42A01SE0210 2.921 EBY

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JUL 4 - 1972

PROJECTS
SECTION

Report on
Geophysical Work
Performed on
EBY 1-71

Eby Township
Larder Lake Mining Division
Kirkland Lake Area

June 26, 1972
Timmins, Ontario

W. F. Graham
Noranda Exploration Co., Ltd.

This report on the electromagnetic and magnetic surveys is submitted under the Special Provision dated October 16, 1967, for credit of 60 assessment work days per claim. The person in charge of the linecutting and geophysical work was Mr. E. A. Gallo.

Location - The property, which consists of 4 contiguous unpatented mining claims numbered L.313289-92 inclusive, is located in the north half of Lot 4, Concession II of Eby Township which lies approximately 9 miles southwest of Kirkland Lake, Ontario.

Access - The property is reached by turning east from Route #66 at a point 2.8 miles south of the turnoff from Route #11. This gravel road leads to the western boundary of the property.

Topography - The terrain is characterized by sand plains. Vegetation is sparse jack pine.

Linecutting - One Base Line was cut for 3200' from the #4 Post of claim #L.313290 at an azimuth of 160°. Traverse lines were cut at right angles to the Base Line at 400' intervals. The Base Line and traverse lines were chained and picketed at 100' intervals. In all, about 4.7 miles of line were cut, chained, and picketed.

Electromagnetic Survey - The electromagnetic survey (field and office) was performed from November 22-26, 1971, and on December 2, 1971.

The instrument used was a McPhar SS15 VLEM dual frequency unit capable of operation at 1000 c.p.s., 5000 c.p.s. or both frequencies simultaneously.

The equipment consists of a transmitter and a receiver. The transmitter is composed of a transmitter coil, transmitter console, and motor generator. The receiver is composed of a search coil, amplifier, clinometer, and headphones.

The transmitter coil is energized by an alternating current produced by the motor generator and resulting in the production of a primary magnetic field. This primary field links with any conductor in its vicinity, producing an induced current which gives rise to a secondary magnetic field. At a given receiving station, the direction and magnitude of the primary field is altered by the secondary field. The direction of the resultant field is determined by means of the search coil with its attached clinometer. Measurements are made in

ter[redacted] of dip angles and are recorded in degrees. The plotting of the dip angles at both frequencies give profiles which are useful in estimating the depth of the conductor axis, the dip of the conductor and its relative conductivity.

Its range of penetration is normally considered to be approximately one half the separation distance between the transmitter and the receiver, although other factors, such as the conductivity of the overburden, must also be taken into consideration.

The results of the V.L.E.M. survey are shown on the prints accompanying this report. No conductors were located. It is possible that the airborne conductor searched for is oriented nearly perpendicular to the Base Line and was therefore, not located. The regional strike of the rocks (N45^{o}E) substantiates this theory.

Magnetic Survey - The magnetic survey was performed from November 22-26, 1971 and on December 2, 1971.

The instrument used was a McPhar Fluxgate M-700. Base readings were taken along the Base Line and all readings were measured relative to the base readings. Readings were taken at the base control stations at periodic intervals to discern day to day and diurnal drift. Any changes noted in the magnetic intensity were then applied as factors and progressive adjustments were made to each reading taken during that specific period of time.

The results of the magnetic survey are shown on the prints accompanying this report. Background magnetics vary between 400 and 600 gammas. The highest magnetic intensity recorded is 2150 gammas located at 12+00E and 12+50E on Line 8S and at 14+00E and 15+00E on Line 12S.

The northern half of the property is magnetically high compared to the southern ahlf. There is a zone of high magnetics trending at an azimuth of 160^{o} from about 12+00E on Line 8S to about 16+00E on Line 28S. This zone is open for extension at both ends and may be the magnetic expression of a basic intrusive, perfhaps a diabase dike. Several diabase dikes that trend approximately north-south occur in the area.

Conclusions and Recommendations - No conductors were located by the electromagnetic survey. It is possible that a conductive zone exists that is oriented parallel to the traverse lines. The regional geology indicates a strike of N45°E. The magnetics indicate that the rocks strike N20°W. The property should be mapped geologically with special emphasis on establishing the strike of the rocks. If the strike of the rocks is within about 40° of being parallel to the direction of the traverse lines, a reconnaissance survey should be performed to determine if any conductor exists which would warrant detailing on a new grid.

W. F. Graham

W. F. Graham
NORANDA EXPLORATION CO., LTD.

C E R T I F I C A T E

I, William Frederick Graham, of the town of Timmins, Province of Ontario, hereby certify:

(1) That I reside at 195-A Commercial Avenue, Timmins, Ontario.

(2) That I am a geologist and that I have been practising in this capacity for 3 years.

(3) That I studied geology and graduated with the degree of Bachelor of Arts (Geology) from the University of Maine, Orono, Maine, United States of America.

(4) That I am a member of the Geological Association of Canada, the Canadian Institute of Mining and Metallurgy, and the Association of Geologists of Quebec.

(5) That I have intimate knowledge of Linecutting and Geophysical Surveys on this property.

Dated at Timmins, Ontario

William F. Graham

William F. Graham.

42A01SE0210 2.921 EBY

Report on
Geophysical Work
Performed on

EBY 2-71 Property

Eby Township
Larder Lake Mining Division
Kirkland Lake Area, Ontario

June 29, 1972
Timmins, Ontario

E. A. Gallo
Noranda Exploration Co., Ltd.

This report on the electromagnetic and magnetic surveys is submitted under the Special Provision dated October 16, 1967, for credit of 60 assessment work days per claim. The person in charge of the linecutting and geophysical work was Mr. E. A. Gallo.

Recommendations - The property should be geologically mapped as a matter of routine. Any further work would be contingent to the results of the geological mapping.

Introduction - A group of 11 contiguous mining claims were staked in the southeast part of Eby Township on an airborne EM anomaly, Loon 18-60, in an area of volcanic rocks on strike with known barren sulphide iron formations lying between two granitic batholithic intrusives.

Location - The 11 mining claims, numbered L-313271-81, inclusive, cover the SW¼ of the N½ of Lot 2, the NW¼ of the S½ of Lot 2, the S½ of Lot 3, the S½ of the N½ of Lot 3, the E½ of the S½ of Lot 4, and the SE¼ of the N½ of Lot 4, all in Concession I of Eby Township, Larder Lake Mining Division. The property is about 10 miles southwest of the town of Kirkland Lake, Ontario.

Access - The property is easily reached by lot and concession roads off of Highway #66, west of Kirkland Lake.

Topography - The ground is flat, with a maximum topographic relief of about 10 feet.

Linecutting - An E-W Base Line was cut across the property from a point 100' N of the #1 post of claim L-313277. Traverse lines were cut at right angles off of the Base Line at 400' intervals. The Base Line and traverse lines were all chained and picketed at 100' intervals. In all, about 11.6 miles of lines were cut, chained, and picketed. Mr. S. Nauss of 419 Twelfth Street, Val d'Or, Quebec, cut the lines under contract between January 13-21, 1972.

Electromagnetic Survey - The Electromagnetic Survey (Field and Office) was performed on February 10-25, 1972, by Noranda Employees L.Dupuis, R. Neimenen, M. Charette, B. Picotte, and B. Marcuri. The instrument used was a McPhar S815 VLEM unit, capable of operation at 1000 cycles per second, 5000 cycles per second, or both frequencies simultaneously.

The equipment consists of a transmitter and a receiver. The

transmitter is composed of a transmitter coil, transmitter console, and motor generator. The receiver is composed of a search coil, amplifier, clinometer, and headphone set.

The transmitter coil is energized by an alternating current produced by the motor generator, which results in the production of a primary magnetic field. This primary magnetic field links with any conductor in its vicinity, producing an induced current which gives rise to a secondary magnetic field. At a given receiving station, the direction and magnitude of the primary field is altered by the secondary field. The direction of the resultant field is determined by means of the search coil with its attached clinometer. Measurements are made of the dip angles of the resultant field, and are recorded in degrees. The plotting of the dip angles at both frequencies gives profiles which are useful in estimating the depth of the conductor axis, the dip of the conductor, and its relative conductivity.

The range of penetration is normally considered to be approximately one-half the separation distance between the transmitter and the receiver, although other factors, such as the conductivity of the overburden, must also be taken into consideration.

The results of the VLEM survey are shown on the prints accompanying this report. Two zones of weak to moderate conductivity were located. One extends from 4+50N on Line 36W to 0+50N on Line 12W, and possibly on to 2+50S on Line 0. The second zone extends from 13+50S on Line 12W to 15+50S on Line 36W, and possibly on to 17+50S on Line 44W. Several weak single-intercept cross-overs were obtained as well, but are of questionable bedrock origin.

Magnetic Survey - The Magnetic Survey (Field and Office) was performed between February 10-25, 1972, by Noranda employees L. Dupuis, R. Neimenen, M. Charette, B. Picotte, and B. Mercuri. The instrument used was a McPhar M-700 fluxgate magnetometer. This magnetometer reads directly in gammas.

Base readings were taken along the Base Line, and all other readings were calculated relative to the base readings. Readings were

repeatedly taken at the base control stations on the Base Line at periodic intervals to discern day-to-day and diurnal drift. Any changes noted in the magnetic intensities were then applied as factors, and progressive adjustments were made to each reading taken during that specific time interval.

The results of the Magnetic Survey are shown on the prints accompanying this report. Most of the property displays very little magnetic relief, with a background of 200-400 gammas. In the middle of the property is a N-S linear zone of high magnetics along Line 24W. The highest reading recorded on the property, 1400 gammas, is in this zone at 2240OS on Line 24W. In the northeast part of the property is the edge of a zone of magnetic lows. The lowest reading recorded on the property, -110 gammas, is in this zone at 1+00N on Line 4W.

Conclusions - As well as the airborne EM anomaly, a second conductive zone was located on the ground. Neither of the zones have any direct magnetic correlation.

A N-S linear zone of high magnetics was located, and probably is the magnetic expression of a diabase dyke. A second magnetic feature, a zone of low magnetics, was located in the NE corner of the property. This zone of lows probably reflects the presence of granites, known to be in this general area.

The property will be geologically mapped, with emphasis placed on explaining the conductivity of the EM zones.

E. A. Gallo
NORANDA EXPLORATION CO., LTD.

42A01SE0210 2.921 EBY

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JUL 4 - 1972

PROJECTS
SECTION

Report on
Geophysical Work
Performed on

EBY 3-71

Eby Township
Larder Lake Mining Division
Kirkland Lake Area, Ontario

June 26, 1972
Timmins, Ontario

W. F. Graham
Noranda Exploration Co., Ltd.

This report on the electromagnetic and magnetic surveys is submitted under the Special Provision dated October 16, 1967, for credit of 60 assessment work days per claim. The person in charge of the linecutting and geophysical work was Mr. E. A. Gallo.

Location - The Eby 3-71 property, which consists of 5 contiguous unpatented mining claims numbered L.313282-86 inclusive, is located in the W½ of the N½ of Lot 10, the NE¼ of the S½ of Lot 10, and the E½ of the N½ of Lot 11, all in Concession II. The claim group lies approximately 10.5 miles southwest of Kirkland Lake, Ontario.

Access - The extreme southeast corner of the property is reached by Route #66 which is the paved road from Highway #11 at Kenogami to Matachewan, Ontario.

Topography - The terrain is characterized by low hills of glacial drift material and bedrock. Vegetation is mixed bush.

Linecutting - One Base Line was cut for 2800' at an azimuth of 115° and for 400' at an azimuth of 285° from a point 75' north and 250' west of Post #3 of claim # L.313285.

Electromagnetic Survey - The survey was performed from November 10-16 and December 3, 1971. The instrument used was a McPhar SS15 VLEM dual frequency unit capable of operation at 1000 cycles per second, 5000 cycles per second, or both frequencies simultaneously.

The equipment consists of a transmitter and a receiver. The transmitter is composed of a transmitter coil, transmitter console, and motor generator. The receiver is composed of a search coil, amplifier, clinometer, and headphones.

The transmitter coil is energized by an alternating current produced by the motor generator and resulting in the production of a primary magnetic field. This primary field links with any conductor in its vicinity, producing an induced current which gives rise to a secondary magnetic field. At a given receiving station, the direction and magnitude of the primary field is altered by the secondary field. The direction of the resultant field is determined by means of the search coil with its attached clinometer. Measurements are made in terms of dip angles and are recorded in degrees. The plotting of the dip angles at both frequencies gives profiles which are useful

in estimating the depth of the conductor axis, the dip of the conductor and its relative conductivity.

The range of penetration is normally considered to be approximately one-half the separation distance between the transmitter and receiver, although other factors, such as the conductivity of the overburden, must also be taken into consideration.

The results of the VLEM survey are shown on the prints accompanying this report. Two conductive zones were located. One zone, weakly to moderately conductive, extends from 18+50N on Line 4W to 26+25N on Line 16E. This conductive zone is open for extension both to the east and west. The conductivity appears to be increasing to the east. The second conductive zone extends from 3+50S on Line 0 to 6+50N on Line 24E. Conductivity is strong with good ratios (about .75) between the high and low frequencies. Both conductors strike east-west and appear to dip to the north.

Magnetic Survey - The survey was performed from November 11-16 and December 3, 1971. The instrument used was a McPhar Fluxgate M-700.

Base readings were taken along the Base Line and all readings were calculated relative to the base readings. Readings were taken at the base control stations at periodic intervals to discern day-to-day and diurnal drift. Any changes noted in the magnetic intensity were then applied as factors and progressive adjustments were made to each reading taken during that specific period of time.

The results of the magnetic survey are shown on the prints accompanying this report. Background magnetics vary between 150 and 400 gammas. The highest magnetic intensity recorded is 1040 gammas located at 14+50E and 27+00E on the Base Line. There is a weak magnetic trend at an azimuth of 115°. There is no correlation between the conductive zones located and any anomalous magnetic features. There is a small annular feature of high magnetics centered around a reading of 990 gammas at 9+00N on Line 12E.

Conclusions and Recommendations - Two conductive zones were located. One of the zones has strong conductivity and good ratios between the low and high frequency readings which is indicative of sulfides. There is no magnetic correlation with the conductive zones located. The property should be mapped geologically with special emphasis on the conductive zones located. The conductive zone in the southern part of the property should be tested by diamond drilling if the conductor cannot be explained in outcrop.

W. F. Graham

W. F. Graham
NORANDA EXPLORATION CO., LTD.

42A01SE0210 2.921 EBY

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GEOPHYSICAL – GEOLOG TECHNICAL DAT.

RECEIVED
JUN 28 1972
PROJECTS SECTION

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: Geophysical - Electromagnetic

Township or Area: Eby Township

Claim holder(s): Noranda Exploration Co., Ltd. (no personal liability)
1809-44 King St., W., Toronto, Ont.

Author of Report: E. A. Gallo

Address: Box 1205, Timmins, Ontario

Covering Dates of Survey: Nov. 22-26, Dec. 2/71; May 24, 1972
(linecutting to office)

Total Miles of Line cut: 4.7

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	40
--Magnetometer	
--Radiometric	
--Other	
Geological	
Geochemical	

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: May 24, 1972 SIGNATURE: E. A. Gallo
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications _____

Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)
L-313289
L-313290
L-313291
L-313292

TOTAL CLAIMS 4

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 221 Number of Readings 386

Station interval 100'

Line spacing 400'

Profile scale or Contour intervals 1" = 20°
(specify for each type of survey)

MAGNETIC

Instrument

Accuracy - Scale constant

Diurnal correction method

Base station location

ELECTROMAGNETIC

Instrument McPhar SS15 VLEM

Coil configuration Vertical Loop

Coil separation 400', 800', 1200'

Accuracy 2° per scale division

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

Frequency 1000 and 5000 c.p.s.
(specify V.L.F. station)

Parameters measured Dip Angles

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION – RESISTIVITY

Instrument

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

File 2.921

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

RECEIVED
JUL 19 1972
PROJECTS SECTION

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 Geophysical - Magnetic
Township or Area Eby Township
Claim holder(s) Noranda Exploration Co., Ltd. (no personal liability)
1809-44 King St. W., Toronto, Ontario
Author of Report E. A. Gallo
Address Box 1205, Timmins, Ontario
Covering Dates of Survey Nov. 22-26, Dec. 2, 1971, May-24/72 (linecutting to office)
Total Miles of Line cut 4.7

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	20
--Radiometric	
--Other	
Geological	
Geochemical	

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

Magnetometer _____ Electromagnetic _____ Radiometric _____ (enter days per claim)

DATE: May 24, 1972 SIGNATURE: E. A. Gallo
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications See this file.
Previous Surveys LD

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L-	313289
L-	313290
L-	313291
L-	313292

TOTAL CLAIMS 4

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 221 Number of Readings 339

Station interval 100'

Line spacing 400'

Profile scale or Contour intervals 200 Gammas
(specify for each type of survey)

MAGNETIC

Instrument McPhar M700 Fluxgate Magnetometer

Accuracy - Scale constant 20 Gammas per Scale Division on 1000 Gamma Scale

Diurnal correction method Repeated Readings at Base Stations

Base station location Every 400' Along Base Line

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

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

File _____

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: Electromagnetic

Township or Area: Eby Township

Claim holder(s): Noranda Exploration Co., Ltd.
(No personal liability)
1809-44 King St. W., Toronto, Ontario

Author of Report: E W. F. Graham

Address: P. O. Box 1205, Timmins, Ontario

Covering Dates of Survey: Nov. 10-16, Dec. 3/71, May 23 1972
(linecutting to office)

Total Miles of Line cut: 5.5

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: 40
  - Magnetometer: _____
  - Radiometric: _____
  - Other: _____
- Geological: _____
- Geochemical: _____

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 26, 1972 SIGNATURE: E. F. Graham
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications _____

Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L.	313282
L.	313283
L.	313284
L.	313285
L.	313286

If space insufficient, attach list

TOTAL CLAIMS: 5

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 262 Number of Readings 524

Station interval 100'

Line spacing 400'

Profile scale or Contour intervals 1" = 20°

(specify for each type of survey)

MAGNETIC

Instrument

Accuracy - Scale constant

Diurnal correction method

Base station location

ELECTROMAGNETIC

Instrument McPhar V.L.E.M. SS15

Coil configuration Vertical Loop

Coil separation 400, 800, & 1200'

Accuracy 2° per scale division

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

Frequency 1,000 c.p.s. & 5,000 c.p.s.

(specify V.L.F. station)

Parameters measured Tilt Angles

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION - RESISTIVITY

Instrument

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

File _____

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: Magnetometer

Township or Area: Eby Township

Claim holder(s): Noranda Exploration Co., Ltd.
(No personal liability)
1809-44 King Street W. Toronto, Ont.

Author of Report: W. F. Graham

Address: P. O. Box 1205, Timmins, Ontario

Covering Dates of Survey: Nov. 10-16, Dec. 3,/71, May 23, 1972
(linecutting to office)

Total Miles of Line cut: 5.5

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	20
–Radiometric	
–Other	
Geological	
Geochemical	

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 26, 1972 SIGNATURE: W. F. Graham
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications on this File

Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L.	313282
L.	313283
L.	313284
L.	313285
L.	313286

TOTAL CLAIMS 5

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 343 Number of Readings 343

Station interval 100' and 50'

Line spacing 400'

Profile scale or Contour intervals 300, 400, 500, 600, 700, 800, & 900 gammas

(specify for each type of survey)

MAGNETIC

Instrument McPhar Fluxgate M-700

Accuracy - Scale constant 20° per scale division

Diurnal correction method closed loops of less than 1 hour duration and - progressive factoring.

Base station location Every 400' along the Base Line

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

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

File _____

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: Magnetometer

Township or Area: Eby Township

Claim holder(s): Noranda Exploration Co., Ltd.
(No personal liability)
1809-44 King St. W., Toronto, Ont.

Author of Report: E. A. Gallo

Address: Box 1205, Timmsin, Ontario

Covering Dates of Survey: Feb. 10-25, 1972
(linecutting to office)

Total Miles of Line cut: 11.6

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 20
--Radiometric _____
--Other _____
Geological _____
Geochemical _____

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 26/72 SIGNATURE: W. T. Graham
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications on this File

Previous Surveys (1)

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L.	313271
L.	313272
L.	313273
L.	313274
L.	313275
L.	313276
L.	313277
L.	313278
L.	313279
L.	313280
L.	313281

TOTAL CLAIMS 11

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 598 Number of Readings 752

Station interval 100' and 50'

Line spacing 400'

Profile scale or Contour intervals 0, 100, 300, 500, 1000, and 2000 gammas
(specify for each type of survey)

MAGNETIC

Instrument McPhar Fluxgate M-700

Accuracy - Scale constant 20° per scale division

Diurnal correction method Closed Loops at less than 1 hour duration & progressive factoring.

Base station location Every 400' along the Base Line

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

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

File _____

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 Electromagnetic

Township or Area Eby Township

Claim holder(s) Noranda Exploration Co., Ltd.
(No personal liability)
1809-44 King Street West, Toronto, Ont

Author of Report E. A. Gallo

Address P. O. Box 1205, Timmins, Ontario

Covering Dates of Survey Feb. 10-25, 1972
(linecutting to office)

Total Miles of Line cut 11.6

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	40
--Magnetometer	
--Radiometric	
--Other	
Geological	
Geochemical	

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 26/72 SIGNATURE: W. J. Graham
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications _____

Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L.	313271
L.	313272
L.	313273
L.	313274
L.	313275
L.	313276
L.	313277
L.	313278
L.	313279
L.	313280
L.	313281

If space insufficient, attach list

TOTAL CLAIMS 11

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 598 Number of Readings 598

Station interval 100'

Line spacing 400'

Profile scale or Contour intervals 1" = 20°

(specify for each type of survey)

MAGNETIC

Instrument

Accuracy - Scale constant

Diurnal correction method

Base station location

ELECTROMAGNETIC

Instrument McPhar VLEM SS15

Coil configuration Vertical Loop

Coil separation 400, 800, & 1200

Accuracy 2° per scale division

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

Frequency 1,000 & 5000 c.p.s.

(specify V.L.F. station)

Parameters measured Tilt Angles

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION - RESISTIVITY

Instrument

Time domain Frequency domain

Frequency Range

Power

Electrode array

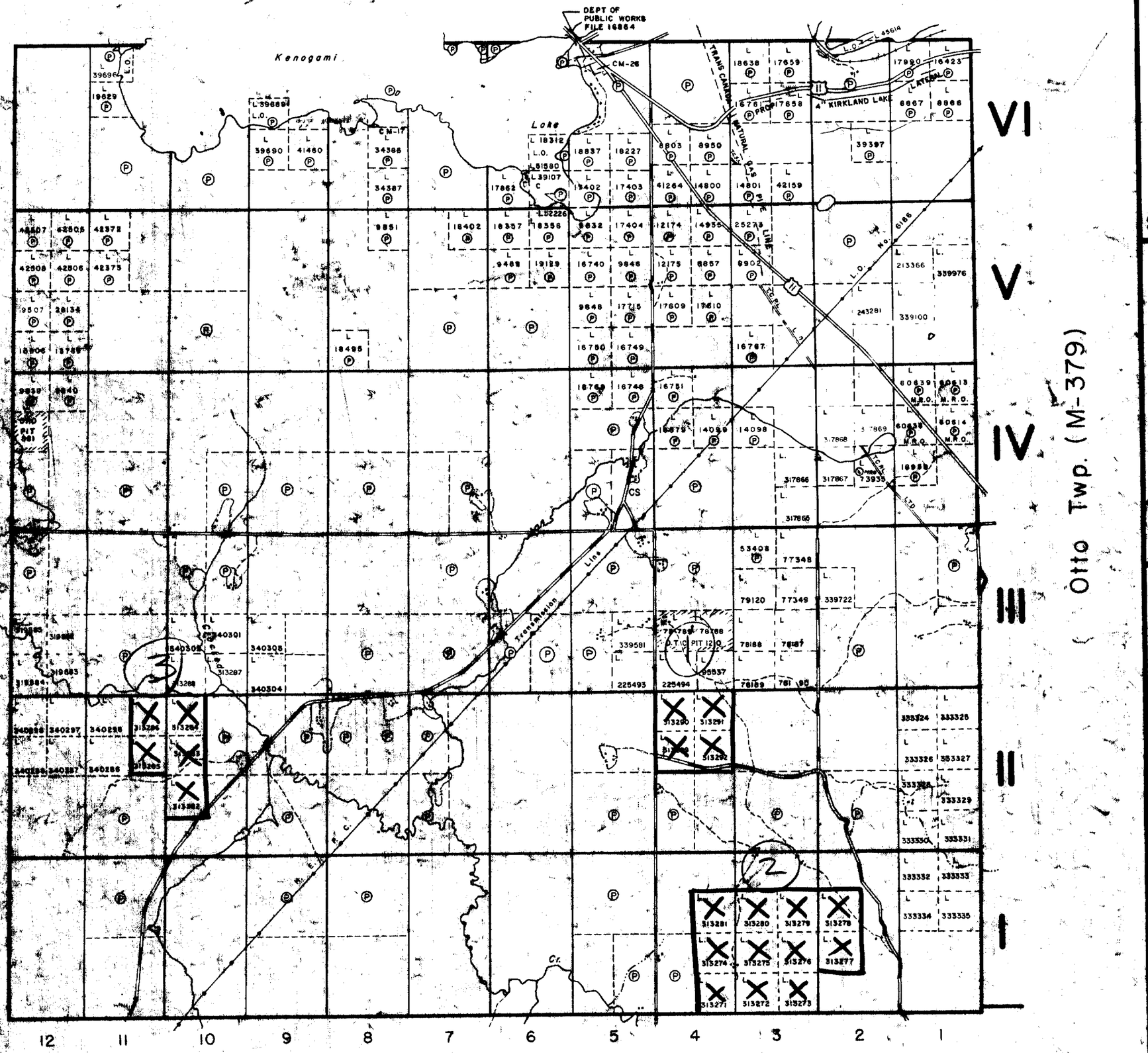
Electrode spacing

Type of electrode

Grenfell Twp. (M-351)

Otto Twp. (M-379)

Blain Twp. (M-418)



THE TOWNSHIP OF EBY

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND
- CROWN LAND SALE
- LEASES
- LOCATED LAND
- LICENSE OF OCCUPATION
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED
- L.S. Lot
- C.S. Con.
- L.O. L.R.
- M.R.O. S.R.O.

NOTES

400' Surface rights reservation around all lakes and rivers

DATE OF ISSUE

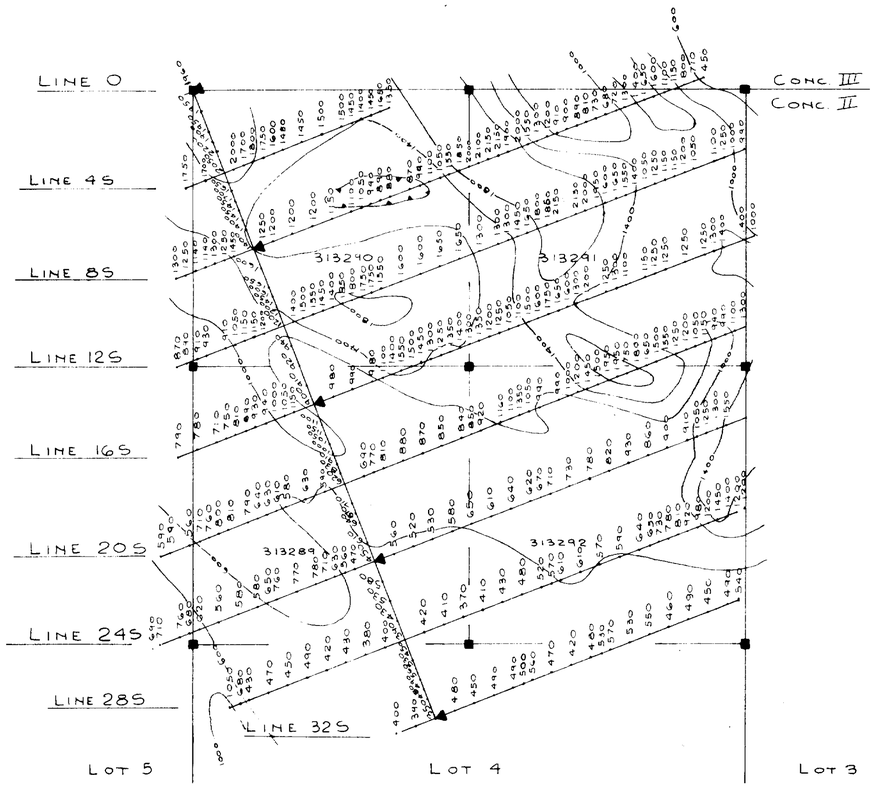
JUL 7 1972

ONT. DEPT. OF MINES AND NORTHERN AFFAIRS

PLAN NO. M-345

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS

42A01SE0210 2.921 EBY

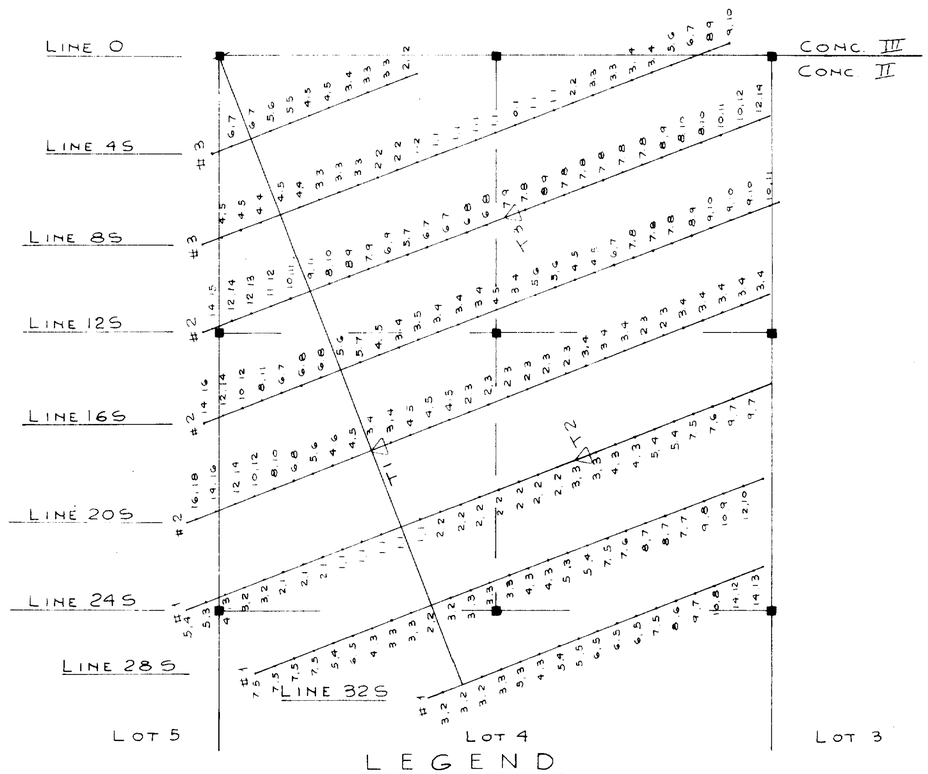


LEGEND

Instrument : McPhar Fluxgate M-700
Readings : Directly in gammas
Contoured at : 600 1000 1400 1800 gammas

- Isomagnetic contours
- Magnetic depression
- ▲ Magnetic base station

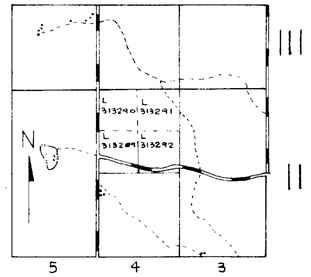
No of readings 339
Date of survey : NOV 71



LEGEND

Instrument McPhar vertical loop (V L E M) SS 1/5
Readings Dip angles in degrees
West readings plotted to the top of line
East readings plotted to the bottom of line
L F (1000 c p s) plotted close to the line
H f (5000 c p s) plotted remote from line
Scale of profile 1" : 20°, (L F - Solid H F - Dotted)
No of readings 199 L F 199 H F
Date of survey NOV 71

T-1 Transmitter location

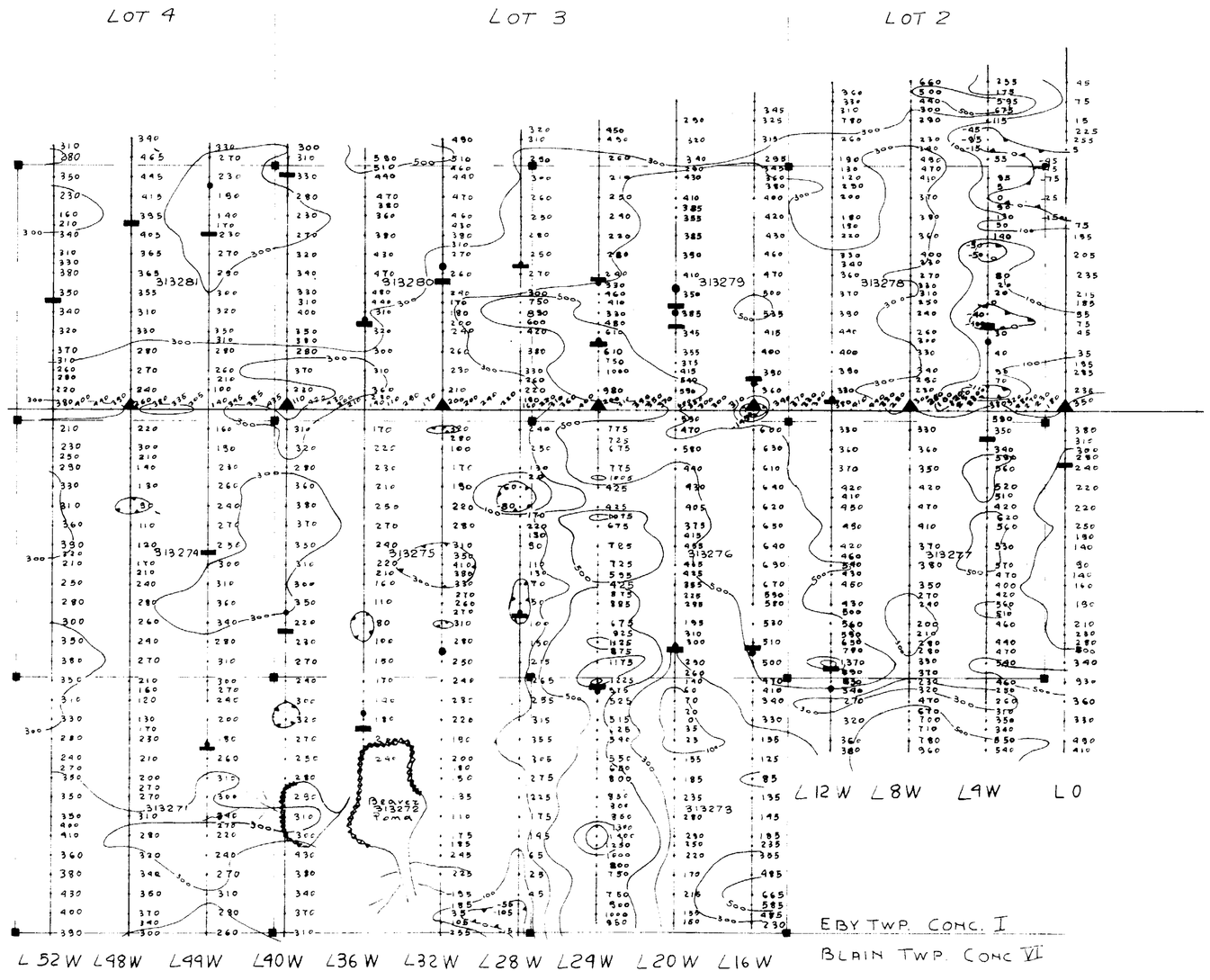


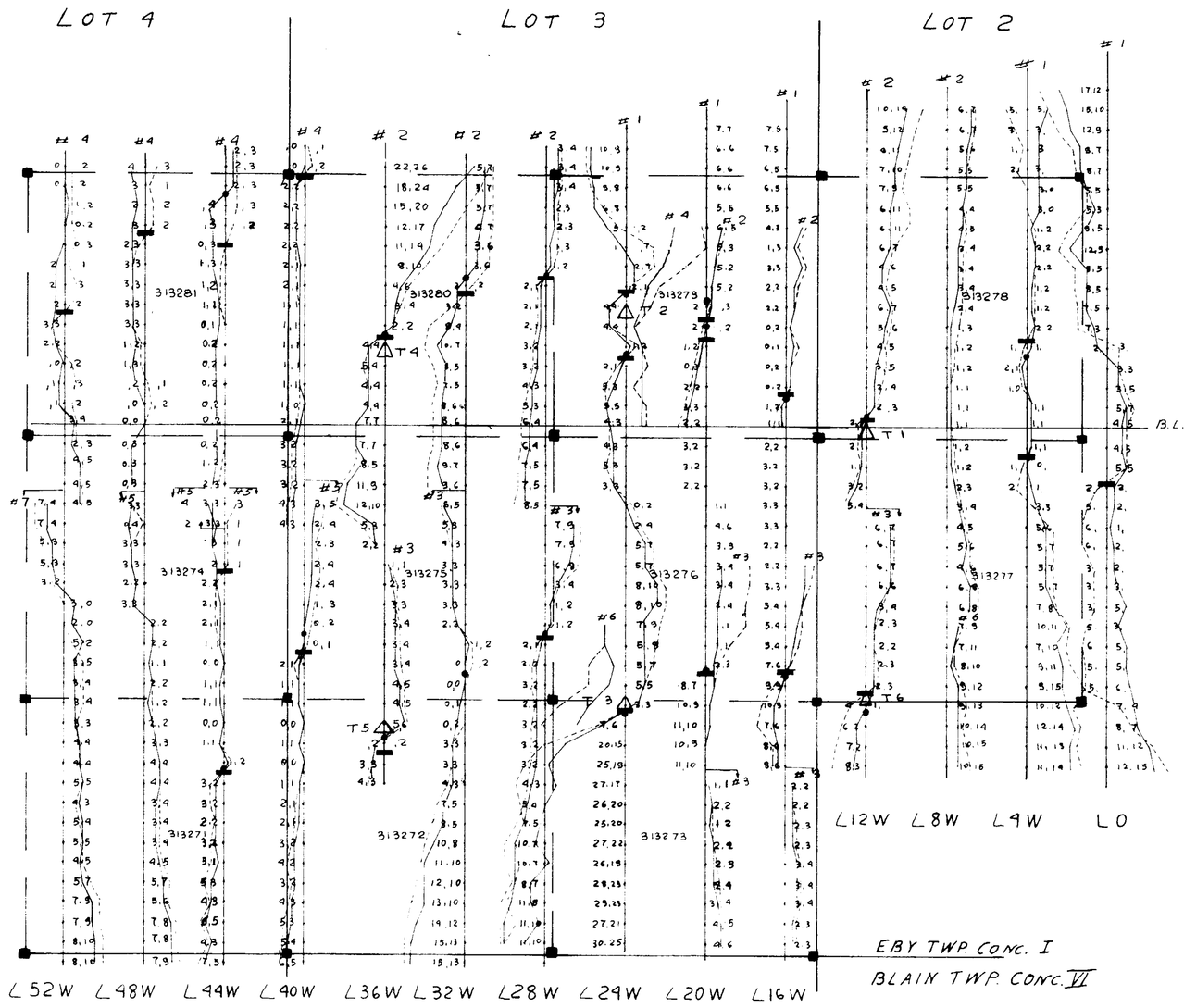
LOCATION PLAN
OF
EBY 1-71
SCALE 1" = 2640'

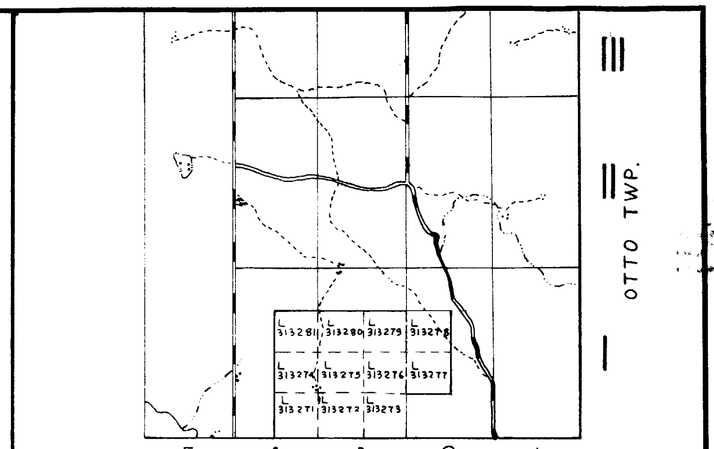
W. J. Graham
June 26/1972

REVISED	EM : MAG SURVEYS
APPROVED	EBY 1-71
	EBY TWP ONTARIO
	PROJECT: KIRKLAND NORTH (OWL & LOON)
PROJ. Nº 1946	SURVEYED BY: B LECLERC DATE: MAY 31, 72
N.T.S. 42-A-1	DRAWN BY: B Mercier SCALE: 1" = 400'
DWG. Nº 1	NORANDA EXPLORATION CO. LTD.
	OFFICE: TIMMINS

42A01SE8210 2.921 EBY







LOCATION PLAN
OF
EBY 2-71
SCALE 1" = 2640'

N

MAG.

Instrument : McPhar Fluxgate M-700
Readings : Directly in Gammas
Contoured at 0, 100, 300 500, 1000, 2000 Gammas
500 Isomagnetic contours
Magnetic depression
Magnetic base station
No. of readings : 752
Date of survey: FEB. 72

E.M.

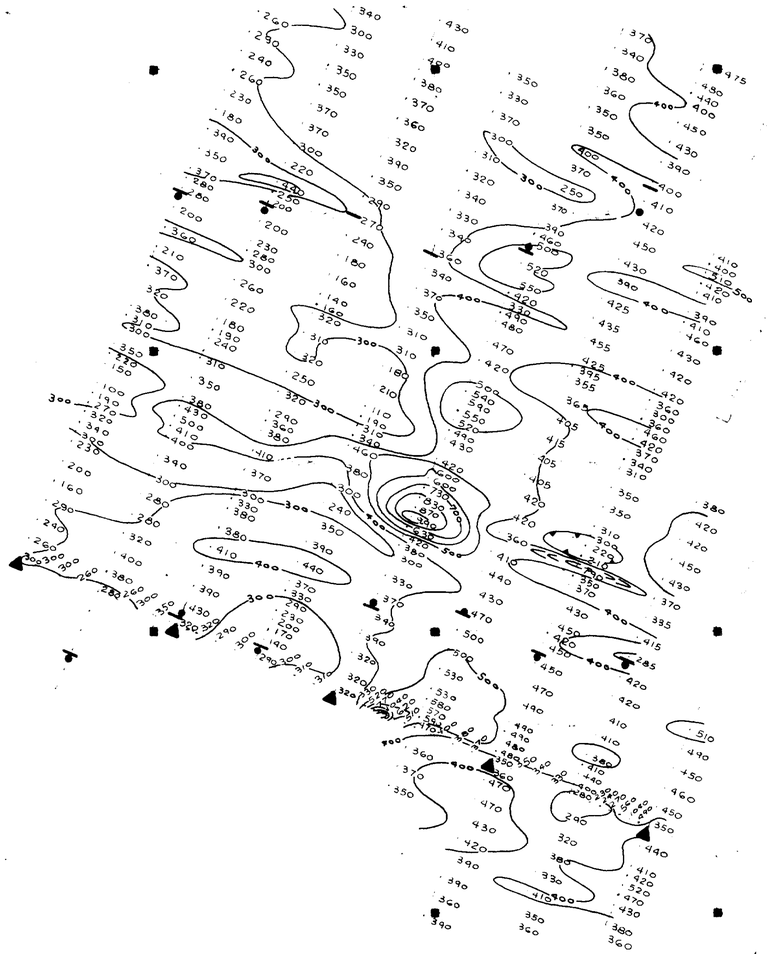
Instrument : McPhar VLEM 55 15
Readings : Dip angles in degrees
North readings to the right of line
South " " " left " "
Low frequency (1000 c.p.s) plotted close to line
High " (5000 c.p.s) " far from "
Profile scale : 1"=20" (solid line - L.F. dotted line - H.F.)
ΔT1 transmitter set up
• Low frequency cross over
▬ High frequency cross over
No. of readings : 598
Date of survey : FEB. 72

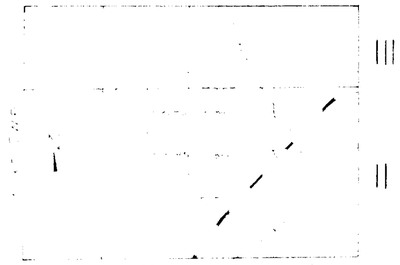
E.A. Hollis

REVISED	MAG. / E.M. SURVEYS
	EBY 2-71
APPROVED	EBY TWP. ONTARIO
	PROJECT: KIRKLAND NORTH (OWL LOON)
PROJ. Nº 1946	SURVEYED BY: A. PICOTTE, A. NEWMAN, R. PUTNEY — DATE: FEB. 25/72
N.T.S. 42-A-1	DRAWN BY: B. MERLEAU SCALE: 1" = 400'
DWG. Nº	NORANDA EXPLORATION CO. LTD.
	OFFICE: TIMMINS ONT.

40481 (80621B 2-321 EBY)

69-C-005 ST. KATHARINES





LOCATION PLAN
SCALE 1 2640

LEGEND

Instrument : McPhar Fluxgate M-700
Readings : Directly in gammas
Contoured at : 300, 400, 500, 600, 700, 800 & 900 gammas

500 Isomagnetic contours
Magnetic depression
▲ Magnetic base station

No. of readings : 343
Date of survey : Nov. 72
• — E.M. X-Overs (L.F, H.F)

N

E. F. Graham
June 28, 1972

REVISED

MAG. SURVEY
EBY 71, 2.921

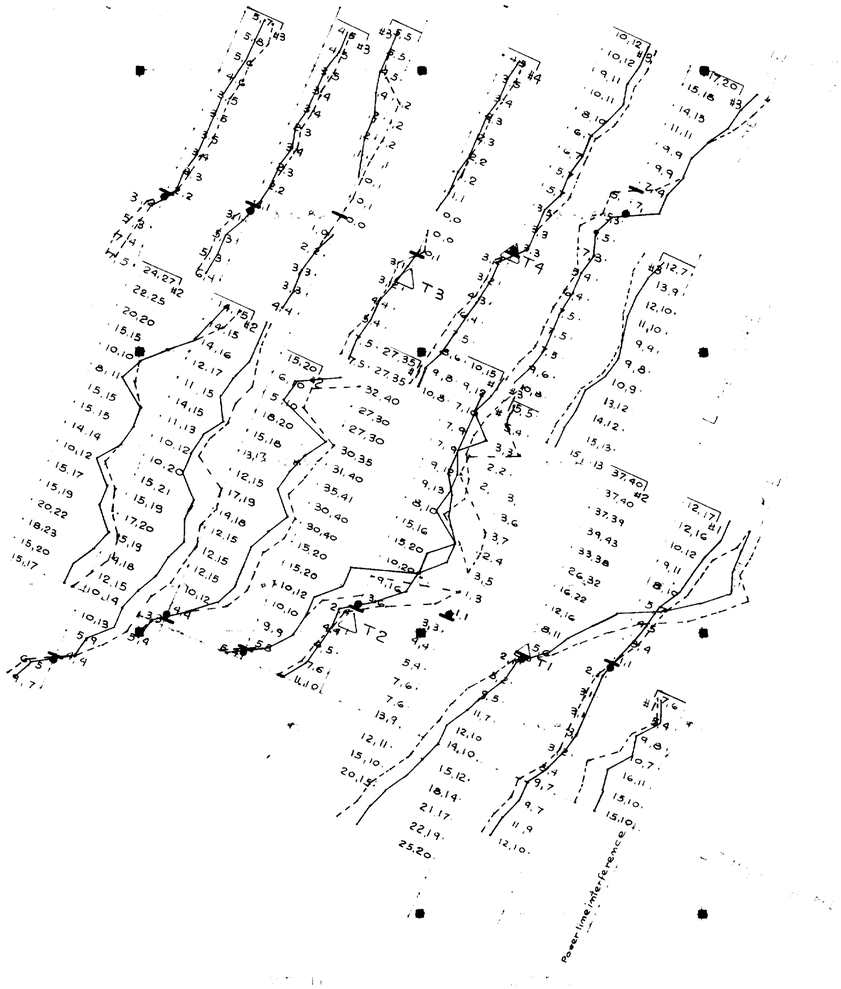
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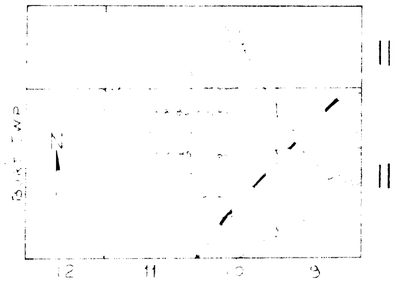
PROJ Nº [illegible]
N.T.S. [illegible]
DWG. Nº

SURVEYED BY: B. LECLERC DATE: [illegible]
DRAWN BY B. Mercure SCALE [illegible]

NORANDA EXPLORATION CO. LTD.
OFFICE: TIMMINS

42A01SE0210 2.921 EBY





LOCATION PLAN
OF
EBY 3-71
SCALE 1 2640'

LEGEND

Instrument : McPhar vertical loop (V.L.E.M) SS 1/5
Readings : Dip angles in degrees
North readings plotted to the right of line
South readings plotted to the left of line
L.F. (1000 c.p.s) plotted close to the line
H.F. (5000 c.p.s) plotted remote from line
Scale of profile : 1" = 20"; (L.F. - Solid, H.F. - Dotted)
No. of readings: 262 L.F.; 262 H.F.
Date of survey: Nov. 71

△T-1 Transmitter location
E.M. X-Overs (L.F., H.F.)

N

Av. A. Graham
June 28/1972
2.921

REVISED
APPROVED

E.M. SURVEY
E BY 3-71.

EBY TWP ONTARIO

PROJECT: KIRKLAND NORTH (OWL) LOOP

PROJ. Nº 1316
N.T.S. 42 A 1
DWG. Nº

SURVEYED BY: B. LECLERC DATE: MAY 4/72
DRAWN BY: B. Mercure SCALE: 1" = 400'

NORANDA EXPLORATION CO. LTD.
OFFICE: TIMMINS

42A01SE0210 2.921 EBY