SURVEYMIN LTD.

SOLITUDE LAKE GROUP

PATRICIA DISTRICT, N-W ONTARIO

REPORT

ON

AN ELECTROMAGNETIC (EM-17) SURVEY

Chester J. Kuryliw, M.Sc., P. Eng.,
Consulting Geologist.

Kenora, Ontario,

August 5, 1976

E-M SURVEY

INDEX

PROPERTY, LOCATION AND ACCESS

The property consists of one contiguous group of 18 claims numbered 362721 - 728 inclusive and 417668 - 677 inclusive located in the Solitude Lake area of the Patricia District of Northwestern Ontario.

The property can be reached from the Trans Canada Highway at Ignace, Ontario by following the Ignace to Pickle Lake Highway northwards for 110 miles, then turning east on an 1/2 mile access road to Fitchie Lake at a provincial camping site. It is about 3 miles along Fitchie Lake to its south end where it reaches the north boundary of the property.

During the late 1960's the Eastern portion of the Claim Group was partly explored by Inco. Air magnetic and E-M surveys by Inco located the magnetic conductors. Inco then carried out follow-up ground geophysics which was then followed by diamond drilling in 1968 to test the conductors. One d. drill hole No. 37663 located a horizon of sulphides well mineralized with significant chalcopyrite and some minor sphalerite. Apparently because the intersection carried sub ore grade copper without any nickel values, further follow-up drilling was not carried out along that conductive horizon.

J. A. Harquail, President of Surveymin Ltd. obtained the ground from prospectors Durnim and Read and in 1976 commissioned this writer to carry out a ground E-M 17 and magnetic survey during June and July, 1976, over a newly cut line grid.

Several conductive horizons were located in this survey and good correlation of magnetic trends with the E-M conductors is noted. The copper bearing conductor termed the "B" conductive horizon was traced as a strong conductor over a length of 1/2 mile at the east end of the property. The same "B" horizon becomes strongly conductive again as the B-1 conductor, a length of at least another 1/2 mile length at the west end of the property. A major program of diamond drilling is recommended following the completion of these surveys.

[illegible]

The instrument used was an EM-17 Electromagnetic survey unit, the horizontal loop mode of operation was used at 300 foot coil separation with the receiver oriented to the north of the transmitter on all lines surveyed.

Basic Principle

The basic principle behind E-M surveying is that certain orebodies are electrically conductive, and can be excited electrically by an "applied primary E-M field." The orebody then produces a "secondary E-M field" which may be detected above ground.

In the E-M 17 the primary field is produced by the transmitting coil which is fed an oscillatory current by the transmitter itself.

The secondary field, together with some primary field coming directly from the transmitter, is picked up by the receiving coil and is measured in the receiver console.

Because the secondary field is quite small compared with the primary it is necessary to "buck out" the primary field in the receiving coil before making secondary field measurements. This is done by means of the reference cable which carries some of the primary signal directly into the receiver. This signal also serves as a reference by which the secondary field can be resolved into its two components, one in-phase (real) and one out-of-phase (imaginary) with the primary, and compared with the primary in amplitude. The relative strengths of the real and imaginary components are a guide to the conductivity-width product of the buried conductor, which is usually related to the quantity of conducting minerals present.

The strength of the secondary field increases as the orebody gets larger or more conductive (higher metallic or electrolytic content). The secondary field is weaker if the orebody is deeper under the ground or if it is covered by a layer of absorbing material such [illegible] water. [illegible]

[illegible] ground surface, it is possible to locate conductive orebodies and tell something about their size and nature.

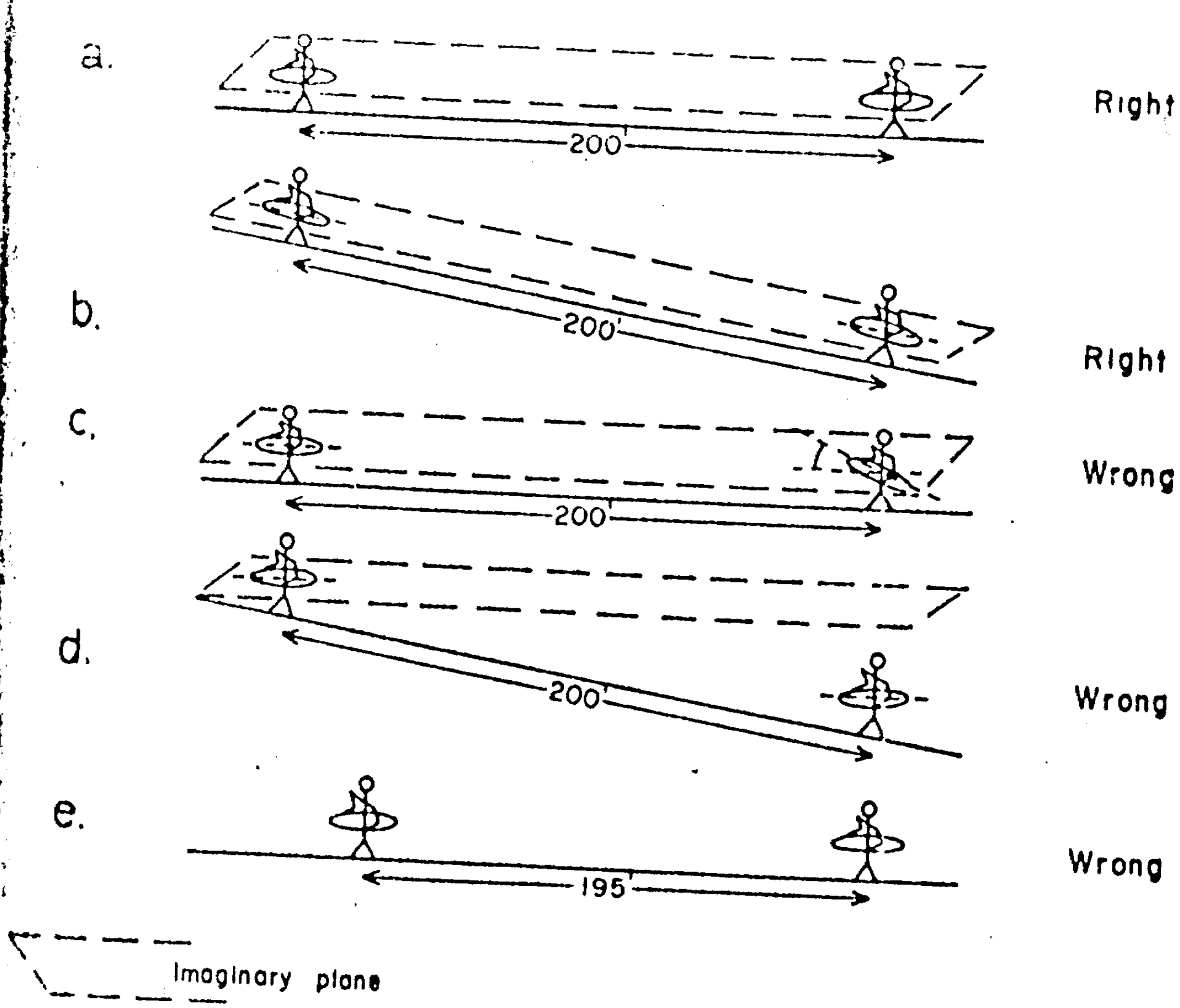
Field Operation

Orientation and Separation. The EM-17 is a two component instrument (real and imaginary), also called in-phase and out-of-phase, as distinct from single-component instruments such as those that measure dip angle only. This is an advantage as it enables the user to discriminate more easily between different types of conductors and to determine more accurately the depth and shape. The primary field from the transmitter is bucked out by the compensation circuit for a particular coil separation and providing the coils are coplanar.

Choice of Coil Separation

The depth of penetration increases with coil separation. On the horizontal-loop mode used in this survey the limits of depth penetration are in the order of 2/3 the coil separation, i.e. for conductors buried with 200 feet of overburden a 400 foot coil separation would be necessary to pick up the conductor. The background effects of conductive overburden are greater at larger coil separations. Accuracy with the EM-17 is still good at a separation of 400 feet though the readings take a little longer to determine, however, the automatic electronic readout of the null on the EM-17 eliminates operator errors common to determining nulls on broad angle nulls common to areas with conductive overburden.

For steeply dipping conductive bodies the horizontal or coplanar configuration results in stronger anomalies where the conductor is buried at a depth of less than one half the coil separation.



ORIENTATION AND SEPARATION EFFECTS

FIGURE 2

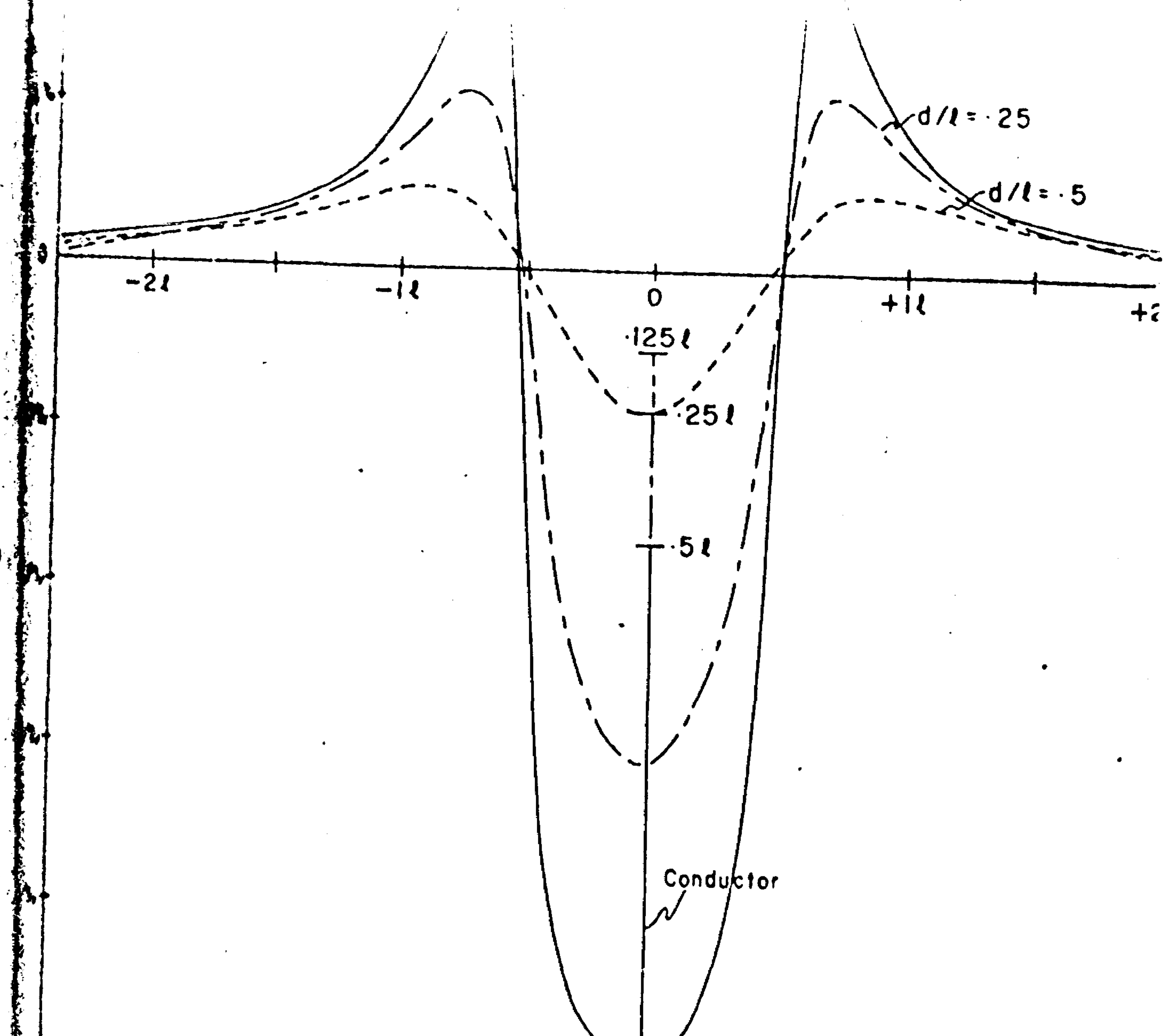
This [illegible] survey was carried out using a horizontal loop method, with a coil separation of [illegible] feet with the receiver oriented to the north of the transmitter on all lines surveyed. Readings were taken at 100 foot stations along lines. The In-Phase (Real) and Out-Of-Phase (imaginary) readings were plotted at the mid point between coils on a plan scale 1" = 200 feet. Profiles were then drawn for each line surveyed. The In-Phase readings were connected by solid line in the profile, the Out-Of-Phase readings by a das hed line. The profiles were plotted using an amplitude of 10% per inch. The axes of the conductors were then correlated from the profiles and marked with heavy lines along their trends. This writer operated the receiver unit while Adrian Kuryliw operated the transmitter on the field survey during July, 1976.

The Effects of Ground Conductivity:

Ground conductivity usually affects the imaginary component more than the real. They can produce either positive or negative effects most commonly negative in the imaginary and positive in the real component. The profiles produced by conductive overburden are commonly broad and "wavy" without distinct shoulders. The anomalies produced are larger at the larger coil separations and they also tend to be negative at the larger coil separations.

The Effects of Magnetite:

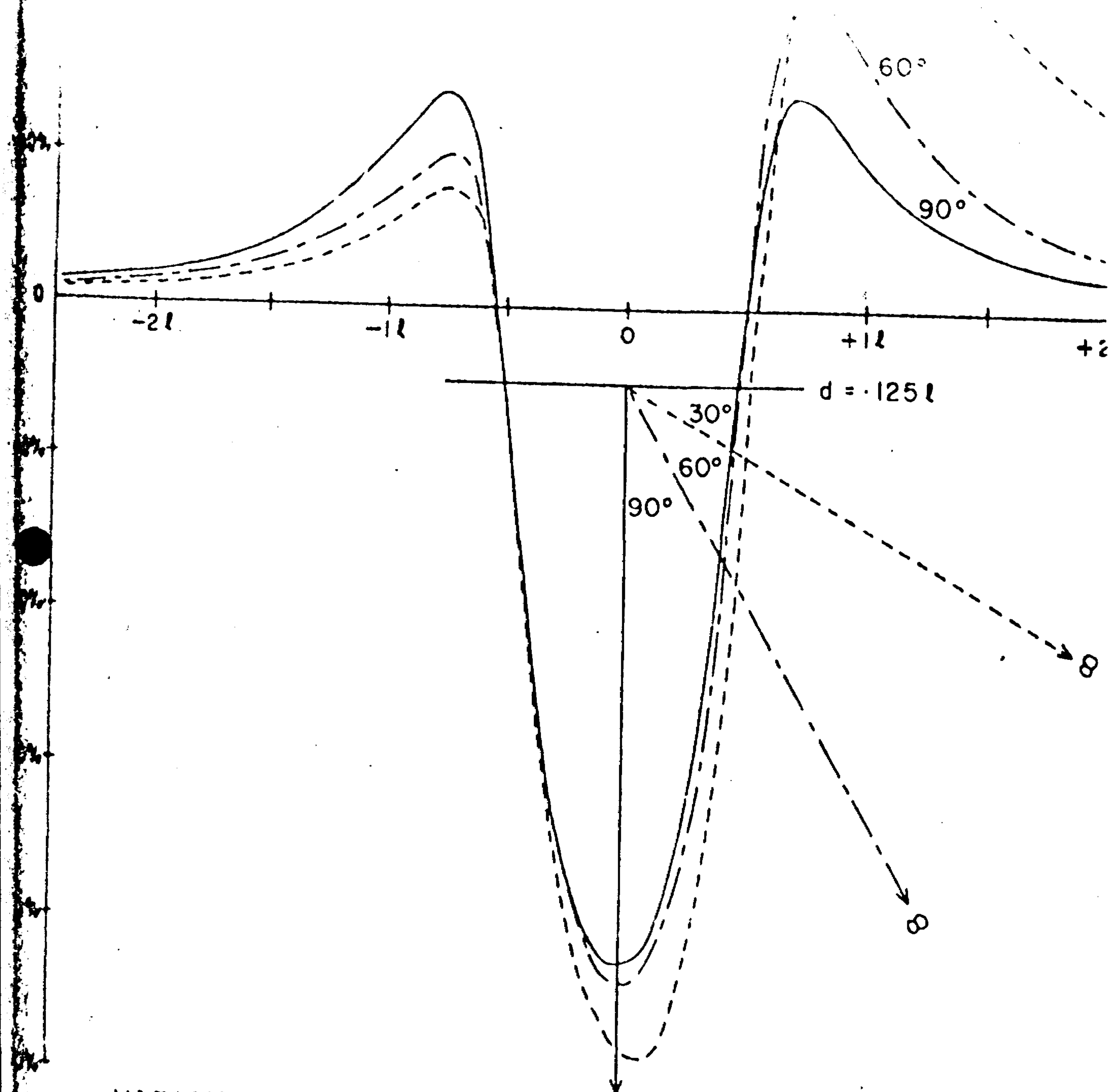
Magnetite in sufficient quantities at least 30% of volume can cause reversal of the real component with little or no anomaly in the imaginary component. If such a body is also conductive the real component may go positive or negative depending on the relative contributions of the conductivity and magnetic susceptibility effects.



VARIATION IN ANOMALY WITH DEPTH

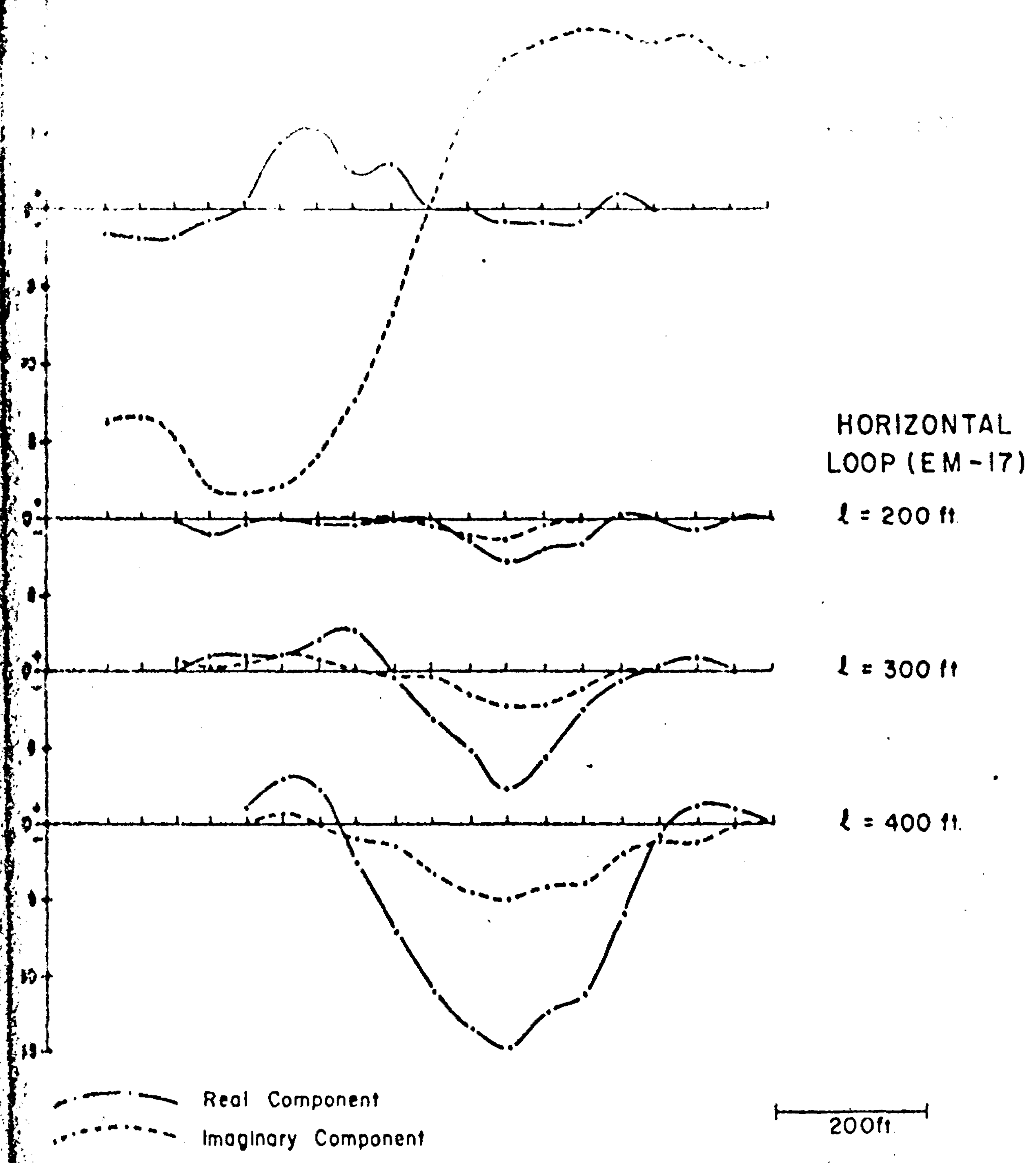
COPLANAR SYSTEM

FIGURE 3a



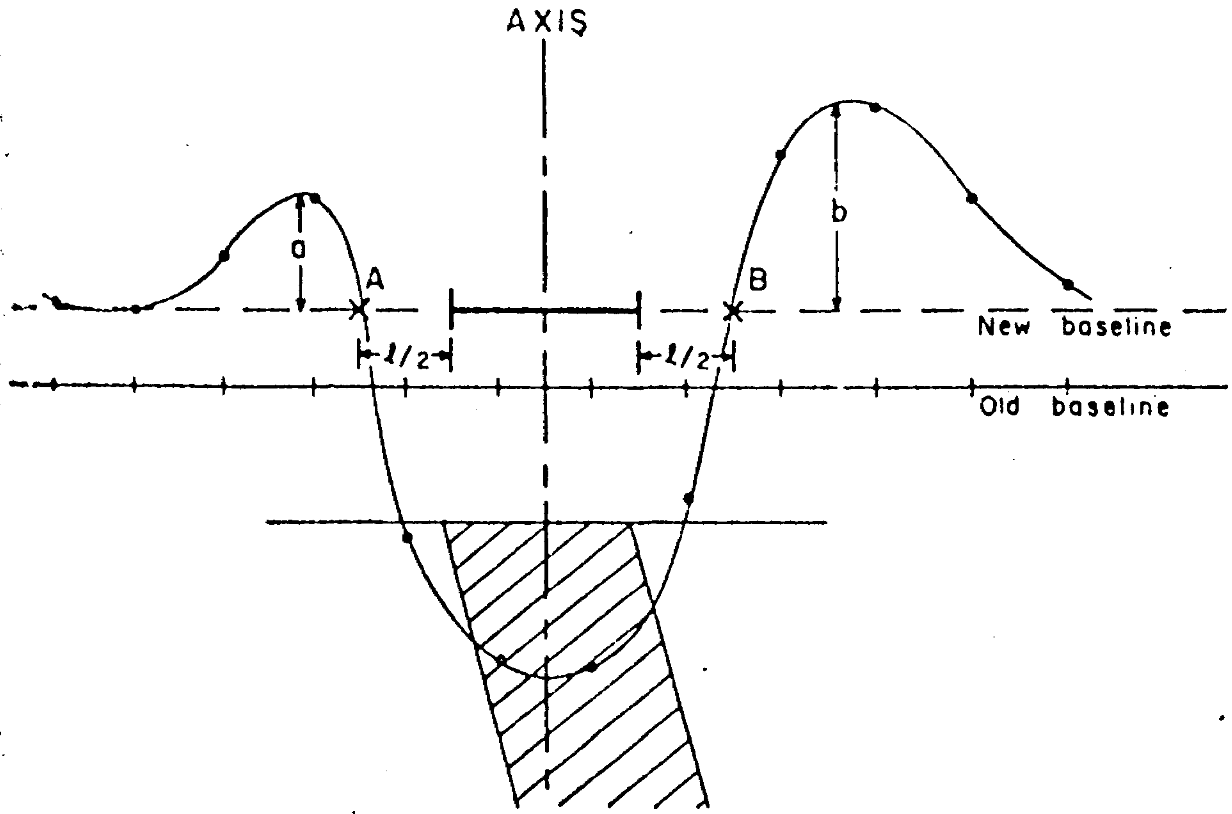
VARIATION IN ANOMALY
WITH DIP
COPLANAR SYSTEM

FIGURE 4a



EM-17 PROFILES, LOUVICOURT TWP. QUEBEC

FIGURE 6



FINDING CONDUCTOR LIMITS

FIGURE 8

GENERAL REGIONAL GEOLOGY

Precambrian rocks underlie the area and consist largely of gneissic granites and syenites with some rounded stocks and batholiths of granite or syenite. Lesser areas of precambrian volcanic - sedimentary areas remain, these volcanic areas usually have steep E-W trends except where they have warped trends surrounding a circular diapiric granite intrusion.

The area is covered by a preliminary geologic map P-354 known as the MINISS LAKE SHEET, scale 1" = 2 miles which was compiled by John C. Davies and A. P. Pryslak issued in 1966.

LOCAL GEOLOGY

[illegible]

[illegible] outcrops [illegible] made during the E-M survey.

The property is largely underlain by basic volcanic tuffs that are finely banded and are composed of amphibole - chlorite and narrower rhyolite tuff bands. The tuffs trend W-N-westerly at the western half of the property with flat dips of 30° - 40° southwards. To the south of Solitude Lake the rocks are faulted and folded so that they change trend from E-W to E-N-easterly towards the eastern portion of the property. The tuffs maintain a flattish dip of from 35° to 45° southwards. About 5 intermittently conductive horizons were located. The most northerly conductor marked the "A" conductor is about 200 feet wide, highly conductive and magnetic at the eastern half of the property and appears to immediately overlie the Solitude Lake granite. A strong northerly trending fault is interpreted to follow the west side of Solitude Lake and it extends southwards along a topgraphic ravine. The fault disrupts the continuity of all conductors to the south of the "A" conductor. The magnetic pattern also shows a similar shift. A hinge fault movement traced along the fault hinged at the "A" conductor drops the southerly portion of the easterly block to show an apparent northerly shift of the southerly conductors within that block. Fault drag is also apparent where the southerly portion of the easterly block abuts the fault. Similar fault drag is evident in the magnetic pattern.

Topographically from OW to 40W the overburden is relatively shallow with outcrops quite common. From OE to 40E extensive deep sand and moraine covered ridges occur. From 40E - 64E the area is relatively swampy.

East of the fault, conductors "A" and "B" are wedged apart by a wedge shaped intrusion of quartz-feldspar-porphyry with the thin edge of the wedge at the fault so that the A and B conductors diverge eastwards from the fault. The "B" conductor

roughly parallels the conductors [illegible], [illegible], [illegible], [illegible], [illegible] to the [illegible] of the "B"
conductor.

Previous exploration (one drill hole) discovered significant grade and widths of copper mineralization in the B conductor stratigraphic horizon. It is speculative at this stage of exploration to assign a priority to a feature favourable to the deposition of that copper mineralization, however, in addition to the favourability of the "B" conductors horizon, other factors may be found to be favourable such as:-

(1) The quartz feldspar porphyry wedge intrusion that immediately underlies the tuffs at the site of the copper mineralization,

(2) The occurrence of the northerly trending Solitude Lake Fault,

(3) The occurrence of a gentle "V" shaped fold in the trend of the tuffs below Solitude Lake.

The "B" conductive horizon extends strongly for a 1/2 mile length immediately east of the Solitude Lake Fault, then it re-emerges as a strong conductor the B-1 starting 1/2 mile west of the fault and then it extends for over 1/2 mile in length westwards. Such a strong conductive horizon could readily contain a copper ore deposit since strong sub ore copper mineralization is known to be present at one location in the "B" horizon.

[illegible]

[illegible]

East of the Solitude Lake Fault this conductor trends E-W and is at least 200 feet wide, it extends 1/2 mile eastwards and is still open eastwards. It has a strong magnetic high correlation of about 2000 gammas above background. A previous drill hole indicates this conductor is largely pyrrhotite.

Conductor A-1 is a long continuous conductor with a magnetic high correlation. Geologically the A and A-1 conductor appears to occupy the northern edge of the basic tuffs that overlie the Solitude Lake Granitic gneiss.

Conductor "B" and "B-1"

The "B" conductor extends for 1/2 mile from 30E to 56E, it is strongly conductive from 36E to 48E. This conductor was indicated to carry copper mineralization from a hole drilled at 48+ 70E. To the East of 48E the conductor has a magnetic correlation of about 300 gammas above background. The strongly conductive portion of this conductor to the west of 48E exhibits a local strongly magnetic area at line 42E. This conductor immediately overlies a quartz-feldspar porphyry intrusion, which appears to be a highly favourable factor geologically. This conductor should be systematically drilled over its entire length.

The "B-1" conductor reappears to the west of the Solitude Lake Fault. It starts at line O-West and extends strongly to 24W where it is still open westwards beyond the property. There is some intermittent magnetic-high correlation with the conductor. This conductor should be investigated by drilling.

Conductor "C" and "C-1"

This conductor occurs about 400 feet south of conductor B and extends from [illegible] - 44E. It is not a particularly strong conductor, [illegible]

[illegible] ratio [illegible]

Conductor "C-1" was located as a very strong conductor only on line 16W. Both the C and C-1 conductors are lower priority drilling targets.

Conductor "D"

This conductor occurs 200' south of conductor C and was picked up on lines 44E and 48E, it is a poor conductor with a low In-Phase to Out-Of-Phase ratio.

Conductor "E" and "E-1"

Conductor "E" occurs 800' south of conductor B and extends from lines 24E to 36E, it has a strong magnetic high correlation. It shows a strong fault drag effect immediately east of the Solitude Lake fault.

The E-1 conductors show up as very strong conductors across lines 4E - 12E and across lines 4W - 16W.

Conductor F and F-1

Conductor "F" lies about 200 feet south of conductor E. It is quite weak. Conductor F-1 is a fairly strong short conductor which crosses lines 8W and 12W.

SURVEYMIN MINES LTD.

DRILL HOLE	DIP	BEARING	[illegible]	DEPTH	CONDUCTOR
(1)	-55°	N	Line 48E 11 + 50S	250'	B
(2)	-55°	N	Line 46E 11 + 00S	250'	B
(3)	-55°	N	Line 44E 10 + 50S	250'	B
(4)	-55°	N	Line 50E 12 + 00S	250'	B
(5)	-55°	N	Line 52E 12 + 50S	250'	B
(6)	-55°	N	Line 42E 10 + 00S	250'	B
(7)	-55°	N	Line 36E 9 + 00S	250'	B
(8)	-55°	N	Line 44E 8 + 00S	550'	B, C & D
(9)	-55°	N	Line 4W 7 + 50N	400'	B-1 and A-1
(10)	-55°	N	Line 12W 12 + 50N	400'	B-1 and A-1
			SUB-TOTAL	3,100'	
II Second Level Priority					
(11)	-55°	N	Line 8E 13 + 50S	400'	F-1 and E-1
(12)	-55°	N	Line 12W 2 + 00S	250'	E-1
(13)	-55°	N	Line 16W	250'	C-1
			SUB-TOTAL	900'	

D. DRILLING TOTAL FOOTAGE 4,000'

CONCLUSIONS

The copper bearing "B" conductive horizon deserves a concentrated d. drill exploration program. The geology is favourable, the presence of a footwall quartz-feldspar-porphyry below the host rock tuffs. The presence of strong faulting and folding in the area are all favourable factors. Investigative drilling should also be carried out to check out the "B-1" westward extension of the "B" conductive horizon. Three drill holes are recommended to investigate the other conductors at choice locations.

RECOMMENDATIONS

That a total footage of 4000 feet of diamond drilling be carried out comprising 10 drill holes to test the "B" and "B-1" conductor horizon. Three additional drill holes are recommended to test other conductors at choice locations. The discovery of an ore intersection would necessarily concentrate further drilling efforts to that site and would require more drilling than recommended here.

Total: 4000 feet of d. drilling in 13 d. drill holes

Estimated cost of d. d. contract		
All inclusive at $13.50 per foot		$54,000.00
Engineering and assaying		8,000.00
Contingencies		3,000.00
	TOTAL	$65,000.00

REGISTERED PROFESSIONAL ENGINEER
C. J. KURYLIW

Chester J. Kuryliw, M.Sc., P. Eng.

DECLARATION

I, Chester J. Kuryliw of 223 Minto Drive, Kenora, Ontario, do hereby declare that I have continuously practiced the profession of geology for the past 27 years and that I hold a degree of Bachelor of Science received in 1949 from the University of Manitoba and the degree of Master of Science in Geology received from that same University in 1966 and that I am a member in good standing of the Professional Engineers of Ontario.

I do hereby declare that this report is based upon personal work in the field and in the plotting and study of results.

August 5, 1976

Chester J. Kuryliw, M.Sc., P. Eng.
Consulting Geologist.

RECEIVED
AUG 26 1976
PROJECTS UNIT

SURVEYMIN LTD.

SOLITUDE LAKE GROUP

PATRICIA DISTRICT, N-W ONTARIO

REPORT

ON

A MAGNETIC SURVEY

Chester J. Kuryliw, M.Sc., P. Eng.,
Consulting Geologist.

Kenora, Ontario,
August 5, 1976

MAGNETIC SURVEY

INDEX

PROPERTY, LOCATION AND ACCESS

The property consists of one contiguous group of 18 claims numbered 362721 - 728 inclusive and 417668 - 677 inclusive located in the Solitude Lake area of the Patricia District of Northwestern Ontario.

The property can be reached from the Trans Canada Highway at Ignace, Ontario by following the Ignace to Pickle Lake Highway northwards for 110 miles, then turning east on an 1/2 mile access road to Fitchie Lake at a provincial camping site. It is about 3 miles along Fitchie Lake to its south end where it reaches the north boundary of the property.

HISTORY

During the late 1960's the Eastern portion of the Claim Group was partly explored by Inco. Air magnetic and E-M surveys by Inco located the magnetic conductors. Inco then carried out follow-up ground geophysics which was then followed by diamond drilling in 1968 to test the conductors. One d. drill hole No. 37663 located a horizon of sulphides well mineralized with significant chalcopyrite and some minor sphalerite. Apparently because the intersection carried sub ore grade copper without any nickel values, further follow-up drilling was not carried out along that conductive horizon.

J. A. Harquail, President of Surveymin Ltd. obtained the ground from prospectors Durnim and Read and in 1976 commissioned this writer to carry out a ground E-M 17 and magnetic survey during June and July, 1976, over a newly cut line grid.

Several conductive horizons were located in this survey and good correlation of magnetic trends with the E-M conductors is noted. The copper bearing conductor termed the "B" conductive horizon was traced as a strong conductor over a length of 1/2 mile at the east end of the property. The same "B" horizon becomes strongly conductive again as the B-1 conductor, a length of at least another 1/2 mile length at the west end of the property. A major program of diamond drilling is recommended following the completion of these surveys.

A Sharpe MF-1 Fluxgate magnetometer was used to read the base line and cross lines. A base station was established at 0-N, 0-E on the grid and was arbitrarily set at 210 gammas. The readings were recorded to the nearest half division on the scale (10 gammas). All readings were taken with the instrument levelled and the operator facing north. The base line was read then re-checked and the base station was read at 1 hour intervals, to provide readings for corrections in diurnal variations. After the base line stations were established, picket cross lines stations were read then checked in at the base line station together with a time check. This procedure was repeated each time the base line was crossed so that diurnal corrections were made possible. The base station at 0-0 was checked at the start and completion of each day.

The corrected readings were plotted in gammas above or below the arbitrary base level. The plotted readings indicate changes in the vertical component of the earths magnetic field. Along all lines readings were taken at 50 foot stations. The corrected readings were plotted on a plan scale 1" = 200' and contoured at 200 gamma intervals between 0 to 1000 gammas. Below 0 gammas a heavy line contour indicates a strong negative anomaly. At 1000 gammas a heavy line contour outlines a strong positive magnetic anomaly. The magnetic survey was carried out in the field by Adrian Kuryliw, under the supervision of this writer who corrected and plotted the results.

GENERAL REGIONAL GEOLOGY

Precambrian rocks underlie the area and consist largely of gneissic granites and syenites with some rounded stocks and batholiths of granite or syenite. Lesser areas of precambrian volcanic - sedimentary areas remain, these volcanic areas usually have steep E-W trends except where they have warped trends surrounding a circular diapiric granite intrusion.

The area is covered by a preliminary geologic map P-354 known as the MINISS LAKE SHEET, scale 1" = 2 miles which was compiled by John C. Davies and A. P. Pryslak issued in 1966.

LOCAL GEOLOGY

The property is largely underlain [illegible] basic volcanic tuffs that are finely banded and are composed of amphibole - chlorite and narrower rhyolite tuff bands. The tuffs trend W-N-westerly at the western half of the property with flat dips of 30° - 40° southwards. To the south of Solitude Lake the rocks are faulted and folded so that they change trend from E-W to E-N-easterly towards the eastern portion of the property. The tuffs maintain a flattish dip of from 35° to 45° southwards. About 5 intermittently conductive horizons were located. The most northerly conductor marked the "A" conductor is about 200 feet wide, highly conductive and magnetic at the eastern half of the property and appears to immediately overlie the Solitude Lake granite. A strong northerly trending fault is interpreted to follow the west side of Solitude Lake and it extends southwards along a topgraphic ravine. The fault disrupts the continuity of all conductors to the south of the "A" conductor. The magnetic pattern also shows a similar shift. A hinge fault movement traced along the fault hinged at the "A" conductor drops the southerly portion of the easterly block to show an apparent northerly shift of the southerly conductors within that block. Fault drag is also apparent where the southerly portion of the easterly block abuts the fault. Similar fault drag is evident in the magnetic pattern.

Topographically from OW to 40W the overburden is relatively shallow with outcrops quite common. From OE to 40E extensive deep sand and moraine covered ridges occur. From 40E - 64E the area is relatively swampy.

East of the fault, conductors "A" and "B" are wedged apart by a wedge shaped intrusion of quartz-feldspar-porphyry with the thin edge of the wedge at the fault so that the A and B conductors diverge eastwards from the fault. The "B" conductor

roughly parallel to conductors C, E, I, I, G to the south of the "B"
conductor.

Previous exploration (one drill hole) discovered significant grade and widths of copper mineralization in the B conductor stratigraphic horizon. It is speculative at this stage of exploration to assign a priority to a feature favourable to the deposition of that copper mineralization, however, in addition to the favourability of the "B" conductors horizon, other factors may be found to be favourable such as:-

(1) The quartz feldspar porphyry wedge intrusion that immediately underlies the tuffs at the site of the copper mineralization,

(2) The occurrence of the northerly trending Solitude Lake Fault,

(3) The occurrence of a gentle "V" shaped fold in the trend of the tuffs below Solitude Lake.

The "B" conductive horizon extends strongly for a 1/2 mile length immediately east of the Solitude Lake Fault, then it re-emerges as a strong conductor the B-1 starting 1/2 mile west of the fault and then it extends for over 1/2 mile in length westwards. Such a strong conductive horizon could readily contain a copper ore deposit since strong sub ore copper mineralization is known to be present at one location in the "B" horizon.

The magnetic survey was successful in indicating the trends of the basic volcanic tuffs and also magnetic trends of conductive horizons. The wide "A" conductor immediately east of the Solitude Lake fault is strongly magnetic. The "E" conductive horizon is also moderately magnetic. To the east of the fault the "B" conductive horizon is lightly magnetic to the east of line 48E and also has a local magnetic anomaly on line 42E at the "B" conductor horizon.

The general trend of the fault is marked by generally low magnetics by the termination of narrow strongly magnetic trends and by fault-drag trend changes in rocks that abut immediately east of the fault.

In the area of the intersection of copper mineralization by the Inco drill hole the conductor indicates magnetics about 300 gammas above background.

CONCLUSIONS

The copper bearing "B" conductive horizon deserves a concentrated d. drill exploration program. The geology is favourable, the presence of a footwall quartz-feldspar-porphyry below the host rock tuffs. The presence of strong faulting and folding in the area are all favourable factors. Investigative drilling should also be carried out to check out the "B-1" westward extension of the "B" conductive horizon. Three drill holes are recommended to investigate the other conductors at choice locations.

RECOMMENDATIONS

That a total footage of 4000 feet of diamond drilling be carried out comprising 10 drill holes to test the "B" and "B-1" conductor horizon. Three additional drill holes are recommended to test other conductors at choice locations. The discovery of an ore intersection would necessarily concentrate further drilling efforts to that site and would require more drilling than recommended here.

Total: 4000 feet of d. drilling in 13 d. drill holes

Estimated cost of d. d. contract	
All inclusive at $13.50 per foot	$54,000.00
Engineering and assaying	8,000.00
Contingencies	3,000.00
TOTAL	$65,000.00

REGISTERED PROFESSIONAL ENGINEER
C. J. KURYLIW
PROVINCE OF ONTARIO

Chester J. Kuryliw, M.Sc., P. Eng.

DECLARATION

I, Chester J. Kuryliw of 223 Minto Drive, Kenora, Ontario, do hereby declare that I have continuously practiced the profession of geology for the past 27 years and that I hold a degree of Bachelor of Science received in 1949 from the University of Manitoba and the degree of Master of Science in Geology received from that same University in 1966 and that I am a member in good standing of the Professional Engineers of Ontario.

I do hereby declare that this report is based upon personal work in the field and in the plotting and study of results.

REGISTERED PROFESSIONAL ENGINEER
C. J. KURYLIW
PROVINCE OF ONTARIO

August 5, 1976

Chester J. Kuryliw, M.Sc., P. Eng.
Consulting Geologist.

52J10SE0012 52J10SE0014 SOLITUDE LAKE

900

File ____

Ministry of Natural Resources

Ontario

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.

RECEIVED

RECEIVED
AUG 26 1976
PROJECTS UNIT

AUG 25 1976
LANDS ADMINISTRATION BRANCH

Type of Survey(s) Ground electromagnetic Survey

Township or Area Solitude Lake - M2054

Claim Holder(s) Surveymin Ltd.
Suite 908, 330 Bay Street, Toronto

Survey Company CHESTER J. KURYLIW MSc., P. ENG.

Author of Report CHESTER J. KURYLIW MSc., P. ENG.
CONSULTING GEOLOGIST

Address of Author 223 MINTO DR.
KENORA, ONT.

Covering Dates of Survey June 15 - August 5, 1976
(linecutting to office)

Total Miles of Line Cut 18

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	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: Aug 5, 76 SIGNATURE: C J Kuryliw
Author of Report or Agent

L.D 63.1489 & also

Res. Geol. ____ Qualifications on this file –

Previous Surveys

File No.	Type	Date	Claim Holder
63.3456 not for assessment credits			

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
PA	362721 ✓
	722 ✓
	723 ✓
	724 ✓
	725 ✓
	726 1/3
	727 ✓
	728 ✓
	417668 ✓
	669 ✓
	670 ✓
	671 ✓
	672 ✓
	673 ✓
	674 ✓
	675 ✓
	676 ✓
	677 ✓

If space insufficient, attach list

TOTAL CLAIMS 18

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 850 **Number of Readings** 810

Station interval 100' **Line spacing** 400'

Profile scale 1" = 10%

Contour interval

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument Geonics EM-17

Coil configuration Horizontal mode, receiver to north, trans to S

Coil separation 300

Accuracy ± 1%

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

Frequency 1600 CPS (specify V.L.F. station)

Parameters measured In phase, out of phase components

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

File 2.2186

Ministry of Natural Resources

Ontario

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

RECEIVED

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.

RECEIVED AUG 26 1976 PROJECTS UNIT

LANDS ADMINISTRATION BRANCH

Type of Survey(s) Ground Magnetic Survey

Township or Area Solitude Lake - M-2054

Claim Holder(s) Surveymin Ltd.
Suite 908, 330 Bay Street, Toronto, Ont.

Survey Company CHESTER J. KURYLIW MSc. P.ENG

Author of Report CHESTER J. KURYLIW MSc., P. ENG.
CONSULTING GEOLOGIST

Address of Author 223 MINTO DR.
KENORA, ONT.

Covering Dates of Survey June 15 - August 5, 1976
(linecutting to office)

Total Miles of Line Cut 18 miles

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	40
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: Aug 5, 76 SIGNATURE: C J Kuryliw
Author of Report or Agent

63.1489 & also

Res. Geol. ______ Qualifications On this file —

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
PA	362721
	722
	723
	724
	725
	726 1/3 No
	727
	728
PA	417668
	669
	670
	671
	672
	673
	674
	675
	676
	677

If space insufficient, attach list

TOTAL CLAIMS 18

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 1870 Number of Readings 1872

Station interval 50 feet Line spacing ______

Profile scale 400 feet

Contour interval Contour interval 200 gammas

MAGNETIC

Instrument Sharpe MF1 Fluxgate magnetometer

Accuracy – Scale constant ± 20 gammas

Diurnal correction method base line read and corrected to base stn., lines corrected to base line.

Base Station check-in interval (hours) ______

Base Station location and value 0-N, 0-E on grid chosen at 210 gammas

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 ______

Ontario

Ministry of
Natural
Resources

March 14, 1977

Our file number 2.2186
Your file number

Mr. Harry L. Bell
Mining Recorder
Ministry of Natural Resources
Box 669
Court House
Sioux Lookout, Ontario
POV 2TO

Dear Sir:

Re: Mining Claims Pa. 362721 et al, Solitude Lake, File 2.2186

The Geophysical (Electromagnetic & Magnetometer) assessment work credits as shown on the attached statement have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

J. R. McGinn, Director
Lands Administration Branch

Whitney Block, Room 1617
Queen's Park
Toronto, Ontario M7A 1X1
Phone: 416-965-6918

DN/mw

cc: Surveymin Limited
Toronto, Ontario

cc: C. J. Kuryliw,
Kenora, Ontario

cc: Resident Geologist
Sioux Lookout, Ontario

Recorded Holder [illegible] Limited

Township [illegible] Lake

Type of survey and number of Assessment days credit per claim	Mining Claims
Geophysical	P. 362721 to 28 inclusive
Electromagnetic 20 days	417668 to 77 "
Magnetometer 40 days	
Radiometric ____ days	
Induced polarization ____ days	
Section 86 (18) ____ days	
Geological ____ days	
Geochemical ____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	

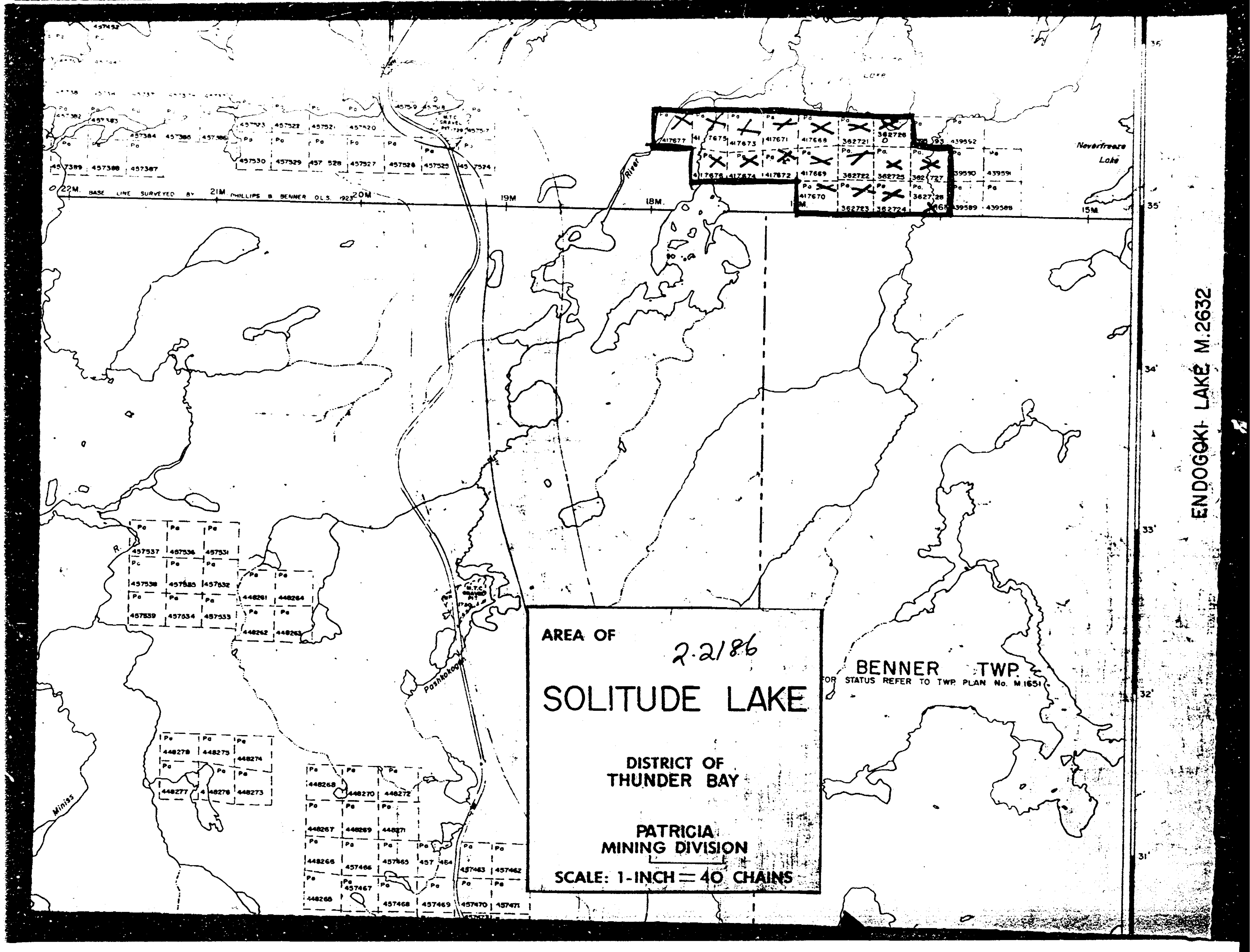
Notice of intent to be issued:

☐ Credits have been reduced because of partial coverage of claims.

☐ Credits have been reduced because of corrections to work dates and figures of applicant.

☐ No credits have been allowed for the following mining claims as they were not sufficiently covered by the survey:

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40;


AREA OF
2-2186
SOLITUDE LAKE
DISTRICT OF
THUNDER BAY
PATRICIA
MINING DIVISION
SCALE: 1-INCH = 40 CHAINS
BENNER TWP.
FOR STATUS REFER TO TWP. PLAN No. M.1651
ENDOGOKI LAKE M.2632
Neverfreeze
Lake
River
Poshkokogan
Miniss
22M. BASE LINE SURVEYED BY
21M PHILLIPS & BENNER O.L.S. 1923
20M
19M
18M.
15M
35'
34'
33'
32'
31'

FOR ADDITIONAL

INFORMATION

SEE MAPS:

52J/10SE-0014 #(1-2)

52J/10 SE-0014 #1


SOLITUDE LAKE
FITCHIE L.
N
BASE LINE 00N
TWP LINE
BENNER TWP.
SYMBOLS
Bog
Muskeg
Claim post
Old D. Drill site
Interpreted Fault
Axis of E.-M. CONDUCTOR
INSTRUMENT: Geonics E.-M. 17
FREQUENCY: 1600 C.P.S.
ORIENTATION: Horizontal mode, 300' Coil Separation
On all lines Receiver to North, Transmitter to South
READINGS: Plotted at mid point between coils
IN PHASE (Real) Readings
PROFILE: Drawn in solid line
OUT OF PHASE (Imaginary) Readings
PROFILE: Drawn in dash line
SURVEYMIN LTD.
SOLITUDE LAKE PROPERTY
PATRICIA REGION, N.W. ONTARIO
PLAN
OF
ELECTRO-MAGNETICS
SCALE: 1" = 200'
JULY 1976.
CHESTER J. KURYLIW
LOCATION MAP
...YMIN CLAIM GROUP
1" = 1/2 mile
M-2054
SOLITUDE LAKE
BENNER TWP.
M-1651
52 J/10 SE - 0014 #2