REPORT ON
AN AIRBORNE ELECTROMAGNETIC SURVEY
LITTLE TOWNSHIP TIMMINS AREA ONTARIO
PORCUPINE MINING DIVISION

TORONTO, ONTARIO, CANADA
JUNE 1982

J. A. McCANCE, P.Eng.
SAMIM CANADA LTD.

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1. INTRODUCTION

This report outlines the results of an INPUT survey flown in Little Township in the Timmins area of northeastern Ontario during the period May 11th to 15th, 1979.

A total of 18 line miles of surveying was carried out at a 1/8 mile line spacing over the 36 claims listed in the Technical Data Statement (attached as Appendix "A").

This area is a limited part of 2 general target areas (see Figure 1) that were selected for airborne coverage by MPH Consultants Ltd. The basis of selection included the presence of favourable geology, known sulphide occurrences and land status following a re-interpretation of the geology north of Timmins (Pamour sheet) and an extensive township by township evaluation and compilation of previous mining exploration throughout the Timmins area.

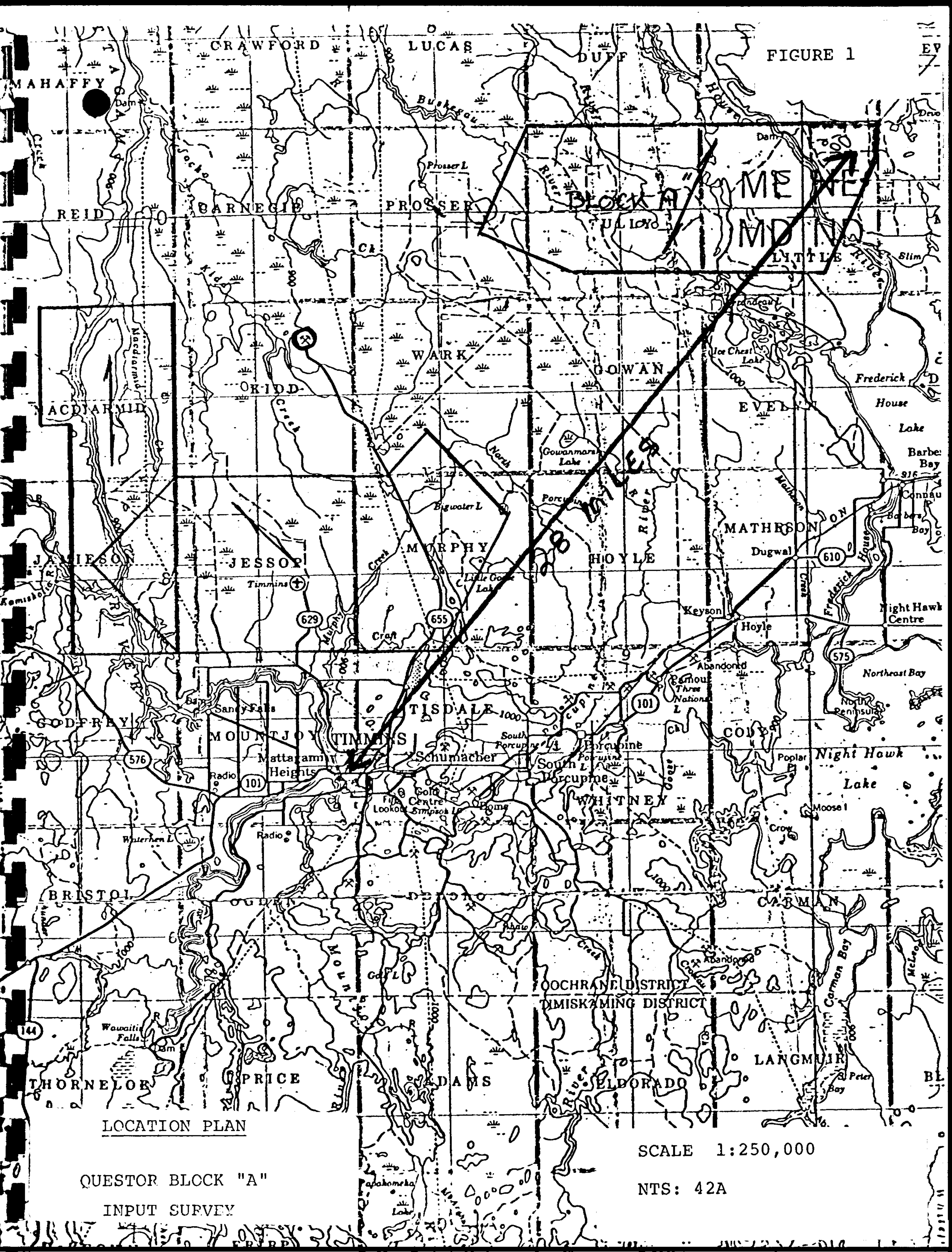

FIGURE 1

LOCATION PLAN

QUESTOR BLOCK "A"

INPUT SURVEY

SCALE 1:250,000

NTS: 42A

2. PROPERTY, LOCATION AND ACCESS

This property consisting of 36 unpatented claims (1440 acres) forms part of a larger group of 74 claims - the Dam Group - around the common corners of Mann, Newmarket, McCart and Little townships (Figure 2). The claims numbered P521825, etc....., are listed in the attached Appendix "B" and are shown on claim map M-535.

The approximate center of the Dam Group is located about 28 miles northeast of Timmins. Co-ordinates of this centerpoint are 80°58'W longitude and 48°47'N latitude as indicated on topographic map 42A/15 "IROQUOIS FALLS".

Access to the claims was by truck west from Highway 11 then by snowmobile along winter roads.

The operating base for the survey aircraft was Timmins, Ontario.

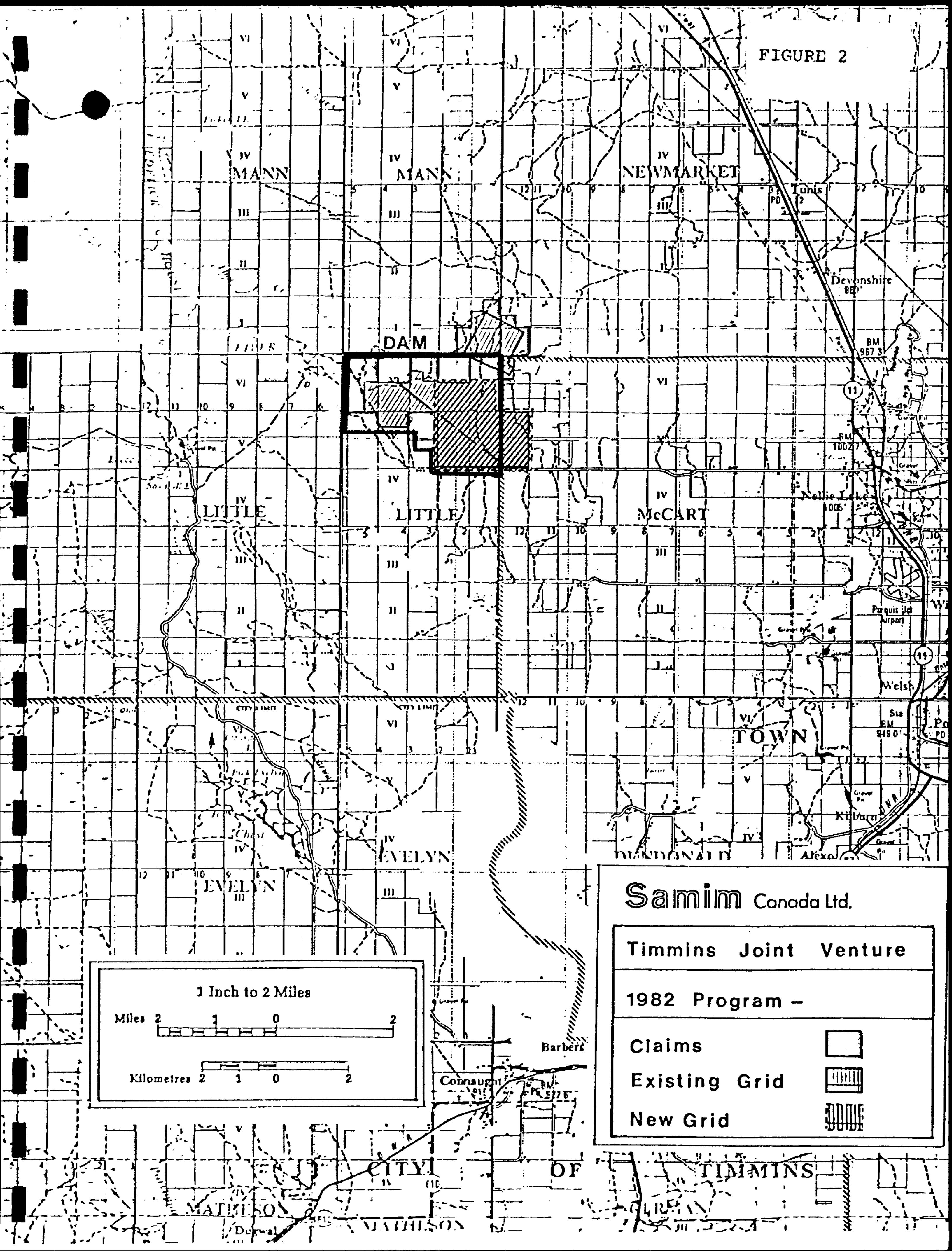
Samim Canada Ltd.
Timmins Joint Venture
1982 Program -
Claims
Existing Grid
New Grid
1 Inch to 2 Miles
Miles 2 1 0 2
Kilometres 2 1 0 2
MANN
MANN
NEWMARKET
DAM
LITTLE
LITTLE
McCART
TOWN
EVELYN
EVELYN
CITY OF TIMMINS
Devonshire
Nellie Lake
Welsh
Barbers
Connaught
Kilburn
Tunis

FIGURE 2

3. PREVIOUS WORK

In 1951 International Nickel Limited together with the Canadian Johns-Manville Company Limited completed follow-up drilling to a 1947 nickel search in McCart township (McCart DR-16). Three holes were drilled encountering serpentinized rock and greenstone (Little DR-10).

No further nickel and/or asbestos exploration is recorded.

Since the discovery of the Kidd Creek Mine however, various parts of the present claim group have been explored for base metals.

In 1971 VanGulf Exploration Company drilled two holes after completing a limited amount of electromagnetic and magnetic surveying on six claims in Lot 1 Concession VI (2.780). Drilling encountered banded, tuffaceous felsic to mafic metavolcanics within which narrow graphitic horizons were identified as the source of conductivity (Little DR-15).

In 1971 AMAX POTASH Limited completed an airborne survey with the Geoterrex Otter system (2.839) (2.1156). Subsequent ground surveys using the horizontal shootback electromagnetic method and ground magnetics identified a long conductor in Lot 3 Concession V, VI and a more limited CEM conductor in Lot 5 Concession VI (2.1230). Each conductor was tested with a single drill hole late in 1971. Both holes encountered narrow graphitic horizons in an otherwise felsic tuffaceous environment (Little DR-17, 18).

Additional ground exploration by Texasgulf (2.2105) in the northeast was completed in 1976 with no evidence that the identified conductor was drill tested.

Ground work by Norcen Energy Resources (2.3334, DR-25) was completed as follow-up work to this airborne survey. A 1980 report by W. E. Brereton, MPH Consultants Ltd., (2.3030) has described the airborne magnetic results obtained over these claims.

4. GEOLOGY

The claims area is covered by open spruce and alder swamp. Outcrops are unknown. Drill results have identified a composite glacial overburden consisting of clay and compacted gravels and boulders. Overburden depths are variable throughout the property with depths of 150 feet indicated in the northwest; 100 feet to 125 feet throughout the central sections and depths of 60 feet to 80 feet indicated in the east near the Little-McCart township line.

Published geology for Little township includes ODM maps 2046 and P-698.

A re-interpretation of the geology involving extensive compilation efforts has suggested the presence of a major contact between basic and felsic volcanics on these claims. The Jonsmith Cu-Zn massive sulphide prospect in adjoining Mann township is interpreted to occur at this contact.

From a compilation of eleven drill holes in these claims it is now known that extensive sulphidic felsic fragmental rocks occur. These include felsic, intermediate and mafic tuffaceous metavolcanics plus serpentinized ultramafics in the extreme northeast. Sericitic and chloritic alteration have been identified in drill core as have coarse pyrite nodules and other sulphides along cherty and finely laminated graphitic argillaceous interbands.

5. AIRBORNE ELECTROMAGNETIC SURVEY

The present survey was flown to aid geological mapping in an area of extensive, thick and in places conductive overburden.

A very close nominal line spacing requiring detailed flying procedures and navigational control was believed justified to quickly locate previously undetected conductors particularly in areas of such complex structural and litho-stratigraphic geology. The INPUT system was used because of its proven depth penetration capabilities in complex overburden conditions as well as providing an airborne technique capable of improved definition of conductors thereby assisting any ground follow-up activities.

The flight lines were oriented in a direction east of north to improve definition of stratabound conductive units within the underlying geology as a northwest strike direction had been identified from prior compilation activities.

Details of the survey operation, equipment, data compilation, presentation and general interpretation form Appendix "A" of this report and have been extracted from a report prepared by R. J. DeCarle, Questor Surveys Limited.

6. SURVEY RESULTS AND INTERPRETATION

Results are presented as conductor axes which have been plotted as accurately as possible on the accompanying map (Figure 3, in pocket). However, these axes should be used as a guide only. Copies of the actual recorded analogue traces covering this area accompany Appendix "A" (see back pocket).

Three major conductive zones, identified as conductors A-18, A-19 and A-20, have been located by this survey.

Conductor A-18 is known from previous drilling to be caused by graphite within felsic tuffs.

Conductor A-19 has a complex source which previous drilling has indicated to be barren sulphides within a graphitic interband between rhyolite and dacitic tuffaceous units. These geological units are believed to represent a favourable volcanogenic environment for base metal massive sulphide deposition similar to the Jonsmith deposit in adjacent Mann township. The eastern extension of this predominantly graphitic horizon remains unexplored.

Conductor A-20 may be a similar feature to A-19 as graphite certainly exists in this area. No previous exploration is known over this conductor.

A parallel conductive trend to the northeast has been drilled by VanGulf Exploration and determined to be a multiple zone of graphitic units within a sequence of felsic to mafic tuffaceous metavolcanics.

Four "point" anomalies are also identified. In the extreme northeast these anomalies flank a magnetic high and are probably associated with a geological contact. In other parts of the survey area the presence of lensy pockets of conductive overburden may contribute to these weak isolated anomalies.

7. CONCLUSIONS

The INPUT survey over northeast Little township has located four major conductive trends and four isolated single intercept conductors. At least three anomalies have not been tested in an area where previous drilling has established the presence of massive pyritic sulphides in felsic pyroclastics. Ground follow-up will be required.

JUNE 25, 1982

REGISTERED PROFESSIONAL ENGINEER
J. A. McCANCE
PROVINCE OF ONTARIO

P. Eng.

APPENDIX "A"

APPENDIX "A"

AN EXCERPT FROM THE REPORT

ON AN

AIRBORNE ELECTROMAGNETIC SURVEY

NORCEN ENERGY RESOURCES LIMITED

TIMMINS AREA, ONTARIO

FILE NO: 21005 JULY, 1979

Questor Surveys Limited, 6380 Viscount Road, Mississauga, Ontario L4V 1H3

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INTRODUCTION

This report contains the results of an airborne electromagnetic survey flown in the Timmins area, Ontario on May 11, 12, 13, 14 and 15, 1979.

A brief description of the survey procedure together with recommendations for ground follow-up is included.

The total survey was 1699 line miles and the survey was performed by Questor Surveys Limited. The survey aircraft was a Britten Norman Trislander C-GNKW and the operating base was Timmins, Ontario.

MAP COMPILATION

The base maps are uncontrolled mosaics constructed from 1" = 4,300 feet (approximate) National Air Photo Library photographs. The mosaics were reproduced at a scale of 1" = 1320 feet.

Flight path recovery was accomplished by comparison of the prints of the 35mm film with the mosaic in order to locate the fiducial points. These points are approximately 4500 feet apart.

SURVEY PROCEDURE

Terrain clearance was maintained as close to 400 feet as possible, with the E.M. bird at approximately 150 feet above the ground. A normal S-pattern flight path using approximately one mile turns was used. The equipment operator logged the flight details and monitored the instruments.

A line spacing of 660 feet was used.

During the course of the survey, an attempt was made to fly the flight lines in alternate directions. This procedure aids in the interpretation of a dip of a conductor. The direction and amount of dip have been put on the INPUT maps where it was deemed possible.

EQUIPMENT

The aircraft are equipped with Mark VI INPUT (R) airborne E.M. systems and Geometrics G-803 proton precession magnetometers. Radar altimeters are used for vertical control. The outputs of these instruments together with fiducial timing marks are recorded by means of galvanometer type recorders using light sensitive paper. Thirty-five millimeter continuous strip cameras are used to record the actual flight path.

(I) BARRINGER/QUESTOR MARK VI INPUT (R) SYSTEM

The Induced Pulse Transient (INPUT) system is particularly well suited to the problems of overburden penetration. Currents are induced into the ground by means of a pulsed primary electromagnetic field which is generated in a transmitting loop around the aircraft. By using half sine wave current pulses and a loop of large turns-area, the high output power needed for deep penetration is achieved.

The induced current in a conductor produces a secondary electromagnetic field which is detected and measured after the termination of each primary pulse. Detection is accomplished by means of a receiving coil towed behind the aircraft on four hundred feet of cable, and the received signal is processed and recorded by equipment in the aircraft. Since the measurements are in the time domain rather than the frequency domain common to continuous wave systems, interference effects of the primary transmitted field are eliminated. The secondary field is in the form of a decaying voltage transient originating in time at the termination of the transmitted pulse. The amplitude of the transient is, of course, proportional to the amount of current induced into the conductor and, in turn, this current is proportional to the dimensions, the conductivity and the depth beneath the aircraft.

The rate of decay of the transient is inversely proportional to conductivity. By sampling the decay curve at six different time intervals, and recording the amplitude of each sample, an estimate of the relative conductivity can be obtained. By this means, it is possible to discriminate between the effects due to conductive near-surface materials such as swamps and lake bottom silts, and those due to genuine bedrock sources. The transients due to strong conductors such as sulphides exhibit long decay curves and are therefore commonly recorded on all six channels. Sheet-like surface materials, on the other hand, have short decay curves and will normally only show a response in the first two or three channels.

The samples, or gates, are positioned at 310, 490, 760, 1120, 1570 and 2110 micro-seconds after the cessation of the pulse. The widths of the gates are 180, 180, 360, 360, 540 and 540 micro-seconds respectively.

For homogeneous conditions, the transient decay will be exponential and the time constant of decay is equal to the time difference at two successive sampling points divided by the log ratio of the amplitudes at these points.

(II) GEOMETRICS G-803 PROTON PRECESSION MAGNETOMETER

The magnetometers which measure the total magnetic field have a sensitivity of 1 gamma and a range from 20,000 gammas to 100,000 gammas.

Because of the high intensity field produced by the INPUT transmitter, the magnetometer results are recorded on a time-sharing basis. The magnetometer head is energized while the transmitter is on, but the read-out is obtained during a short period when the transmitter is off. Using this technique, the head is energized for 1.15 seconds while the precession frequency is being recorded and converted to gammas. Thus a magnetic reading is taken every 1.3 seconds.

DATA PRESENTATION

The symbols used to designate the anomalies are shown in the legend on each map sheet, and the anomalies on each line are lettered in alphabetical order in the direction of flight. Their locations are plotted with reference to the fiducial numbers on the analog record.

A sample record is included to indicate the method used for correcting the position of the E.M. Bird and to identify the parameters that are recorded.

All the anomaly locations, magnetic correlations, conductivity-thickness values and the amplitudes of channel number 2 are listed on the data sheets accompanying the final maps.

GENERAL INTERPRETATION

The INPUT system will respond to conductive overburden and near-surface horizontal conducting layers in addition to bedrock conductors. Differentiation is based on the rate of transient decay, magnetic correlation and the anomaly shape together with the conductor pattern and topography.

Power lines sometimes produce spurious anomalies but these can be identified by reference to the monitor channel.

Railroad and pipeline responses are recognized by studying the film strips.

Graphite or carbonaceous material exhibits a wide range of conductivity. When long conductors without magnetic correlation are located on or parallel to known faults or photographic linears, graphite is most likely the cause.

Contact zones can often be predicted when anomaly trends coincide with the lines of maximum gradient along a flanking magnetic anomaly. It is unfortunate that graphite can also occur as relatively short conductors and produce attractive looking anomalies. With no other information than the airborne results, these must be examined on the ground.

Serpentinized peridotites often produce anomalies with a character that is fairly easy to recognize. The conductivity which is probably caused in part by magnetite, is fairly low so that the anomalies often have a fairly large response on channel #1; they decay rapidly, and they have strong magnetic correlation. INPUT E. M. anomalies over massive magnetites show a relationship to the total Fe content. Below 25 - 30%, very little or no response at all is obtained, but as the percentage increases the anomalies become quite strong with a characteristic rate of decay which is usually greater than that produced by massive sulphides.

Commercial sulphide ore bodies are rare, and those that respond to airborne survey methods usually have medium to high conductivity. Limited lateral dimensions are to be expected and many have magnetic correlation caused by magnetite or pyrrhotite. Provided that the ore bodies do not occur within formational conductive zones as mentioned above, the anomalies caused by them will usually be recognized on an E.M. map as priority targets.

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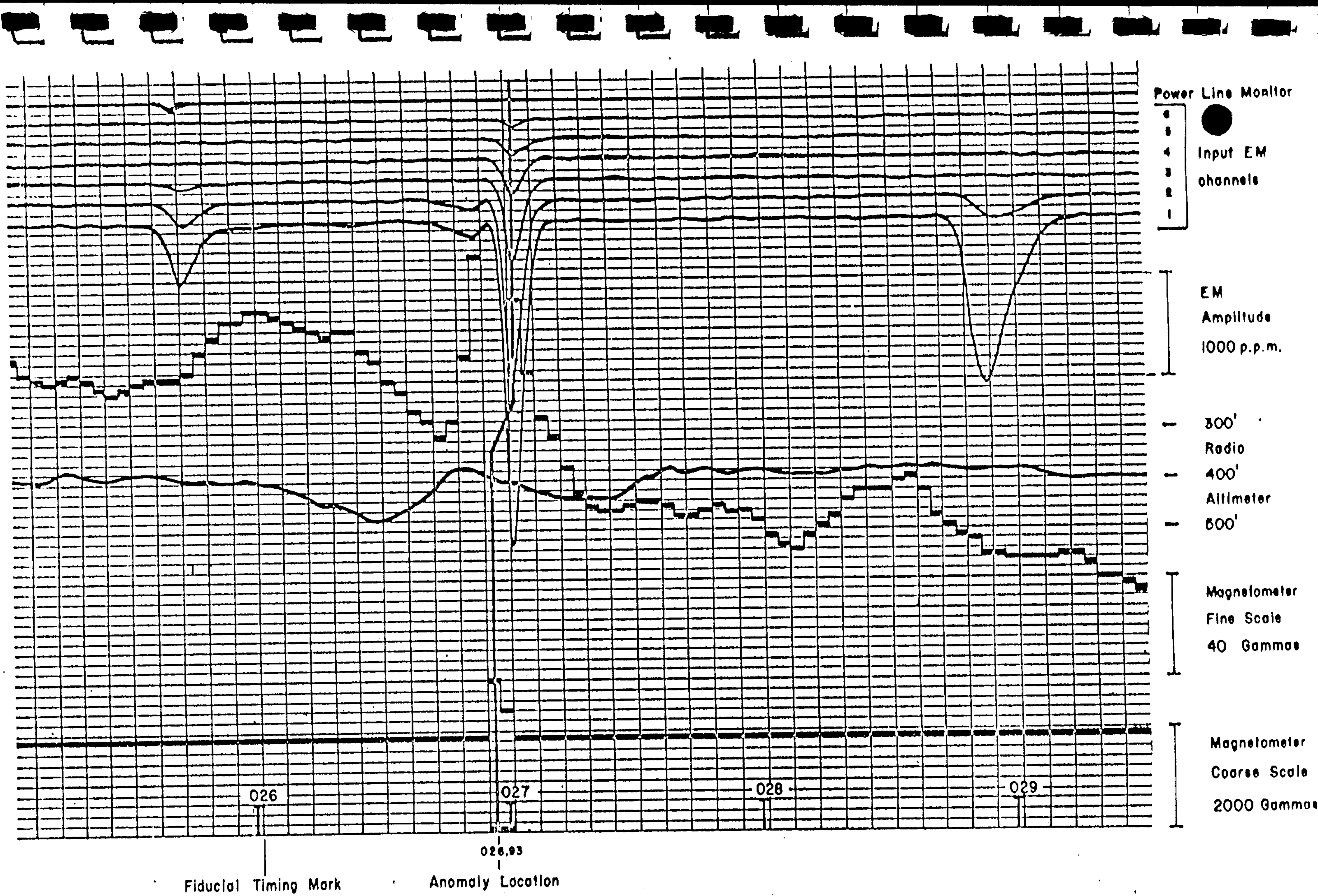
JUNE 25, 1982



Representative INPUT, Magnetometer and Altimeter Recording

DATA SHEET

AND

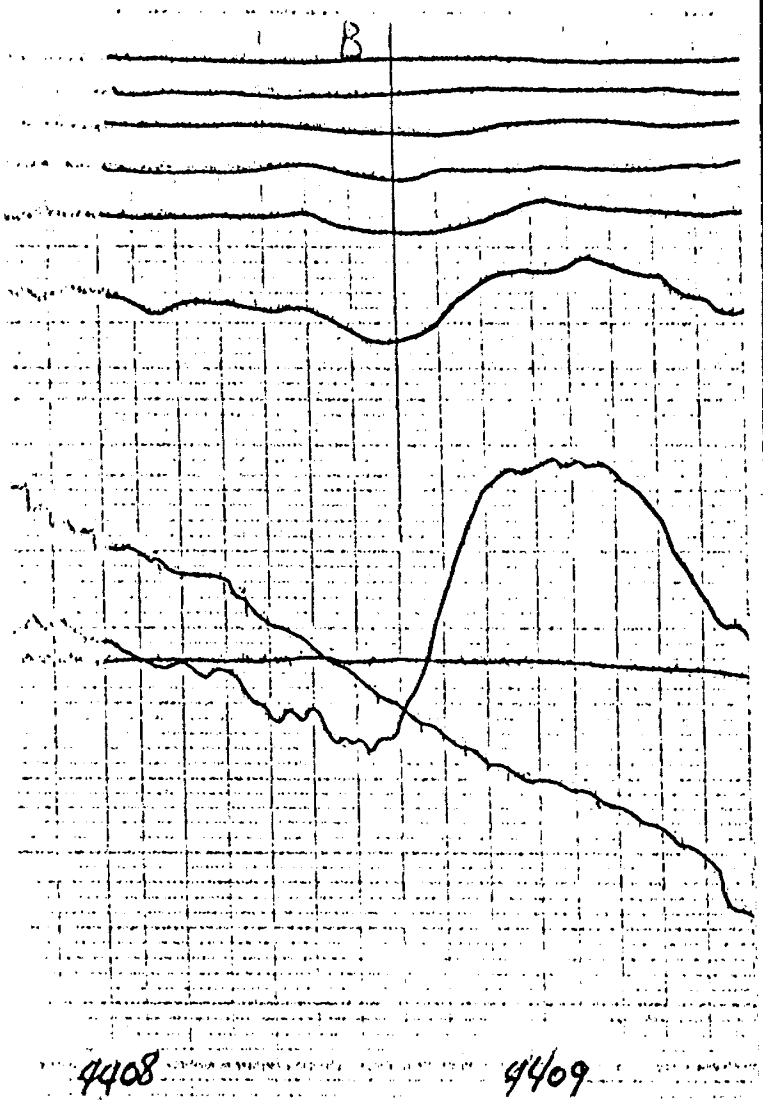
ANALOGUE RECORDS

DATA SHEET

NORTHEAST LITTLE TOWNSHIP

ANOMALY	FID	CHS	CH2.AMP	MHOS	MAG	VALUE
10730C	4593.71	4	970	1	4593.80	6
10740C	4546.91	6	2885	1		
10751B	4576.96	6	1970	13	4577.65	1710
10751BX	4576.00	4	500	1		
10780B	4514.71	4	575	3	4514.70	7
10790B	4543.81	4	515	1		
10790C	4544.36	5	1170	3		
10790D	4544.51	3	730	1		
10800A	4497.66	5	1260	1	4497.65	9
10810B	4527.39	6	2225	21	4527.55	89
10820A	4480.91	6	1985	8	4480.75	67
10820B	4481.04	5	1570	4	4481.05	8
10831B	4510.91	6	1960	13	4511.25	8
10841A	4465.04	6	2020	5	4462.15	6
10850B	4493.14	6	1830	9	4493.15	51
10850C	4494.54	3	210	6		
10860C	4446.61	6	1320	4	4446.70	67
10860D	4446.89	3	920	1		
10870B	4476.46	4	680	1		
10870C	4476.84	6	815	5	4476.95	14
10870D	4477.99	6	735	15		
10881C	4429.66	5	635	4		
10881D	4430.51	5	835	6	4430.20	62
10881E	4430.76	4	1060	1		
10890B	4458.09	4	775	1	4458.30	8
10890C	4458.56	6	1570	9	4458.95	49
10890D	4459.44	6	1615	28		
10890E	4459.94	6	1860	2	4459.90	1540

ANOMALY	FID	CHS	CH2.AMP	MHOS	MAG	VALUE
10900B	4411.16	4	560	3	4411.00	1110
10900C	4411.61	6	970	10		
10900D	4411.94	3	320	1	4412.05	11
10900E	4412.24	4	560	2		
10900F	4412.49	4	830	1	4412.50	9
10910B	4442.04	3	470	1		
10910C	4443.29	6	1920	10		
10910D	4443.79	4	1960	1		
10920B	4423.16	4	680	1		
10920C	4424.31	6	1565	7		
10920D	4424.80	6	2120	3	4424.80	1460
10930B	4408.64	4	620	3		
10930C	4409.72	4	900	8	4409.95	40



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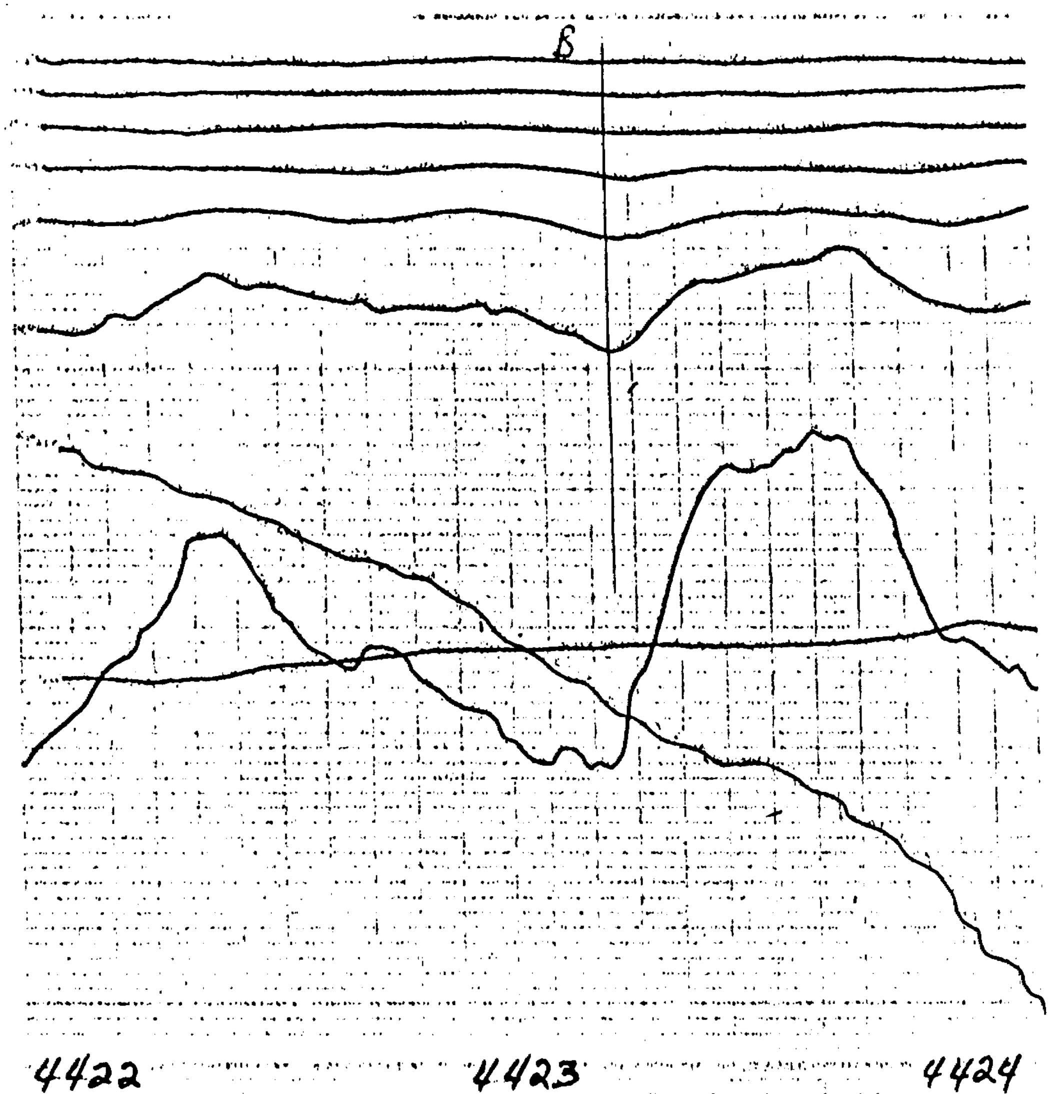

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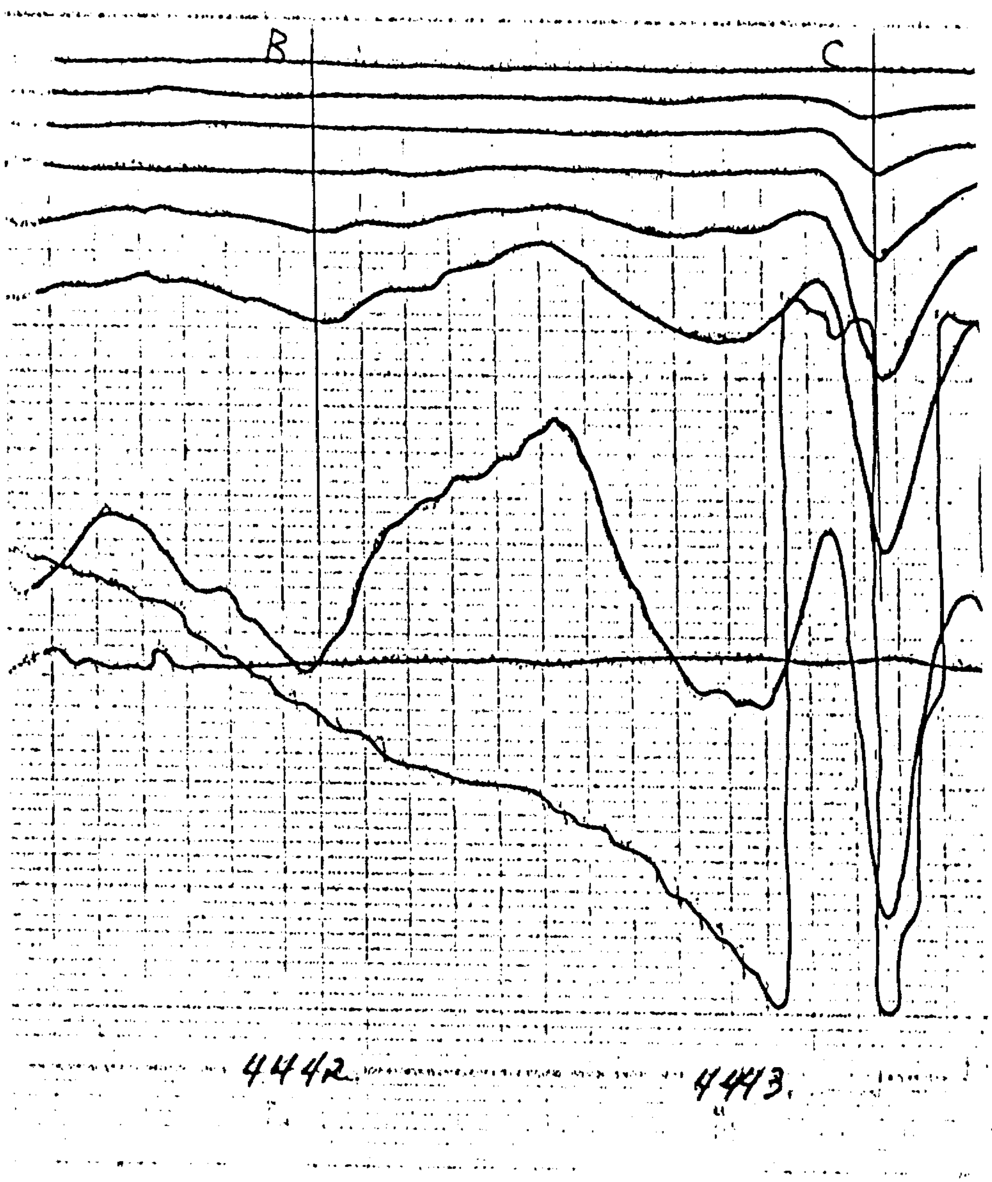

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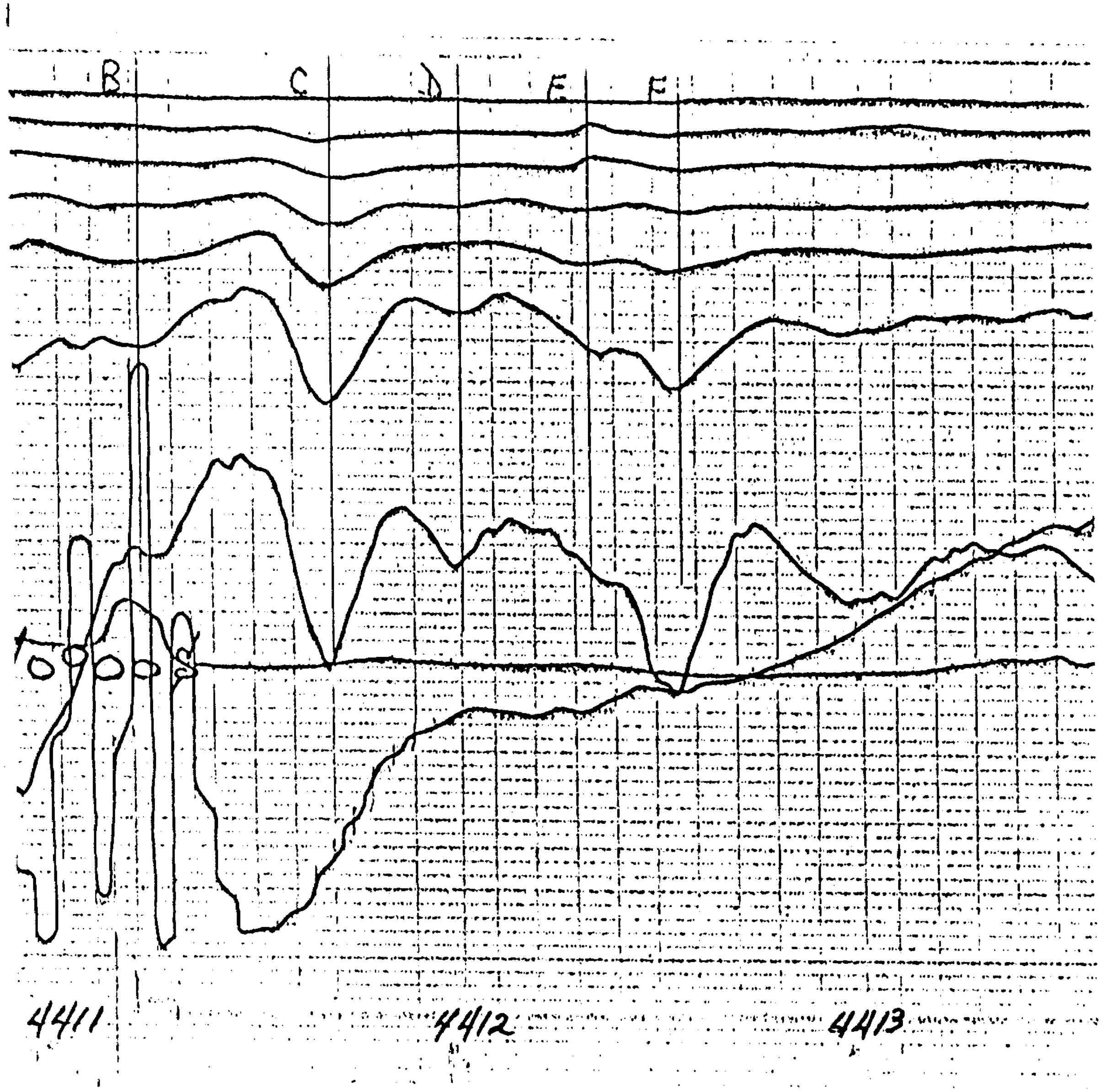

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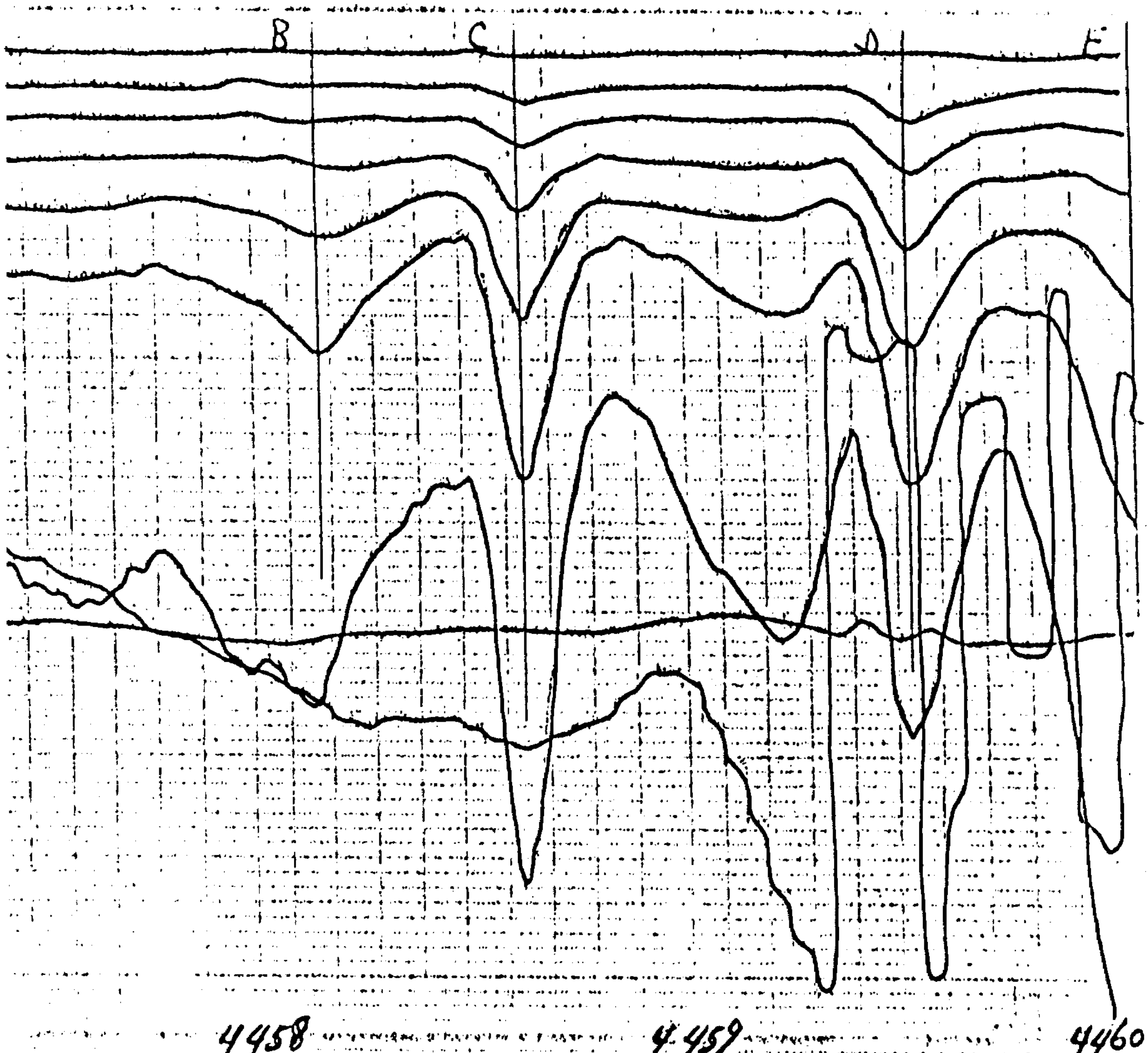

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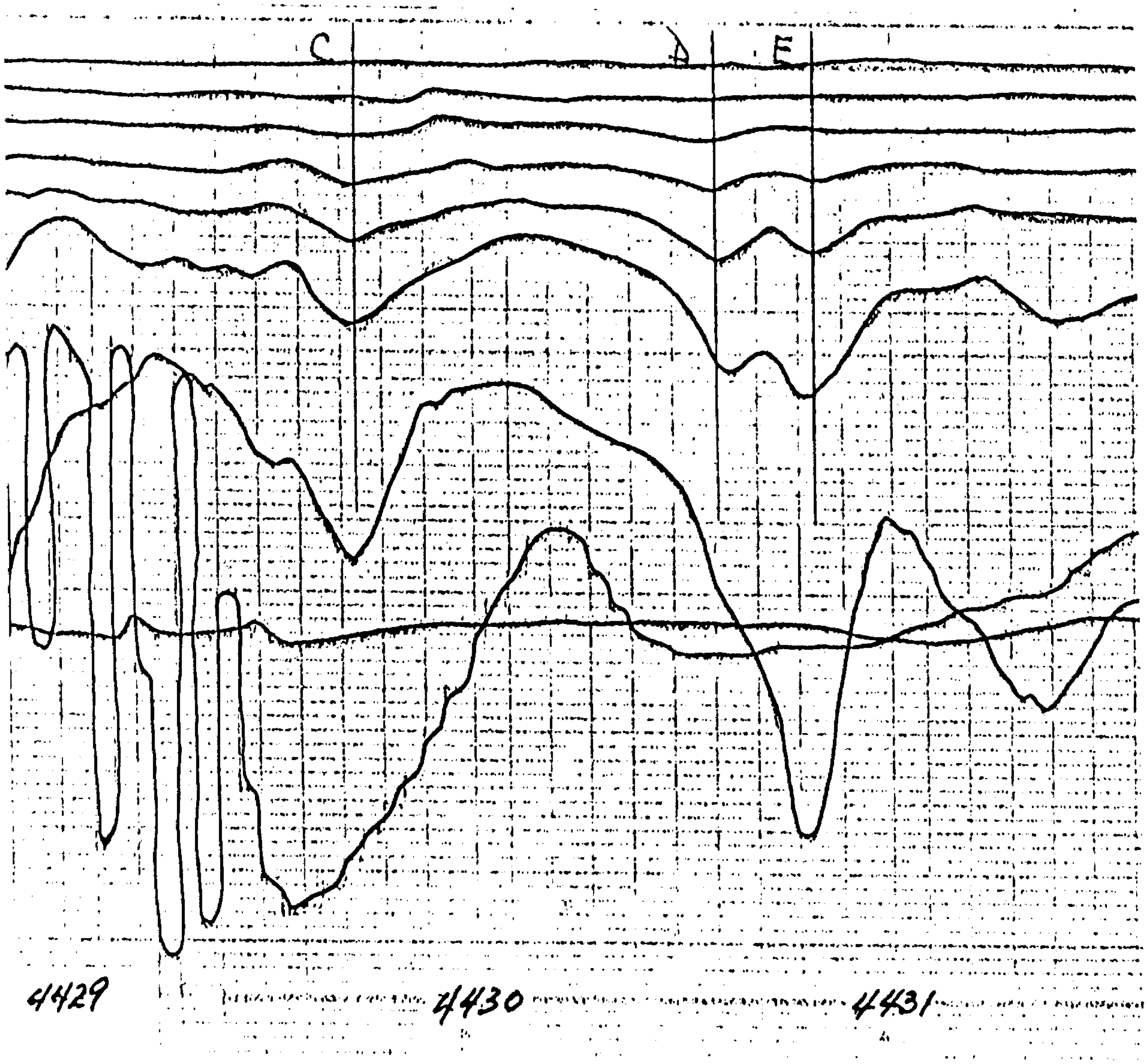

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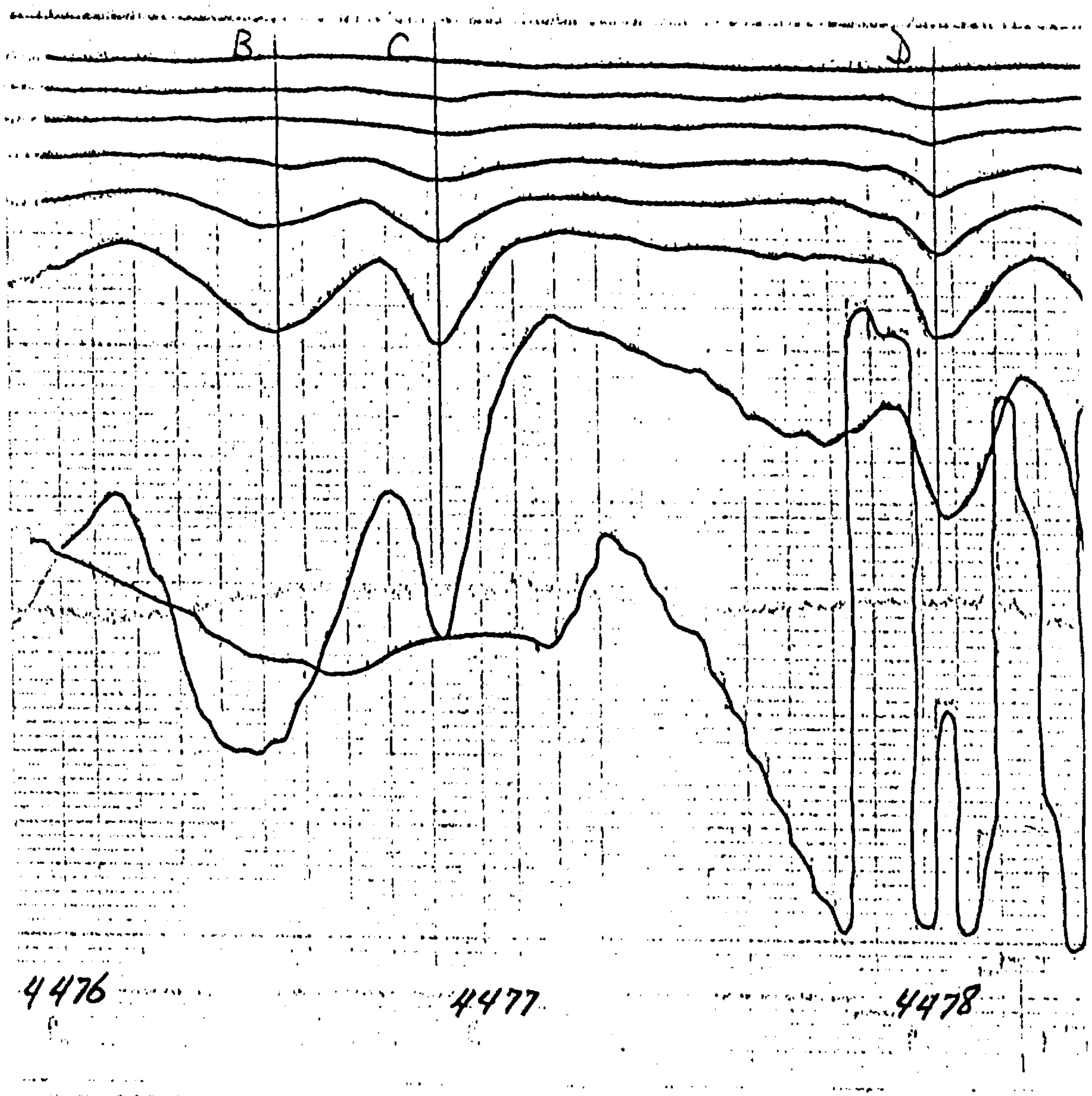

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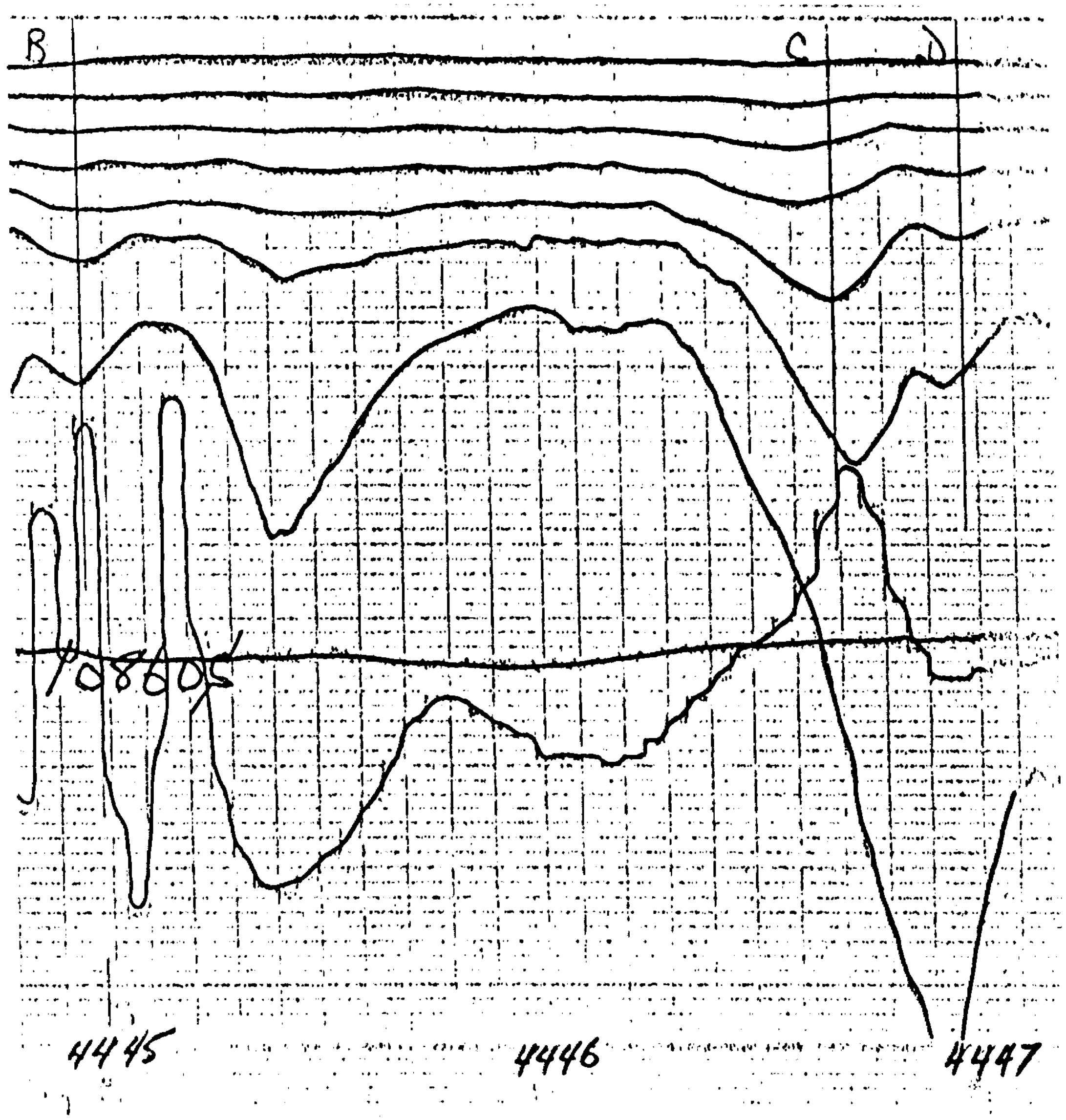

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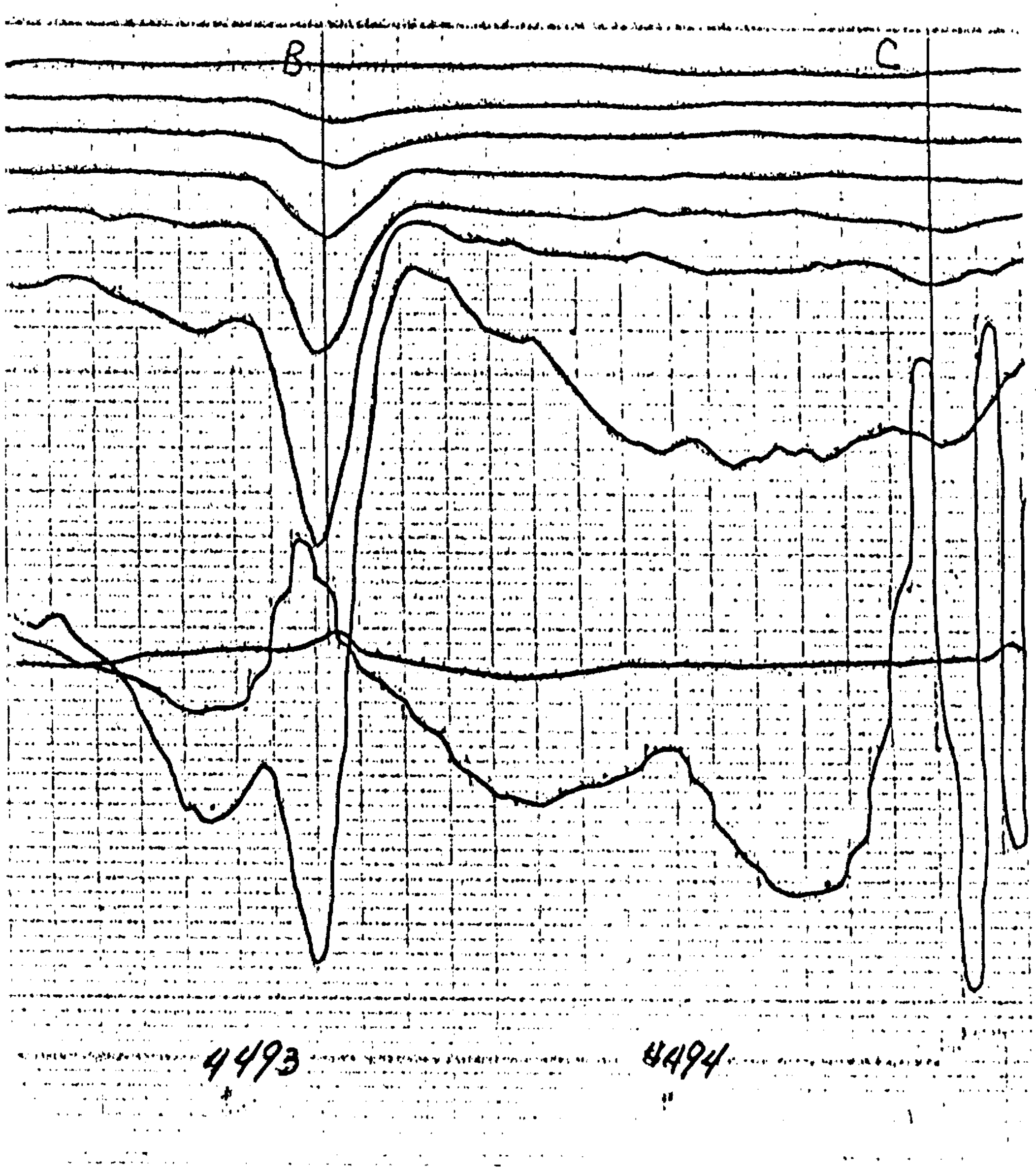

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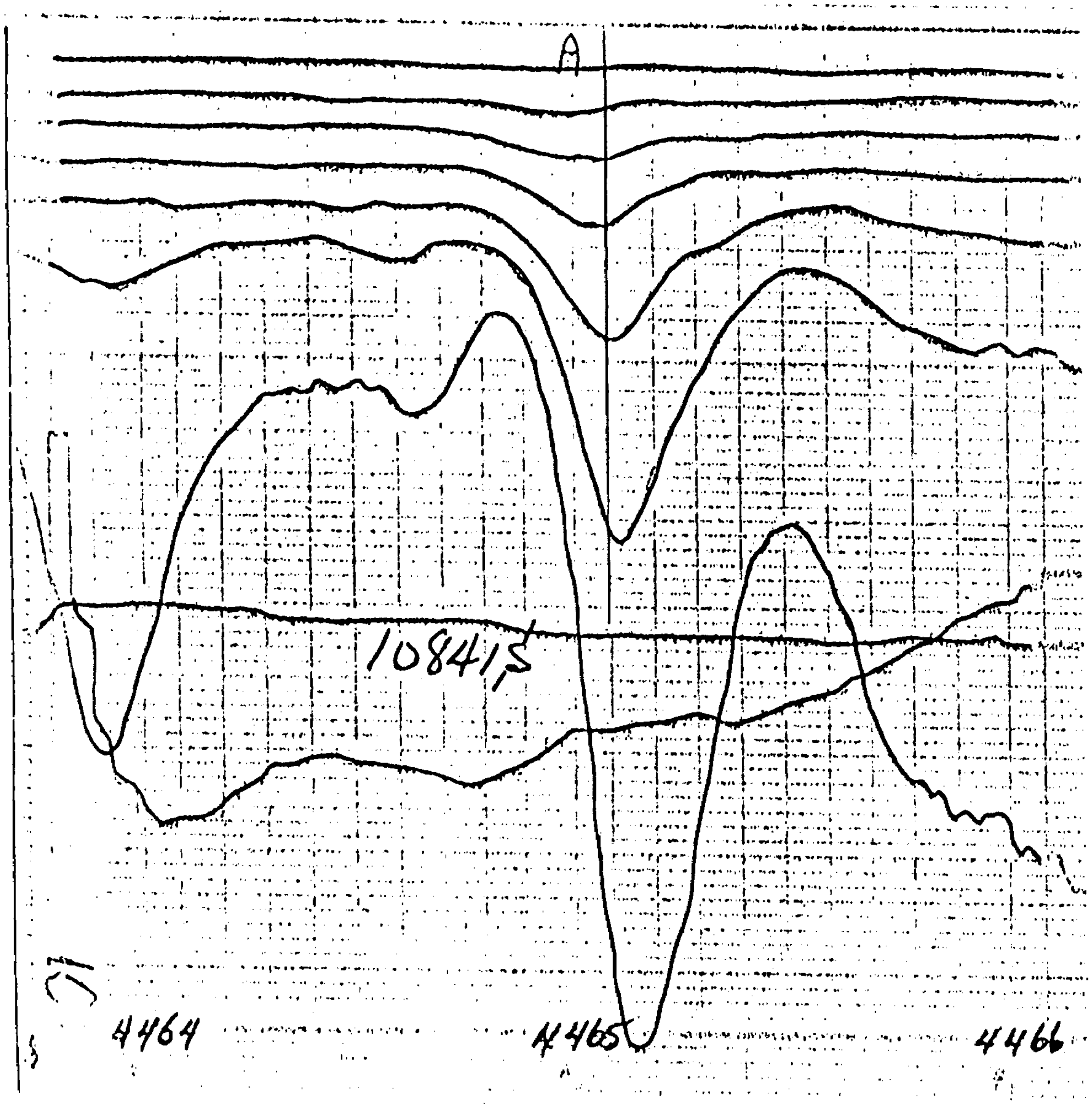

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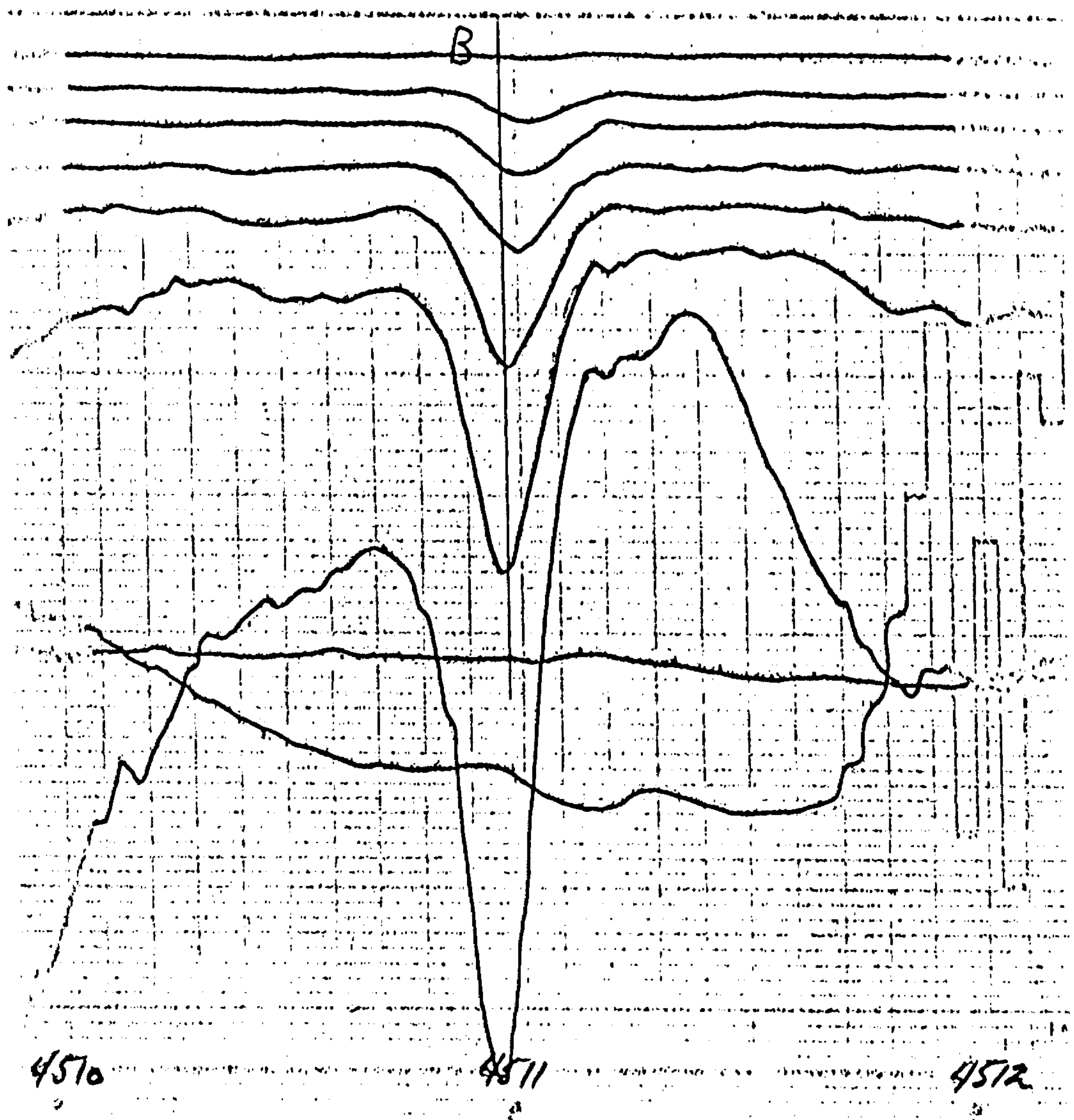

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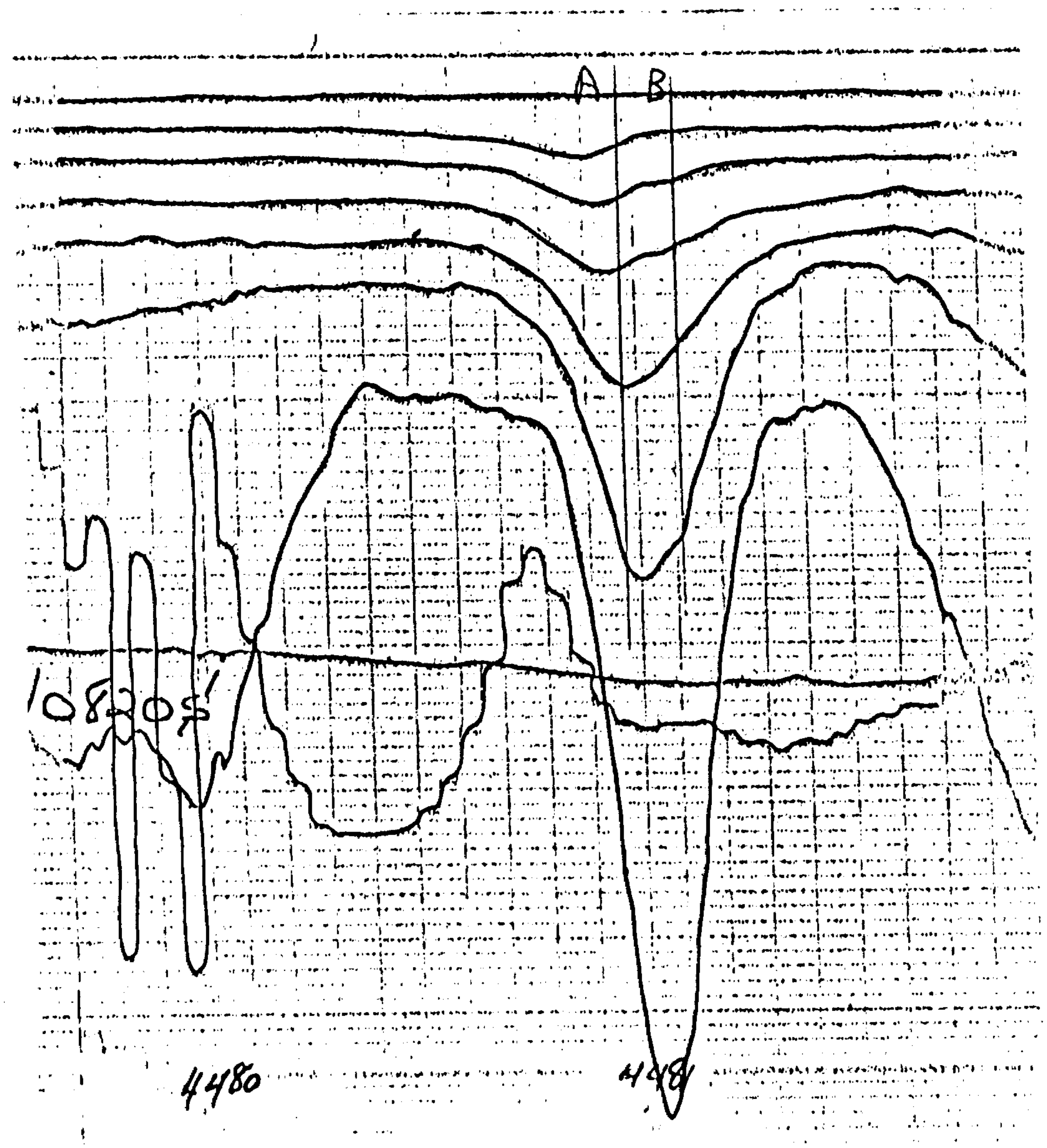

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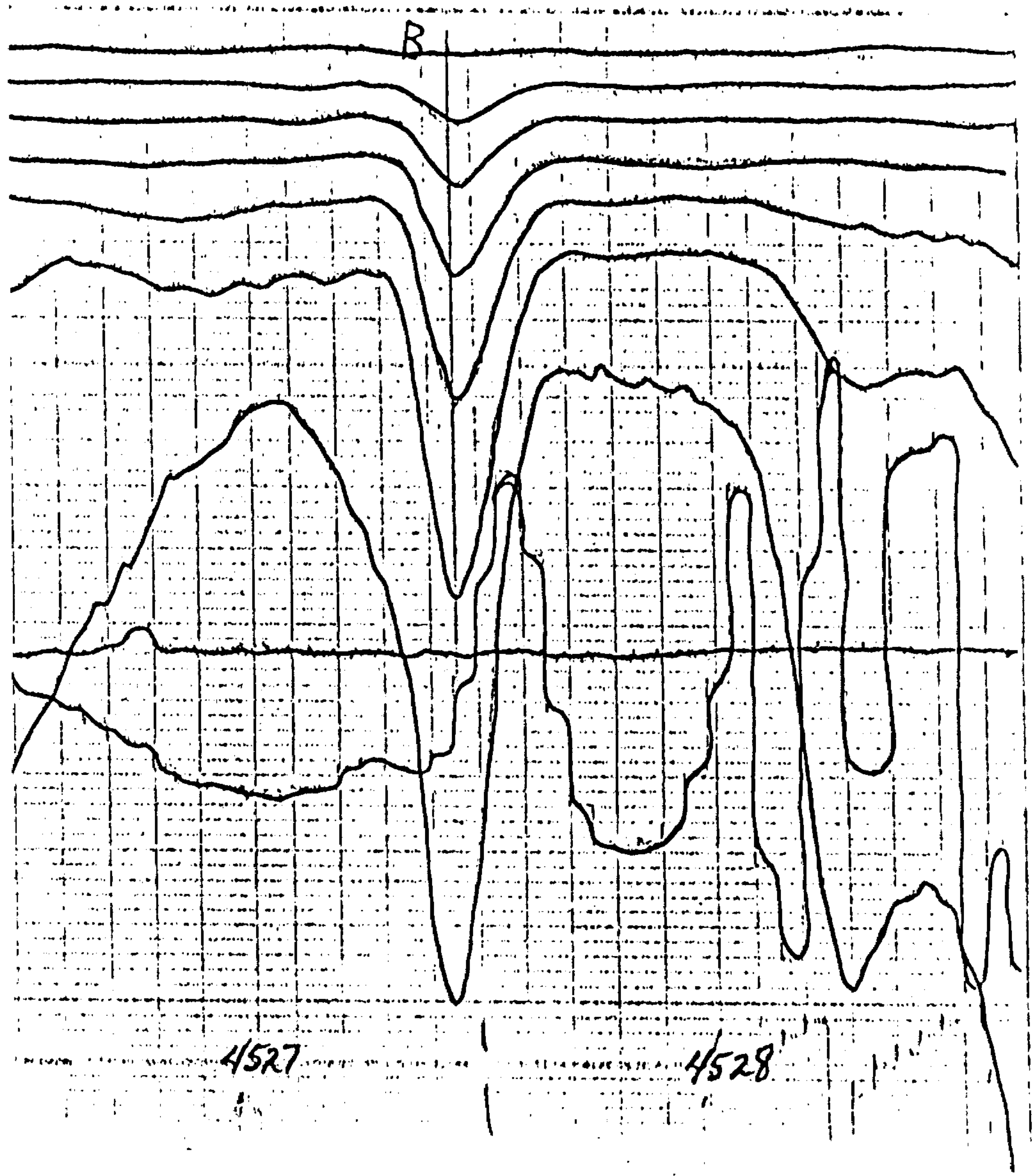

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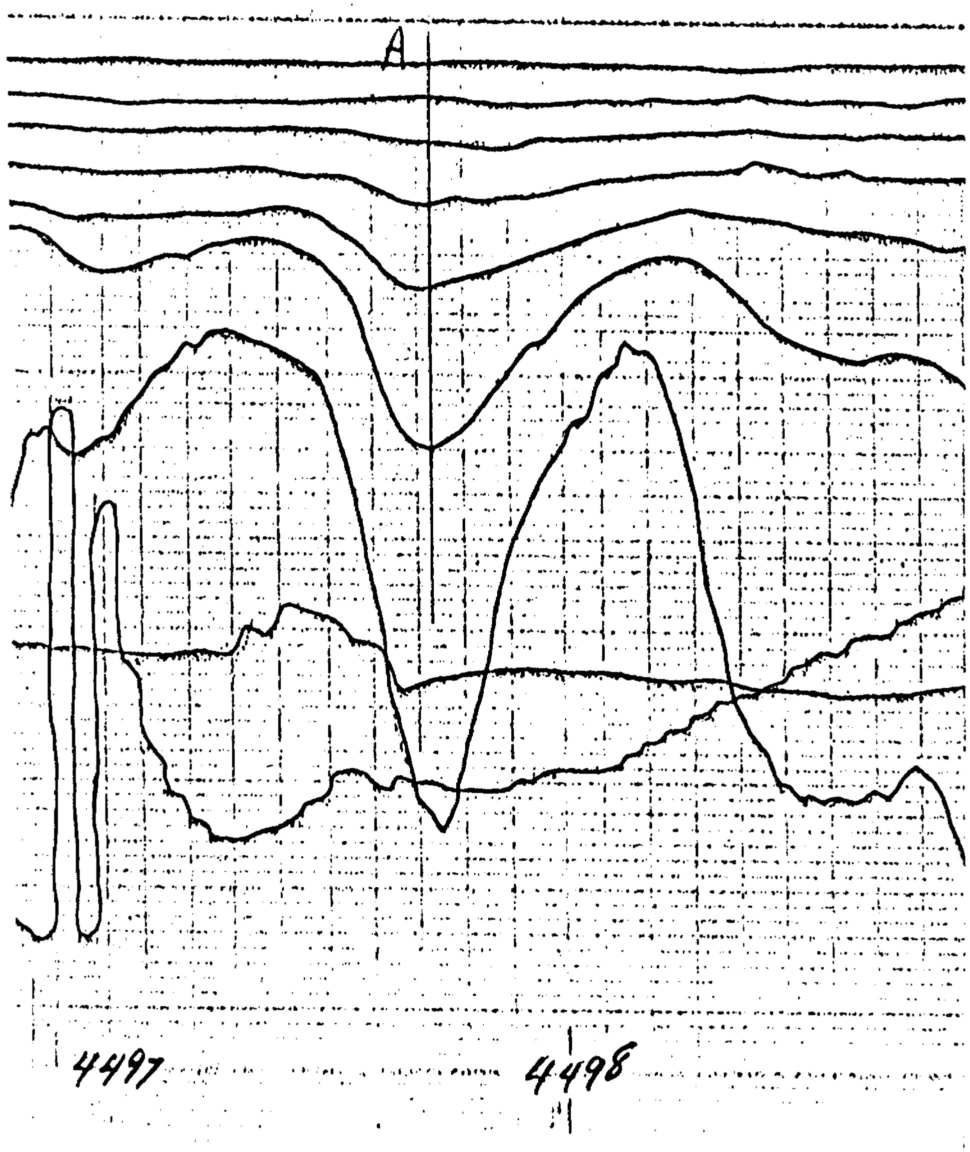

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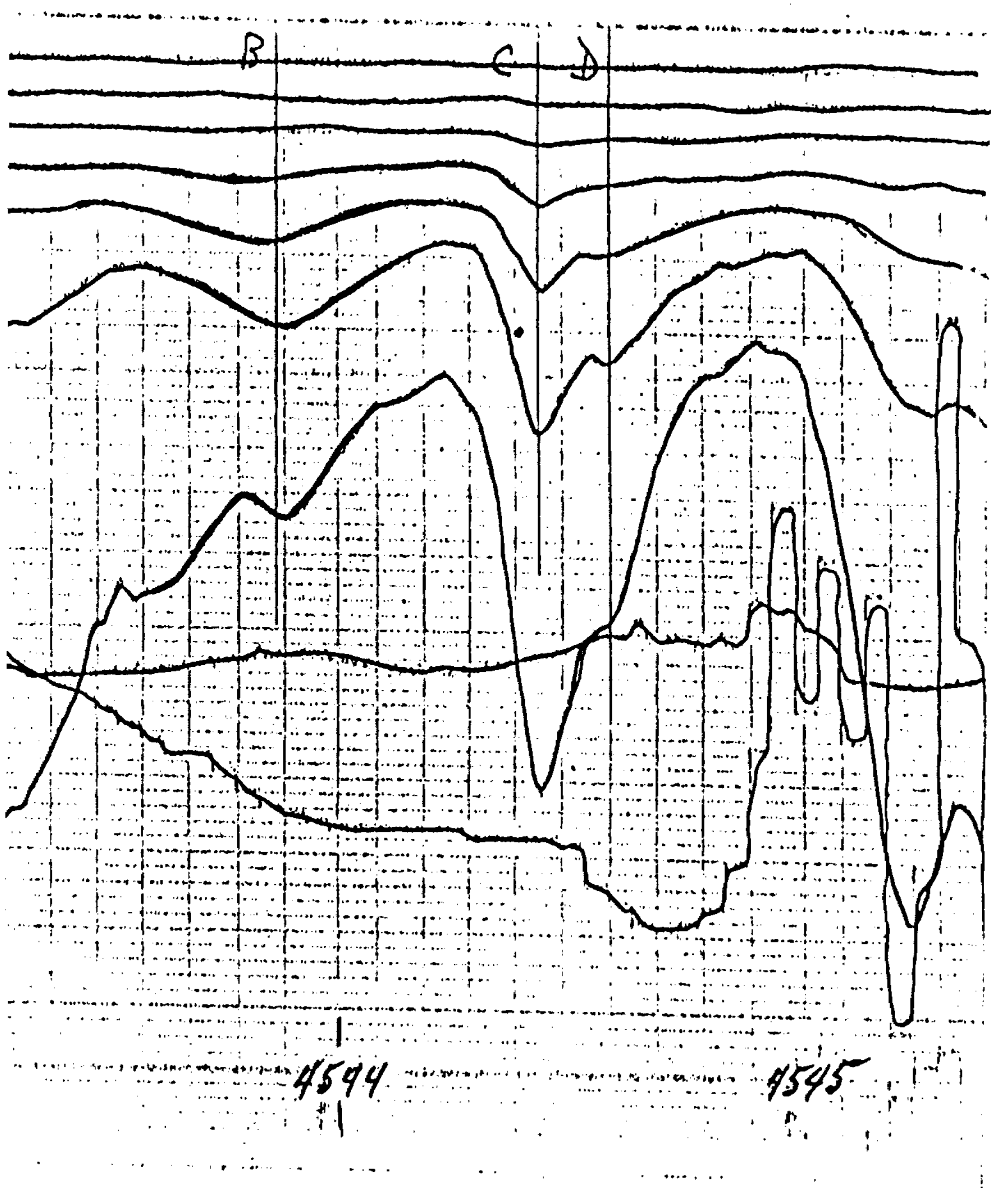

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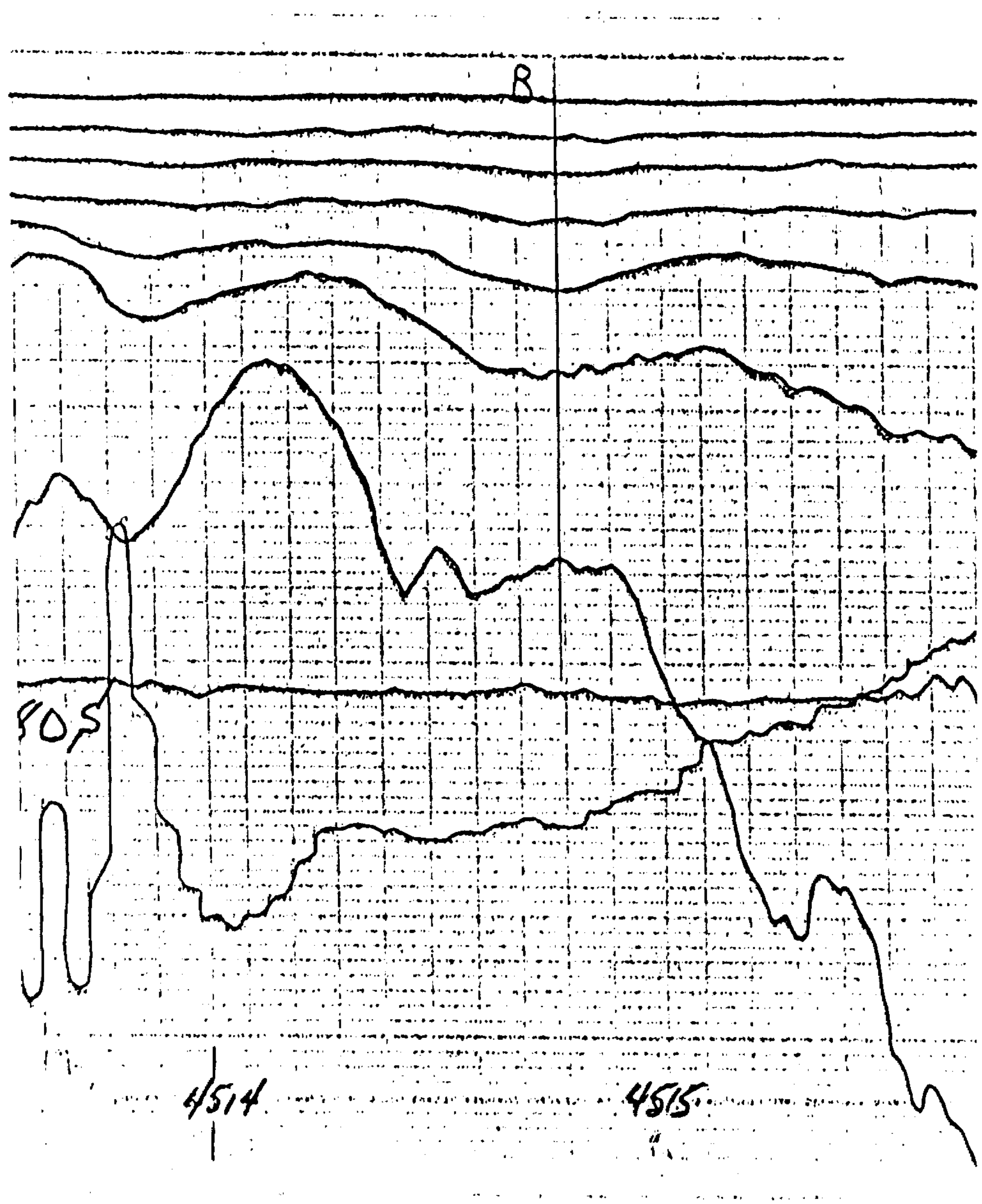

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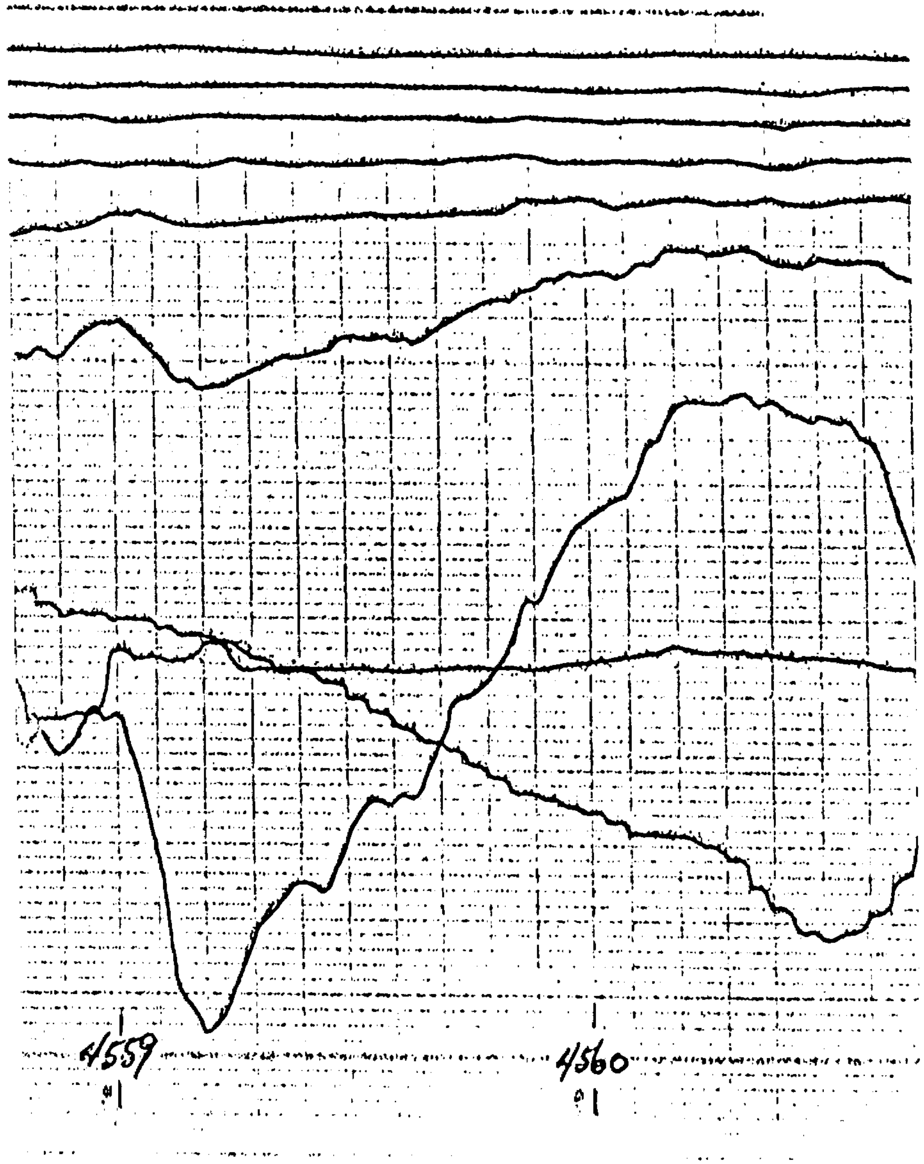

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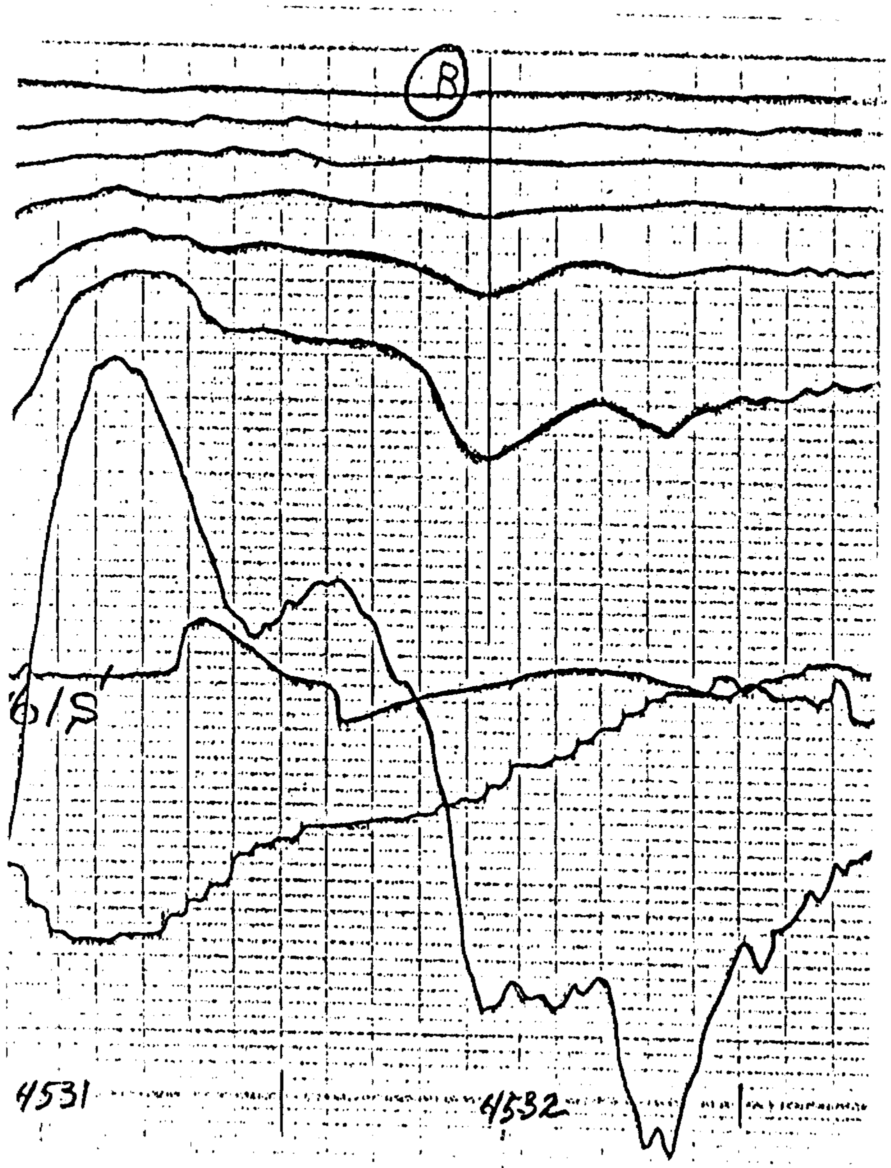

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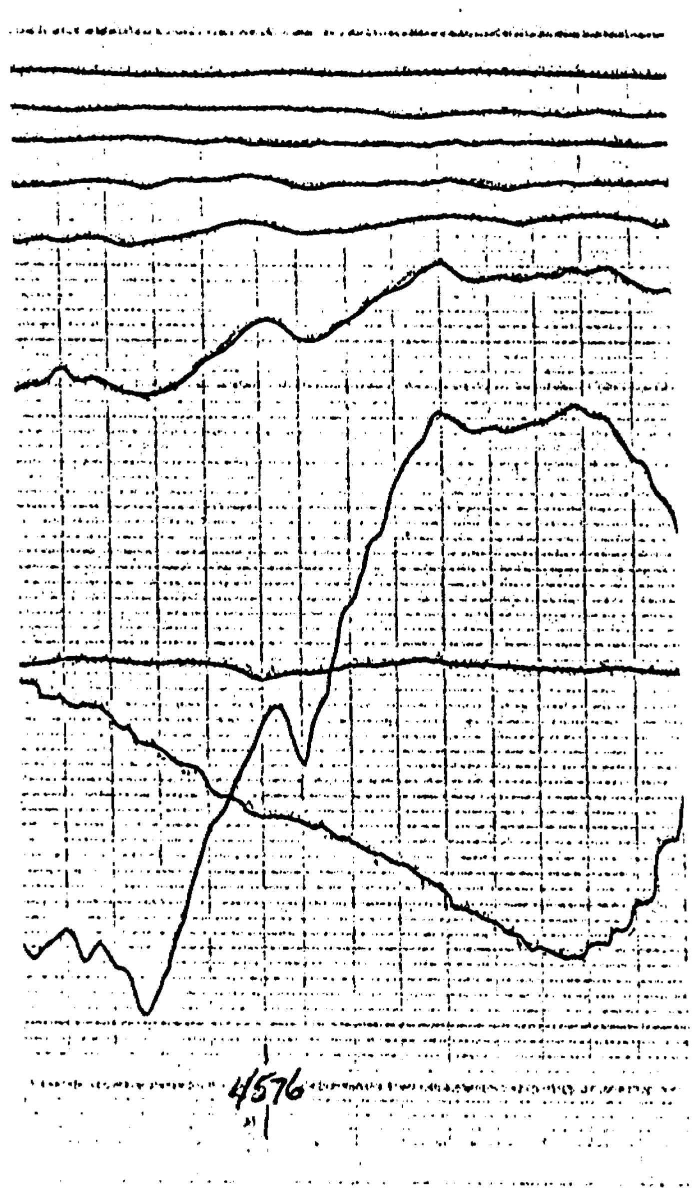

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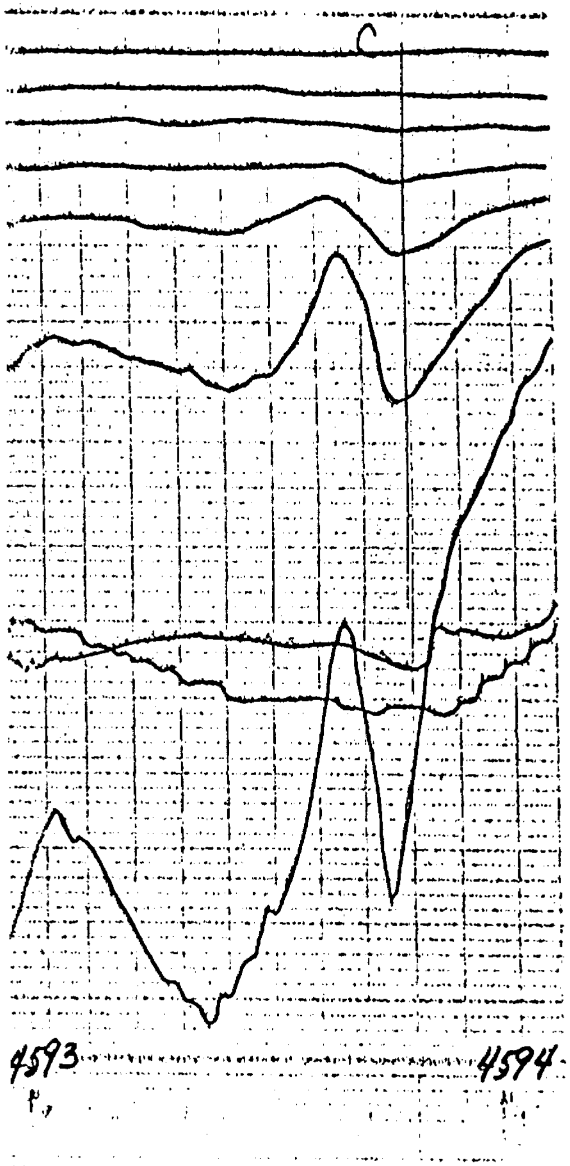

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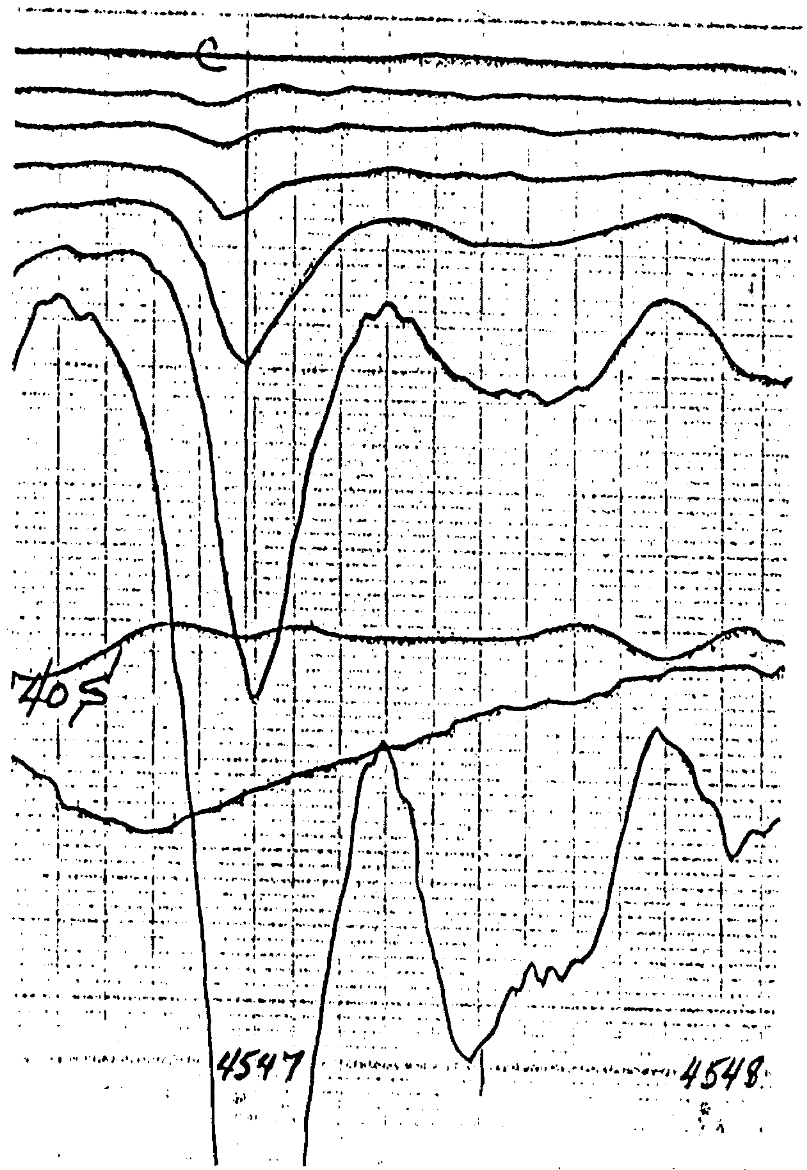

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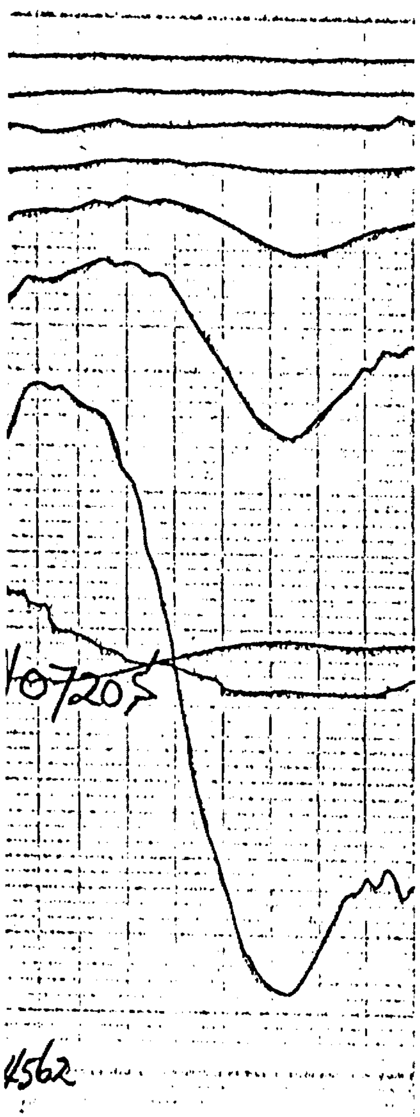

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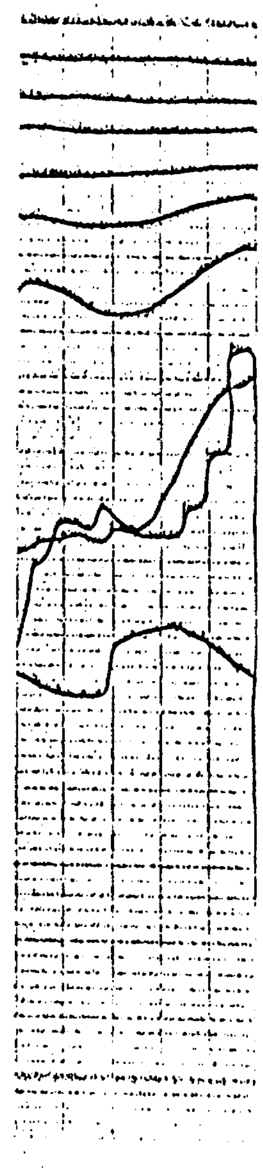

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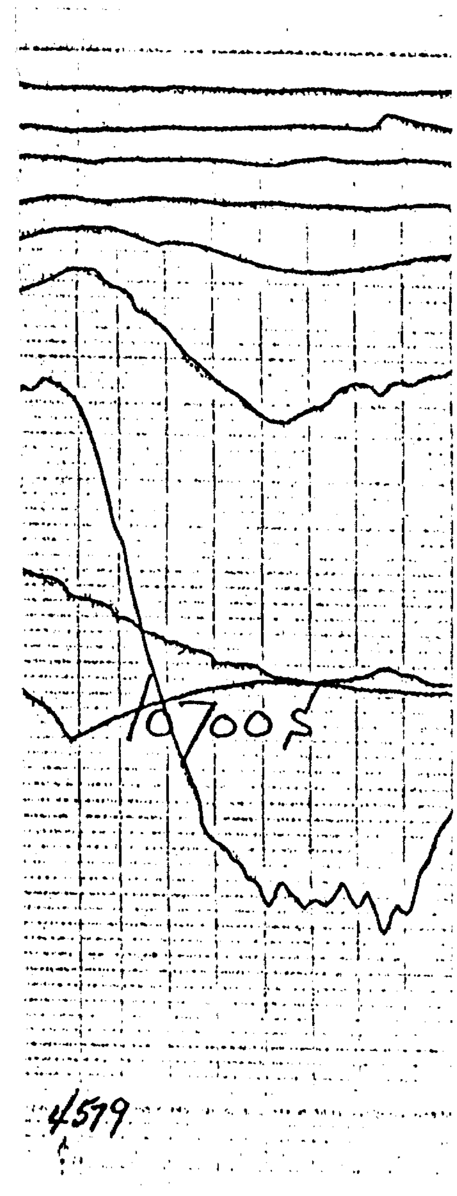

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APPENDIX "B"

Ontario Ministry of Natural Resources

Report of Work (Geophysical, Geological, Geochemical and Expenditures)

June #246 #

2.4896 The Min

42A15SW0146 2.4896 LITTLE

900

Type of Survey(s): AIRBORNE ELECTROMAGNETIC	Township or Area: LITTLE
Claim Holder(s): SAMIM CANADA LTD.	Prospector's Licence No.: T1193
Address: SUITE 2116, 130 Adelaide Street West, Toronto, Ontario	2.4896
Survey Company: QUESTOR SURVEYS LTD.	Date of Survey (from & to): 11 05 79 / 15 05 79 (Day Mo. Yr.) — Total Miles of line Cut: 18.11
Name and Address of Author (of Geo-Technical report): J. A. McCANCE	

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	20
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions

Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	521825	20		521848	20
	521826	20		521849	20
	521827	20		521850	20
	521828	20		521861	20
	521829	20		521862	20
	521830	20		521863	20
	521831	20		521864	20
	521832	20		521865	20
	521833	20		521866	20
	521834	20		521867	20
	521835	20		521868	20
	521836	20		521869	20
	521837	20		521870	20
	521838	20			
	521839	20			
	521840	20			
	521841	20			
	521842	20			
	521843	20			
	521844	20			
	521845	20			
	521846	20			
	521847	20			

RECEIVED JUL 7 1982 MINING LANDS SECTION

RECORDED JUN 25 1982 Receipt No. ....

Total number of mining claims covered by this report of work: 36

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
720	June 25/82	
	Date Approved as Recorded: 83:06:08	Branch Director

Date: June 18/82 — Recorded Holder or Agent (Signature): A. D. Robinson

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

John A. McCance, 130 Adelaide St. W., Suite 2116, Toronto, Ont. M5H 3P5

Date Certified: June 18, 1982 — Certified by (Signature): J. A. McCance P.Eng.

APPENDIX "B"

File ____________

Ontario

Ministry of Natural Resources

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Airborne Electromagnetic

Township or Area Little

Claim Holder(s) Samim Canada Ltd.

130 Adelaide St. West, Toronto M5H 3P5

Survey Company Questor Surveys Limited

Author of Report J. A. McCance

Address of Author c/o Samim Canada Ltd.

Covering Dates of Survey May 11th - 15th, 1979 (linecutting to office)

Total Miles of Line Cut N/A

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	
–Magnetometer	
–Radiometric	
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer ______ Electromagnetic 20 Radiometric ______
(enter days per claim)

DATE: June 21,1982 SIGNATURE: J A McCance
Author of Report or Agent

Res. Geol. ____________ Qualifications 2.1965

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	521825 etc.
See attached Appendix "B"	

If space insufficient, attach list

TOTAL CLAIMS 36 Claims

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations ______ Number of Readings ______

Station interval ______ Line spacing ______

Profile scale ______

Contour interval ______

MAGNETIC

Instrument ______

Accuracy – Scale constant ______

Diurnal correction method ______

Base Station check-in interval (hours) ______

Base Station location and value ______

ELECTROMAGNETIC

Instrument ______

Coil configuration ______

Coil separation ______

Accuracy ______

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency ______ (specify V.L.F. station)

Parameters measured ______

GRAVITY

Instrument ______

Scale constant ______

Corrections made ______

Base station value and location ______

Elevation accuracy ______

INDUCED POLARIZATION / RESISTIVITY

Instrument ______

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time ______ Frequency ______

– Off time ______ Range ______

– Delay time ______

– Integration time ______

Power ______

Electrode array ______

Electrode spacing ______

Type of electrode ______

SELF POTENTIAL

Instrument ______________________ Range ______________

Survey Method ______________________

____

Corrections made ______________________

____

RADIOMETRIC

Instrument ______________________

Values measured ______________________

Energy windows (levels) ______________________

Height of instrument ______________________ Background Count ______________

Size of detector ______________________

Overburden ______________________

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey ______________________

Instrument ______________________

Accuracy ______________________

Parameters measured ______________________

____

Additional information (for understanding results) ______________________

____

____

AIRBORNE SURVEYS

Type of survey(s) Electromagnetic

Instrument(s) Barringer/Questor Mark VI Input System
(specify for each type of survey)

Accuracy Less than 50 ppm noise level on CH.3 (see representative record attached)
(specify for each type of survey)

Aircraft used Britten Norman Trislander C-GNKW

Sensor altitude EM bird at approximately 150 feet above the ground

Navigation and flight path recovery method FPR: comparison of prints from 35mm continuous strip camera footage taken during flight with uncontrolled photo mosaic (scale 1"=1320 feet). NAV Sperry Rand. Radar altimeter provides vertical control

Aircraft altitude 400 feet Line Spacing 660 feet

Miles flown over total area 1699 miles Over claims only 18.11* miles

*measurement excludes mileage flown over adjacent patented and other lands.

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken ____________________

____

____

Total Number of Samples ____________________

Type of Sample ____________________
(Nature of Material)

Average Sample Weight ____________________

Method of Collection ____________________

____

Soil Horizon Sampled ____________________

Horizon Development ____________________

Sample Depth ____________________

Terrain ____________________

____

Drainage Development ____________________

Estimated Range of Overburden Thickness ____________________

____

____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis ____________________

____

____

____

General ____________________

____

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____

____

____

____

____

____

____

ANALYTICAL METHODS

Values expressed in: per cent ☐ p. p. m. ☐ p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others ____________________

Field Analysis (____________________ tests)

Extraction Method ____________________

Analytical Method ____________________

Reagents Used ____________________

Field Laboratory Analysis

No. (____________________ tests)

Extraction Method ____________________

Analytical Method ____________________

Reagents Used ____________________

Commercial Laboratory (____________________ tests)

Name of Laboratory ____________________

Extraction Method ____________________

Analytical Method ____________________

Reagents Used ____________________

General ____________________

____

____

____

____

____

____

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____

LITTLE TOWNSHIP

DAM GROUP (Claim No.)	Date Recorded
521825	September 20, 1978
521826	" " "
521827	" " "
521828	" " "
521829	" " "
521830	" " "
521831	" " "
521832	" " "
521833	" " "
521834	" " "
521835	" " "
521836	" " "
521837	" " "
521838	" " "
521839	" " "
521840	" " "
521841	" " "
521842	" " "
521843	" " "
521844	" " "
521845	" " "
521846	" " "
521847	" " "
521848	" " "
521849	" " "
521850	" " "
521861	" " "
521862	" " "
521863	" " "
521864	" " "
521865	" " "
521866	" " "
521867	" " "
521868	" " "
521869	" " "
521870	September 20, 1978

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.4896

Mining Lands Comments

☑ To: Geophysics Mr. Barlow

Comments

☑ Approved ☐ Wish to see again with corrections | Date April 29/83 | Signature R Bark

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geochemistry

Comments

L.D.

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

1982 07 06 2.4896

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geophysical Airborne (Electromagnetic) survey submitted on mining claims P 521825 et al in the Township of Little.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

J. Skura/sc

c.c. Samim Canada Limited
Toronto, Ontario
Attn: John A. McCance

Samim Canada Ltd.

June 25th, 1982

Ontario Ministry of Natural Resources,
Mining Lands Branch,
Whitney Block, Queen's Park,
Toronto, Ontario
M7A 1X1

RECEIVED
JUN 30 1982
MINING LANDS SECTION

Attention: Mr. F. W. Matthews

Re: Submission of Airborne Electromagnetic Data for Assessment Work on 36 claims in the Porcupine Mining Division: P521825, etc.

Dear Mr. Matthews,

Enclosed please find two copies of each of the following documents, resulting from an airborne geophysical survey completed over 36 claims in the Porcupine Mining Division. This work was completed under contract for a joint venture group of companies for which Samim Canada is currently the operator-manager. Data over adjacent land holdings, patented properties and newly acquired claims is submitted without request for credit solely to provide a complete picture of the EM anomalies identified within this part of Little Township.

1. Report on airborne electromagnetic survey, Timmins area Ontario, with Technical Data Statement.

2. Airborne Mark VI Input Survey Anomaly Identification and Location Map, scale 1" = 1320 feet.

3. Analogue Trace Segments for lines 10700S-10930N.

We are hereby respectfully requesting that this submitted work be recorded as 20 days assessment work on each of these 36 claims.

Yours truly,

John McCance

John A. McCance
Chief Geophysicist

JAM/lt

c.c. D. S. Kerby

Encl. as listed above

130 Adelaide St. W.
Suite 2116, P.O. Box 7
Toronto, Canada M5H 3P5

Telephone - (416) 863-0168
Telex 06-217829