52-G-14
MADSEN RED LAKE GOLD MINES LTD. OPTION
STURGEON LAKE, Ontario
GEOLOGICAL AND GEOPHYSICAL REPORTS

Revised March, 1973

Toronto, Ontario

W. Benham

H. Beckmann

RIO TINTO CANADIAN EXPLORATION LIMITED
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SUMMARY

During July 1972, detailed mapping, magnetometer and EM surveys were carried out on the Madsen Red Lake Gold Mines Limited optioned property in the Sturgeon Lake Area, Northwestern Ontario.

The geological mapping showed the southern part of the property to be underlain by andesites, diorites and quartz diorites. The complete lack of outcrop in the northern claims prevented an accurate geological assessment of this area which is interpreted as being underlain by extensions of the acid volcanics that host the Mattabi Mines Limited base metal deposit.

The magnetometer survey was carried out over the entire land portion of the claim group indicating banded, positive anomalies in an area underlain by diorite, while the portion of the property, projected to be underlain by rhyolites returned very little magnetic contrast.

The peninsula extending into Young Lake was surveyed with the SE 600 EM, employing the parallel line method, no actual cross overs were indicated, but a series of unidirectional tilt suggest some zoning.

A showing on line 8 East at 30 South was investigated and tested for conduction along strike by a turam SE 71 survey.
on 6 lines, but no conduction was detected.

During the 1972-73 winter season, the geophysical surveys were extended to arrive at total magnetometer coverage SE 600 EM coverage of the Sturgeon Lake portion and turnam SE 71 coverage of the favourable horizon north of and including Young Lake.

Only minor, surficial conduction was detected.

Interpretation of the magnetic data would correlate the northern limit of the andesites with a magnetic positive anomaly within the Young Lake Bay.
INTRODUCTION

This report describes the detailed geological mapping magnetometer and EM surveys carried out by Rio Tinto Canadian Exploration Limited, during July, 1972 on the Madsen Red Lake Gold Mines Limited optioned property in the Sturgeon Lake area of northwestern Ontario.

Previous reconnaissance mapping and the compilation of assessment file and government reports of the Sturgeon Lake area indicated that the property may be underlain by westward extensions of the favourable acid volcanics that host the Mattabi Mine Ltd. base metal deposit.

PROPERTY, ACCESS AND LOCATION

The property consists of fifty contiguous claims in the Sturgeon Lake area, District of Kenora, Patricia Mining Division, northwestern Ontario.

Its location is shown on Map L-2589, accompanying this report.

Access is by Highway 599, which crosses the southern claims, from Ignace, 45 miles to the south, and by boat via Elbow and Young Lakes.

Madsen acquired the ground from Lake-O-Explorations Limited, who staked the claims in November 1969, during the
rush that followed the discovery of a massive sulphide, base metal deposit, nine miles to the east by Mattagami Lake Mines Limited in September 1969.

Rio Tinto presently holds the property under a working option agreement effective April 30, 1976.

PREVIOUS WORK

Madsen had the claims covered by a line grid and EM 16 V.L.F. survey in early 1970. This survey detected several overburden and shear zone conductors, but no strong bedrock conductors were detected.

Three old trenches have been blasted west of L 8 E at 29+00 S to expose a rusty silicified shear zone in quartz diorites. Grab samples assaying low copper and nickel values have been reported.

Madsen put down five packsack holes. Three in the vicinity of the above showing and two on an island in Sturgeon Lake to test a northeast shear zone indicated by the EM 16 survey. Diorites, quartz dikes and andesites with minor disseminated pyrite were intersected.

Most of the work carried out to date has been concentrated on the southern claims.

GEOLOGY

(a) General

The property covers extensions of the Archean meta-volcanic belt that extends westward from the Mattabi Mines
Limited Cu, Zn, Ag massive sulphide deposit, nine miles to the east.

Outcrop is very scarce due to extensive areas being covered by glacial sands, gravels, tills, thick alder and cedar swamps.

In the north and central parts of the property, the rocks consist of a series of metavolcanics consisting of rhyolite tuffs, agglomerates and flows to the north and andesites to the south.

The extreme southern claims are underlain by diorites and quartz diorites.

Quartz-feldspar dykes intrude all other rocks of the area.

The volcanics strike 250° to 260°, dip steeply north to vertical, and top north as indicated by pillowed andesites to the south of Young Lake. The mafic volcanics are highly sheared and have been metamorphosed to an upper greenschist facies.

(b) Property

The results of the geological mapping are shown on drawings G-4397 and G-3388 accompanying this report.

The mapping was carried out by J. Casey, the writer and under the writer's supervision by traversing along lines cut at 400 foot intervals.

The main rock types found are described below:
(i) **Andesites (1)**

The mafic volcanics found in the central portion of the property occur as massive and pillowed lavas, tuffs and agglomerates, chlorite schists and locally as feldspar porphyritic lavas.

The lack of outcrop and the intensity of shearing makes it difficult to outline accurately the various andesite units.

The massive andesites are best exposed southwest of the baseline in contact with the diorites. They are fine grained, grey-green to dark green and in parts silicified by the intrusion of the diorites. On L16W, 18+50S, sheared pillows were observed; but no top determinations were possible. N. Trowell, O.D.M., 1970 describes pillowed andesite facing north 2000-3000 feet to the west of the property.

The massive andesites are overlain by mafic tuffs and agglomerates. The tuffs exposed on the south shore of Young Lake consist of 1mm to 30 mm lenticular grey-green mafic fragments in a highly sheared, dark green chloritic matrix. Irregular 2-3mm white carbonate patches and crushed feldspar phenocrysts are common.

The green-brown weathered agglomerates consist of rounded stretched 10-20cm fragments in a chloritic tuffaceous matrix.

In places the pyroclastics are more dacitic in composition for example the south shore of Sturgeon Lake.

Locally the andesites are feldspar porphyritic and amygdaloidal. They consist of 2-5mm stretched feldspar pheno-
crysts and quartz and carbonate filled "vesicles" in a sheared chloritic matrix. The sheared porphyritic lavas are difficult to distinguish from the sheared porphyritic pyroclastics.

(ii) Dacites (2)

A single dacite fragmental outcrop occurs on L 24E at 10+00S. It consists of fine grained, grey-green, 5-10cm subrounded fragments in a darker chloritic matrix. This dacitic unit is completely enclosed by intrusives.

(iii) Rhyolite Tuff (3) and Rhyolite (4)

The northern portion of the property is interpreted as being underlain by felsic volcanics consisting mainly of rhyolite tuffs, agglomerates and possibly rhyolite flows.

However, no outcrop at all was found in this area which is covered by numerous thick cedar swamps and granite boulder hills and ridges.

Two angular boulders of fine grained, light grey, siliceous, massive rhyolite were found, but their source is unknown. The low magnetic relief supports the theory that the area is underlain by acidic rocks.

Assessment file ddh records and O.D.M. reports describe acid tuffs, agglomerates and flows to the northeast and east of the property.

A study of the aeromagnetics suggest that the contact between the rhyolites and the underlying andesites occurs 1000 to 1500 feet north of the south shore of Young Lake.
(iv) **Diorite (5)**

The diorites occur as narrow dykes cutting the andesites as a more basic phase of a diorite/quartz diorite intrusive underlying the southern part of the property.

They are fine to medium grained, dark green to black and massive. Occasionally they are highly sheared and difficult to distinguish from the andesite.

(v) **Quartz Diorite (6)**

The southern claims are underlain by a large quartz diorite body that is part of the Beidelman Bay - Darkwater Lake-Bell Lake Granodiorite - Trondhjemite - Quartz Porphyry Complex that extends for twelve miles to the east. This body is described in detail by N. Trowell in O.D.M. Open File Report 5051.

The quartz diorite is medium grained, equigranular, grey-green on weathered surface and dark green to black on a fresh surface. It consists of 40 to 50 percent hornblende, 30 to 40 percent plagioclase and 10 to 20 percent blue, translucent quartz.

The diorite phases of this complex are similar in physical appearance except they contain 0 to 10 percent blue quartz; the quartz being finer grained, and less conspicuous.

(vi) **Quartz-feldspar Porphyry Intrusive (7)**

The quartz-feldspar porphyrys occur as narrow dykes cutting all other rocks of the area and as a small oval-shaped body in the southwestern corner of the property.
They consist mainly of 1-3 mm anhedral to euhedral, white feldspar and scattered 2mm rounded, light blue quartz phenocrysts set in a medium grained, grey-green felsic matrix. They are massive to slightly foliated.

(c) Structure

The metavolcanics strike 250° to 260°, dip steeply north to vertical and face north as indicated by pillowed structures to the west of the property.

The volcanics and locally the diorites are highly sheared and have been metamorphosed to an upper green schist facies.

The EM 16 survey, the magnetic patterns and the offset of the andesite formations indicate a major fault system striking north eastwards through the south end of Sturgeon Lake.

The EM 16 results and the magnetics also suggest several other minor faults in the southern half of the property.

(d) Mineralization

West of L 8E at 29+00S, a barren sulphide occurrence is exposed by three old trenches. The showing consists mainly of disseminated pyrite with minor amounts of pyrrhotite and chalcopyrite in a silicified shear zone 20 to 40 feet wide striking 250°. It is exposed for a strike length of about 200 feet.

Grab sample 115267 of the best pyrite mineralization assayed 0.21 percent Cu and 0.009 percent Ni.
An X-ray semi-quantitative analysis of grab sample 115268 of the best chalcopyrite, pyrrhotite mineralization returned 2.00 percent Cu and 0.50 percent Ni.

See Appendix I for complete results.

Low copper and nickel values were reported from three packsack holes drilled in this area.

A Turam EM survey carried out over this showing failed to detect any significant conduction.

**DISCUSSION**

The geological mapping has shown the southern part of the property to be underlain by andesites, diorites and quartz diorites.

The complete lack of outcrop in the northern claims prevented an accurate geological assessment of this area which is interpreted as being underlain by the extensions of the favourable acid volcanics that host the Mattabi Mines Limited base metal deposit.

A deep penetrating geophysical method such as IP or Turam EM is required to better assess the potential of the northern claims.

Wayne Benham
SECTION II

DISCUSSION OF GEOPHYSICAL RESULTS (revised)

Electromagnetics

A six line loop of SE 71 turam EM, centered on a mineral showing near Highway 599 was surveyed to test for conduction along strike, but no anomaly was detected.

The northern portion of the claim group, covering part of a peninsula into Young Lake was surveyed with SE 600 EM on the parallel line system. If any conduction was indicated, it is very minor and was observed as unidirectional tilts only, that can be traced over several lines. Very little could be gained by detail, setup work using the semi system.

This area was re-surveyed with SE 71 turam EM on 400cps during January 1973 when it was possible to position the transmitting loop to make full use of the system. Coverage included the lake portion of Young and Elbow Lake. Results again were disappointing and the data indicates minor surficial conduction only.

An EM 16 survey over the Sturgeon Lake portion of the claim, available to the writer had indicated probable conduction, this was also tested with SE 600 EM during January 1973. No correlation was found.

The electromagnetic data of the continued surveys are presented on drawings E-3389A, 3415 and E-4400A.
Magnetometer Survey

The entire land portion of the claims was surveyed with a MF2 Fluxgate magnetometer during the 1972 season and extended in January 1973 to provide complete coverage.

The data was tied in and corrected for diurnal and instrumental drift and are presented as isodynamic contours on drawings M-4401A and 3390A.

Considerable magnetic activity is indicated in the southern portion of the claim group, displayed by banded, narrow short frequency positive magnetic anomalies caused by the varying magnetite content within diorite and andesite.

Interpreted block faulting would place the northern limit of the andesites and contact with the rhyolites through Young Lake in correlation with a broad magnetic zone outlined by the 400 gamma plus contour.

The area north of this zone interpreted to be underlain by rhyolites displays a marked contrast and is relatively flat. Particular attention was given to minor magnetic anomalies within this area while testing correlating conductivity.

Conclusion

Only minor, surficial conduction was indicated by the various electromagnetic survey techniques employed on the claim group and the banded positive magnetic anomalies are all underlain by diorite and andesites.
Recommendation

Based on the geophysical survey data and information available, no direct target area is indicated for further testing.

Revised March, 1973

H. Beckmann
REFERENCE MAPS AND REPORTS

Aeromagnetic Survey Series, 1 inch to 1 mile, Map 1127-G, Watcomb Lake, 1961.

Metionga Lake Area, Geological Report No. 24, O.D.M. D. Rodgers, 1964

Sioux Lookout-Armstrong Sheet, Geological Compilation Series Map 2169, 1 inch to 4 miles, 1970


Bell Lake - Sturgeon Lake Area, Maps P588 to P591, 1 inch to ¼ mile, N. F. Trowell, 1970


O.D.M. Assessment Files, Sturgeon Lake Area

## APPENDIX I

### ANALYSIS REPORT

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### X-RAY SEMI-QUANTITATIVE ANALYSIS REPORT

**Lab No.:** F-769

**Sample Description:** C-21595; 115268

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* Al, P, S, and Cl not determined
APPENDIX

GEOPHYSICAL SURVEYS

MODEL: SE 600 ELECTROMAGNETIC UNIT

The SE 600 is a moving source electromagnetic unit capable of measuring In-Phase and Out-of-Phase components at coil separations up to 300 feet.

Readings are recorded at 100-foot stations with the reference point midway between the two coils.

A typical anomaly due to a sub-surface conductor will consist of a decrease in the In-Phase reading and a negative Out-of-Phase reading.

As a horizontal loop unit, both coils are moved along a line, preferably cut across the strike of the formation. Penetration is approximately one half of the coil separation.

A simple conversion enables the operator to employ the SE 600 as a vertical loop unit. With this method the receiver and transmitter can be run (a) in line (b) on parallel lines 400 feet apart and (c) with the transmitter stationary and the receiver moving on adjacent lines and up to 800 feet away. This increases the depth penetration considerably. Readings are recorded in degrees of deflection and interpretation is comparable to other vertical loop units.

The SE 600 is battery powered and operates on 1600 cps. Horizontal loop data are plotted in per cent (%) In-Phase and Out-of-Phase signal while the vertical loop results are plotted in degree (°) of deflection resulting in crossovers over electromagnetic conduction.
APPENDIX

GEOPHYSICAL SURVEYS

FLUXGATE MAGNETOMETER MF 2 (SCINTEX)

The MF 2 Fluxgate Magnetometer is a hand held instrument.

It is orientation independent, measures the vertical component of the earth's magnetic field directly in gammas over a range of ± 300 to 100,000 gammas with an accuracy of better than 1%.

Readings are taken and recorded from a top mounted meter after levelling the magnetometer.

Periodic checks are made to base stations for diurnal drift.

These base stations are generally located at the line interception along base lines favouring areas of low magnetic contrast, along shore lines for later winter work and are time controlled, closed in loops. Closures do not exceed 1 to 1½ hours depending on the time of the day and will be re-run if deviations are suspect of accidental shock or might be caused by magnetic storms.

Corrections for drift and day to day variations have been applied to the presented data.
APPENDIX

TURAM SURVEYS

The Turam method can be classified as a fixed source compensation electromagnetic method.

The primary or source field consists of a large energized layout (4,000 x 2,000 feet) in the form of 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.

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 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.

A Sharpe Instruments Turam E.M. Unit, Model SE 71 with variable frequencies was employed throughout the survey.
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: S.W. part of Sturgeon Lake

Claim holder(s): Madsen Red Lake Gold Mines

Author of Report: H. Beckmann

Address: c/o Rio Tinto Canadian Expl'n. Ltd.

Covering Dates of Survey: January 10-30, 1973

Total Miles of Line cut: Chained & picketed on lakes 13.6

SPECIAL PROVISIONS
CREDITS REQUESTED

Geophysical
- Electromagnetic
- Magnetometer: 20
- Radiometric
- Other

Geological

Geochemical

AIRBORNE CREDITS

Magnetometer: 6
Electromagnetic: 6
Radiometric: 6

DATE: March 5, 1973
SIGNATURE: H. Beckmann
Author of Report or Agent

PROJECTS SECTION

Res. Geol: K
Qualification: 2/1111
Previous Surveys: 2/1023/196/196 (F.M.)
Completed E70 instruments

TOTAL CLAIMS: 24
Show instrument technical data in each space for type of survey submitted or indicate "not applicable".

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations  670
Station interval  100 ft.
Line spacing  400 ft.
Profile scale or Contour intervals  100 and 200 gammas

MAGNETIC

Instrument  Scintrex MP2 Fluxgate
Accuracy - Scale constant  Direct readout in gammas ±1%
Diurnal correction method  Vertical force fluxgate
Base station location  Carried forward base stations

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
Power
Electrode array
Electrode spacing
Type of electrode
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 Turam E. M.
Township or Area S.W. part of Sturgeon Lake
Claim holder(s) Madsen Red Lake Gold Mines
c/o Rio Tinto Canadian Exploration Ltd
2400-120 Adelaide St. W., Toronto
Author of Report H. Beckmann
Address c/o Rio Tinto Canadian Exploration Ltd
Covering Dates of Survey Jun 30 - Jul 27, 1972; Jan 10 - 30, '73
(linecutting to office)
Total Miles of Line cut Nil

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AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer Electromagnetic Radiometric (enter days per claim)

DATE: Mar 5, 1973  SIGNATURE: H. Beckmann
Author of Report or Agent

PROJECTS SECTION
Res. Geol. Qualifications
Previous Surveys
Checked by date

GEOLOGICAL BRANCH
Approved by date

TOTALCLAIMS 22
**GEOPHYSICAL TECHNICAL DATA**

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**INDUCED POLARIZATION - RESISTIVITY**

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<th>Instrument</th>
<th></th>
<th>Time domain</th>
<th>Frequency</th>
<th>Frequency</th>
<th>Range</th>
<th>Power</th>
<th>Electrode array</th>
<th>Electrode spacing</th>
<th>Type of electrode</th>
</tr>
</thead>
</table>
Type of Survey: Vertical Loop E. M.
Township or Area: S.W. part of Sturgeon Lake
Claim holder(s): C/o Rio Tinto Canadian Lake Gold Mines
Author of Report: H. Beckmann
Address: C/o Rio Tinto Canadian Exploration Ltd
Covering Dates of Survey: Jan 10-30, '73; Jun 30-Jul 27, '72

Total Miles of Line cut: 

<table>
<thead>
<tr>
<th>SPECIAL PROVISIONS</th>
<th>CREDITS REQUESTED</th>
<th>DAYS per claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geophysical</td>
<td>Electromagnetic</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Magnetometer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radiometric</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geological</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geochemical</td>
<td></td>
</tr>
</tbody>
</table>

AIRBORNE CREDITS: (Special provision credits do not apply to airborne surveys)
Magnetometer: Electromagnetic: Radiometric:

DATE: Mar. 5, 1973 SIGNATURE: H. Beckmann

PROJECTS SECTION
Res. Geol.: Qualifications:
Previous Surveys:

Checked by: date:

GEOLICAL BRANCH

Approved by: date:

GEOLICAL BRANCH

Approved by: date:

MINING CLAIMS TRAVERSED
List numerically:

<table>
<thead>
<tr>
<th>PA (prefix)</th>
<th>(number)</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>245587</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245588</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245589</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245600</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245603</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245604</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245605</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245606</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245609</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245610</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>245639</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CLAIMS: 11
Showing instrument technical data in each space for type of survey submitted or indicate "not applicable"

**GEOPHYSICAL TECHNICAL DATA**

**GROUND SURVEYS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Stations</td>
<td>462</td>
<td>Number of Readings</td>
<td>462</td>
</tr>
<tr>
<td>Station interval</td>
<td>100 ft.</td>
<td>Line spacing</td>
<td>400 ft.</td>
</tr>
<tr>
<td>Profile scale or Contour intervals</td>
<td>20°</td>
<td>(specify for each type of survey)</td>
<td></td>
</tr>
</tbody>
</table>

**MAGNETIC**

<table>
<thead>
<tr>
<th>Instrument</th>
<th></th>
<th>Accuracy - Scale constant</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diurnal correction method</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base station location</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ELECTROMAGNETIC**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>S.E. 600</th>
<th>Coil configuration</th>
<th>Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil separation</td>
<td>400 ft.</td>
<td>Accuracy</td>
<td>+3%</td>
</tr>
<tr>
<td>Method</td>
<td></td>
<td>Fixed transmitter</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>1600 C.P.S. (specify V.L.F. station)</td>
<td>Shoot back</td>
<td>In line</td>
</tr>
</tbody>
</table>

Parameters measured: *Vertical component of electromagnetic field.*

**GRAVITY**

<table>
<thead>
<tr>
<th>Instrument</th>
<th></th>
<th>Scale constant</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrections made</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base station value and location</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Elevation accuracy

**INDUCED POLARIZATION - RESISTIVITY**

<table>
<thead>
<tr>
<th>Instrument</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>Type of electrode</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Mr. J. R. Oatway  
Regional Director  
Ministry of Natural Resources  
808 Robertson Street  
Kenora, Ontario P9N 1X9  

Attn: Mr. W. A. Buchan  

Dear Sir:

Re: Mining Claims Pa. 245587 et al, S.W. part of Sturgeon Lake (Valora Lake) File 2.1167  

The Geophysical (Electromagnetic and Magnetometer) assessment work credits as listed with my Notice of Intent dated May 11, 1973 have been approved as of the date above.  

The mining recorder should inform the recorded holder of these mining claims and so indicate on his records.  

Yours very truly,  

Fred W. Matthews  
Supervisor  
Projects Unit  

cc: Rio Tinto Canadian Expl. Ltd.  
   Attn: D. Ceryals  
cc: Madsen Red Lake Gold Mines  
cc: Resident Geologist  
   Kenora, Ontario
SEE ACCOMPANYING MAP(S) IDENTIFIED AS 52G14SE -0062 # 1-3

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE (X)

(X)

[Diagram with marked areas]
FOR ADDITIONAL INFORMATION

SEE MAPS:

S2G/14SE-0602 = 4-6