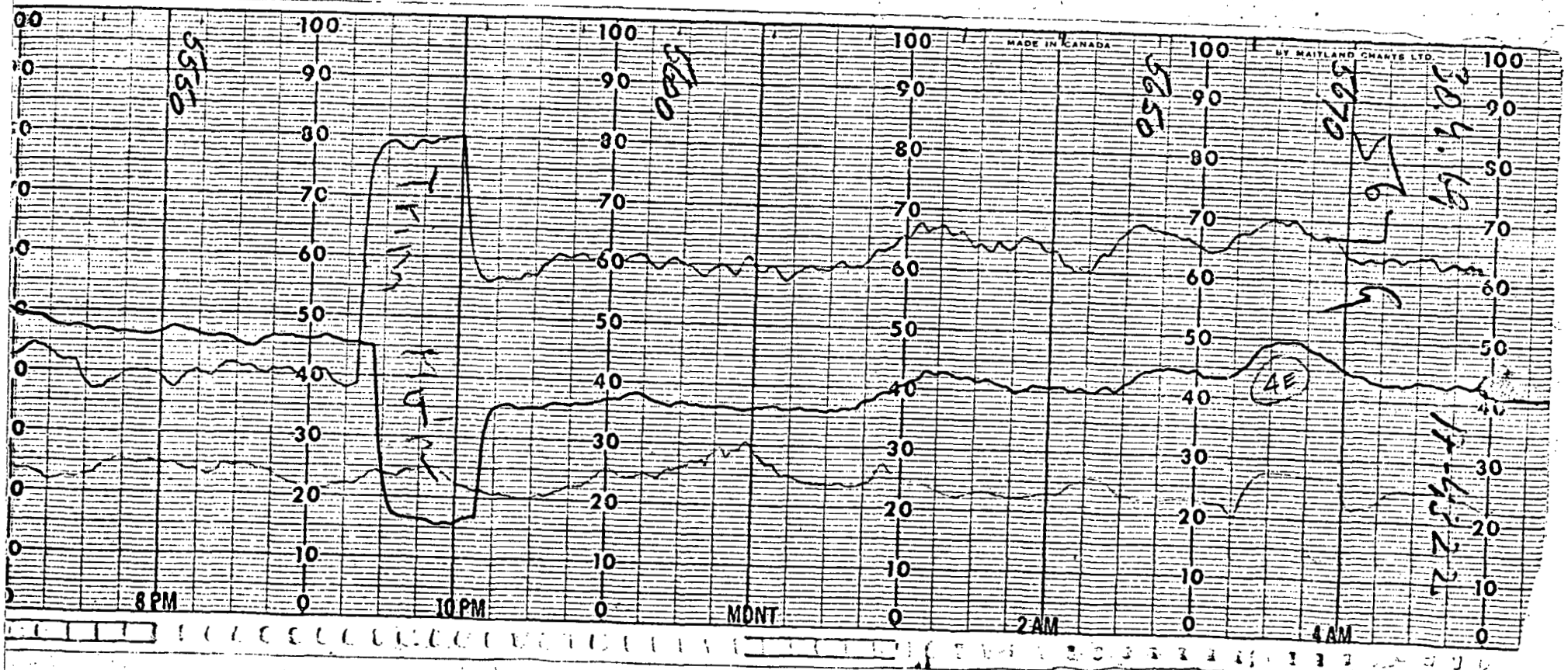
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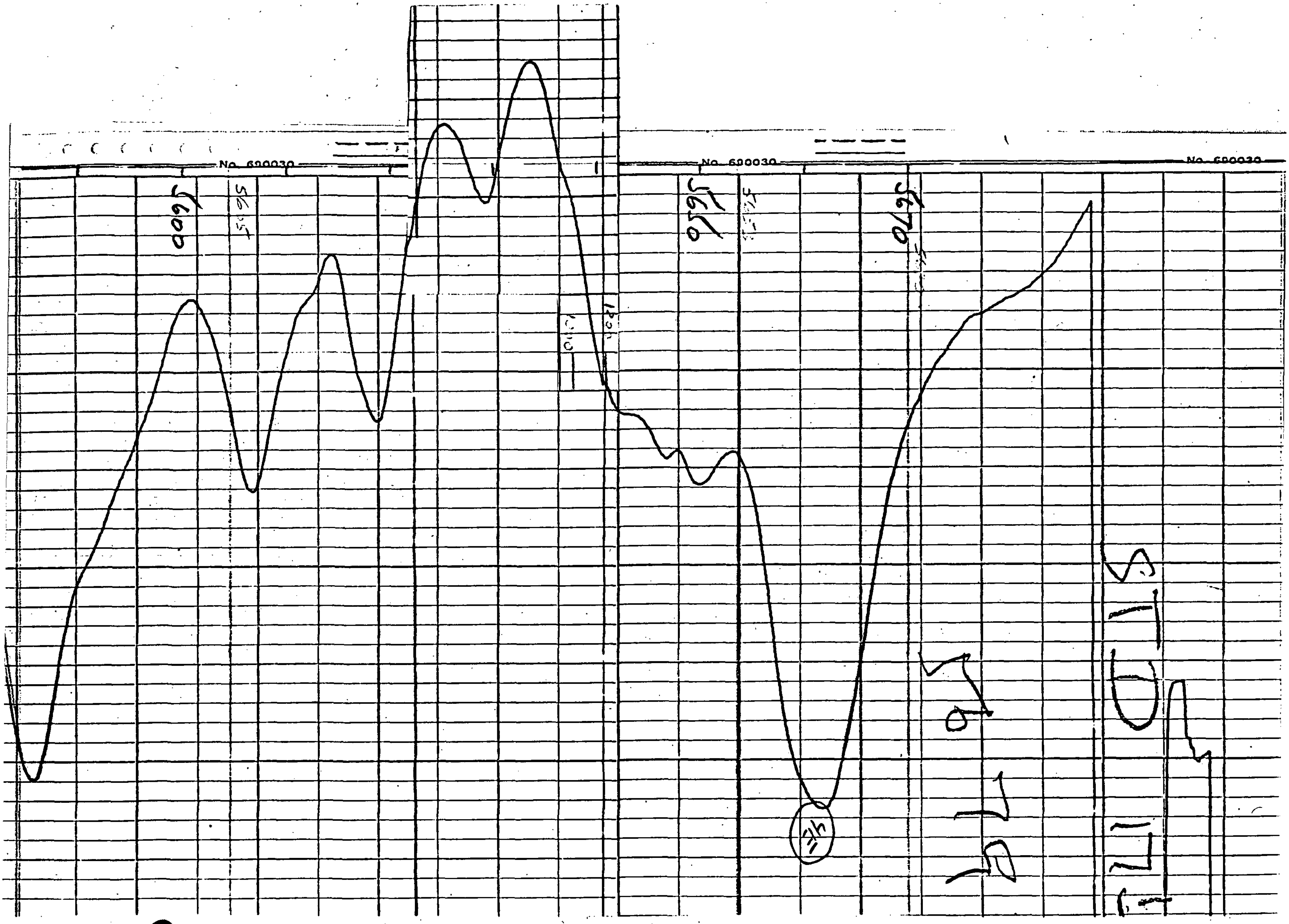
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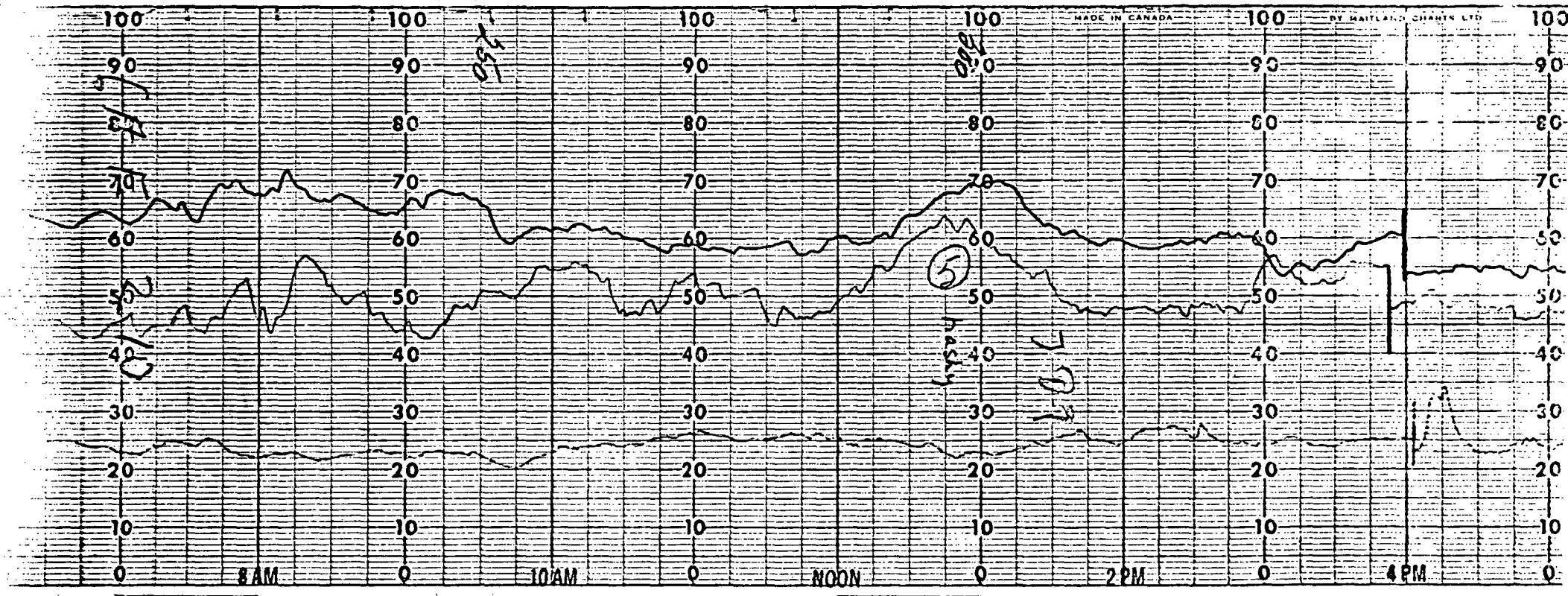
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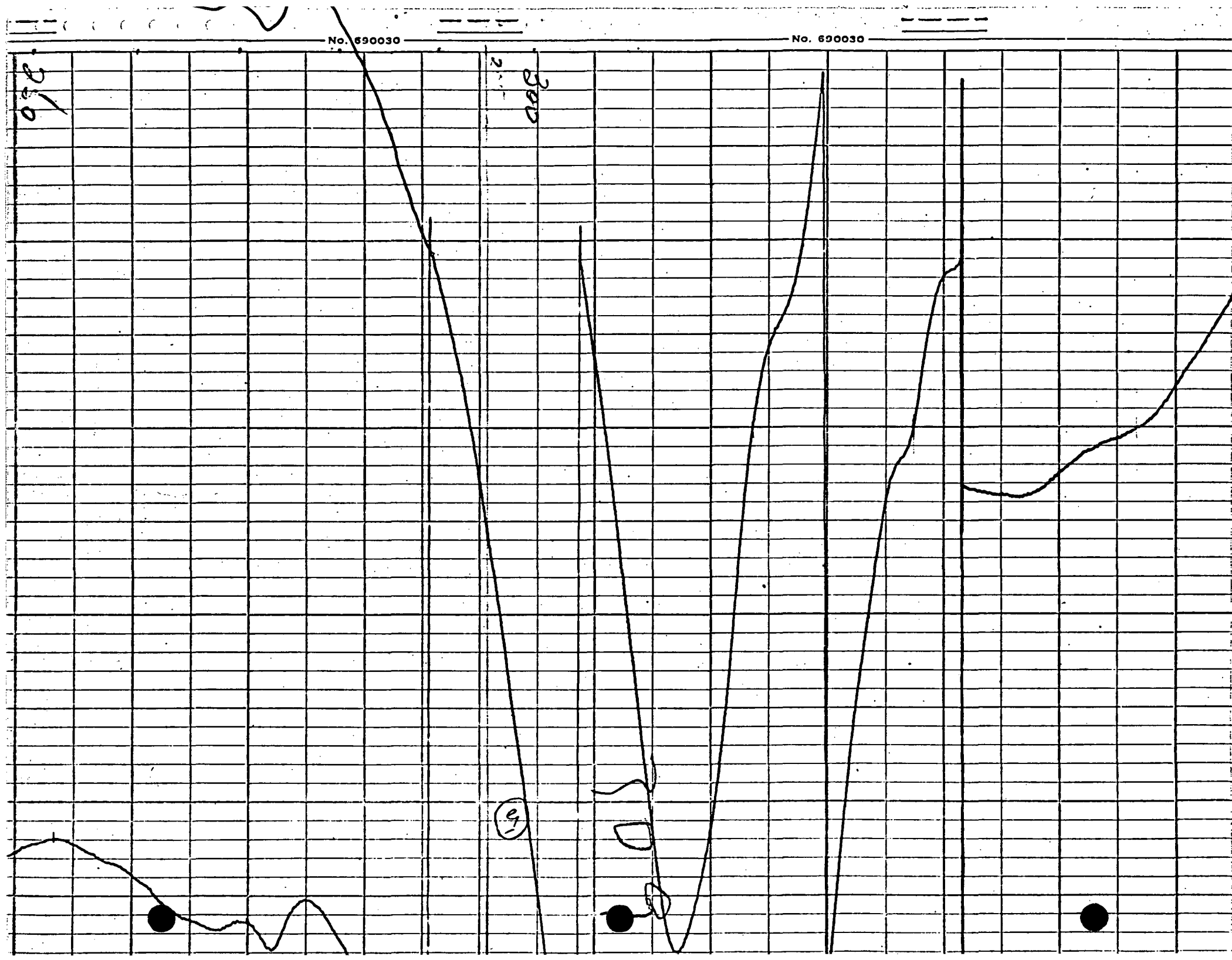
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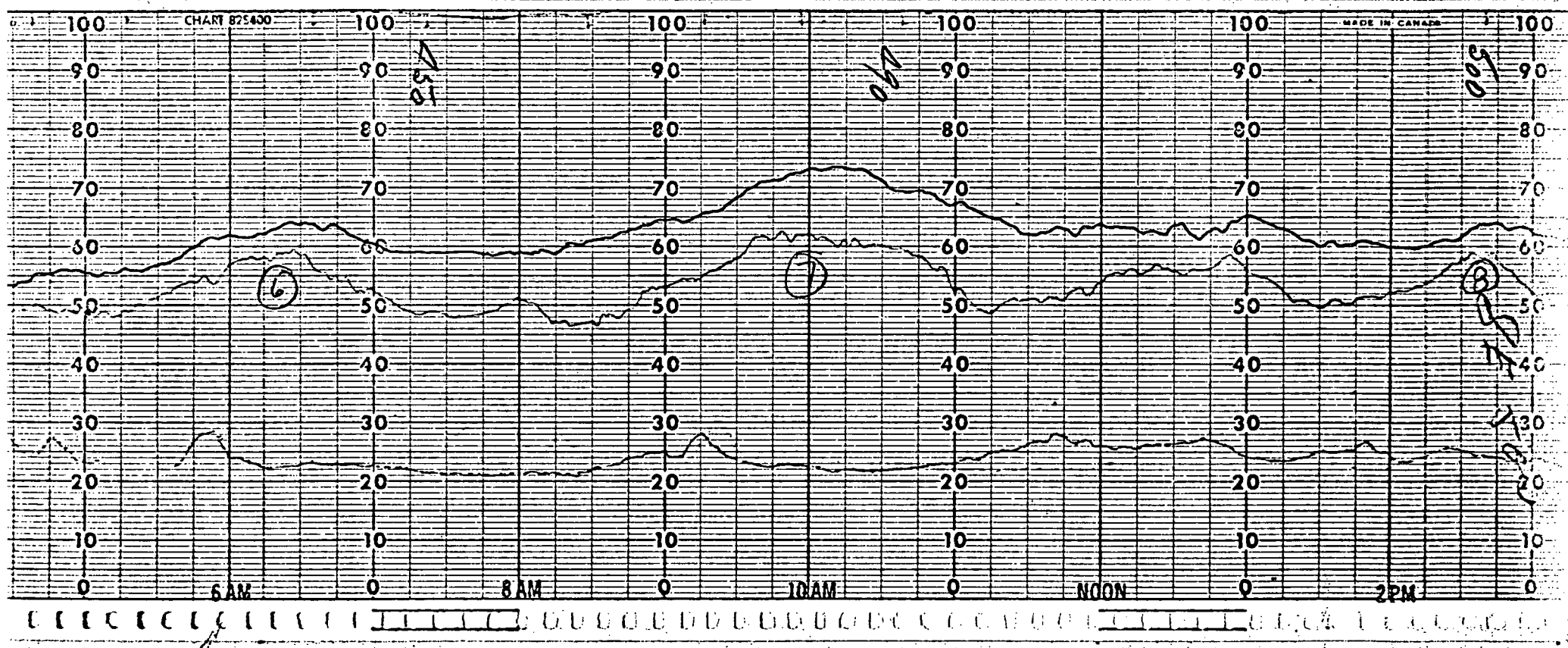
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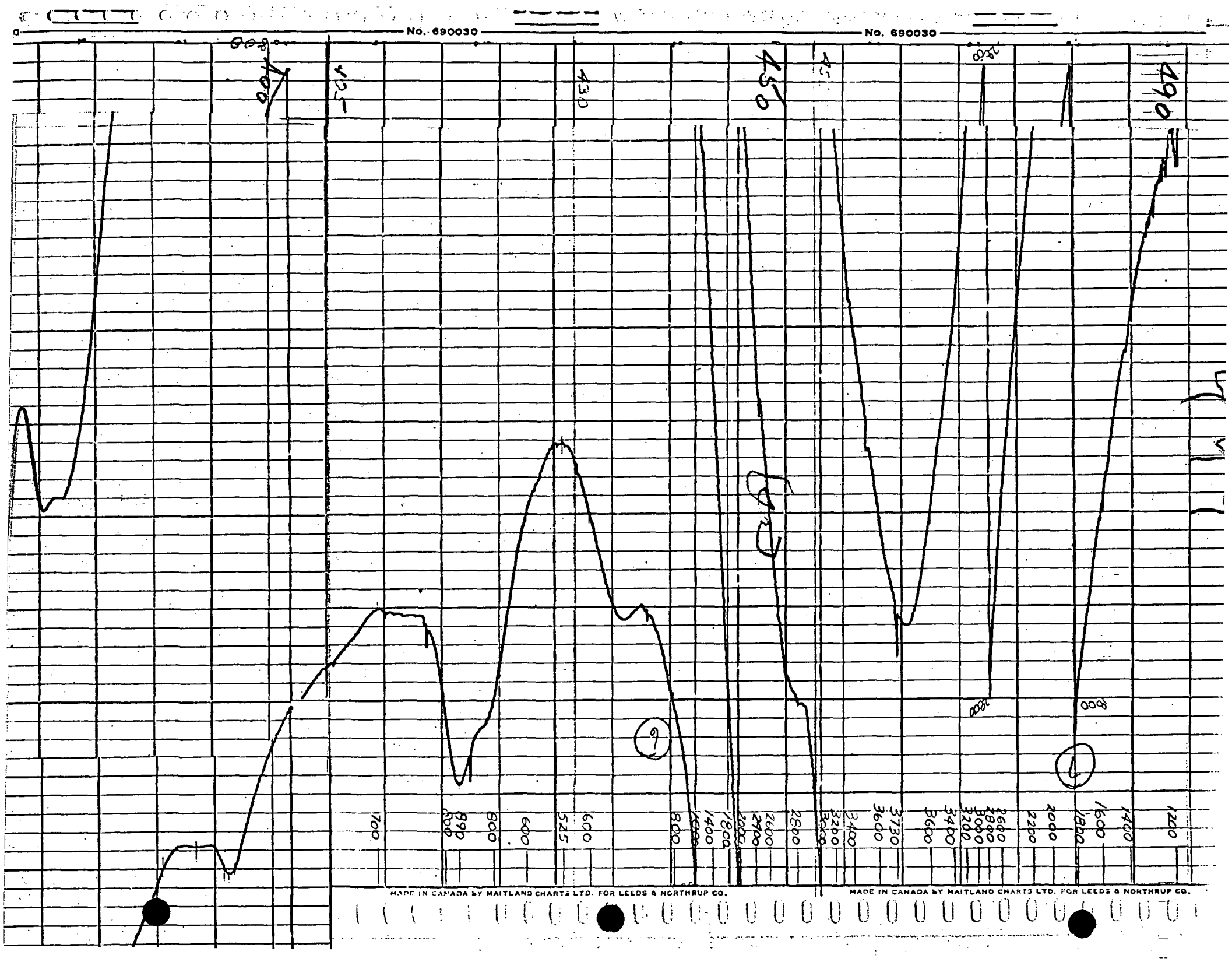
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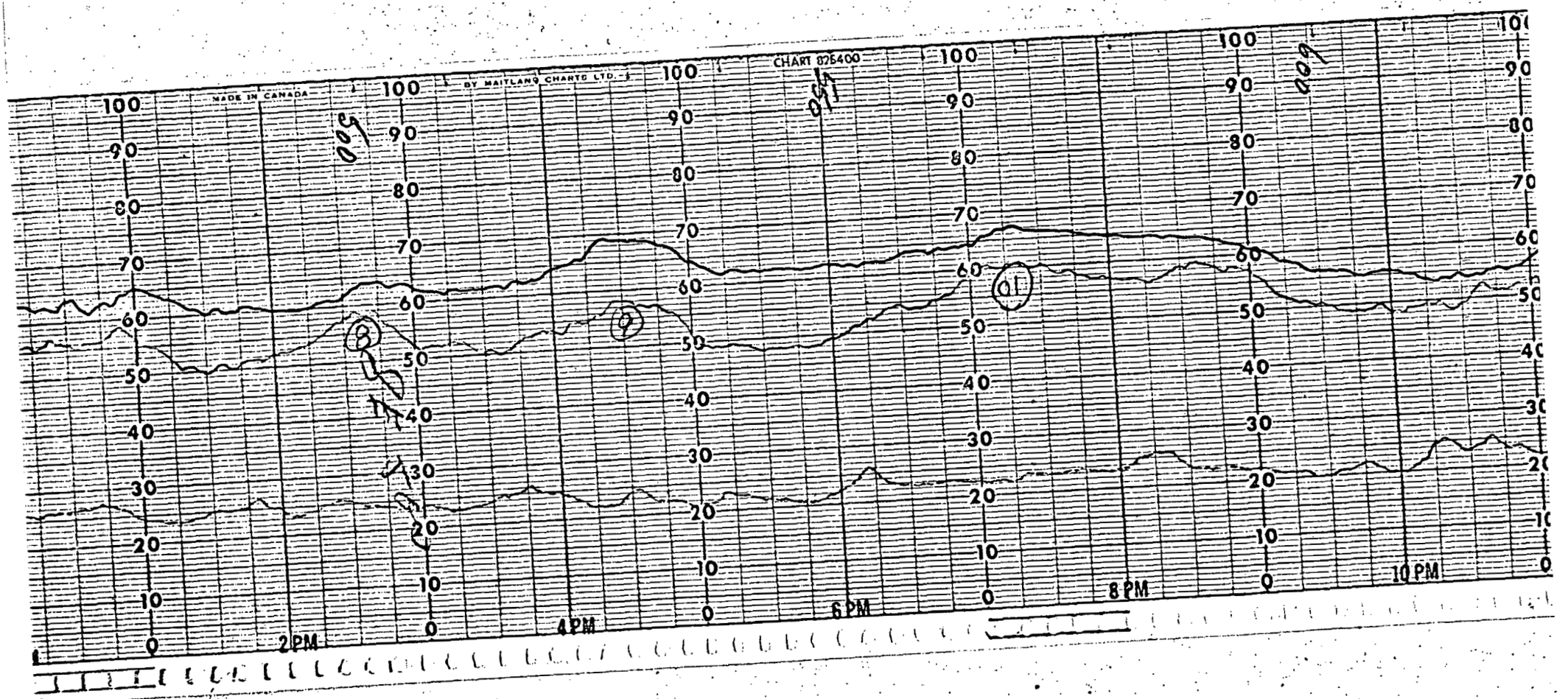
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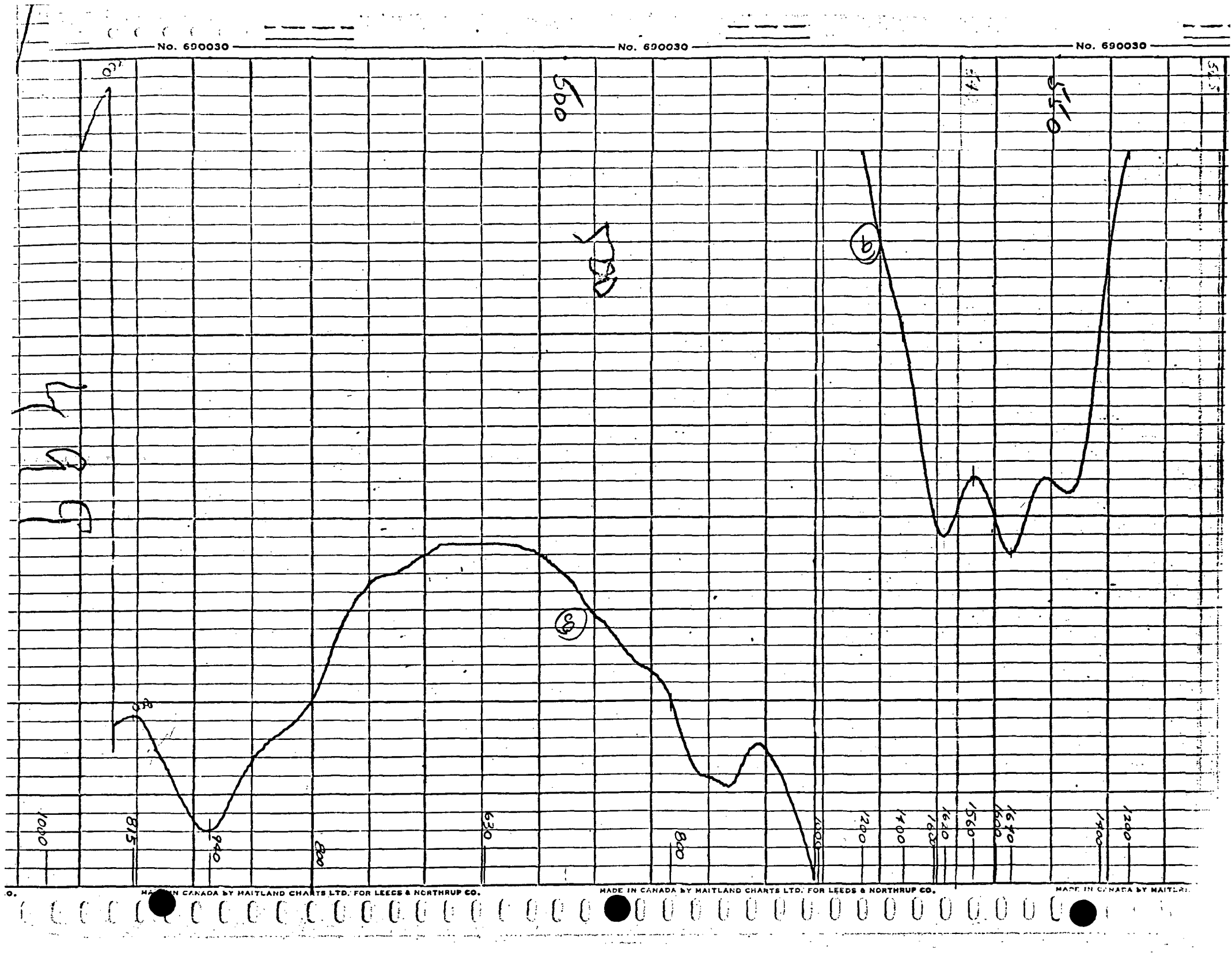
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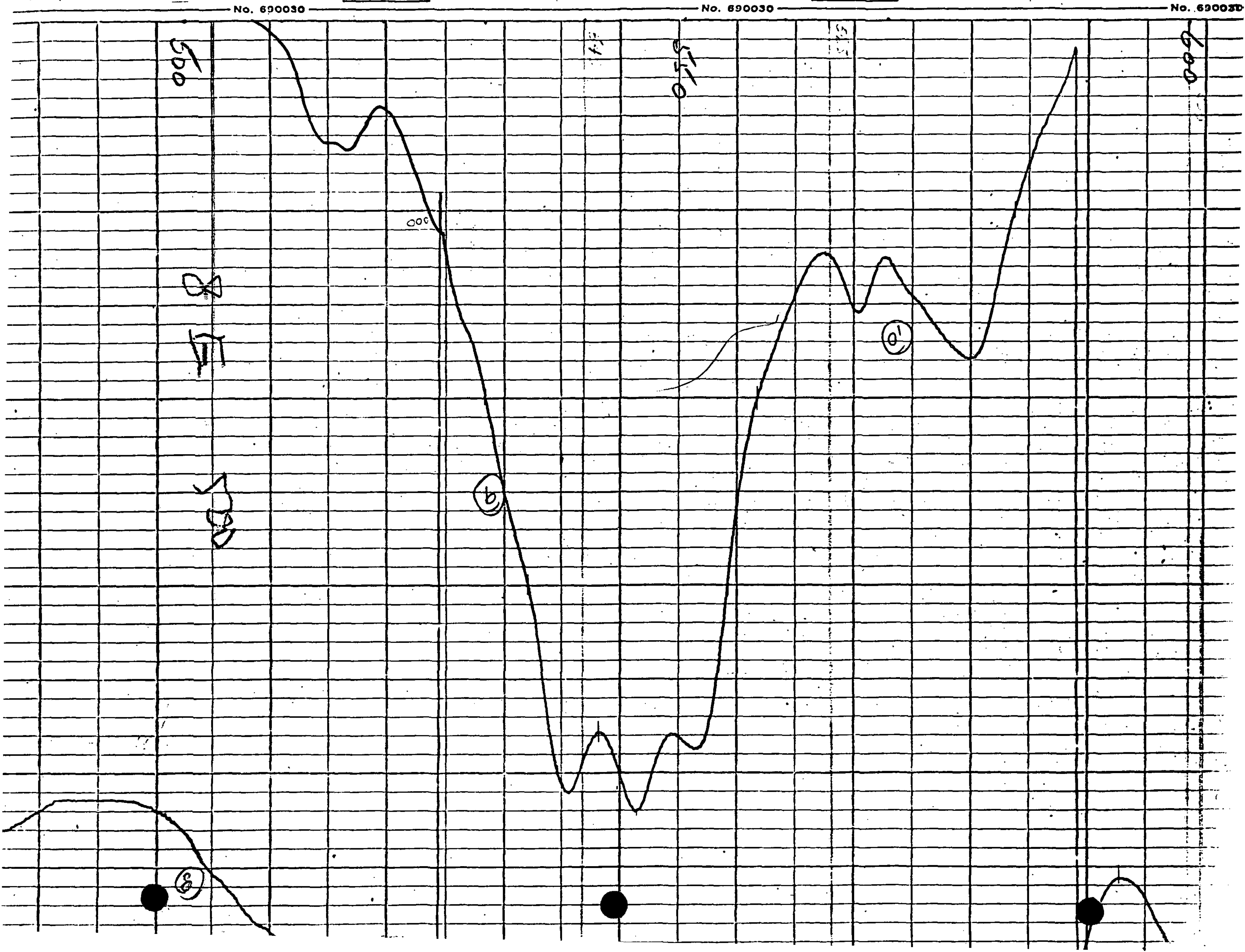
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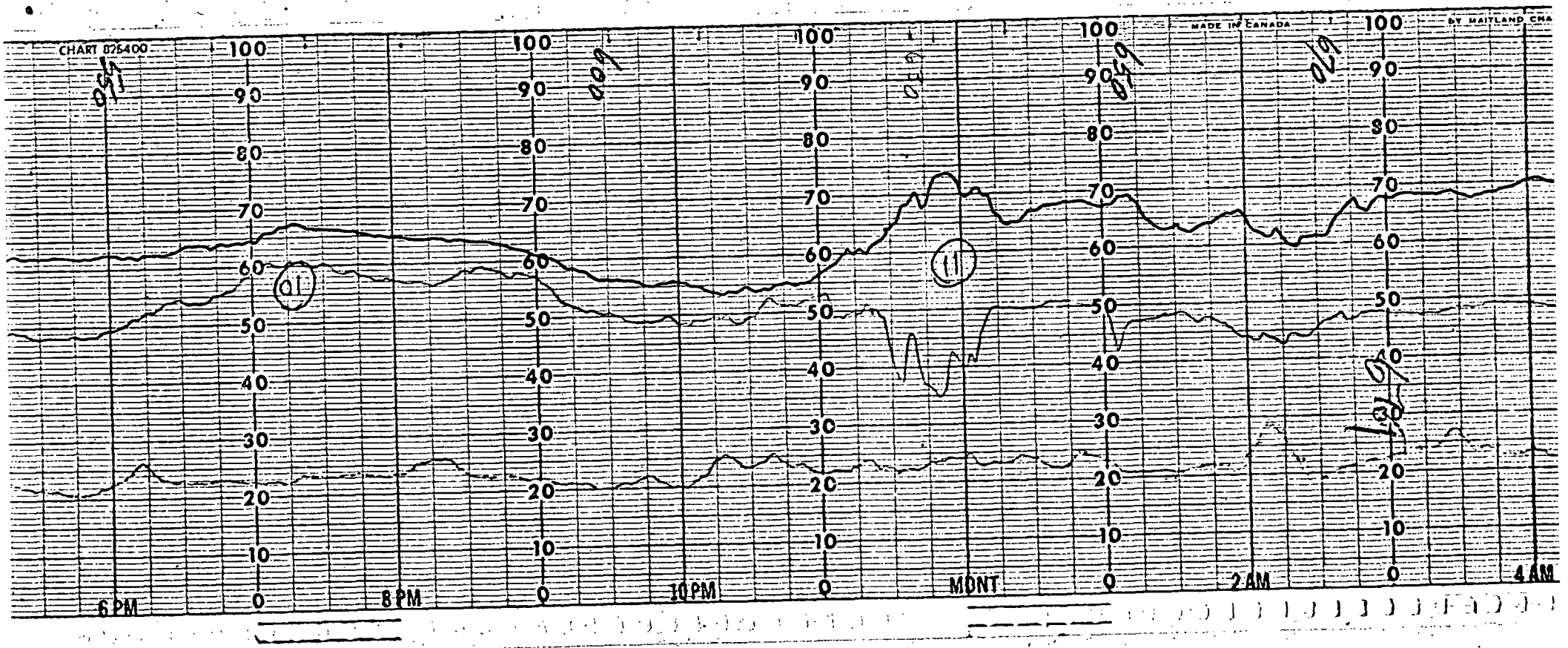
CHART 826400
MADE IN CANADA
BY MAITLAND CHA
100
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80
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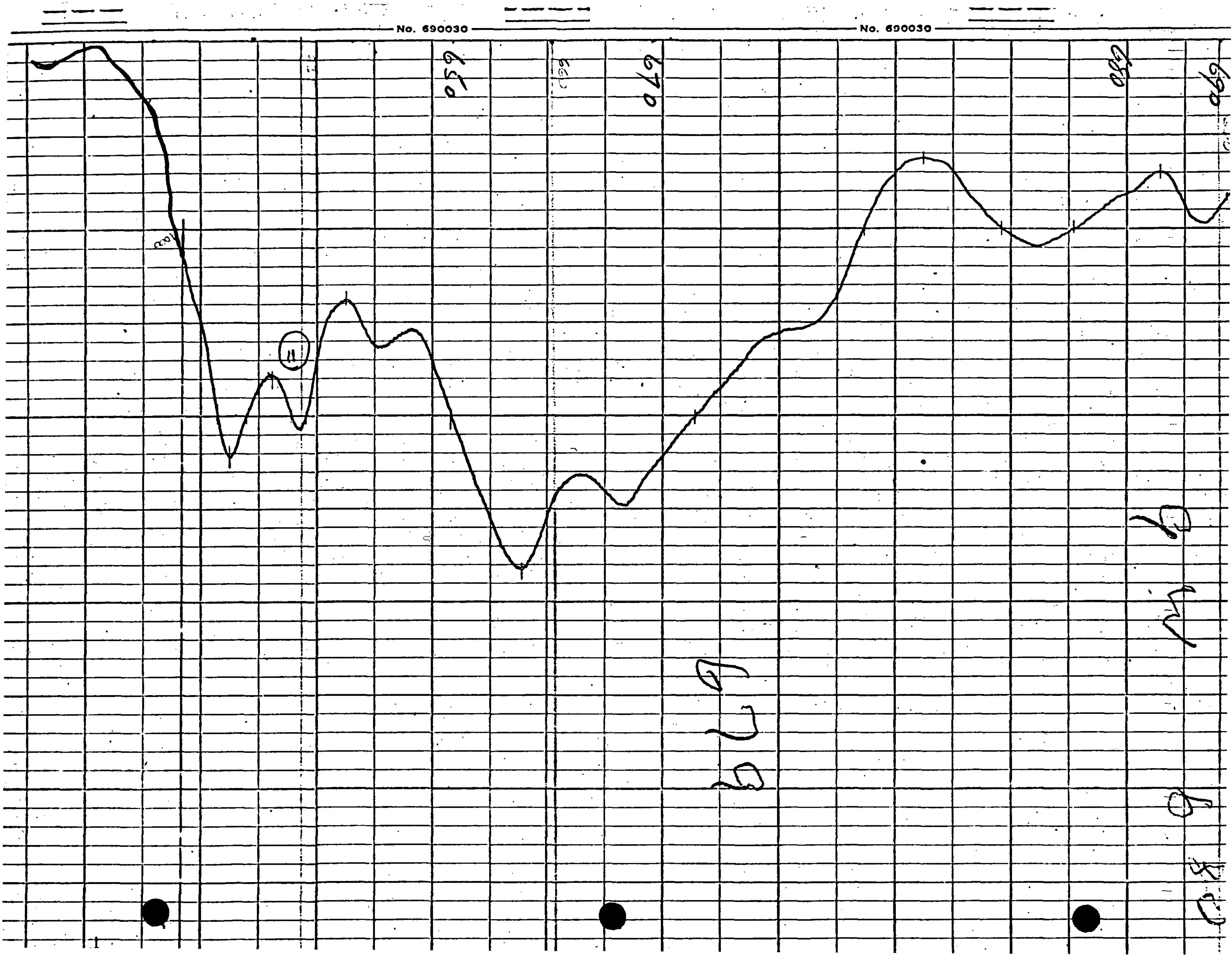
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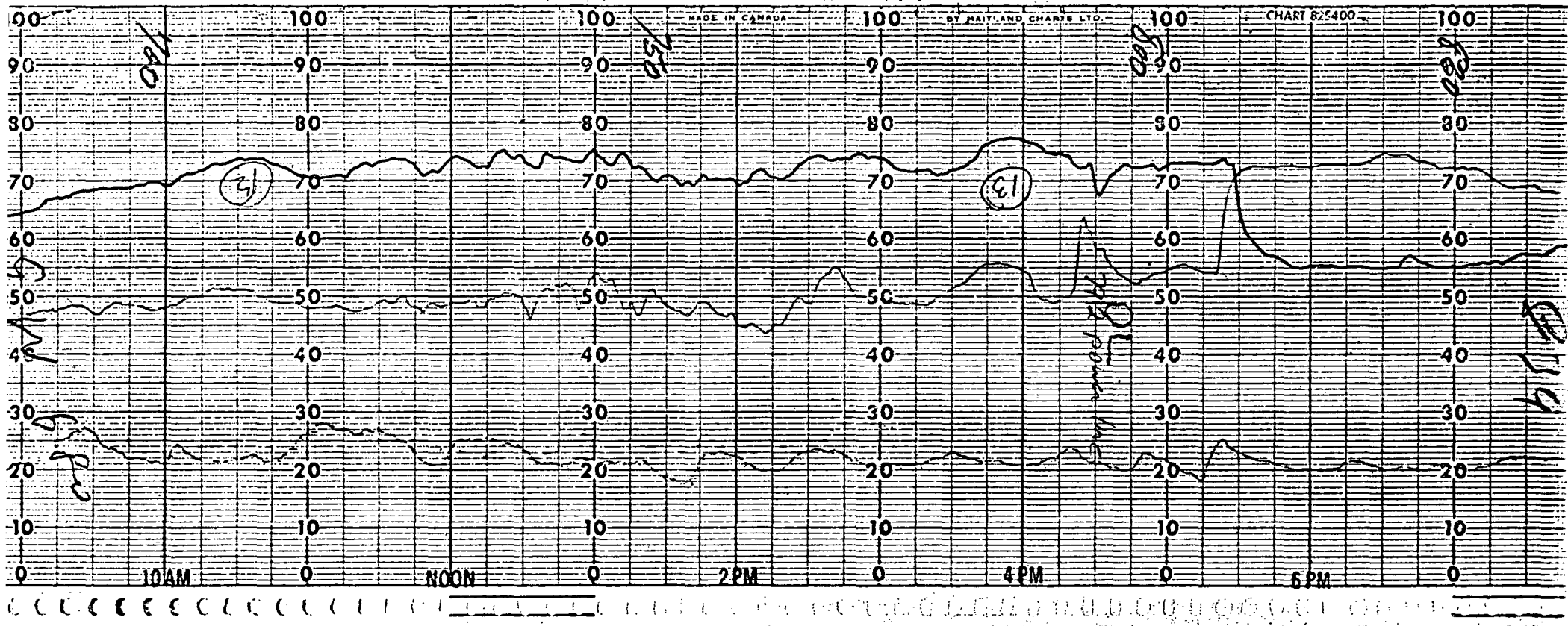
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BY MAITLAND CHARTS LTD.
CHART 825400
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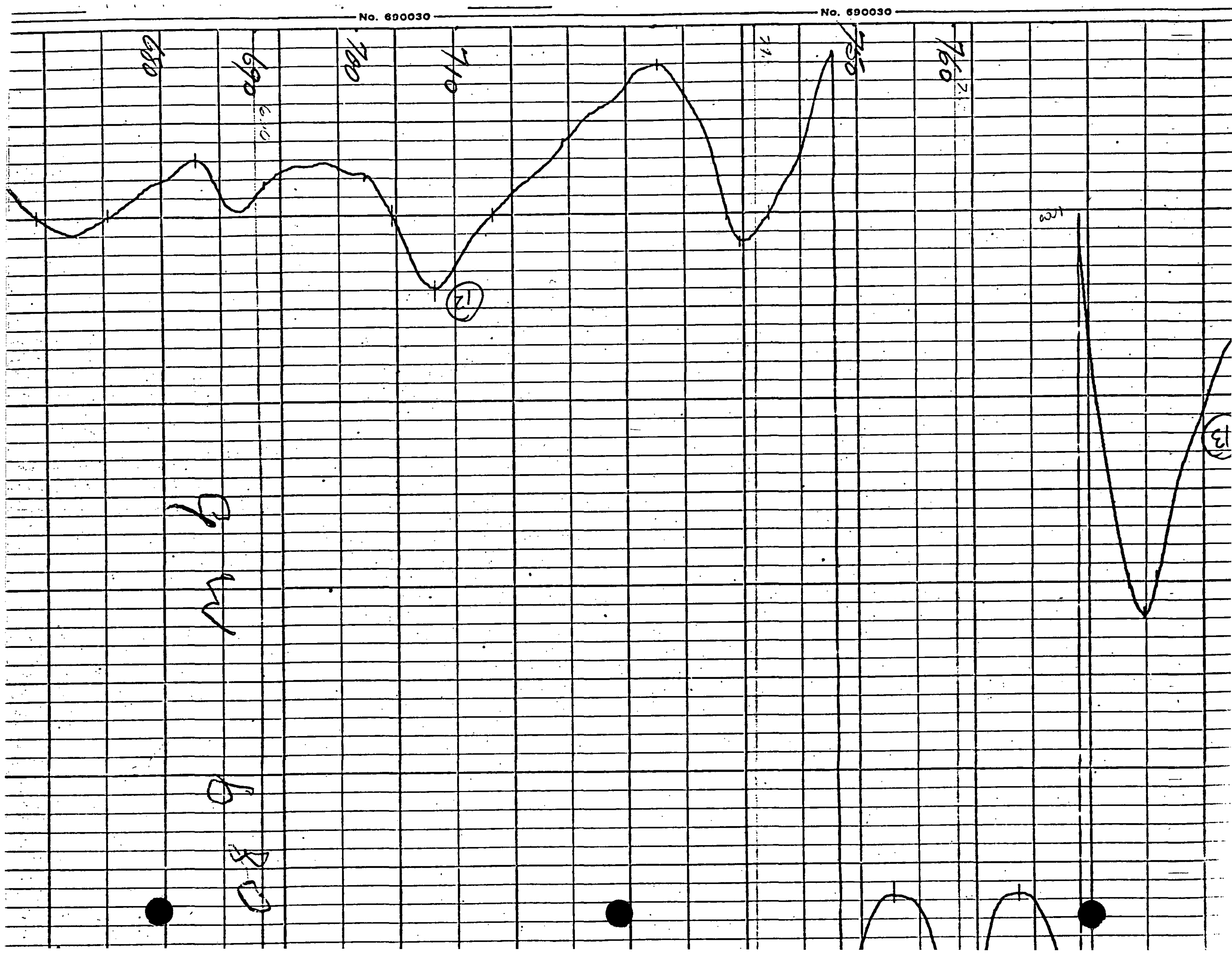
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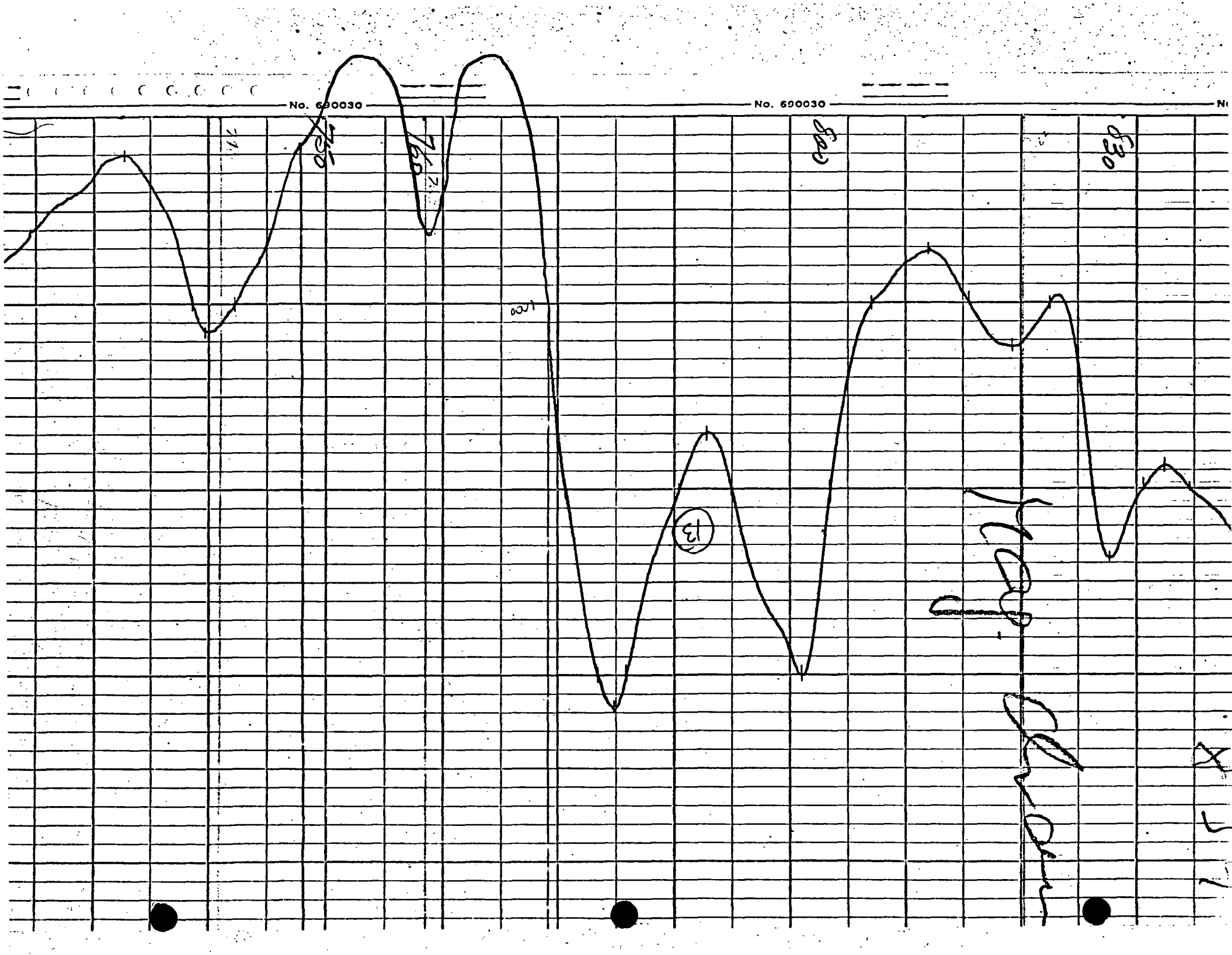
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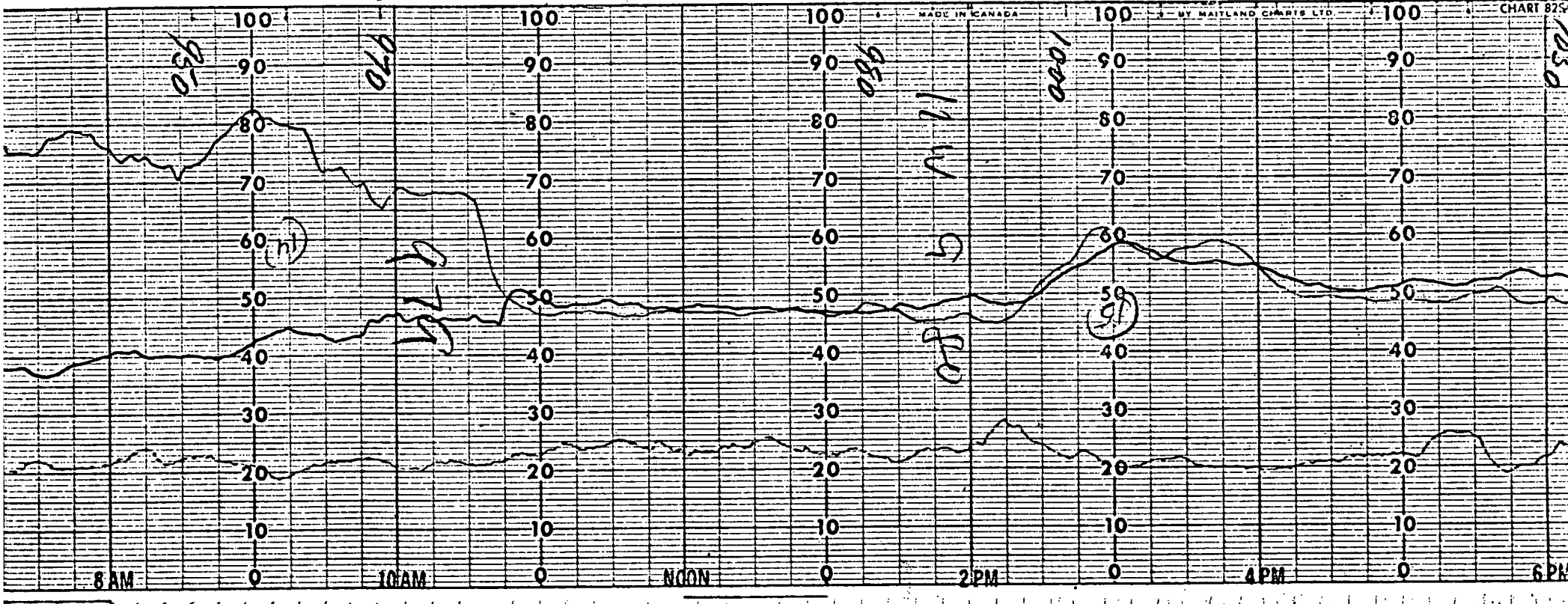
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CHART 825
8 AM
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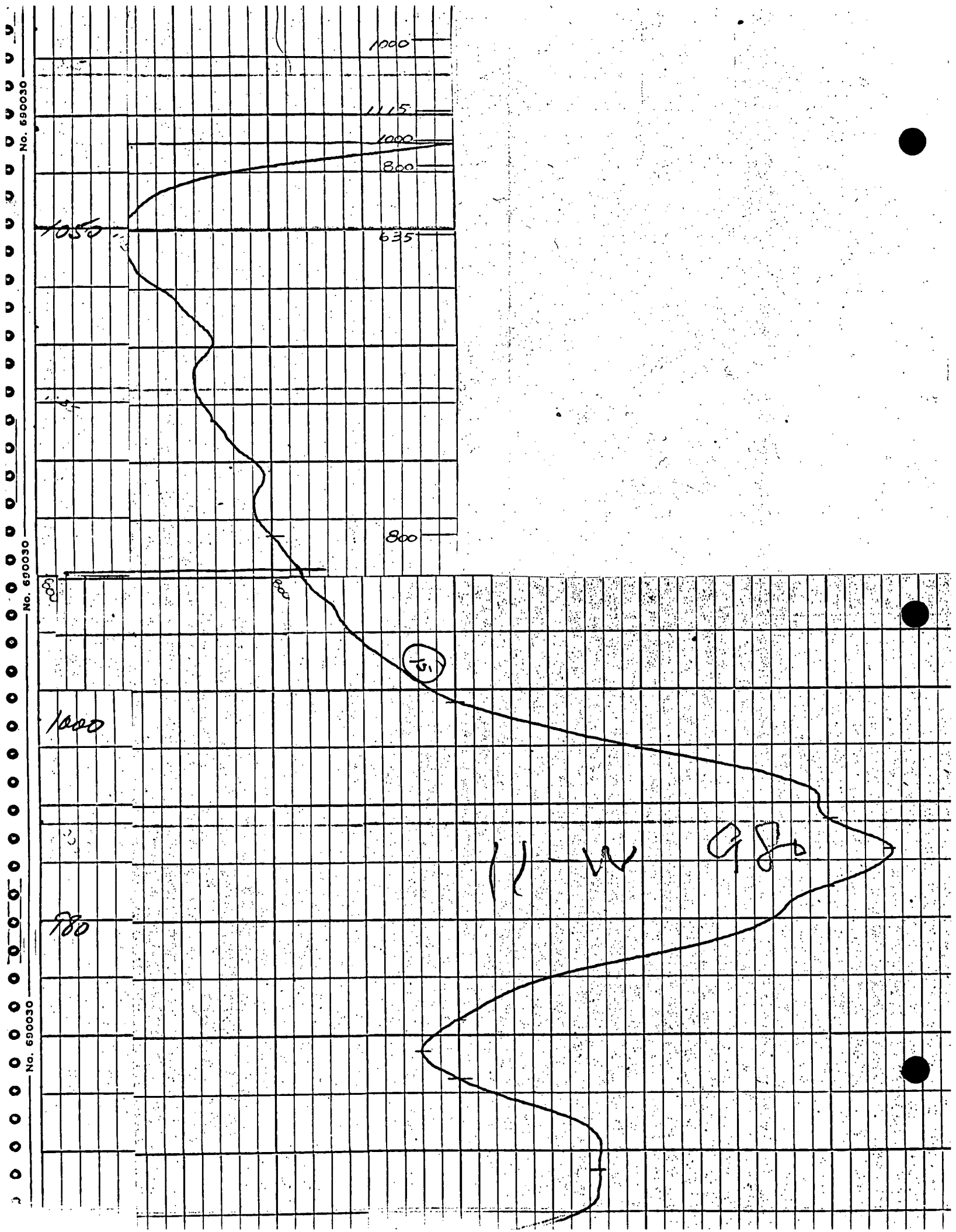
1000
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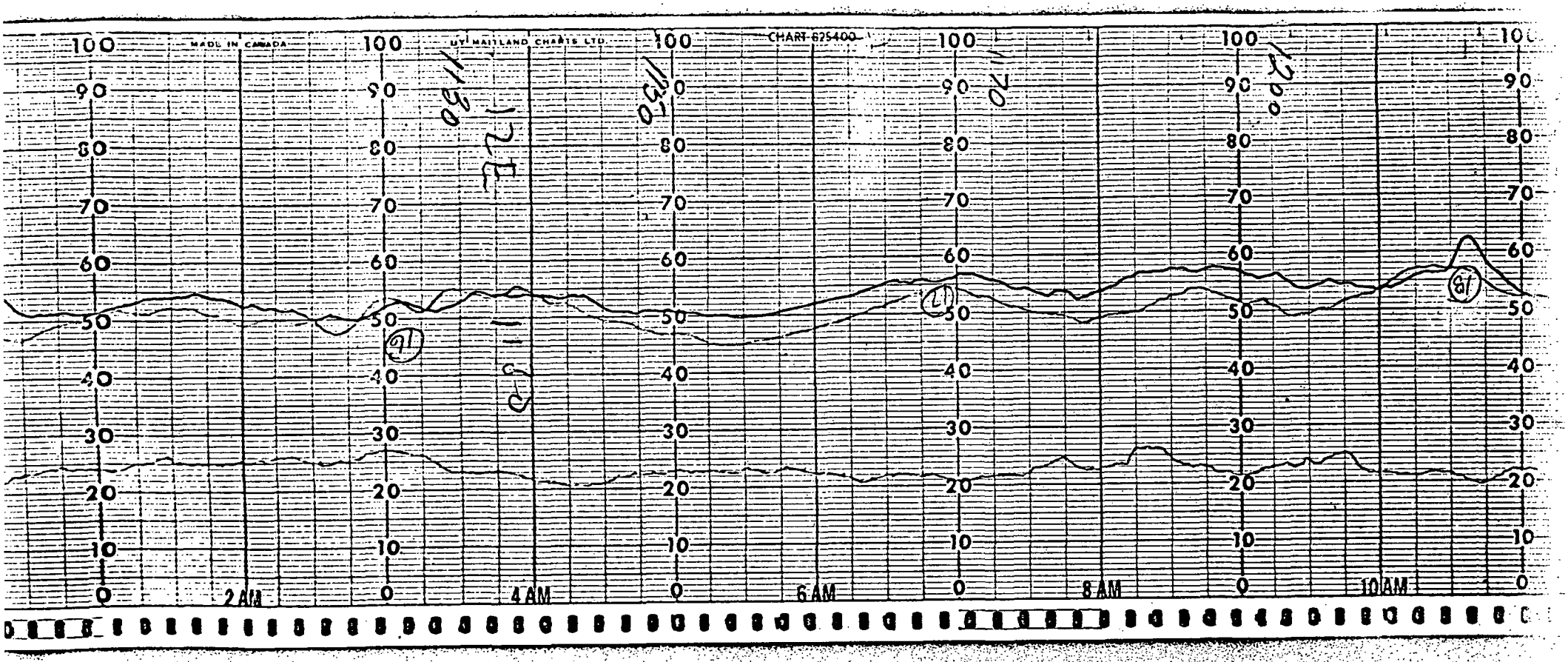
MADE IN CANADA
BY MAITLAND CHARTS LTD.
CHART 625400
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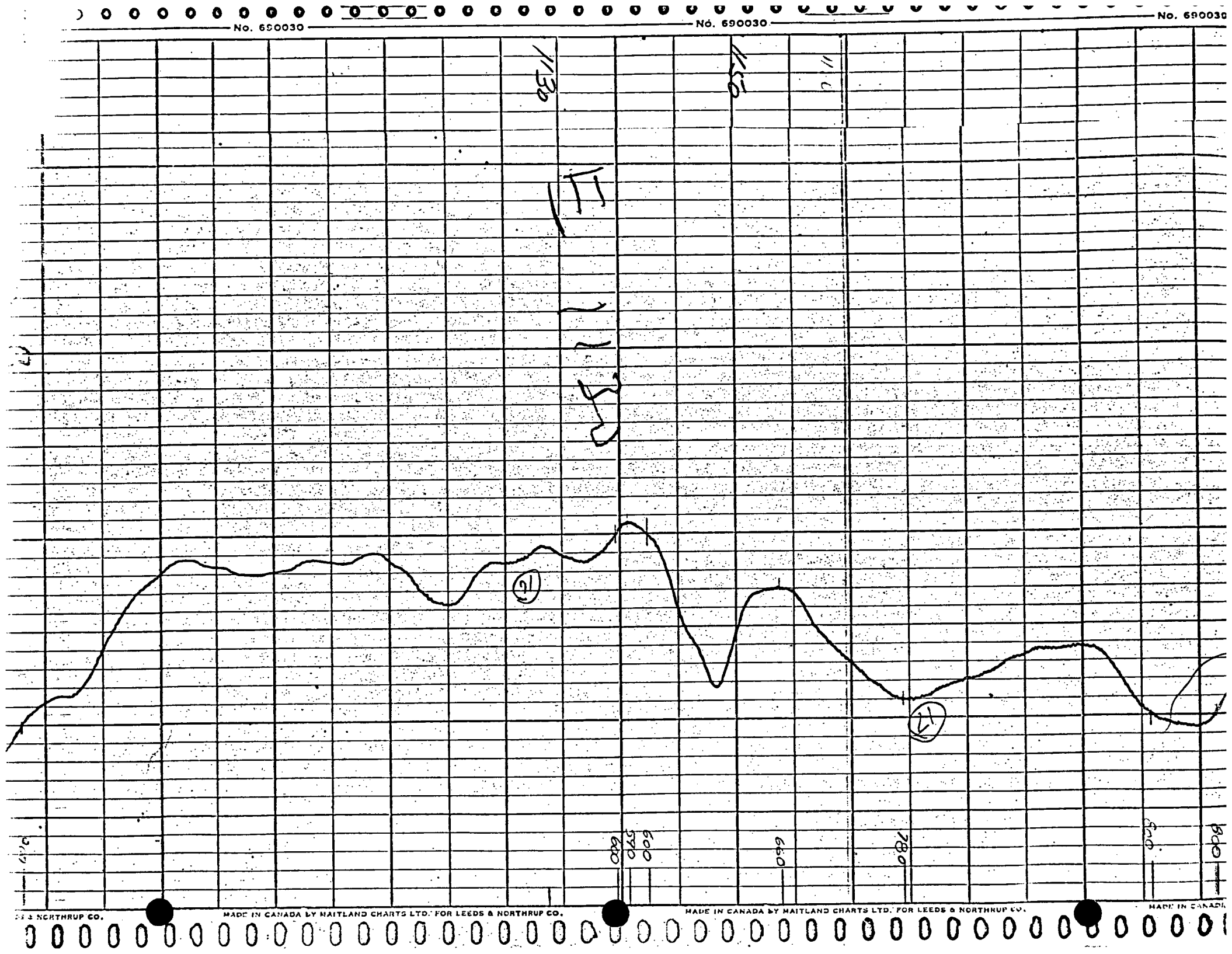
No. 690030
No. 690030
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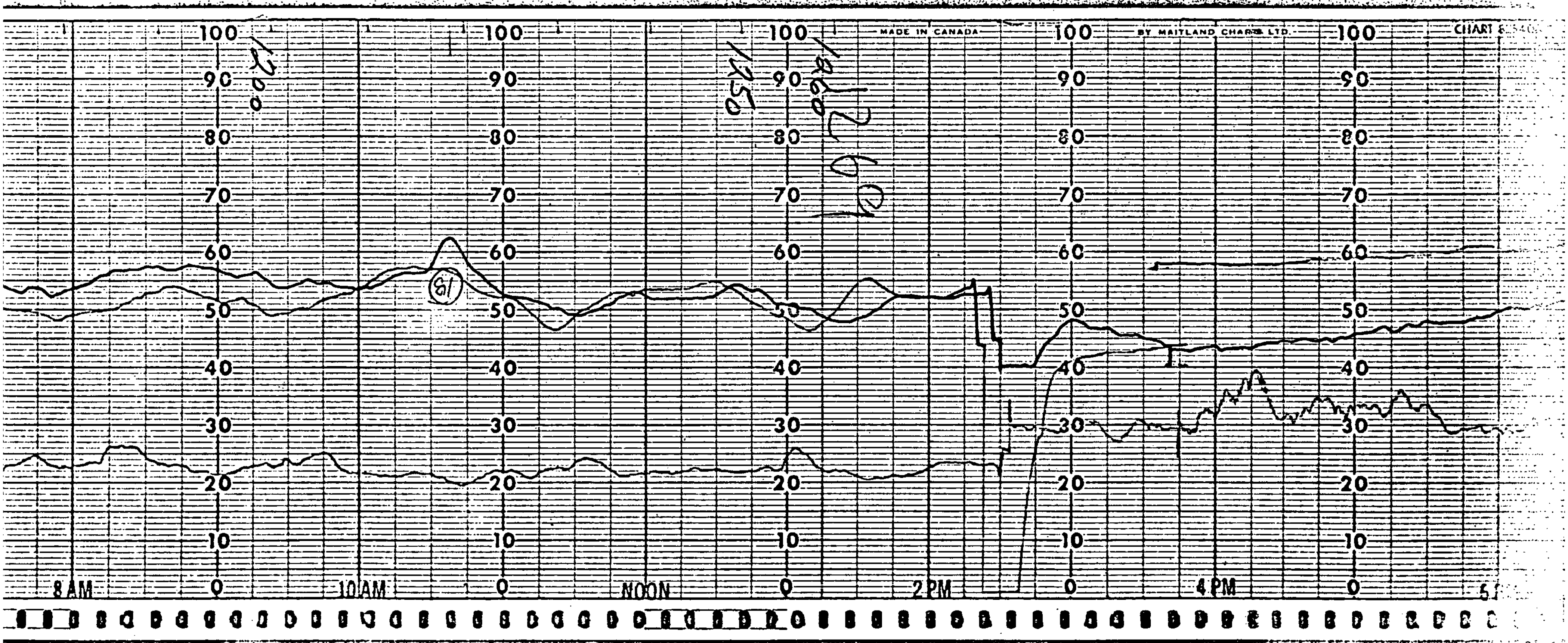
MADE IN CANADA BY MAITLAND CHARTS LTD. FOR LEEDS & NORTHRUP CO.
MADE IN CANADA BY MAITLAND CHARTS LTD. FOR LEEDS & NORTHRUP CO.



MADE IN CANADA
BY MAITLAND CHARTS LTD.
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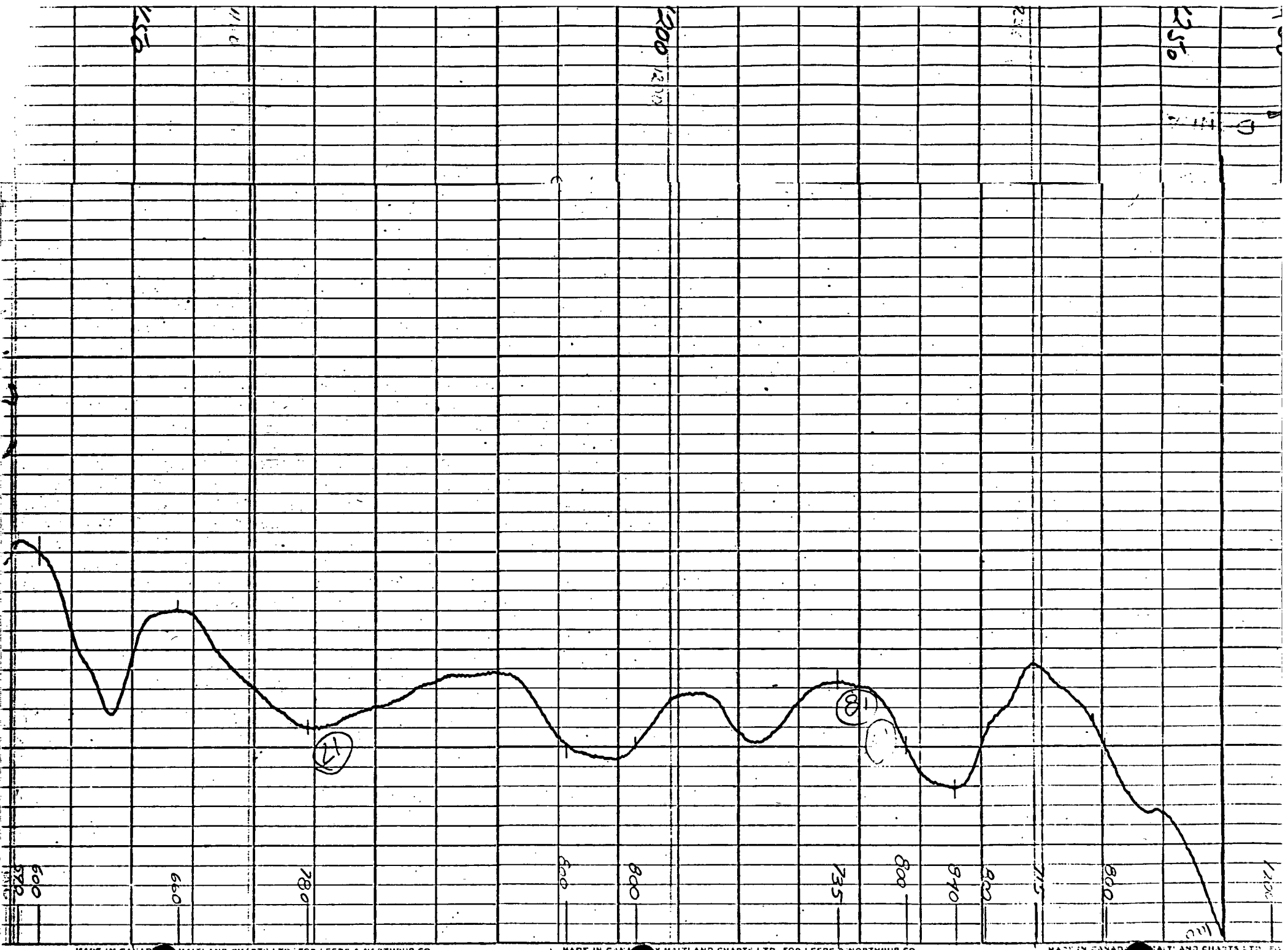
600
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715
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MADE IN CANADA BY MAITLAND CHARTS LTD. FOR LEEDS & NORTHRUP CO.

APPENDIX II

GEOCHEMICAL ANALYTICAL PROCEDURE

BARRINGER RESEARCH INC.

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

December 8th, 1969

Evergreen Explorations Limited
635-789 W. Pender Street
Vancouver 1, B.C.

Attention: Mr. Woolverton

Dear Sir:

Our laboratory procedures for your samples are as follows:-

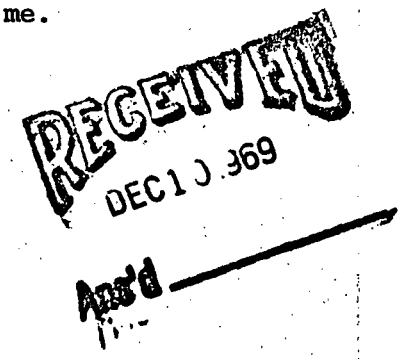
Total Copper (soils) - a portion of -80M material is digested in concentrated perchloric acid, diluted with water and analysed by atomic absorption.

HCl copper (stream sed.) - same as above but using a dilute solution of hydrochloric acid.

Total Molybdenum - a -80M portion of sample is fused with a carbonate flux and the molybdenum is colorimetrically determined using zinc dithiol.

Total copper was done on the "Donna" and "Red Top" projects and both total copper and moly on the "Allie". Our reports 168-B (for total copper) and 161-B (for HCl copper) had no project no. specified on the work order form received from you.

Should you require any further information, please do not hesitate to contact me.



Yours sincerely
BARRINGER RESEARCH LIMITED

Y. M. Hazeldene

YH:lh

Yvonne Hazeldene
Chief Analyst
Department of Geochemistry

APPENDIX III

RADEM SPECIFICATIONS

FIGURE 2.

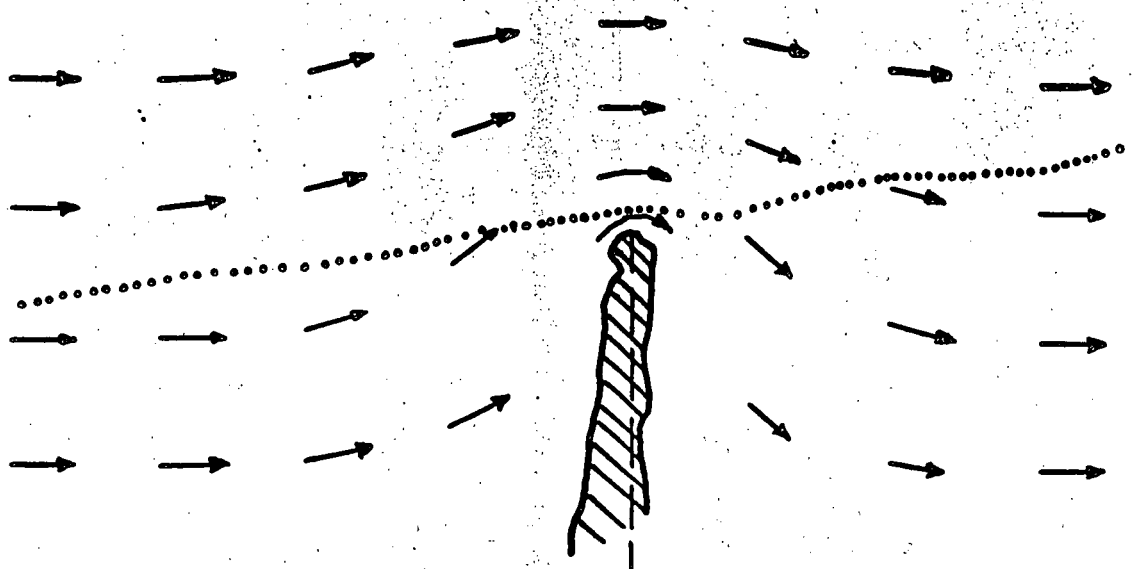
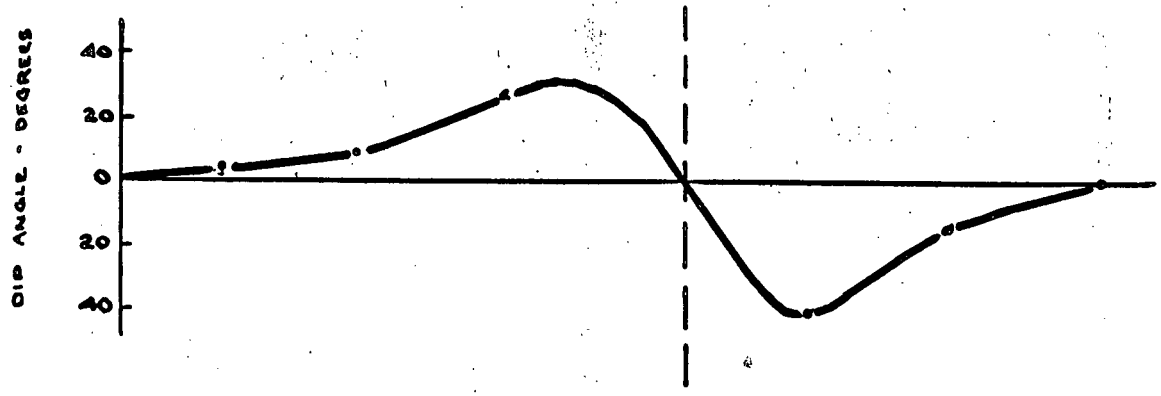


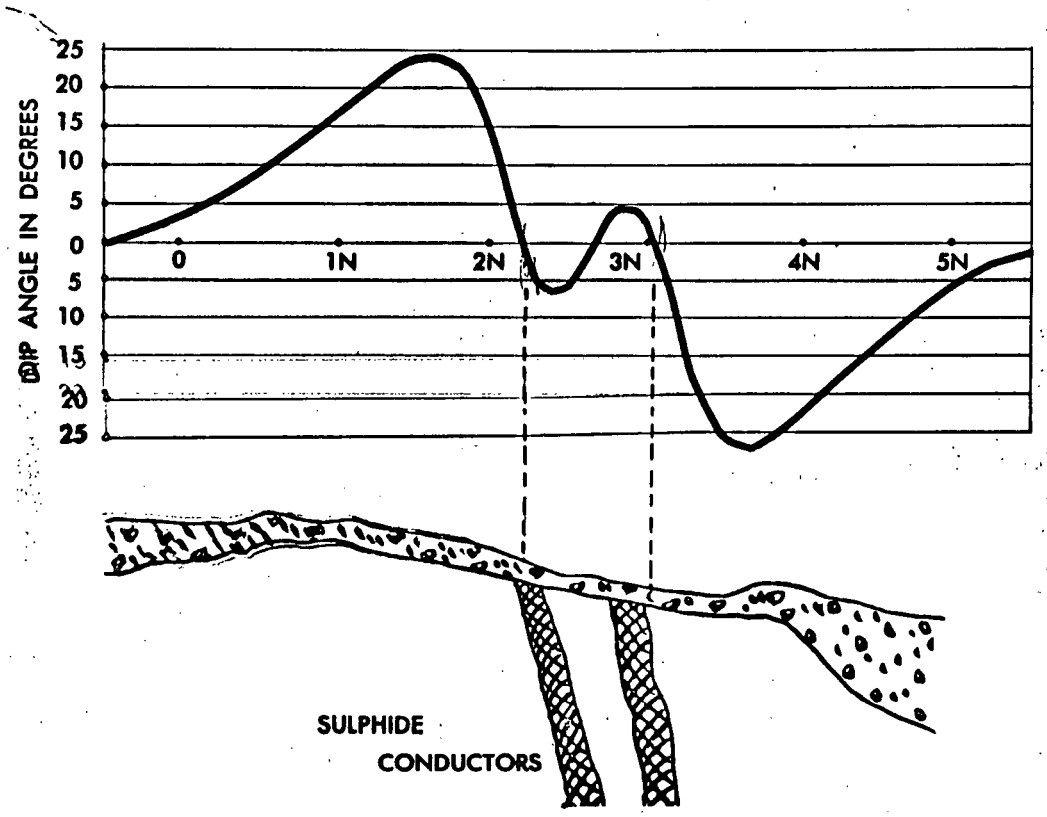
FIGURE 3.



THE VERY LOW FREQUENCY RADIO TRANSMITTING STATIONS

The purpose of these stations is to broadcast over large distances navigational and other information for use by ships and submarines. Numerous stations are situated around the globe and a considerable number are in the process of construction. Operational stations are located at Cutler Maine, Annapolis Maryland, Fort Collins Colorado, Seattle Washington, Balboa Panama, Rugby England, Lualualei Hawaii, Guam and N.W. Cape Australia. The frequency range used varies between 12 and 24 KC's and is thus 10 times higher than the normal frequencies used in mineral prospecting. This results in the RADEM method being more sensitive to lower conductivity and smaller sized bodies than normal EM equipment.

Example of a RADEM traverse over a Banded Conductor in the Timmins area of Ontario.



SPECIFICATIONS

READOUT — Dip angle of resultant VLF magnetic field component from an inclinometer of ± ½ degree sensitivity

NULL INDICATOR — Both audio (loudspeaker) and visual by means of an averaging field strength meter

TUNING — Preset switch tuning

BATTERIES — 2 of 9 volt Eveready # 216, independent test indicators

STATIONS — Standard 5 stations — Cutler, Maine 17.8; Seattle, Wash. 18.6; Ft. Collins, Colorado 20.0; Annapolis, Md. 21.4; Balboa, Panama 24.0 KCs.

— Optional — N.W. Cape, Australia 15.5; Lualualei, Hawaii 23.4; Rugby, England 16.0 KCs.
Other stations as they become operational

WEIGHT — Receiver — 4 lb. Leather Case — 2 lb. Shipping Weight — 15 lb.

PRICE — $2,250.00 Canadian

RENTAL — $150.00 per month

APPENDIX IV

DECLARATION OF EXPENDITURES

CRONE GEOPHYSICS LIMITED

979 LAKESHORE ROAD E.
PORT CREDIT, ONTARIO

TELEPHONE 274-3704

CASE HISTORY # 1 March 1, 1968

Two Radem (VLF Radio EM) Traverses in the Timmins Area, Ontario.

The use of the VLF radio transmitters as an EM primary field source is not new, but rather one of the oldest and earliest (1929) EM methods. The recent revival of this method is due to the greatly increased power and reliability of the transmitter stations. The method still has, however, its original advantages and limitations. If used properly it can be very effective; if pushed beyond its basic limitations disappointing results will be obtained. The following two profiles illustrate this point.

The first profile, over the Canadian Jamieson Mine near Timmins, illustrates the ability of the method to detect the three in echelon ore bodies. This is rather remarkable from three aspects: 1) no other EM method (horizontal loop, vertical loop - fixed and broadside, or JEM) was capable of detecting even one of these ore lenses; 2) the traverse crossed the yard of a producing mine, thus operating in an area of high hydro noise; 3) the dip angles obtained were very large, +30° to -30°.

The ore lenses are excellent conductors, but were not detected by previous EM surveys, due to their being discontinuous and of limited size.

The second profile, also from the Timmins area, is a traverse over a strong conductor buried below 75 ft. of clay and sand overburden. The RADEM profile fails to detect the conductor which is clearly outlined by the dual frequency vertical loop survey. (Note: The ratio of low frequency, 480 cps, to high frequency, 1800 cps, is unity.) This illustrates the inability of the VLF - EM method to penetrate the overburden. The VLF - EM method will produce large tilt angles from the clay bed itself. These large angles will occur towards the edge of the clay bed and thus complicate interpretation in these areas.

Conclusion: The VLF - EM method is a highly effective and rapid reconnaisance tool. It is limited by its high frequency and the inability to interpret from the results the conductivity and shape of the conductor. Until more experience is gained, this method should be used in shallow (less than 30 ft.) overburden areas.

J. Duncan Crone

J. Duncan Crone,
Geophysicist.

CASE HISTORY # 1

RADEM PROFILES OVER CANADIAN JAMIESON MINE, TIMMINS, ONTARIO.

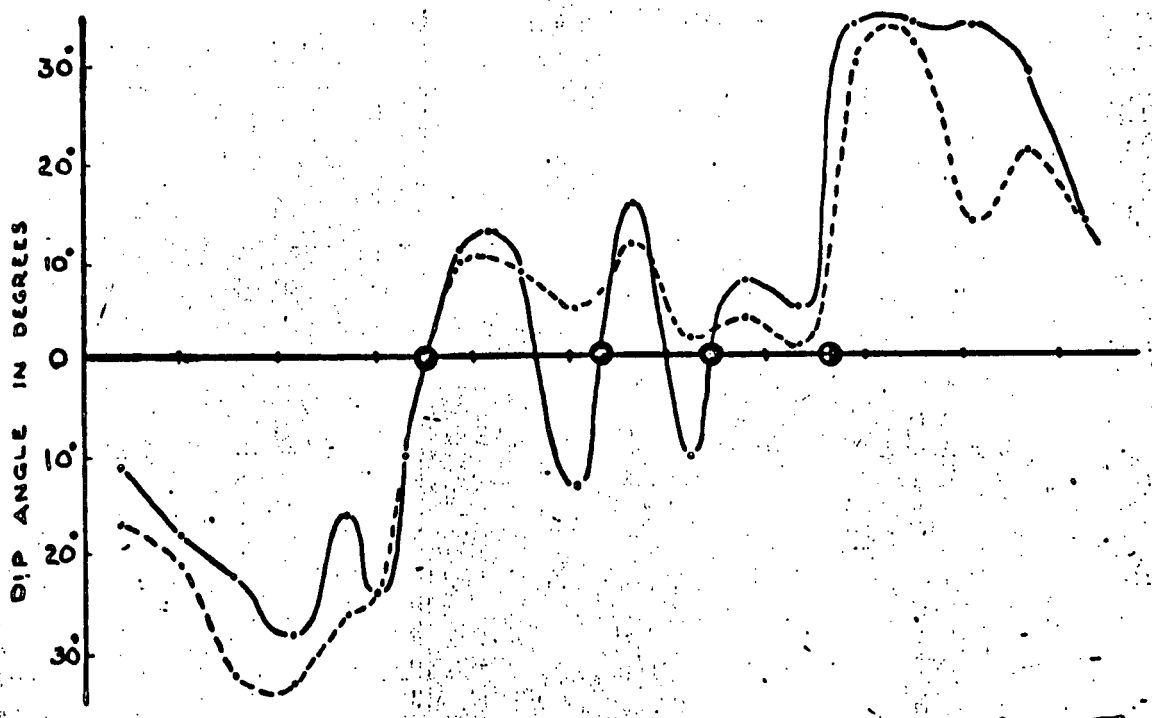
Scale 1" = 20°; 1" = 200'

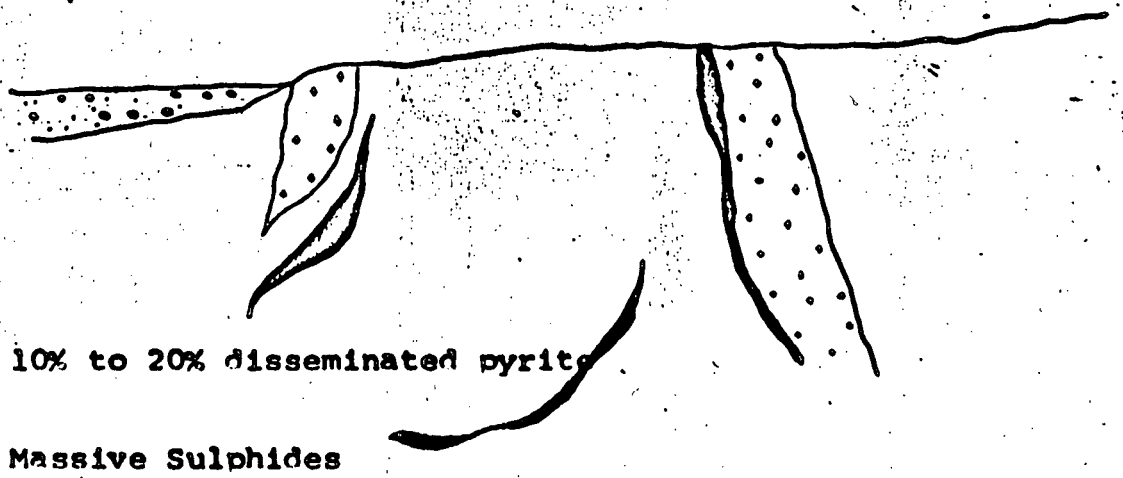
—.— Annapolis 21.4 kcs

---.--- Panama 24.0 kcs

—⊙— True Cross-Over

—⊕— Indicated Cross-Over





10% to 20% disseminated pyrite

n Massive Sulphides

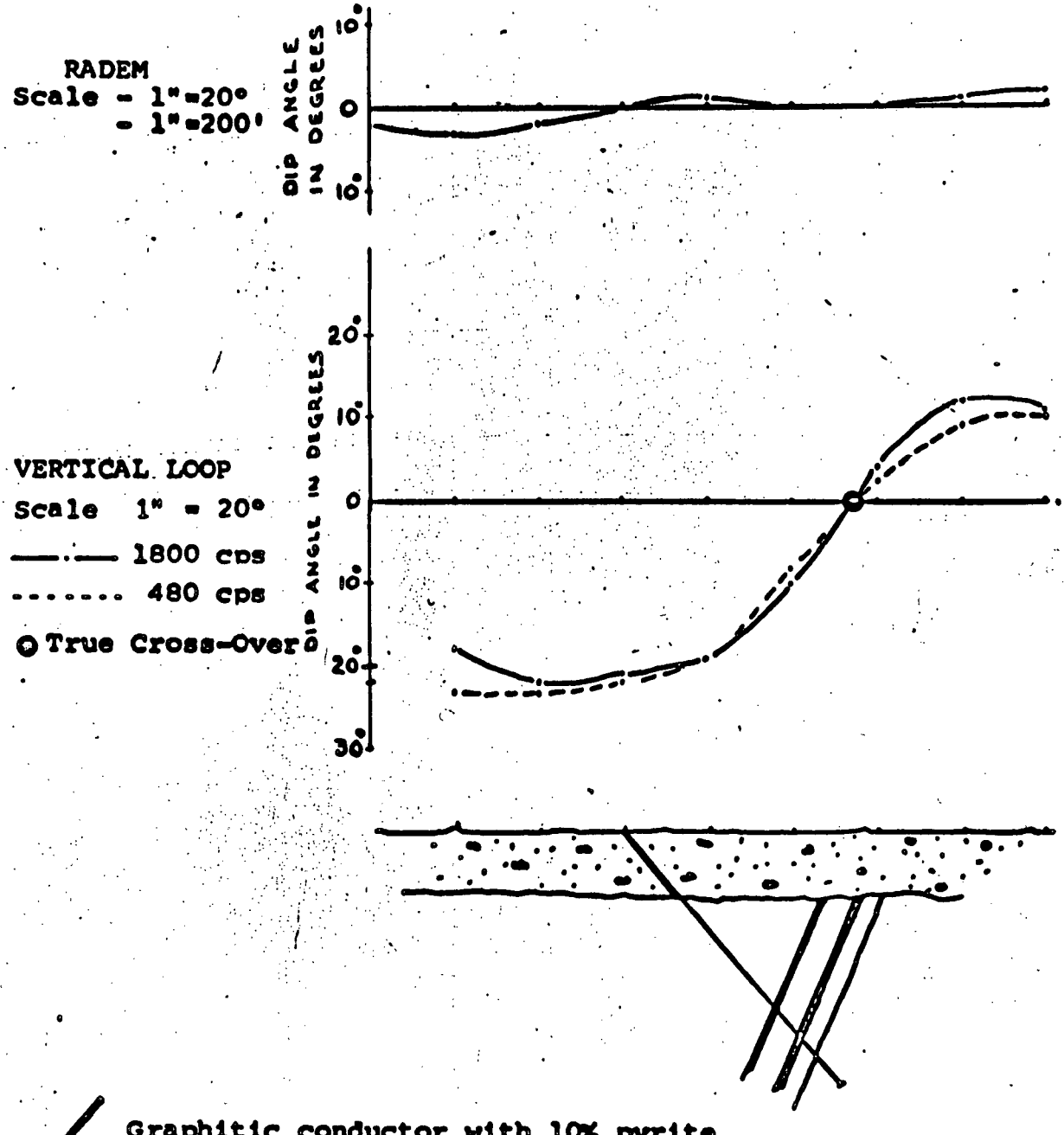
Sizes of ore lenses - 105,000, 135,000 and 280,000 tons

Only one of the ore lenses outcrops

Overburden is shallow over mineralized area.

CASE HISTORY # 1

RADEM AND DUAL FREQUENCY VERTICAL LOOP TRAVERSES OVER AN EXCELLENT CONDUCTOR BURIED AT MODERATE DEPTH (75'), TULLY TOWNSHIP, TIMMINS, ONTARIO.



Evergreen Explorations Ltd.

- R. WOOLVERTON
  GEOLOGIST, P.ENG.
- R. C. O'BRIEN
  FIELD SUPERVISOR
- JOHN C. OSWALD & CO., C.A.'s
  ACCOUNTANTS:

635 - 789 W. PENDER ST.
VANCOUVER 1, B.C., CANADA

CONTRACT EXPLORATION

- 5424 HALIFAX ST., BURNABY 2, B.C., CANADA, PHONE - 299-6998
- P.O. BOX 604, SMITHERS, B.C., CANADA PHONE - 847-3523

August 19, 1969

RED TOP SYNDICATE

c/o Whitesail Mines Ltd. (NPL)
202 – 560 West Broadway
Vancouver, B. C.

c/o Mercury Explorations Ltd. (NPL)
1281 West Georgia St.
Vancouver, B. C.

INVOICE #1

CHARGES FOR APRIL, MAY & JUNE 1969:

Personnel –		
3 man days @ $50.00 (local help at cost)		$ 150.00
6 man days @ 40.00		320.00
7 man days @ 25.00		175.00
Equipment –		
Truck – 9 days @ $20.00		180.00
Mag. E.M. – 1 day @ $25.00		25.00
Field and field office		50.00
Accomodation – 18 days @ $15.00		270.00
Claim tags and recording – 92 claims @ $5.25		483.00
Helicopter charter – May 23rd (Okanagan Helicopters – flight report #50685)		206.25
		1,859.25

Helicopter mag. – E.M. Surveys – Flying, data reduction, and report writing at contract price of $45.00 per line mile –

	No. of line miles		
Donna Group	26	$1,170.00	
Lana, Hull, Jo claims	65	2,925.00	4,095.00
Total, this invoice			$5,954.25

Whereof –

Whitesail Mines	$2,977.12
Mercury Explorations	2,977.13
As above	$5,954.25

E. & O. E.

John C Oswald & Co.
Accountants

PAID

Evergreen Explorations Ltd.

- R. WOOLVERTON
  GEOLOGIST, P.ENG.
- R. C. O'BRIEN
  FIELD SUPERVISOR
- JOHN C. OSWALD & CO., C.A.'s
  ACCOUNTANTS:

635 - 789 W. PENDER ST.
VANCOUVER 1, B.C., CANADA

CONTRACT EXPLORATION

- 5424 HALIFAX ST., BURNABY 2, B.C., CANADA, PHONE - 299-6998
- P.O. BOX 604, SMITHERS, B.C., CANADA PHONE - 847-3523

September 15, 1969

RED TOP SYNDICATE

c/o Whitesail Mine Ltd. (NPL)
202 - 560 West Broadway
Vancouver , B. C.

c/o Mercury Explorations Ltd. (NPL)
1281 West Georgia Street
Vancouver, B. C.

INVOICE #4

CHARGES FOR AUGUST -

	No. of man days	Rate	
Personnel -			
Operators	75	$40.	$ 3,000.00
Helpers	140	25.	3,500.00
Expediting	4	25.	100.00
Supervision	8	75.	600.00
	Total man days - 227		
EQUIPMENT -			
Trucks	42 days @ $20.00		840.00
Field and field office	8 man mos. @ $70.		560.00
Magnetometer	1 mo.		250.00
JEM and RADEM units			610.00 *
Chain saw	18 days @ $8.		144.00
Disbursements -			
Meals and accomodation			473.63 *
Groceries, expendable hardware and supplies			977.90 *
~~Mineral claim option payment - Karen claims~~			~~1,000.00~~
Long distance telephone			45.95
Geochem analysis			706.00
Freight			59.20
Accounting			175.00
			$13,041.68
Plus 10% on $2,061.53 (items marked*)			206.15
			~~$13,247.83~~ 12,247.83

Whereof -

Whitesail Mines	$6,623.92
Mercury Explorations	6,623.91
As above	$13,247.83

Apply 103/227 ths to Donna

E. & O. E.

John C Oswald & Co.
Accountants

PAID

Evergreen Explorations Ltd.

- R. WOOLVERTON GEOLOGIST, P.ENG.
- R. C. O'BRIEN FIELD SUPERVISOR
- JOHN C. OSWALD & CO., C.A.'s ACCOUNTANTS:

635 • 789 W. PENDER ST. VANCOUVER 1, B.C., CANADA

CONTRACT EXPLORATION

• 5424 HALIFAX ST., BURNABY 2, B.C., CANADA, PHONE - 299-6998
• P.O. BOX 604, SMITHERS, B.C., CANADA PHONE - 847-3523

October 14, 1969

RED TOP SYNDICATE

c/o Whitesail Mines Ltd. (NPL)
202 - 560 West Broadway
Vancouver, B. C.

c/o Mercury Explorations Ltd. (NPL)
1281 West Georgia Street
Vancouver, B. C.

INVOICE # 7

CHARGES FOR SEPTEMBER -

Personnel	No. of Men days	Rate	
Operators	8	$40.	$320.00
Helpers	22	25.	550.00
Supervision	1	75.	75.00
Equipment			
Truck	7 days @ $20		140.00
Field and field office	1 man/mo.		70.00
Parcoll housing unit	credit re rental on your behalf		~~(150.00)~~
Disbursements			
Long distance telephone			51.70
Expendable hardware and supplies			25.45 *
Geochem analysis			171.30
4 X 4 rental (U-Drive)			113.72
Equipment insurance			75.00
Accounting			150.00
		+	1,592.17
Plus 10% on $25.45 (item marked *)			2.55
			~~$1,594.72~~

Whereof -

Whitesail Mines	$ 797.36 ✓	1744.72
Mercury Explorations	797.36	
As above	$1,594.72	

Pd

E. & O. E.

John C Oswald & Co.
Accountants

RECEIVED 10/15/69

Evergreen Explorations Ltd.

- R. WOOLVERTON
  GEOLOGIST, P.ENG.
- R. C. O'BRIEN
  FIELD SUPERVISOR
- JOHN C. OSWALD & CO., C.A.'s
  ACCOUNTANTS:

635 - 789 W. PENDER ST.
VANCOUVER 1, B.C., CANADA

CONTRACT EXPLORATION

- 5424 HALIFAX ST., BURNABY 2, B.C., CANADA, PHONE - 299-6998
- P.O. BOX 604, SMITHERS, B.C., CANADA PHONE - 847-3523

December 10, 1969

RED TOP SYNDICATE

c/o Whitesail Mines Ltd. (NPL)
202 - 560 West Broadway
Vancouver, B. C.

c/o Mercury Explorations Ltd. (NPL)
1281 West Georgia Street
Vancouver, B. C.

INVOICE #9

CHARGES FOR OCTOBER AND NOVEMBER -

	No. of man days	Rate	
Personnel			
Supervision (Nov)	2	$75	$150.00
Helpers (Oct)	53	25	1,325.00
Equipment			
Truck (Oct)	15 dyas @ $20		300.00
Disbursements			
Long distance telephone			88.40
Groceries, expendable hardware and supplies			315.27 *
Accomodation purchased			35.60 *
I.P. Survey -			
Redtop claims			1,330.00
Donna claims			975.00
Accounting			86.76
Rentals -			
U Drive			94.37
Radem unit			150.00 *
Magnatometer			290.50 *
Freight			82.90
Drafting and printing			815.87 *
~~Mining Recorder~~			~~371.00~~
			6,410.67
* Plus 10% on $1,607.24			160.71
			~~$6,571.38~~
			6200.38

Whereof -

Whitesail Mines	$3,285.69
Mercury Explorations	3,285.69
As above	$6,571.38

E & O E

John C Oswald & Co.
Accountants

SUMMARY OF EXPENSES

PER PRECEDING INVOICES

INVOICE #1

Airborne survey	$ 1,170.00

INVOICE #4

103 man days of total 227 spent on Donna so

$\frac{103}{227}$ (12,247.83) =	$ 5,860.00

INVOICE #7	$ 1,744.72

INVOICE #9

Total less I.P. Survey (1330 + 975)

$6200.38 - $2305.00 = $3895.38

Apply ¼ to Donna so:

¼ ($3895.38)	$ 973.59
Donna I.P. Survey	$ 975.00

MISC. EXPENSES

Drafting and report writing	$ 600.00
TOTAL TO BE APPLIED AS ASSESSMENT	$ 11,323.31

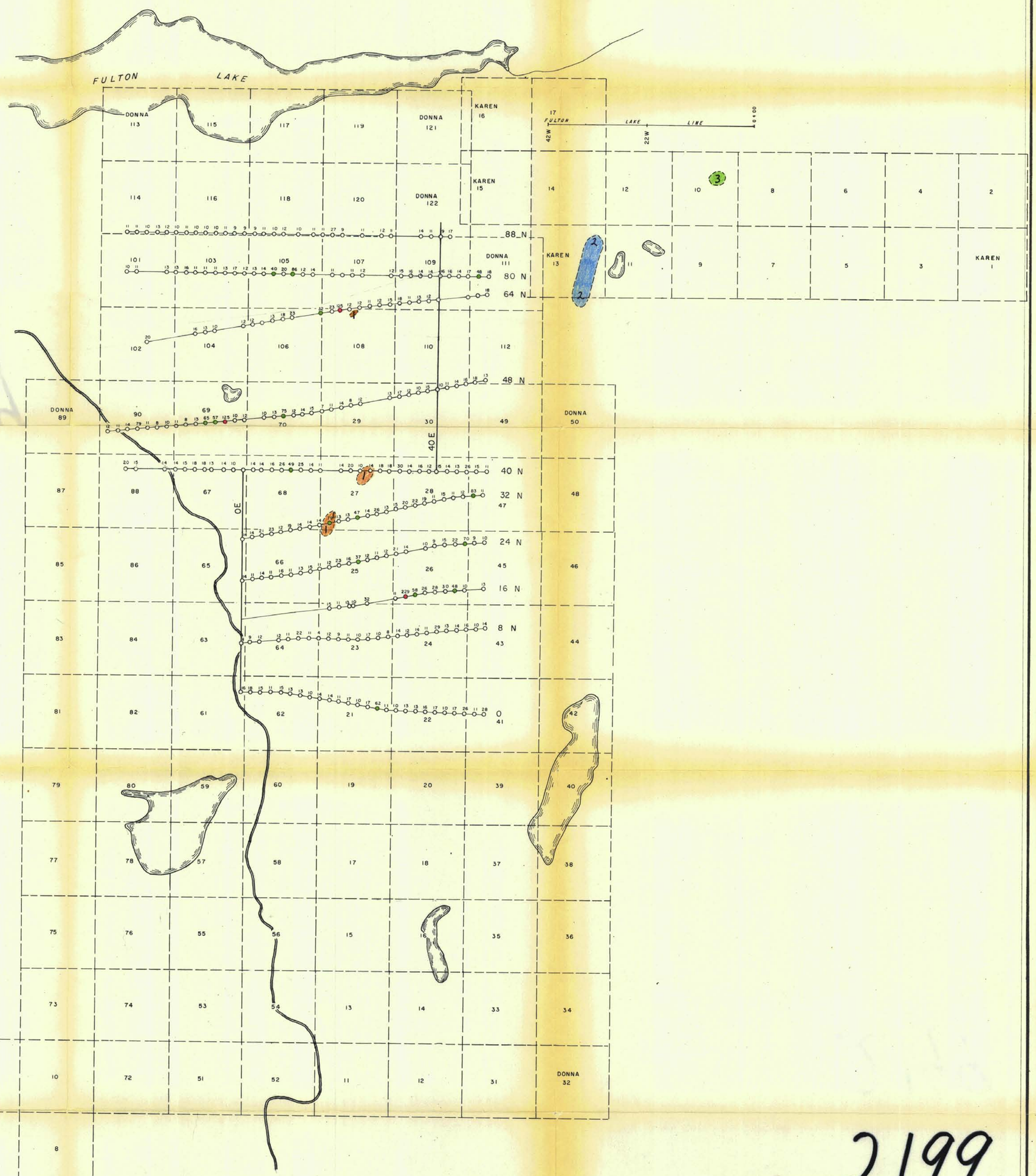
DECLARATION OF PROJECT CHARGES

The undersigned consider the preceding invoices applicable as assessment work.

R.E. CHAPLIN, P.ENG.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
ROBERT E. CHAPLIN

R.W. WOOLVERTON, P.ENG.



2199

LEGEND

Cu IN PPM

14 — SAMPLE LOCATION

ppm	
○ < 30	BACKGROUND
● 30 - 100	SLIGHTLY ANOMALOUS
● > 100	VERY ANOMALOUS

MINERAL CLAIM

LAKE OR POND

ROAD

3 ANDESITE } HAZELTON
2 LIMESTONE }
1 TOPLEY GRANITE

TO ACCOMPANY A REPORT BY R. WOOLVERTON, P.ENG, ON THE DONNA AND KAREN CLAIMS DATED 8 Jan 1970

R. Woolverton

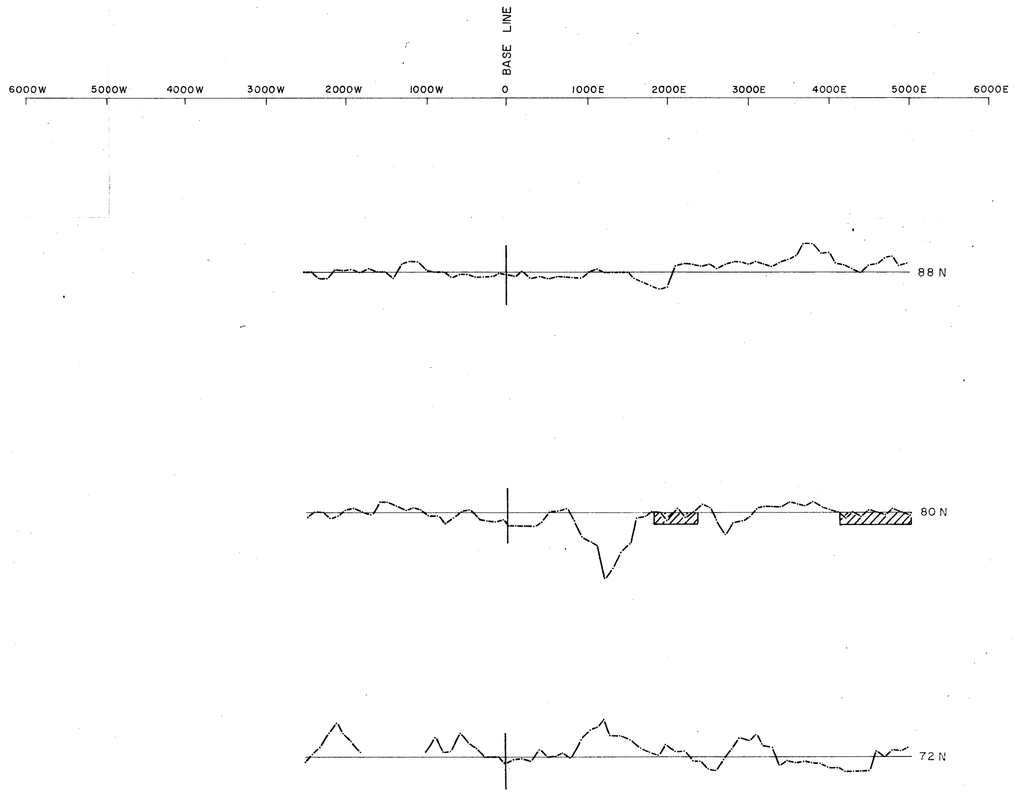
WHITESAIL MINES LTD.
MERCURY EXPLORATIONS LIMITED

DONNA PROPERTY
DONNA CLAIMS
GEOLOGY AND SOIL SURVEY
TOTAL Cu. IN P.P.M.
OMINICA M.D. B.C.

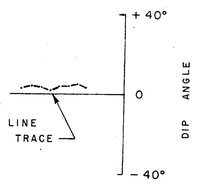
1000 0 1000 2000
SCALE: 1"= 1000'

SURVEY BY EVERGREEN EXPLORATIONS LTD.
AUGUST, 1969

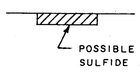
MAP Nº 1

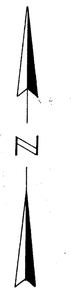


LEGEND



NOTE:
INTERLINE SPACING
NOT TO SCALE





TO ACCOMPANY A REPORT BY R. WOOLVERTON, P. ENG. ON THE DONNA AND KAREN CLAIMS DATED 8 Jan. 1970 R. Woolverton

2199

WHITESAIL MINES LTD.
MERCURY EXPLORATIONS LIMITED

DONNA PROPERTY

DONNA CLAIMS

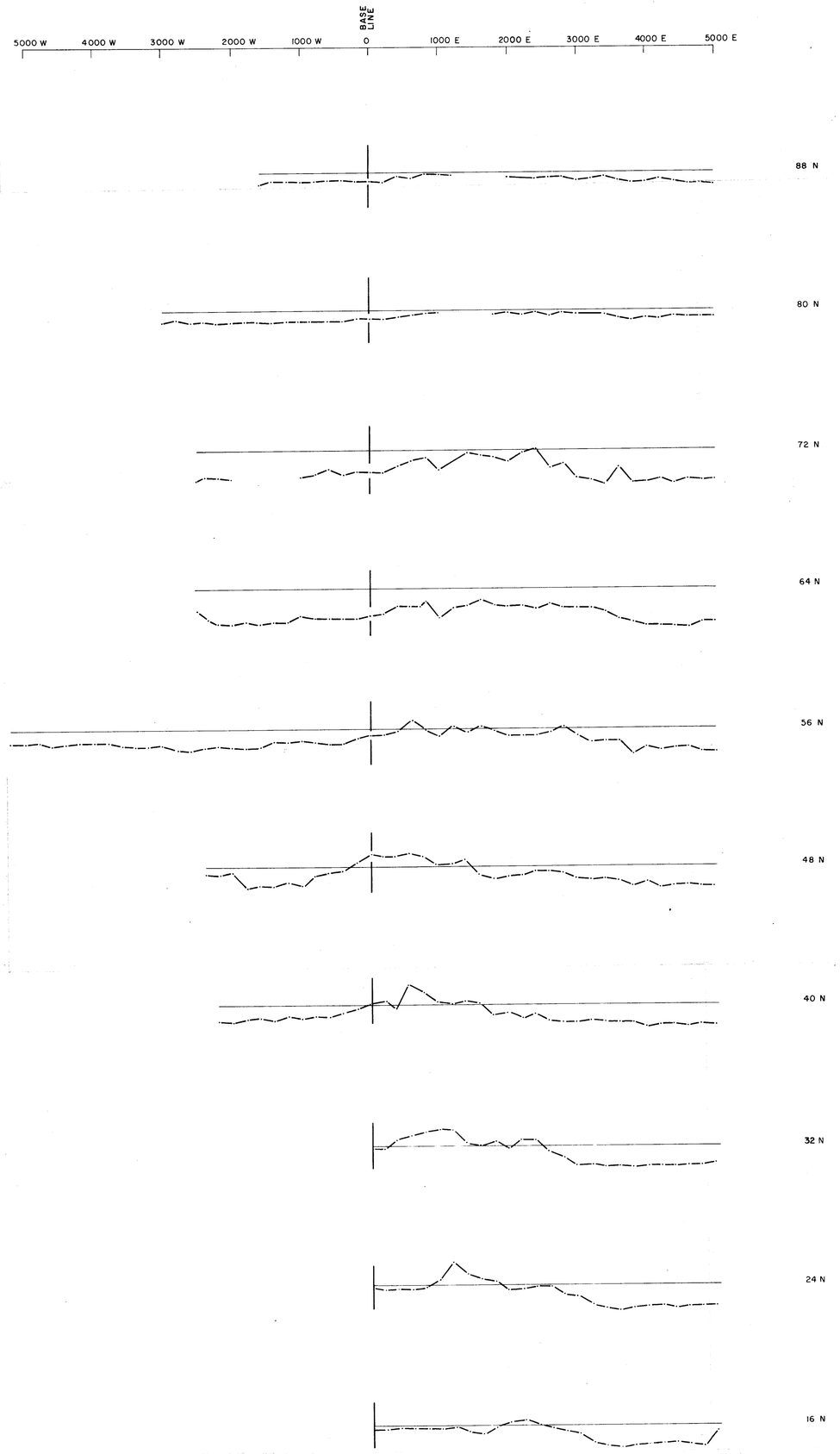
RADEM SURVEY

OMINECA M.D., B.C.

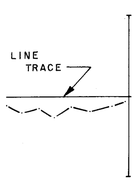
1000 0 1000 2000
SCALE: 1" = 1000 Feet

SURVEY BY EVERGREEN EXPLORATIONS LTD.
AUGUST 1969

MAP Nº 2



LEGEND :



NOTE: INTERLINE SPACING NOT TO SCALE

TO ACCOMPANY A REPORT BY R. WOOLVERTON, P. ENG, ON THE DONNA AND KAREN CLAIMS DATED 8 Jan 1970 R. Woolverton

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WHITESAIL MINES LTD.
MERCURY EXPLORATIONS LIMITED

DONNA PROPERTY

DONNA CLAIMS

MAGNETOMETER SURVEY

OMINECA M.D., B.C.

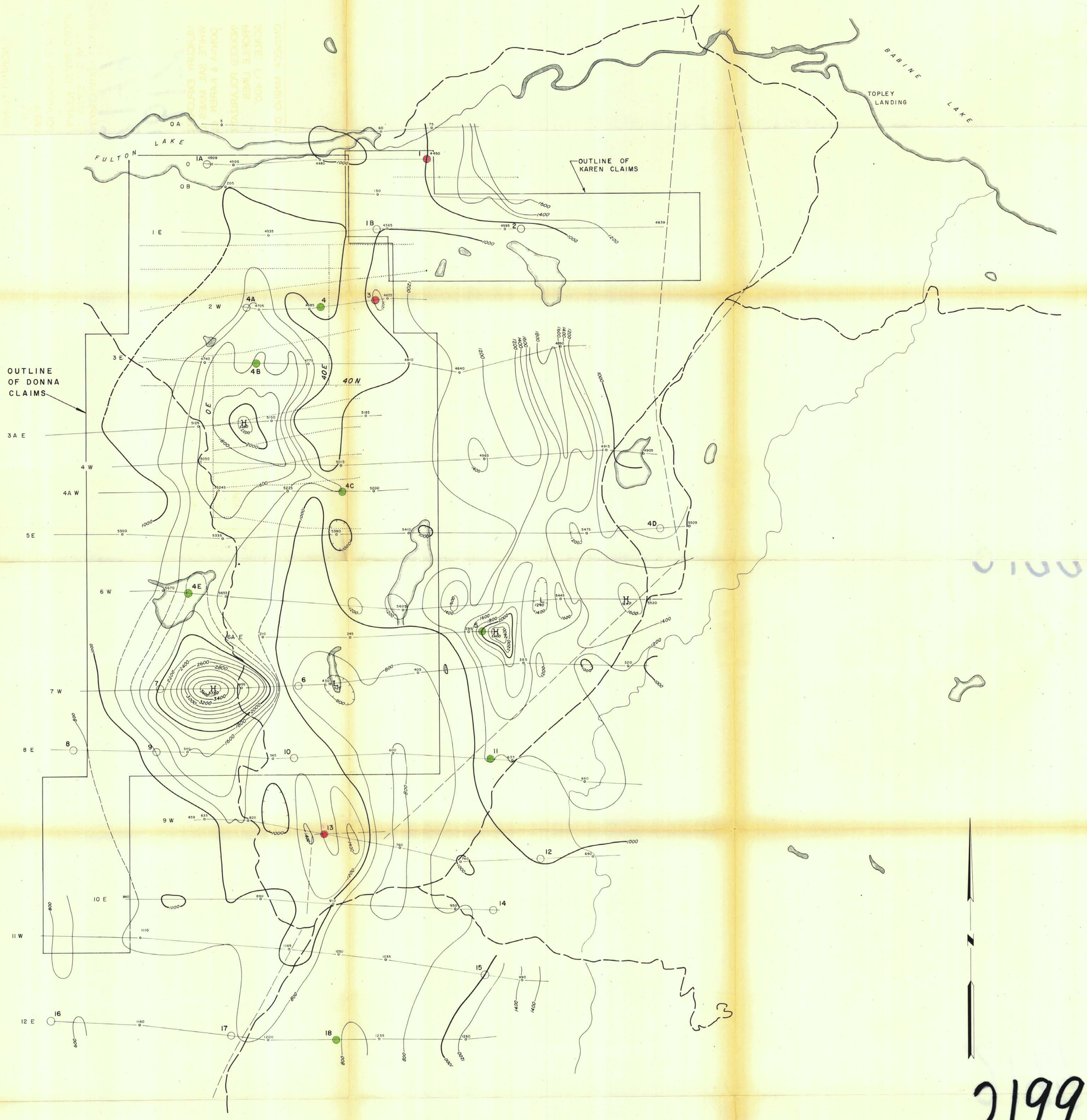
1000' 0 1000' 2000'

SCALE: 1" = 1000'

SURVEY BY EVERGREEN EXPLORATIONS LTD

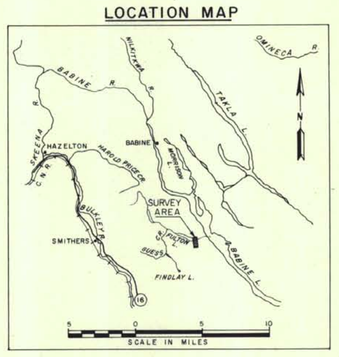
AUGUST 1969

MAP Nº 3



2199

LOCATION MAP



CONDUCTORS
- Primary interest
- Secondary interest
- Surficial or formational

Ground Survey Grid

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2199 MAP #5

LEGEND

Flight lines and photo identity points 1200 1235 1260

Isomagnetic Contours: 1,000 Gammas; 200 Gammas; Mag. Dep.

Magnetic High H

Magnetic Low L

Map values in gammas plus 57,220 equals true magnetic intensity

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R. Woolverton

WHITESAIL MINES LTD.
MERCURY EXPLORATIONS LIMITED

DONNA PROPERTY
DONNA CLAIMS

HELICOPTER MAGNETIC AND ELECTRO MAGNETIC SURVEYS

OMINECA M. D., B.C.

1/4 0 1/4 1/2
SCALE IN MILES

SURVEY BY EVERGREEN EXPLORATIONS LTD.
APRIL, 1969

MAP Nº 4

LINE 48N

	28W	24	20	16	12	8	4W	0	4E	8	12	16	20	24	28	32	36E
PFE	2.8	2.3	1.7	1.3	2.8	3.3	4.3	1.8	2.3	2.0	1.9	2.1	1.3	3.0±1.0	2.0	1.9	
ρ	490	512	472	422	376	131	760	618	920	1600	714	653	672	760	2112	405	

LINE 32N

	0	4E	8	12	16	20	24	28	32	36	40	44	48	52	56E
PFE	0.9	0.6	0.4	0.7	0.5	1.4	2.0	2.0	0.9	2.1	1.6	1.8	1.3		
ρ	193	540	1158	1490	1325	1625	1000	458	308	228	200	300	375		

LINE 16N

	4W	0	4E	8	12	16	20	24	28	32	36	40	44	48	52E
PFE	0.8	2.6	2.2	1.8	0.6	2.2	0.6	0.6	0.8	1.8	1.3	1.3	1.7	1.4	
ρ	196	193	208	184	234	303	278	442	427	314	166	150	336	309	

LINE 0+00

	4W	0	4E	8	12	16	20	24	28	32	36	40	44E
PFE	2.1	2.1	1.2	1.3	1.9	2.8	0.8	2.5±1.0	0.6	1.6	1.2	2.6	
ρ	209	288	194	202	116	222	403	525	676	371	380	290	

PFE Percent Frequency Effect
3.0-0.1 cycles/sec.

ρ Apparent Resistivity in Ohms-meters

SURVEY BY PROFESSIONAL GEOLOGIC SERVICES LTD.
TO ACCOMPANY A REPORT BY R.E.CHAPLIN P.ENG.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA ROBERT E. CHAPLIN

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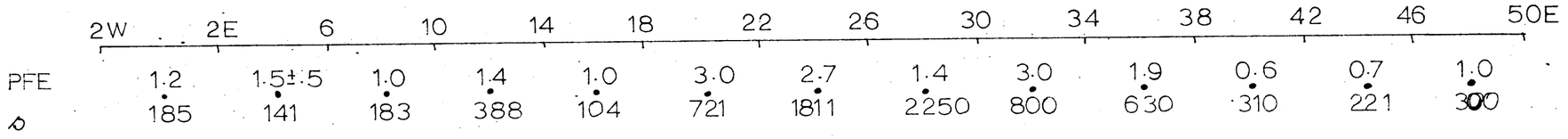
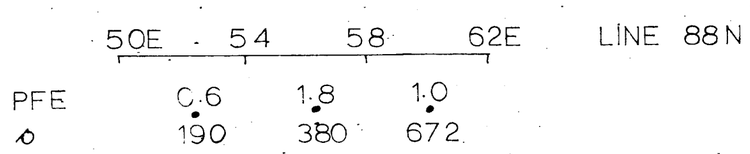
DONNA & KAREN CLAIM GROUP

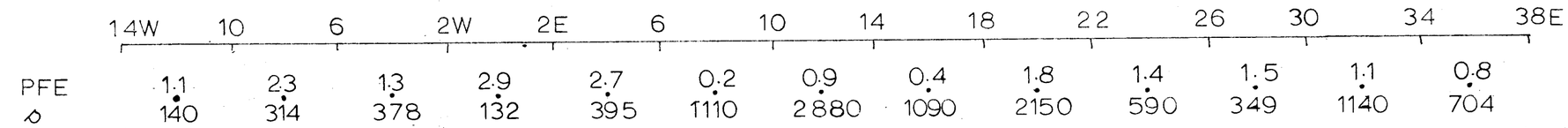
INDUCED POLARIZATION SURVEY
PROFILE LINES:
SCALE, 1"= 400'

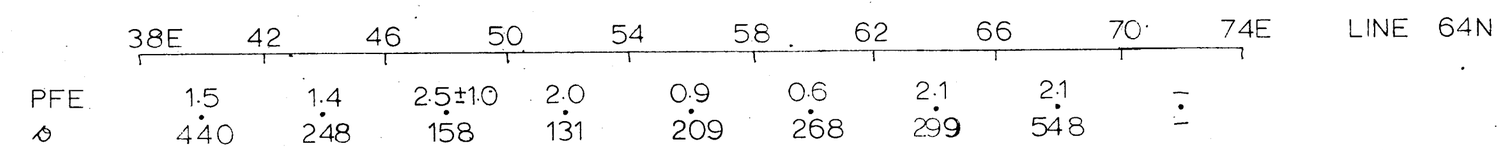
OMINECA MINING DIVISION

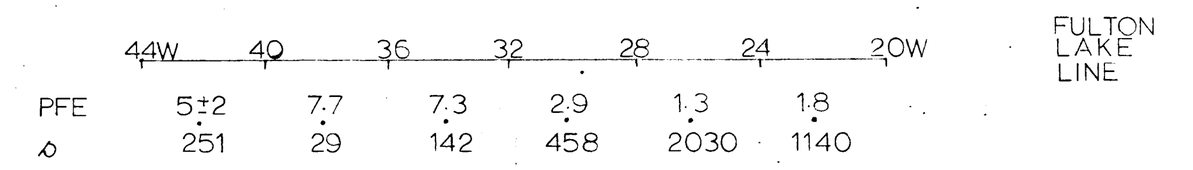
Map 5







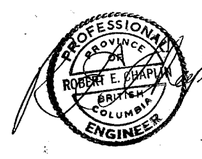




PFE Percent Frequency Effect
3·0 – 0·1 cycles/sec.

ρ Apparent Resistivity in Ohms-meters

SURVEY BY PROFESSIONAL GEOLOGIC SERVICES LTD.
TO ACCOMPANY A REPORT BY R.E. CHAPLIN P.ENG.



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MERCURY EXPLORATION LTD. (N.P.L.)
WHITE SAIL MINES LTD. (N.P.L.)
DONNA & KAREN CLAIM GROUP

INDUCED POLARIZATION SURVEY
PROFILE LINES:
SCALE, 1" = 400'

OMINECA MINING DIVISION

Map-6