



42A11SW0350 2.1550 GODFREY

010

AUG 23 1974

PROJECTS UNIT.

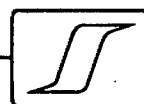
REPORT ON A TURAM
ELECTROMAGNETIC SURVEY
EXECUTED IN
GODFREY TOWNSHIP, KAMIS KOTIA, ONTARIO
ON BEHALF OF
HOLLINGER MINES LIMITED

SUMMARY

During the period, March - June, 1974, 68.8 line miles of Turam electromagnetic survey data were recorded in Godfrey Township, Kamis Kotia, Ontario.

The observed electromagnetic distortion pattern revealed the presence of many conductor axes, a high proportion of which are probably due to sources not of economic interest. The potential presence of economic sulphides, however, is not excluded.

All available geological and geochemical information will be needed to fully assess the conductors found in the present survey. Consequently, drilling recommendations have not been made at the present time.



REPORT ON A TURAM ELECTROMAGNETIC SURVEY
EXECUTED IN
GODFREY TOWNSHIP, KAMIS KOTIA, ONTARIO
ON BEHALF OF
HOLLINGER MINES LIMITED

INTRODUCTION

During the period March 8 to June 23, 1974, Turam electromagnetic surveys were executed on behalf of Hollinger Mines Limited by Scintrex Surveys Limited. A total of 54 days at the location were needed to complete the survey.

The claim group covered was in a block approximately defined by concessions 4, 5 and 6, lots 3, 4, 5 and 6 of Godfrey Township. The area is located approximately eight miles WNW of Timmins (fig. 1).

During the survey period the geophysical crew were under the direction of three different crew chiefs: Mr. D. Carriere, B.Sc., Mr. H. Lee, B.Sc., and Mr. T. Geurnier. Overall supervision of the project was provided by Mr. J. Klein, M.Sc., P.Eng.

The area was covered by a total of 22 energizing loops. The leading edges of 16 of these loops ran at an angle of N140°E while the leading edges of the other 6 loops ran at an angle of N105°E. The survey lines ran perpendicular to these directions with an inter-line spacing of 400 feet. A total of 68.8 line miles were covered (including minor overlap sections).

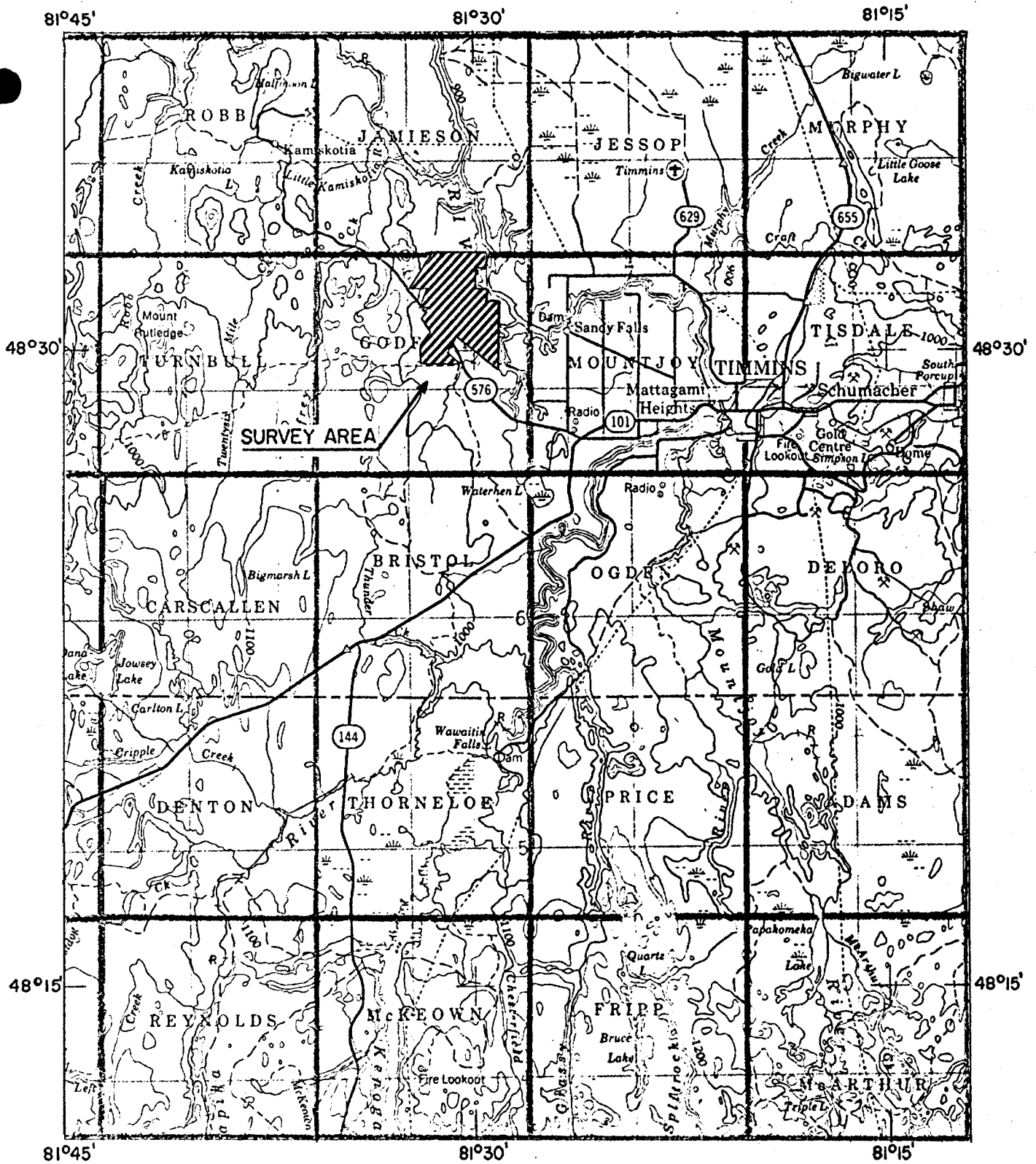
The purpose of the survey was to delineate subsurface zones of sulphide mineralization.

EQUIPMENT AND METHODS

The present survey employed a Scintrex SE-71 three frequency Turam electromagnetic unit. A 400 Hz energizing signal was used in all of the loops. Loop sizes ranged from 2000 feet x 2000 feet to 4800 feet x 3200 feet. Except for the beginning of the survey when readings from loops 1A, 2A and lines 212N to 236N inclusive from loop 3A were taken with a 200 foot cable, the separation, "a" between the receiving coils for the remainder of the survey was 100 feet.

The enclosed specification sheet, Appendix T, and article entitled "Some Aspects of the Turam Electromagnetic Method" give further details on the equipment and technique.





LOCATION MAP

HOLLINGER MINES LIMITED
GODFREY TWP. KAMIS KOTIA, ONTARIO
GROUND GEOPHYSICAL SURVEY

Scale: 1:250,000

PRESENTATION OF DATA

Plate 1 shows a profile presentation of the Turam results on a scale of 1" = 400 feet. Along the profiles the field strength ratio (F.S.R.) is plotted at a scale of 1" = 20% with the phase difference ($\Delta \phi$) at a scale of 1" = 10°. The positions of energizing loops is shown on plate 2.

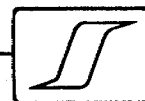
DISCUSSION OF RESULTS

The more prominent conductive lineations have been and are marked on Plate 1 while the more interesting conductors have also been individually labeled.

On the northern and eastern edges of the area, numerous well-defined, closely spaced current axes are evident. In the northern part of the area these axes run parallel to an ESE flowing tributary of the Mattagami river while along the eastern edge of the area the surface drainage system cuts perpendicular to the observed lineations. At both locations conduction within swamp and creek sediments is likely to have contributed to the anomalous current channeling, although the long nature of some of these features (eg., A₁, A₂, A₃, A₄, C₁ and C₂) would tend to indicate structural conductors, possibly graphitic in nature. Inter-line correlation is frequently hard to distinguish and it is suspected that considerable variations in the conductivity and/or width of the conducting bands are present. The conductors may, in fact, "pinch-out" several times along their strike lengths. Furthermore, the complex nature of the data in the north is accentuated because certain sections were covered with a 100' cable and others with a 200' cable. Generally speaking, greater resolution can be expected with the shorter cable at the expense of lower amplitude anomalies over more deeply buried conductors.

Many of the conducting systems are associated with reverse-sensed current axes (ie., a negative FSR in conjunction with a positive $\Delta \phi$) flanking the normal-sensed axis -- eg., C₁ and C₂. The well-defined reverse-sensed current axis between A₁ and A₂ exhibits the most prominent electromagnetic distortion over the whole grid. Normally, anomalous expressions of this nature are attributable to a horizontal eddy current circulation which might be expected to be induced in a swamp or a wide conducting horizon, however, very complex basement structures can produce similar patterns.

Conductors H, J₁ and J₂ all exhibit distortions of reverse sense and in the case of J₁ there is little evidence of a return flow. This may indicate that the anomalous source is dipping towards the loop, ie., to the east or northeast. The response from the same conductor with the loop on the foot-wall side, --ie., to the west -- might be expected to be considerably stronger. This would tend to upgrade the possible significance of this zone.



In the case of the multiple roughly parallel conducting axes, in groups A, B and C an estimation of a conductivity x width product is difficult to obtain because of the mutual induction from the various closely-spaced conductor axes. Qualitatively, however, "Q" values (ie., the ratio of in-phase to quadrature distortions) at almost all intersections indicate relatively poor to moderate conductivity x width. Except for conductors E and F, whose distortion patterns tend to exhibit a higher conductivity x width at certain intercepts, the remaining conductors also suggest conductivity x width products of poor to moderate magnitude.

CONCLUSIONS AND RECOMMENDATIONS

A Turam electromagnetic survey executed over a grid system in Godfrey Township, Kamis Kotia, Ontario, revealed the presence of numerous conductive lineations. Many of the observed distortions are probably related to lenses and/or banded horizons of graphite-rich material with overburden conduction having contributed to some extent. The existence of a massive sulphide source, however, cannot be excluded.

Although, from the Turam data alone, a priority list cannot justifiably be made, some of the isolated conductors, eg., E, F, J, may prove to have more interesting sources than the prominent distortions on the northern and eastern edges of the area. However, a careful checking of all known geological and geochemical information in the vicinity of all of the more prominent conductor axes noted on Plate 1 is recommended. As it seems probable that many of the conductors found in the present survey have been previously located and tested, no drilling recommendations are being made at the present time. Scintrex Surveys Limited will be willing to discuss in greater detail areas in the immediate vicinity of the found conductors which are considered by Hollinger Mines to be of favourable geological interest.

Respectfully submitted,

P. R. Bailey, M.Sc., D.I.C.,
Geophysicist


Jan Klein, M.Sc., P.Eng.,
Geophysicist



APPENDIX "T"

BRIEF DESCRIPTION OF THE TURAM ELECTROMAGNETIC SYSTEM

GENERAL

The Turam method can be classified as a fixed source compensation method. The primary or source field consists of a large energizing layout in the form of a long wire or a large loop laid out on the terrain, to which an audio frequency alternating current is fed by means of a motor generator. The resulting current pattern is investigated inductively, with two identical receiving coils connected to a bridge compensator which compares the signal received in each coil in relative phase and amplitude. When grounded cable is used, the energization is both galvanic and inductive; when the primary layout consists of a closed loop, the energization is purely inductive. Under most conditions the presence of galvanic current is undesirable and inductive energization is, as a rule, preferred.

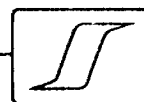
Although the system allows the comparison of any two components of the resultant field, it is standard procedure in systematic surveys to measure the gradient of the vertical component.

The pattern for a typical Turam survey is shown in Fig. 1. A large rectangular loop is used as primary layout and the field gradients are measured with horizontal receiving coils along profiles perpendicular to a long side of the transmitting loop.

DATA REDUCTION

The relative strength of the undisturbed primary field is dependent on the loop dimensions and the location of the observation points, and can be determined by calculation. The measured field strength ratios are normalized through division by these calculated free space ratios.

The primary field causes eddy currents to flow in subsurface conductors. As a result the resultant field will be distorted in both amplitude and phase. The presence of conductors will thus be indicated by abnormal field strength ratios and phase differences.



PRESENTATION

The measuring results are usually presented in profile form, as (reduced) field strength ratio and phase difference curves, with the observed values plotted at the midpoint between coil positions.

Occasionally one of the two parameters is presented in contour form, but contour plans are generally inadequate to express the full significance of the data.

INTERPRETATION

Where field distortion occurs the curves indicate the location and the depth of burial of the main current flow. The "current axis" is well defined when the current is concentrated as, for instance, in thin, steeply dipping conductors. In wide, banded conductors, or in horizontal conductors such as, for instance, overburden, the current is usually more dispersed and the anomalies will yield less positive information.

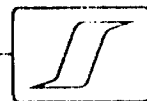
As a rule the current axis is located right below the maximum field strength ratio deflection or the maximum negative phase shift. Its depth under the traverse is indicated by the shape of the anomaly.

The relative amplitudes of field strength and phase distortions are a measure of the conductivity of the conducting bodies, i. e. good conductors are characterized by field strength distortion combined with relatively little phase shifting, whereas poor conductors affect the phase, rather than the strength of the resultant field.

For an accurate grading the conductivity thickness ρt value the individual conductors can be derived from the calculated in-phase and out-of-phase components, taking further into consideration the exciting frequency and the strike length of the conductor. The relations are shown in Fig. 2 and Fig. 3. The obtained ρt values are marked on the upper right side of the anomalies, in units of mho. On the lower left side the depth of the current axis (ft.) is marked. It is normally located 30 - 40 ft. within the body and the indicated depth should be regarded as the maximum depth to the upper surface of the conductor.

To obtain the projection of the current pattern, the anomalies are connected between lines, whereby depth and ρt values, as well as other characteristics of the curves are used as criteria. The strike of the formations if known, is also taken into consideration. Fig. 4 and Fig. 5 show a plan and section of a typical Turam survey and interpretation.

- References: 1937 Hedstron, E. H. Phase Measurements in Electrical
Prospecting. AIME Techn. Publ. 827
- 1964 Bosschart, R. A. Analytical Interpretation of Fixed Source
Electromagnetic Prospecting Data.
Delft.



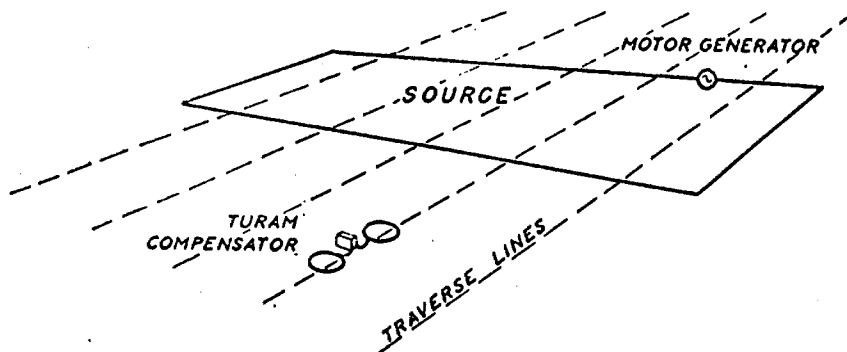


Fig. 1 The Turam method. General layout

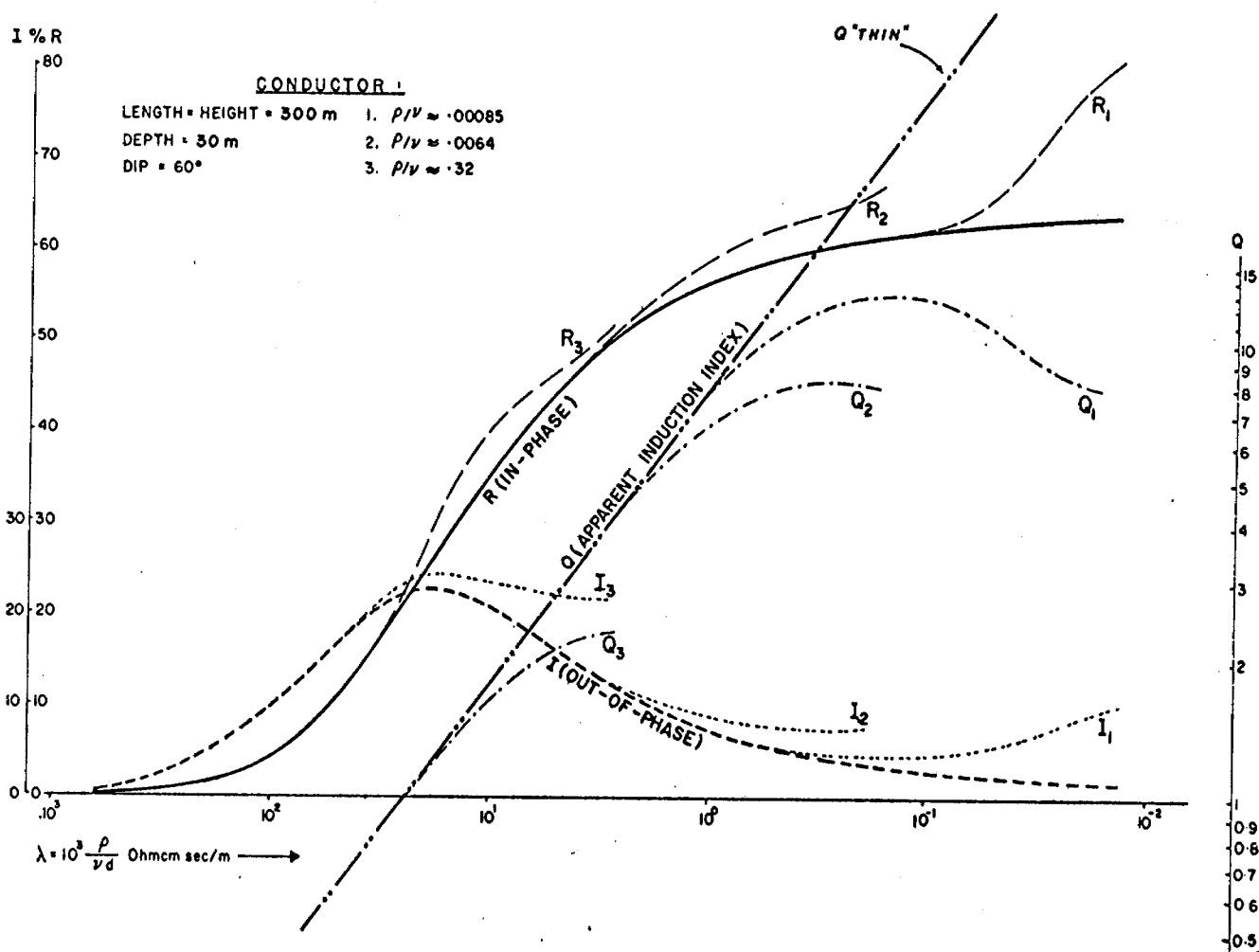


FIG. 2 RESPONSE OF A FINITE TABULAR CONDUCTOR.
 (R.A. Bosschart 1964)

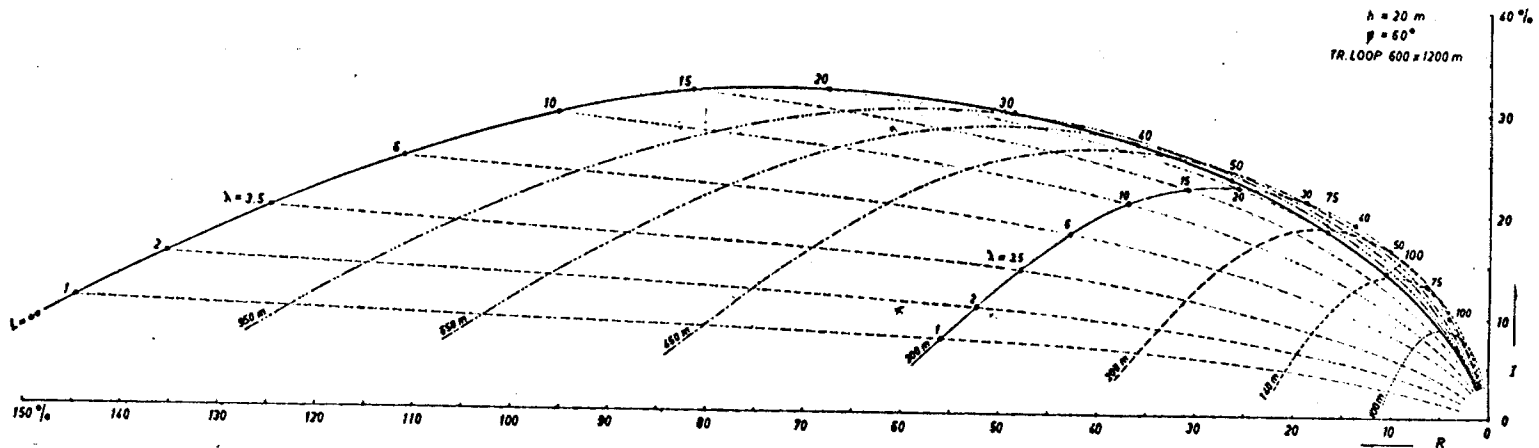
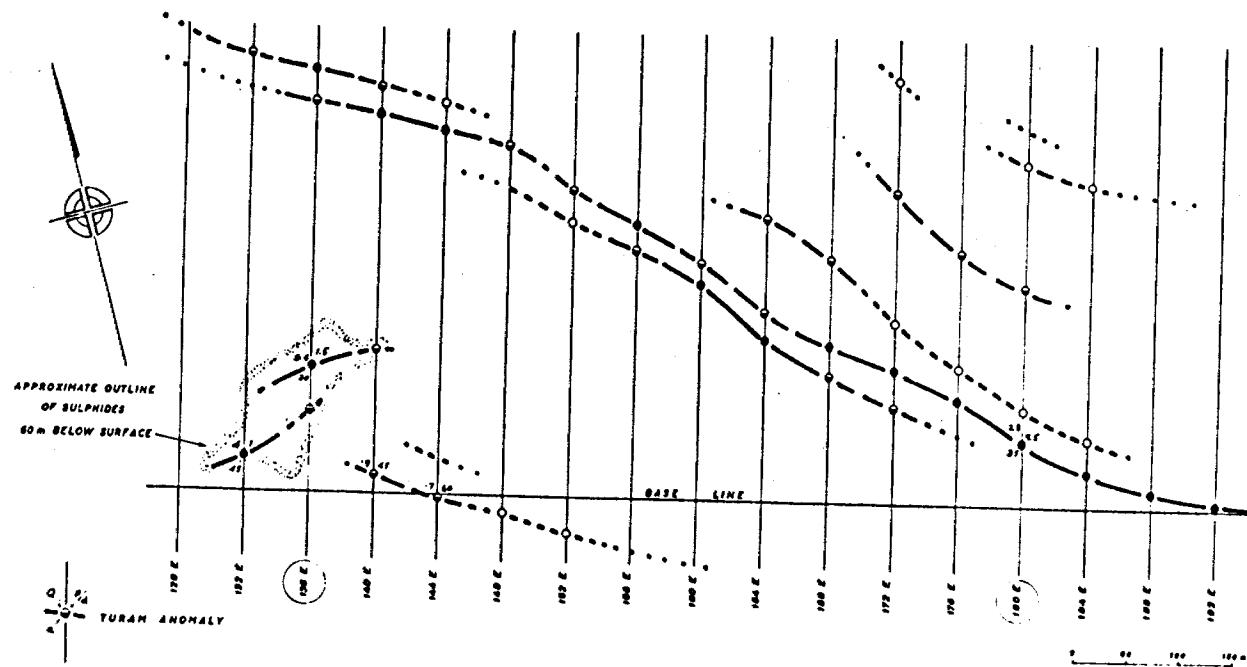


FIG. 3 RESPONSE DIAGRAM FOR CONDUCTORS OF VARYING STRIKE LENGTHS.

FIG. 4 TURAM SURVEY ON THE MURRAY GROUP, NEW-BRUNSWICK. (R.A. Bosschart 1964)



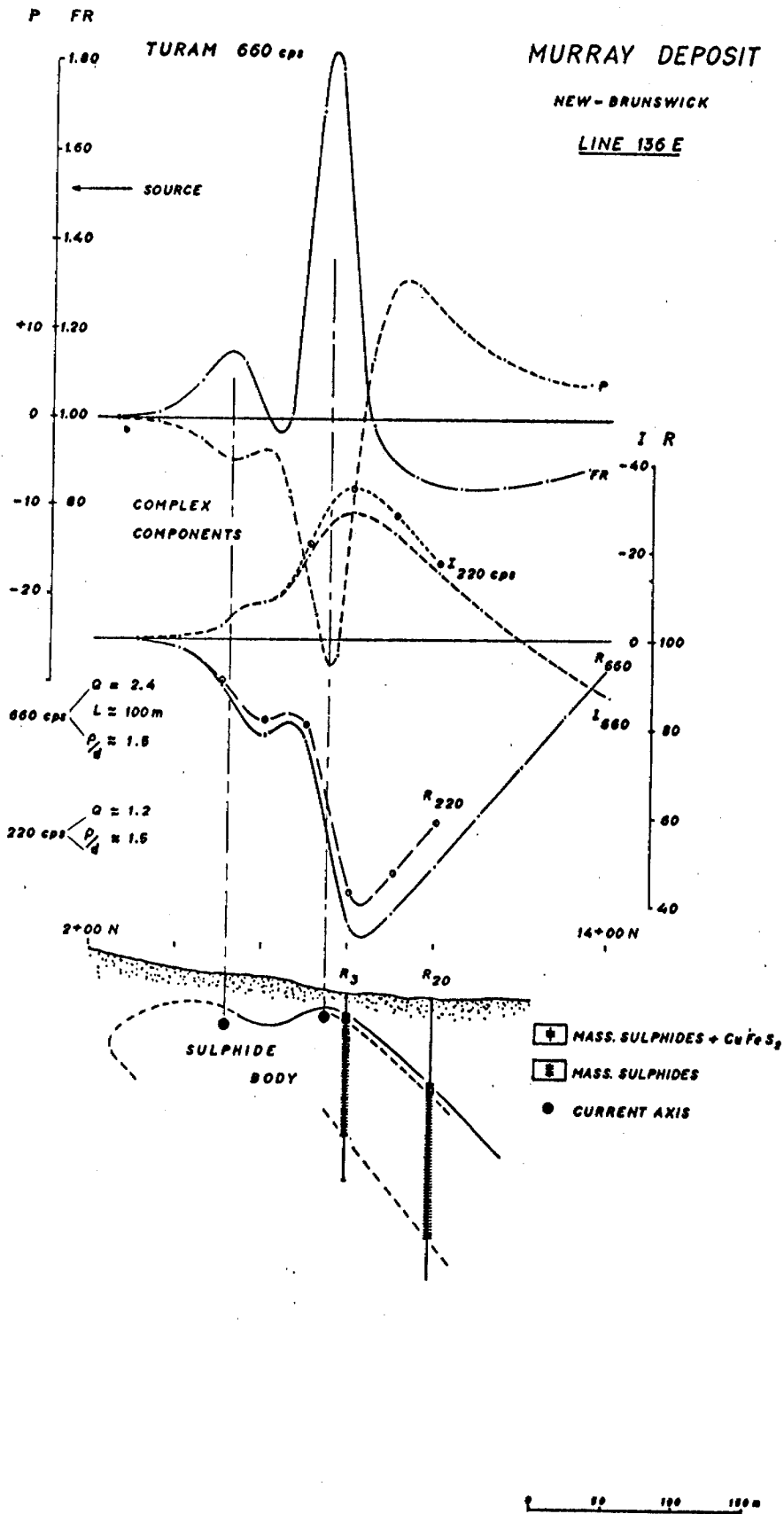


FIG. 5 TURAM SURVEY ON THE MURRAY GROUP, NEW BRUNSWICK. INTERPRETATION OF A TYPICAL SECTION. (R.A. Bosschart 1964)



42A11SW0350 2.1550 GODFREY

020

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AUG 28 1974

PROJECTS UNIT

MAGNETIC SURVEY

on the

GODFREY #2 & #4 GROUPS

Hollinger Mines Limited
Godfrey Township, Ontario

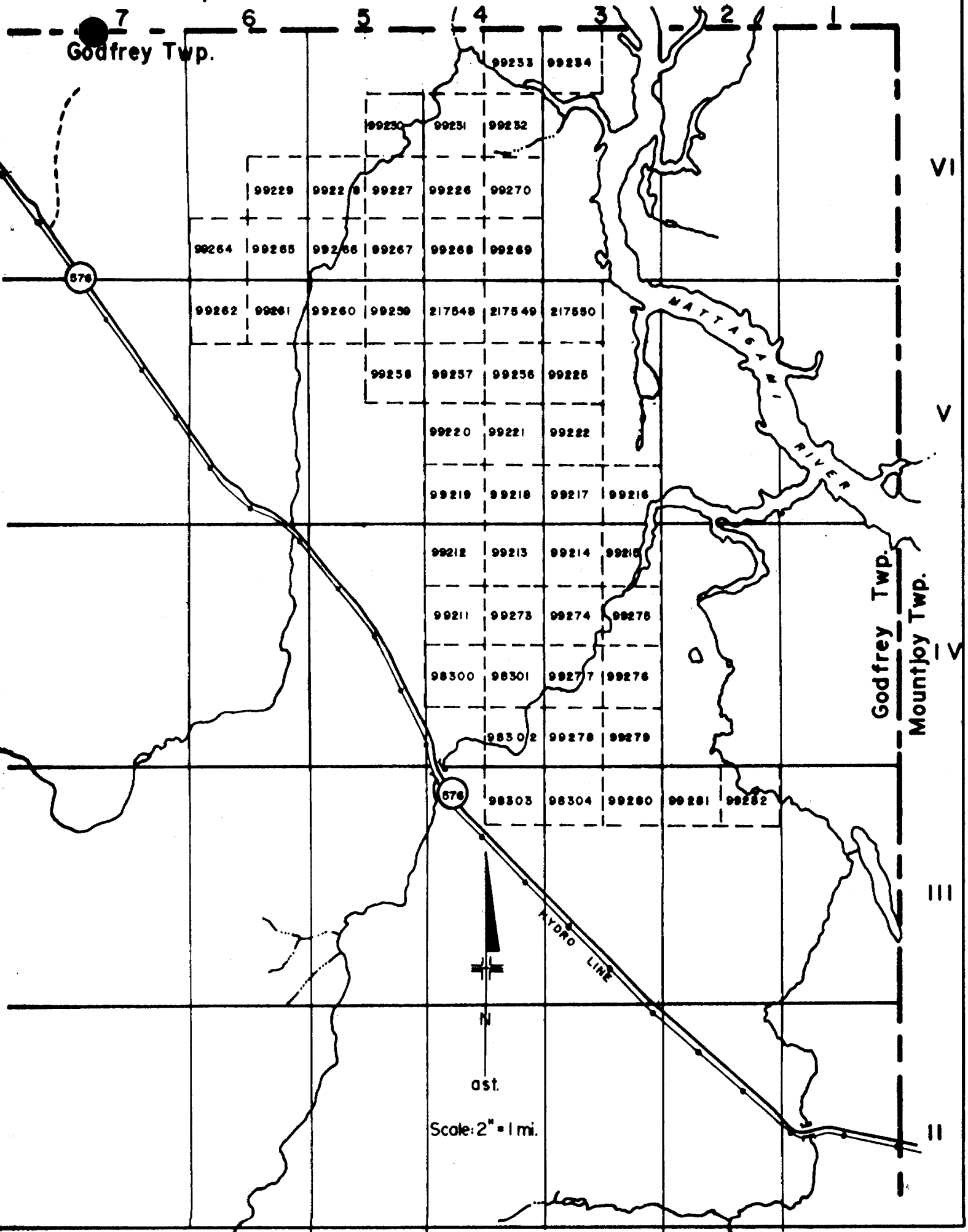
H. Z. Tittley, P. Eng.

Timmins, Ontario

July 30, 1974

Jamieson Twp.

Godfrey Twp.



VI

V

V

III

II

Godfrey Twp.

Mountjoy Twp.

HYDRO LINE

MATTAGAMI RIVER

N

ast.

Scale: 2" = 1 mi.

576

576

INTRODUCTION

A magnetic survey was carried out by Hollinger Mines Limited on its Godfrey #4 Group in Godfrey Township near Timmins, Ontario during March and April 1970.

The purpose of the survey was to assist in outlining the underlying geological features. Several north trending anomalies, attributed to diabase dykes, have been outlined. The accompanying map shows the results obtained over the area surveyed.

PROPERTY, LOCATION AND ACCESS

The portion of Godfrey #4 Group covered by the magnetic survey consists of 54 contiguous mining claims situated in lots 2 to 6 in the fourth, fifth and sixth concessions in Godfrey Township, Porcupine Mining Division.

The claims are:

| | | | |
|----------|----|----------|-----------|
| P-98300 | to | P-98304 | inclusive |
| P-99211 | to | P-99222 | " |
| P-99225 | to | P-99234 | " |
| P-99256 | to | P-99262 | " |
| P-99264 | to | P-99270 | " |
| P-99273 | to | P-99282 | " |
| P-217548 | to | P-217550 | " |

The property lies entirely between the Mattagami River to the east and Highway #576 that crosses Godfrey Township immediately west of the claims. Both of these provide access to the property from Timmins, situated six miles to the east.

HISTORY

Although Godfrey Township has been the scene of a considerable amount of exploration activity over the past years, most of the claims that fall within the scope of this report have received little or no attention. Mespi Mines Ltd. put down three diamond drill holes in 1964 following the completion of a geophysical program on the most northwesterly claims. Three holes put down on claim # P-99215 at the end

of a long bay of the Mattagami River are believed to have been drilled in the 1940's by a group named McKay-Colgan while searching for gold.

GEOLOGY

The entire area of the property is underlain by keewatin lavas of felsic and basic composition cut by younger north trending quartz diabase dykes. Rhyolites exposed in a prominent ridge that extends from the middle of Godfrey Twp. to the centre of Jamieson Twp. are visible in outcrop on claims P-99262 and P-99264 in the northwest corner. Basic lavas are visible near the Mattagami River along the east boundary, but these are believed to occur east of a major displacement fault (Mattagami River fault), and would therefore not be part of the same volcanic sequence.

Surficially, the property is situated along the southern edge of the clay belt (Barlow-Ojibway formation). This flat, heavily wooded plain consists mainly of clays, some sand and occasional boulders. Overburden thicknesses vary from the bedrock surface in the west to hundreds of feet under the Mattagami River where the latter and its tributaries have gouged down nearly 100 feet into the alluvium.

SURVEY METHOD

On the two existing grids of lines shown on the accompanying plan, readings were taken 100 feet apart or less with two A.B.E.M. Mz-4 torsion wire magnetometers capable of measuring the vertical component of the earth's magnetic field. Base stations were established along the base lines at the even 400 foot intersections by averaging two repeat loops encompassing each of the points. Main base stations, located throughout the property, were related through

observations to the government magnetic base on the Bristol-Ogden Township boundary where an arbitrary value of 945 gammas has been assigned. Diurnal and instrument drift variations were recorded by repeating the bases and were subtracted from the readings. The arbitrary value of 945 was then added to complete the corrections in gammas.

RESULTS

The results of the survey are presented as iso-magnetic contours on the accompanying plan entitled "Geomagnetic Survey" at a scale of 1 inch to 400 feet.

All of the north and northwest trending magnetic features are interpreted as diabase dykes. A northeasterly trending magnetic anomaly on claims P-99215 is believed to be due to concentrations of magnetite within basic lava flows.

The presence of the Mattagami River fault which is generally projected near the east boundary of the group is not readily discernable from the data. However, the north trending contours on claim P-99234, to the north, near the north part of claim P-99216 and through the centre of claim P-99281 along the south boundary may represent part of the fault.

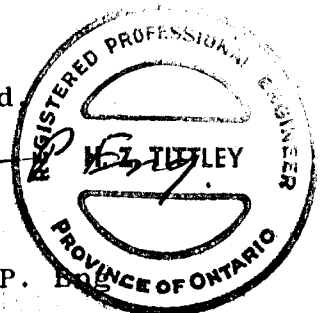
CONCLUSIONS

The amount of information revealed by the magnetic survey is interminable and will prove of great merit when evaluating other geophysical surveys.

Respectfully submitted,

H. Z. Tittle

H. Z. Tittley, P. Eng.



GEOPHYSICAL - GEOLOGICAL
TECHNICAL DATA



42A115W0350 2.1550 GODFREY

900

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.

AUG 23 1974

PROJECTS UNIT

Type of Survey Geophysical Turam Electromagnetic
Township or Area Godfrey Twp.
Claim holder(s) Hollinger Mines Limited
Box 320, TIMMINS, Ontario
Author of Report Jan Klein, MSc., P.Eng.
Address Scintrex Surveys Limited, Concord, Ontario
Covering Dates of Survey March 15 to June 23, 1974
(linecutting to office)
Total Miles of Line cut _____

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

See Attached Sheet

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

Geophysical
Turam Electromagnetic 20
-Magnetometer _____
-Radiometric _____
-Other _____
Geological _____
Geochemical _____

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

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

DATE: _____ SIGNATURE: _____
Author of Report or Agent

PROJECTS SECTION DR. H. O. Seigel R.T.D.

Res. Geol. _____ Qualifications 63.2411

Previous Surveys See sheet

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

TOTAL CLAIMS 54 45

OFFICE USE ONLY

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 1950 Number of Readings 1950
Station interval 100 feet
Line spacing 400 feet
Profile scale or Contour intervals 1"=20% with phase difference 1"=10%
(specify for each type of survey)

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base station location _____

ELECTROMAGNETIC

Instrument SE 71 Scintrex Turam three frequency Electromagnetic Unit
Coil configuration Loop ranged from 2000 x 2000 ft. to 4000 x 3200 ft.
Coil separation 200 ft.
Accuracy _____
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 400 H-Z Energising Signal
(specify V.L.F. station)
Parameters measured Field Strength Ratio & Phase Difference Curves

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 _____

June 27, 1974.

Statement showing distribution of assessment days as a result of a Geophysical Tram E.M. Survey performed on 45 contiguous claims in Godfrey Township, performed November 1968 to June 26, 1974.

| <u>Claim No.</u> | <u>Assessment Days</u> | <u>Claim No.</u> | <u>Assessment Days</u> |
|------------------|------------------------|------------------|------------------------|
| P-98300 | 20 | P-99233 | 20 |
| 98301 | 20 | 99234 | 20 |
| 99211 | 20 | 99235 | 20 |
| 99212 | 20 | 99237 | 20 |
| 99213 | 20 | 99238 | 20 |
| 99214 | 20 | 99239 | 20 |
| 99215 | 20 | 99260 | 20 |
| 99216 | 20 | 99261 | 20 |
| 99217 | 20 | 99262 | 20 |
| 99218 | 20 | 99263 | 20 |
| 99219 | 20 | 99266 | 20 |
| 99220 | 20 | 99267 | 20 |
| 99221 | 20 | 99268 | 20 |
| 99222 | 20 | 99269 | 20 |
| 99223 | 20 | 99270 | 20 |
| 99226 | 20 | 99273 | 20 |
| 99227 | 20 | 99274 | 20 |
| 99228 | 20 | 99275 | 20 |
| 99229 | 20 | 99276 | 20 |
| 99230 | 20 | 99277 | 20 |
| 99231 | 20 | 217348 | 20 |
| 99232 | 20 | 217349 | 20 |
| | | 217350 | 20 |

W. A. Hansen

HOLLINGER MINES LIMITED,
TIMMINS, ONTARIO

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

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 616 Number of Readings 616
Station interval 100 ft.
Line spacing 400 ft.
Profile scale or Contour intervals 1"=20% with phase difference 1"=10%
(specify for each type of survey)

MAGNETIC

Instrument Scintrex SE 71 three frequency Turam Electromagnetic Unit
Accuracy - Scale constant Loop ranged from 2000 x 2000 feet to 4800 x 3200 feet
Diurnal correction method 200 ft.
Base station location

ELECTROMAGNETIC

Instrument Scintrex SE 71 three frequency Turam Electromagnetic Unit
Coil configuration Loop ranged from 2000 x 2000 feet to 4800 x 3200 feet
Coil separation 200 ft.
Accuracy
Method: [] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency 400 HZ
Parameters measured Field Strength Ratio & Phase difference Curves
(specify V.L.F. station)

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

June 27, 1974.

Statement showing distribution of Assessment days
as a result of a Geophysical Survey performed on
12 contiguous claims in Godfrey Township,
performed January 1-11, 1974

| <u>PURAN E.M. SURVEY</u> | |
|--------------------------|------------------------|
| <u>Claim Number</u> | <u>Assessment Days</u> |
| P-99223 | 40 |
| 99224 | 40 |
| 381216 | 40 |
| 381217 | 40 |
| 381218 | 40 |
| 381219 | 40 |
| 381211 | 40 |
| 381212 | 40 |
| 381213 | 40 |
| 381214 | 40 |
| 381215 | 40 |
| 381216 | 40 |
| Total | <u>480 days</u> |

W. H. Hansen

HOLLAND MINES LIMITED
TIMMINS, ONTARIO

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

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 2978 Number of Readings 2978
Station interval 100 feet
Line spacing 400 feet & 200' in the South End
Profile scale or Contour intervals _____
(specify for each type of survey)

MAGNETIC

Instrument A.B.E.M. MZ4 Serial No's. 4539 and 4599
Accuracy - Scale constant 10.1 and 9.9 gammas per scale division
Diurnal correction method Return Loops
Base station location Government Base @n Bristol-Ogden Twp. Boundary

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 _____

June 27, 1974.

Statement showing Distribution of Assessment Days as a result of a Geophysical Mag Survey (including line cutting) on 54 contiguous claims in Godfrey Township, performed November to December 1968, July to November 1969, and March 24 to April 10, 1970

| <u>Claim No.</u> | <u>Assessment Days</u> | <u>Claim No.</u> | <u>Assessment Days</u> |
|------------------|------------------------|------------------|------------------------|
| P-98300 | 40 | P-99259 | 40 |
| 98301 | 40 | 99260 | 40 |
| 98302 | 40 | 99261 | 40 |
| 98303 | 40 | 99262 | 40 |
| 98304 | 40 | 99264 | 40 |
| 99211 | 40 | 99265 | 40 |
| 99212 | 40 | 99266 | 40 |
| 99213 | 40 | 99267 | 40 |
| 99214 | 40 | 99268 | 40 |
| 99215 | 40 | 99269 | 40 |
| 99216 | 40 | 99270 | 40 |
| 99217 | 40 | 99273 | 40 |
| 99218 | 40 | 99274 | 40 |
| 99219 | 40 | 99275 | 40 |
| 99220 | 40 | 99276 | 40 |
| 99221 | 40 | 99277 | 40 |
| 99222 | 40 | 99278 | 40 |
| 99223 | 40 | 99279 | 40 |
| 99226 | 40 | 99280 | 40 |
| 99227 | 40 | 99281 | 40 |
| 99228 | 40 | 99282 | 40 |
| 99229 | 40 | 217548 | 40 |
| 99230 | 40 | 217549 | 40 |
| 99231 | 40 | 217550 | 40 |
| 99232 | 40 | | |
| 99233 | 40 | | |
| 99234 | 40 | | |
| 99256 | 40 | | |
| 99257 | 40 | | |
| 99258 | 40 | | |

W. A. Hansen
HOLLAND
TRADING

48S.M

CODREY T.M.B.

48S.M

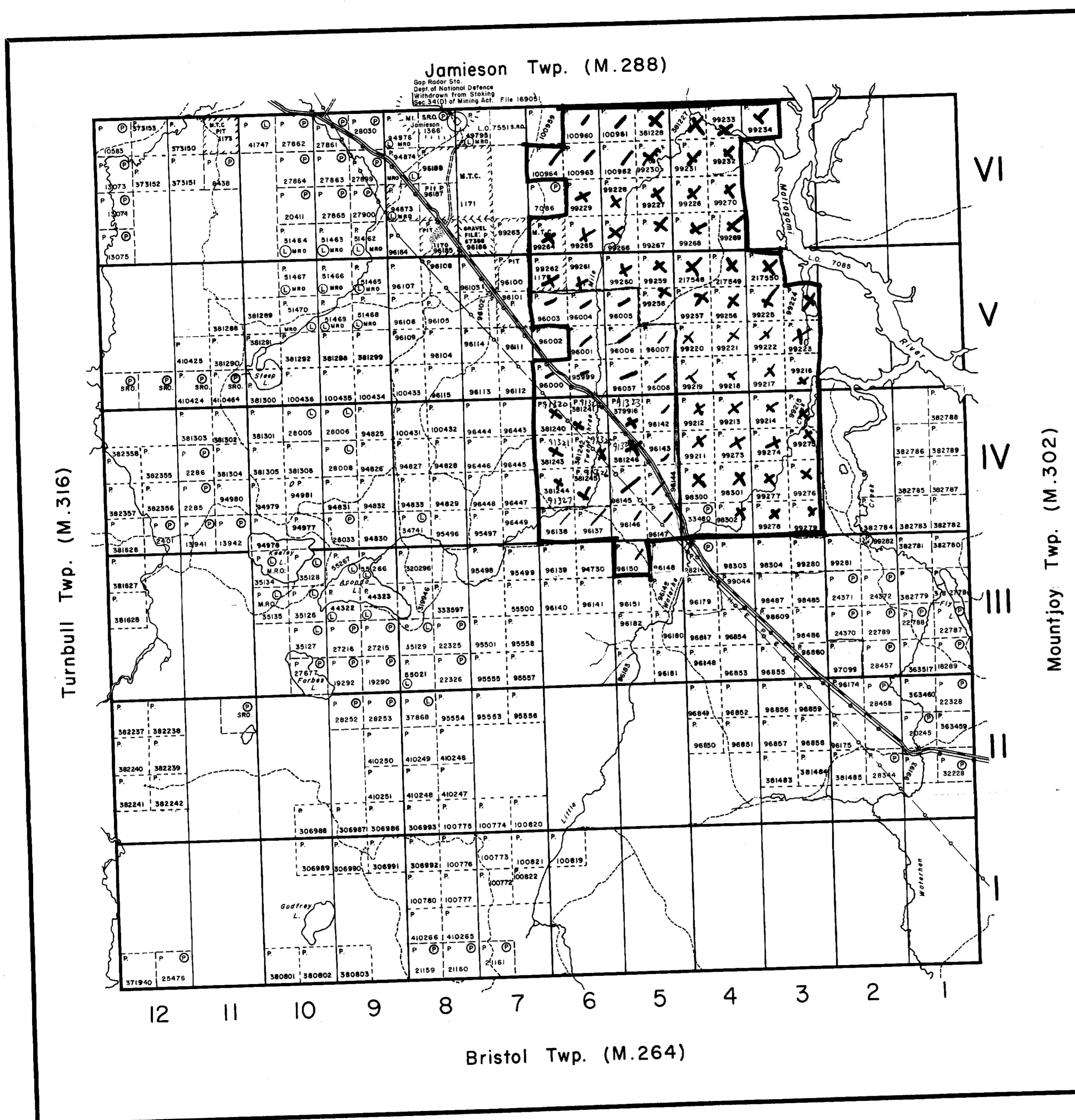
TRIM LINE

63.2
2361

48S.M

CODREY T.M.B.

48S.M



THE TOWNSHIP OF
GODFREY
DISTRICT OF COCHRANE
PORCUPINE MINING DIVISION
SCALE: 1-INCH = 40 CHAINS

LEGEND

| | |
|-----------------------|--------|
| PATENTED LAND | ● or ⊙ |
| CROWN LAND SALE | C.S. |
| LEASES | ⊠ or ⊡ |
| LOCATED LAND | Loc. |
| LICENSE OF OCCUPATION | L.O. |
| MINING RIGHTS ONLY | M.R.O. |
| SURFACE RIGHTS ONLY | S.R.O. |
| ROADS | — |
| IMPROVED ROADS | — |
| KING'S HIGHWAYS | — |
| RAILWAYS | — |
| POWER LINES | — |
| MARSH OR MUSKEG | — |
| MINES | ⊕ |
| CANCELLED | ⊖ |
| PATENTED S.R.O. | ⊙ |

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Flooding rights on either side of the Mattogami to H.E.P.C.

This township lies within the Municipality of CITY OF TIMMINS.

MINING LANDS
DATE OF ISSUE
007-9-1974
MINISTRY OF NATURAL RESOURCES

2.1550

PLAN NO. M.284

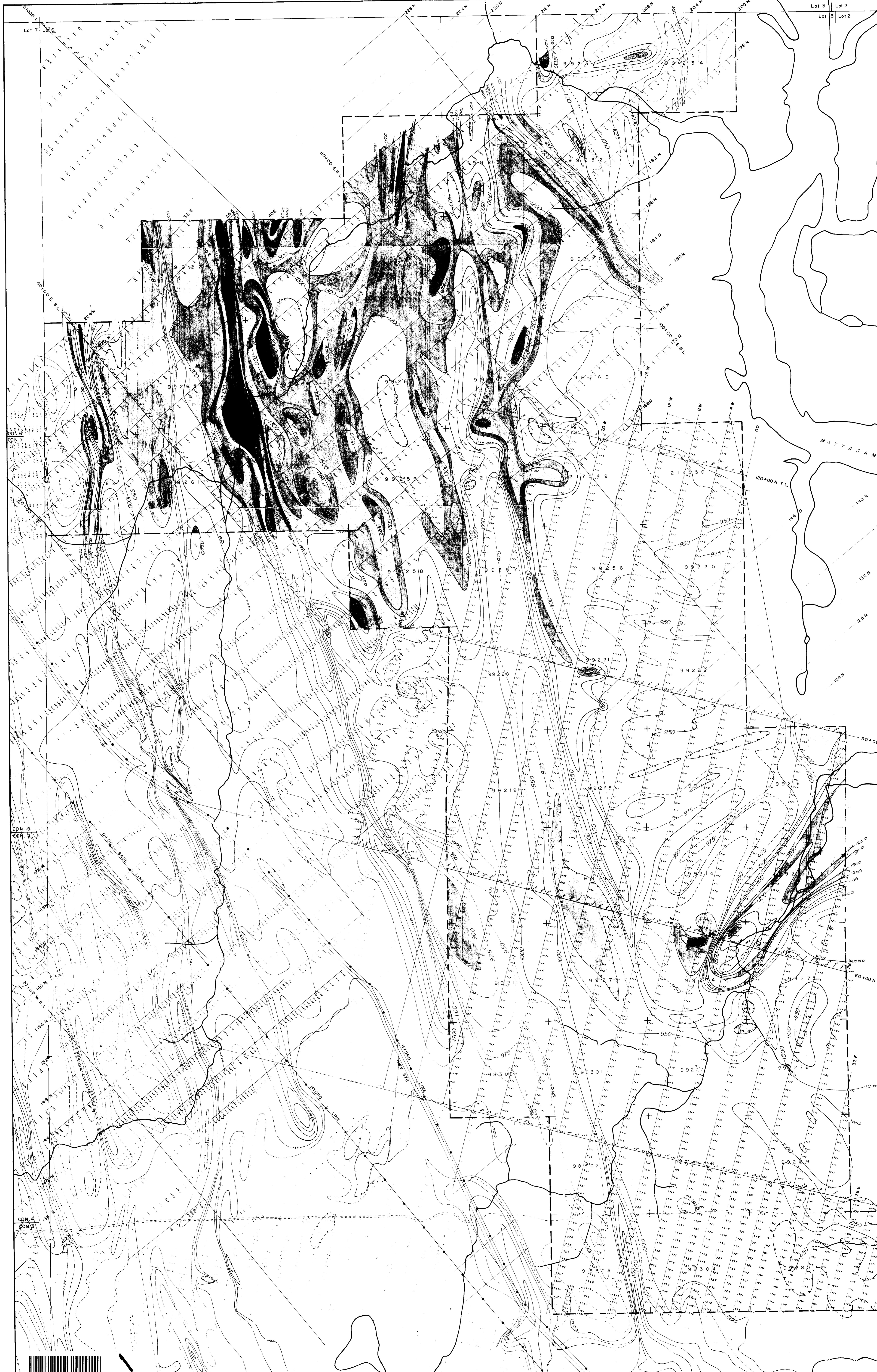
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



200

TRIM LINE

map of em plan



Lot 3 Lot 2
Lot 3 Lot 2

Lot 7

MATTAGAM

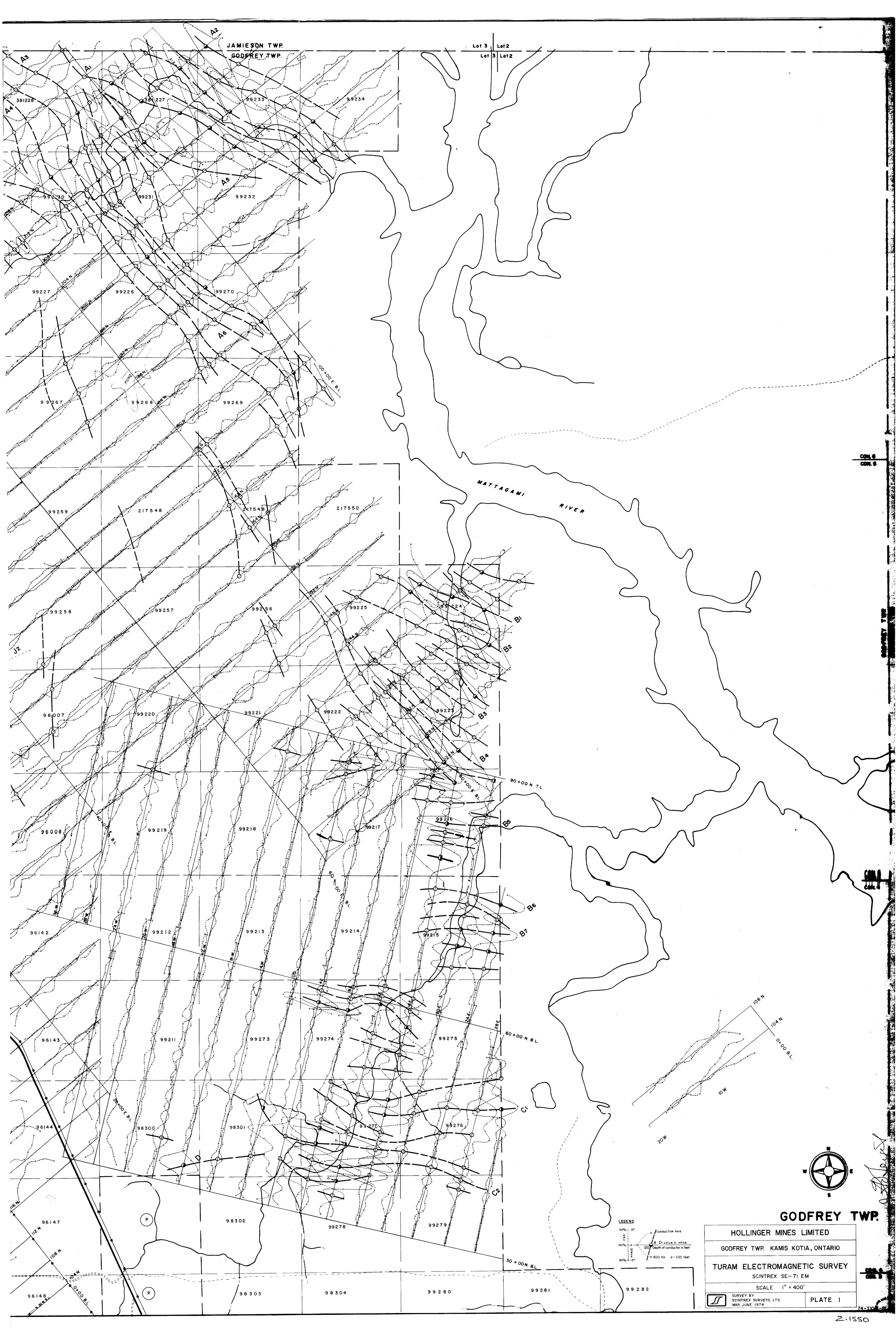
HYDRO LINE
HYDRO W.K. 576

0.100' BASE LINE

CON 5
CON 5

CON 4
CON 3





JAMIESON TWP.
GODFREY TWP.

Lot 3 Lot 2
Lot 1 Lot 2

MATTAGAMI RIVER

GODFREY TWP.

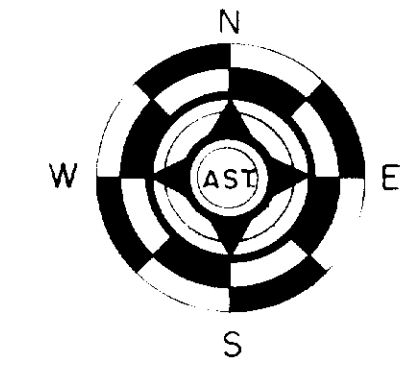
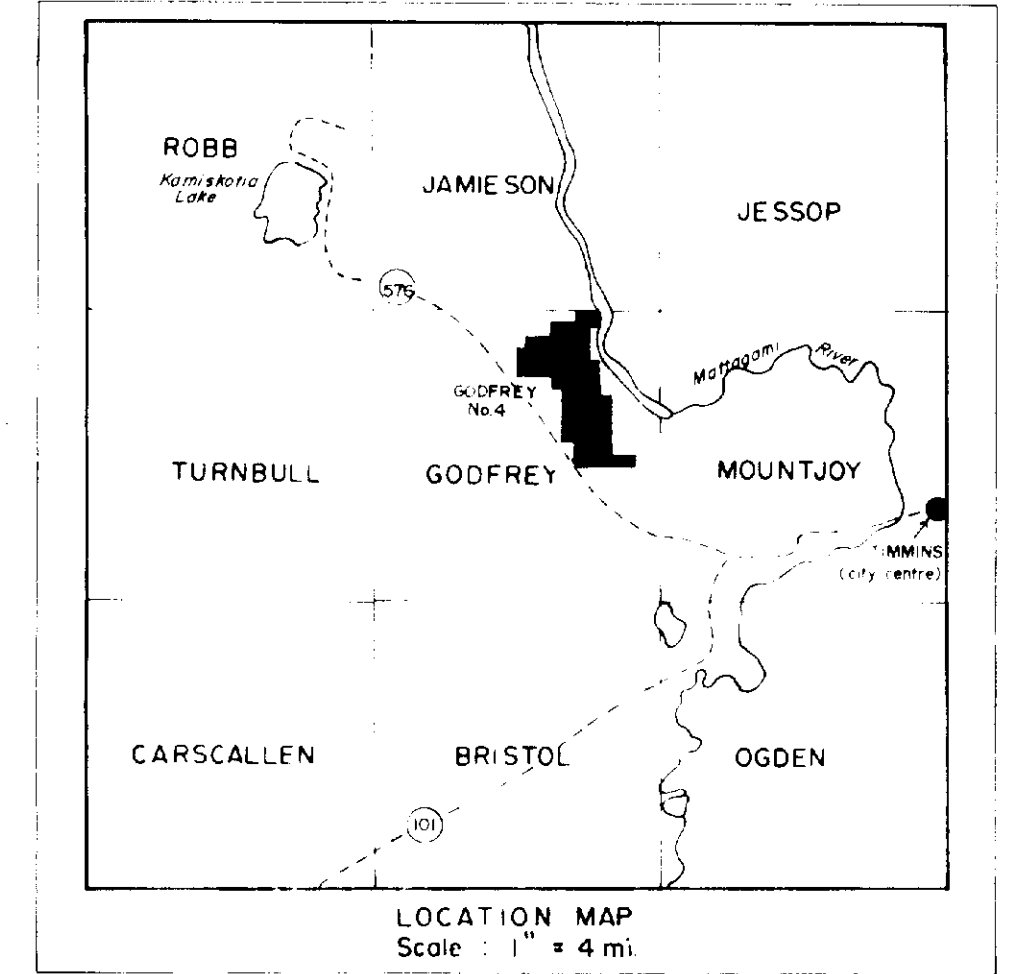
HOLLINGER MINES LIMITED
GODFREY TWP. KAMIS KOTIA, ONTARIO
TURAM ELECTROMAGNETIC SURVEY
SCINTREX SE-71 EM
SCALE 1" = 400'
SURVEY BY SCINTREX SURVEYS LTD. MAR. JUNE 1974
PLATE I

LEGEND
100% - 5°
CONDUCTOR AXIS
8 Ohm value in ohms
120 Depth of conductor in feet
+400 Hz 0-100 feet
90% - 5°

JAMIESON TWP.
GODFREY TWP.

HOLLINGER MINES LTD.
Godfrey Group No. 4
GODFREY TWP. ONT.
GEOMAGNETIC SURVEY
SCALE: 1 INCH TO 400 FEET

NORTH - EAST SHEET



----- Property Boundary

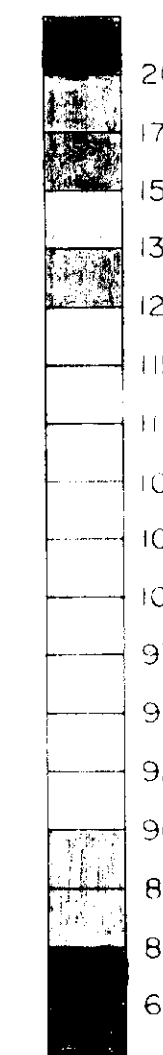
CON. 6
CON. 5

CON. 5
CON. 4

GODFREY TWP.
MOUNTJOY TWP.

CON. 4
CON. 3

CONTOUR INTERVALS
(In gammas)



9/27/05
H. Z. TITLEY
Professional Geophysicist
Geophysicist of Ontario