Induced Polarization and Resistivity Survey
of the
Colby Resources Corporation Property
Hemlo - Marathon Gold Region
Seeley Lake Claim Map Area
Pic River Area
Ontario

RECEIVED
DEC 28 1983
MINING LANDS SECTION

by

E022

Robert S. Middleton Exploration Services Inc.
Box 1637, TIMMINS, Ontario. P4N 7W8
October, 1983
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INTRODUCTION

An induced polarization and resistivity survey was carried out on the Colby Resources Corporation property located in the Pic River region (Seeley Lake claim map area) between August 19 and September 23, 1983. The 24 claim property covered by the survey was mapped during June and July by a two man geological team, Coster, I., and Maser, M., (1983). In addition a magnetometer survey was carried out on the grid as well as a horizontal loop electro magnetic (Max-Min II EM) survey. The grid consists of approximately 44.4 kilometers of line at 120 metre line spacings with pickets at 20 metre intervals.

The purpose of the IP-Resistivity survey was to outline zones of disseminated sulphides which host the Hemlo type gold deposits. Disseminated sulphides were noted during the geological mapping program which contained anomalous gold values particularly in the southeast portion of the property. The interpretation section of this report illustrates the correlation of chargeability values with the pyritic tuff horizons on the property as well as the correlation of chargeability values with graphitic sediments and a chert-sulphide-oxide iron formation unit on the northern part of the property.

LOCATION AND ACCESS

The Colby claim group is located in the north central portion of MAP 2099, Bamos Lake Sheet (Milne (1967)). The western boundary of the claim group is situated about 1.5 km east of the Pic River between mileage markers 19 and 21. The Geco powerline crosses the Pic River
at mileage marker 19 and traverses the central portion of the property in a northeast direction.

Indirect road access to the Colby property is provided by gravel road which links mileage marker 16 on the Pic River to highway #17 opposite the Marathon turn off - a distance of 4 miles. A 3 mile boat trip is necessary to reach the power line at mileage marker 19 on the Pic River.

Direct air access to the Colby property is provided by helicopter from a base on highway #17, 6 miles southwest in a direct line distance. The nearest float plane landing area is on Page Lake, which is about 1.5 km east of the property.

PROPERTY

The 24 contiguous mining claims included in the Colby claim group, encompass approximately 960 acres of mining land. The claims are registered with the Ministry of Natural Resources mining recorders office in Thunder Bay. The claims, recorded in the names of the three stakers, are listed below.

<table>
<thead>
<tr>
<th>CLAIM NUMBERS</th>
<th>TOTAL</th>
<th>ANNIVERSARY DATE (RECORDING DATE)</th>
</tr>
</thead>
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</tr>
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<td>10</td>
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<tr>
<td>660851 - 54</td>
<td>4</td>
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</tr>
<tr>
<td>660855 - 62</td>
<td>8</td>
<td>23 September, 1982</td>
</tr>
</tbody>
</table>

These claims are held in trust by Ingamar Explorations Limited
CLAIM INDEX MAP
COLBY RESOURCES
SEELY LAKE AREA
THUNDER BAY MINING DIVISION, ONT.
for Colby Resources Corporation. The claims were in the process of being transferred during the last week of September, 1983 to the mining licence of Ingamar Explorations Ltd.

**TOPOGRAPHY AND VEGETATION**

Terrain in the Pic River area is occasionally very rugged. Ridge-valley type topography is common in the metavolcanic rock areas in the central portion of the Pic River area in which the Colby property is located.

Scattered outcrop comprises approximately 35% of the property. The terrain is rugged in the northeast and southeast portion of the property where rolling hills provide vertical relief of up to 70 meters. Metavolcanic rocks and iron formation are fairly resistant and form most of the outcropping, while metasedimentary rocks, particularly the shales, are eroded in most places. Shale outcroppings are located in creek beds and along the shore of the lake on the powerline in the central portion of the claim group. Between outcrops, overburden appears to be quite shallow, the exception being the southwest portion of the property.

A thick forest of spruce, birch, minor jackpine and poplar covers the property. Low areas, swamps and creek valleys are thick with tag alders.

**PREVIOUS WORK**

Sporadic exploration activity has been conducted in the Pic River
area from the early 1900's until as recently as 1975 prior to the Hemlo gold camp staking rush. Various programs have been conducted to evaluate several prospects in the area, including:

1) Copper sulphide zones within the Port Coldwell Alkalic Complex

2) Copper-nickel mineralization associated with mafic intrusive rocks in Goodchild Lake area

3) Base metal mineralization in the metavolcanics approximately 300 m. southeast from the southeast corner of the Colby property.

Exploration activity in the area during the 1960's and 70's was directed at the acid metavolcanic-metasedimentary sequence in search of massive sulphide deposits, and is listed below:

1) 3/4 mile east of mileage marker 16 on the Pic River.
   2 miles South of the Colby property.
   Pyritic rhyolite in pit.
   Trace copper, nickel, and gold.

2) 1965 Seeley Mining Corporation (Sutherland, H.H. (1965), file 63.1755)
   2 miles east of mileage marker 20 on the Pic River.
   Adjacent to or overlapping the east boundary of the Colby property.
   Ground geophysical surveys on an east-west grid direction - EM and magnetometer. Five anomalous zones were defined and recommended for drilling.
A 700' long vein with chalcopyrite, pyrite and pyrrhotite is reported to have been observed adjacent to one of the anomalies (Sutherland, H.H. (1965), file 63.1755). No record of further work documented.

3) Irish Copper Mines Ltd. (Zurowski, M. (1965), file 63.1690)
Located along the Pic River between mileage markers 16 and 19. Preliminary ground EM and magnetic surveys completed during 1965. One EM anomaly associated with sulphide mineralization. Other EM anomalies deduced to be due to overburden effects.

2 miles southwest of the Colby property.

Magnetic anomalies on west side of the Pic River deduced to represent magnetically susceptible minerals in the alkalic complex.

4) 1971 Kerr Addison Mines Ltd. (1971, diamond drill assessment File 23)
2 miles East of mileage marker 19 on the Pic River. Adjacent to and overlapping the southeast corner of the Colby property.

Ground geophysical surveys.

9 short DDH's - maximum 205' on EM targets.

Rhyolite, greywacke, and graphitic tuff intersected.
Disseminated sulphides in rhyolite yielded values in gold and base metals.

1 DDH contained 20% of a green mineral (fuchsite?).

Disseminated sulphides intersected in rhyolite and graphitic tuff.

Anomalous values in copper, zinc, and gold obtained.

Best values: .12 oz 1 ton Au / 5'.

3% zinc also reported.

5) Shell Minerals of Canada Ltd. (1975)

Airborne helicopter EM and magnetic survey over the entire acid metavolcanic-metasedimentary sequence.

Survey covers all the Colby property.

Numerous airborne EM anomalies were detected over the acid metavolcanics (rhyolite breccia) along the east and north margins of the unit but also within and along the west margin.

Several clusters of airborne EM anomalies occur within the Colby claim group. A prominent series of anomalies lie along and overlap the east boundary of the property.

A band of anomalies trends east-west through the south sector of the N 1/2 of the property and into the adjoining properties on the east and west.

The southeast corner of the claim group also contains clusters of EM anomalies.

Governmental investigations in the area include that of J.E.

Lake bottom sediment sampling was conducted over the area in 1967 and the results were released in G.S.C. Open File Report 746. The general area is indicated as being moderately anomalous in zinc, copper, lead and mercury.

SURVEY STATISTICS AND SURVEY DATES

The IP Resistivity Survey was carried out between August 19 and September 23, 1983 using a five man crew consisting of personnel provided by Rayan Exploration Ltd. of North Bay. These persons were Bryan Belanger, Stuart Winchester, Howard McGowan, Mike Tremblay and James Lariviere.

An "a" spacing of 40 metres was used with readings taken at n=1 and n=2. A dipole-dipole array was used resulting in 1296 chargeability readings being taken on 120 metre line spacings at 40 metre intervals. A total of 648 stations were observed. In addition, there were 1296 resistivity readings taken.

REGIONAL GEOLOGY

The Colby property is located on the central part of the Schreiber-Marathon greenstone belt in the Superior Province of the Canadian Shield. The property lies within an Archean
BASIC TO INTERMEDIATE METAVOLCANICS AND METASEDIMENTS
la Dark green, fine- to medium-grained massive and gneissic amphibolite.
2b Dark green, coarse-grained massive and gneissic amphibolite.
2c Light green amphibolite and saussuritic metavolcanic rocks.
2d Pillow lava.
2e Amygdular, spherulitic or variolitic lava.
2f Flow breccia.
2g Flow banded lava.
2h Tuff, slate, parnetiferous chlorite schist, greywacke.
2i Chlorite schist.
2j Banded iron formation.
2k Hybrid hornblende gneiss.
2l Lamprophyre.
2m Rhyolite.
2n Biotite paragneiss.

ACID METAVOLCANICS AND METASEDIMENTS
1a Rhyolite, porphyritic rhyolite, rhyolitic breccia.
1b Sericite schist.
1c Slate, iron formation, tuff.
1d Greywacke, tuff.
1e Complex of metavolcanic rock and intrusive athetic gabbro, syenite and granitic dikes.

YOUNGER BASIC INTRUSIVE ROCKS
6a Diabase.
6b Quartz diabase.

REGIONAL GEOLOGY
SCALE 1"=½ MILE
FROM O.D.M. MAP #2099

FIGURE 3
metasedimentary-metavolcanic belt trending northerly from the Heron Bay area on Lake Superior, and is referred to as the Pic River Area. The geology for the surrounding area is illustrated on the Bamoos Lake Geological Sheet (Map 2009 by Milne, V.G. (1967)). The property covers a cross section of rhyolitic rocks, metasediments, mafic and ultramafic volcanics as well as a chert exhalite (iron formation) zone within the mafic-ultramafic section. A regional northeast trending anticlinal fold is located on the east side of the property thereby giving north-south trending rocks on the southeast portion of the property and then east-west trends on the central to northern part of the property. Details of the geology on the property are given in a recent report (filed for assessment credit) by Coster, I., and Maser, M. (1983).

SURVEY PROCEDURES - INSTRUMENTATION

The IP and Resistivity Survey was carried out using time domain equipment along 120 metre line spacings with readings taken at 40 metre intervals. The transmitter was a Scintrex IPC-8 250 watt unit. The receiver was a Crone N-IV (Newmont type) and a single time window was read after the shut off of the pulse. The signal transmitted into the ground via steel stake electrodes was a 2 second on 2 second off square wave pulse. The voltage was measured via non polarizing copper sulphate filled electrodes. The array used was a dipole-dipole array with an "a" spacing of 40 metres with readings taken at n=1 and n=2. Contoured results of the chargeability and resistivity values for both
"n" spacings are given on the maps at the back of this report, see Figures 4, 5, 6 and 7.

INTERPRETATION

Southeastern Sector

A 32 millisecond chargeability anomaly occurring on line 600 east at 300 north correlates with a pyritic tuff horizon classified as a crystal lithic tuff in the recent geological mapping program, Coster, I. and Maser, M. (1983). This horizon extends to the northeast and would link up with 28 and 22 millisecond readings on line 480 north between 960 east and 1000 east.

A second anomalous region occurs along the contact of the metasediments and the felsic tuffs and extends from line 960 east-base line 0+00 to the north across lines 120 north and 240 north before swinging to the northeast to hit line 360 north at 1100 east. This trend merges with a second anomaly trend that occurs within the metasediments and extends northeastward to tie line 840 north at 14 + 40 east. Within the metasedimentary zone another strong anomaly trend extend northward in the vicinity of line 1200 east between 0 + 00 and line 480 north. Values in excess of 60 milliseconds occur in this trend which in part correlates with sulphide horizons within the metasediments. A third parallel trend occurs along the eastern margin of the property between line 240 north and 720 north with chargeability values in the 60 to 80 millisecond range. This trend also occurs within the metasediments (shale, sandy shale, slates and
argillites).

Central Sector

A strong east northeastward trending high chargeability anomaly occurs between 1320 north and 1560 north on lines 1200 east to 1560 east. Values in excess of 125 milliseconds were encountered. The zone mainly falls within the metasedimentary units and the south boundary of the anomaly is defined by an east-west contact between metasediments and rhyolitic pyroclastics. West of line 840 east i.e. of the power line another complex IP anomaly pattern occurs with values in excess of 100 milliseconds. These anomalies correlate with the northern and southern margin of the metasedimentary sequence and likely reflect increases in sulphide content as well as graphite within the metasedimentary zone particularly along the contacts with the surrounding volcanics. A 52 millisecond anomaly which occurs on line 720 east at 1640 north marks the zone within the felsic intermediate tuffaceous volcanic unit which follows the northern contact of the metasedimentary units. Another anomaly within this tuffaceous unit occurs on line 480 east at 1600 north and is in excess of 100 milliseconds. This anomaly occurs close to the contact between the metasediments to the south and the felsic intermediate tuffaceous volcanics to the north. This region is cut by the complex northwest trending diabase dyke system.
Northern Sector

An east-west trending IP anomaly in the order of 70 milliseconds occurs between line 960 east and 1440 east at 1700 to 1800 north. This trend occurs within a unit called green chert fragmental and is intermediate to mafic in composition. The chargeable horizons appears to be the extension of a carbonate horizon that has been metamorphosed and altered resulting in quartz stock work development. This unit can be interpreted as carbonized iron formation and becomes one of the drill targets on the property. Intense carbonate alteration can be observed to the immediate northwest of the camp within this horizon.

Another east-west IP anomaly with values up to 80 milliseconds occurs between lines 720 east and 1440 east in the vicinity of 2000 north to 2200 north respectively. This horizon correlates in part with a banded iron formation with chert, sulphide, and magnetite facies as well as carbonate alteration. The northern boundary of this horizon is generally mafic volcanics with possible ultramafic components. Anomalous gold values have been observed in the vicinity of line 840 east and 720 east at 19+60 north. A drill hole cross section through this horizon is warranted. Since these units appear to dip north at 70%, a hole from north to south would be required. A secondary IP anomaly occurs on line 720 east at 2100 north within what is thought to be mafic volcanics and this singular anomaly should be tested as part of this drill program on the north side of the property.

Resistivity values are generally high throughout the region due
to the shallow overburden and massive nature of most of the felsic volcanics. Low resistivity values correlate with metasedimentary areas i.e. those containing graphitic argillites. Mafic volcanics generally have a lower resistivity value than the rhyolites. However pyritic tuff sections which commonly occur throughout the felsic pyroclastic sections also give slightly lower resistivities than the massive rhyolite areas.

CONCLUSIONS AND RECOMMENDATIONS

The induced polarization and resistivity survey has outlined a number of chargeability zones which correlate with occurrences of disseminated sulphides both within the felsic pyroclastic rocks as well as within the sedimentary horizons. These chargeability anomalies are areas within which one should explore for gold mineralization and cross section drilling of these units is therefore recommended.

In addition to the disseminated sulphide zones within the felsic pyroclastics and sediments there are other chargeable horizons which correlate with iron formation or carbonate zones. These anomalies occur in the northern part of the property, one of which is immediately north of the camp on Claim 660857 and the other horizon extends in an eastwest fashion across the northern part of the property approximately 500 metres south of the northern boundary of the property. Both of these carbonate-chert-sulphide-oxide iron horizons should be tested by drilling.
The following is a listing of drill hole collar locations suggested as a result of a comprehensive interpretation of all available data. These collar locations may have to be shifted after field inspection in order to locate suitable drill stations due to the rugged topography.

**TABLE OF PROPOSED DRILL HOLES**

Colby Resources Ltd.

<table>
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<tr>
<th>Hole No.</th>
<th>Coordinates</th>
<th>Azimuth</th>
<th>Dip</th>
<th>Depth feet</th>
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<tr>
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<td>1320E/120</td>
<td>270°</td>
<td>-50°</td>
<td>500'</td>
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<tr>
<td>2</td>
<td>1160E/120N</td>
<td>270°</td>
<td>-50°</td>
<td>500'</td>
</tr>
<tr>
<td>3</td>
<td>1040E/120N</td>
<td>270°</td>
<td>-50°</td>
<td>850'</td>
</tr>
<tr>
<td>4</td>
<td>1080E/320N</td>
<td>340°</td>
<td>-50°</td>
<td>850'</td>
</tr>
<tr>
<td>5</td>
<td>1320E/1500N</td>
<td>180°</td>
<td>-50°</td>
<td>600'</td>
</tr>
<tr>
<td>6</td>
<td>1320E/1640N</td>
<td>0°</td>
<td>-50°</td>
<td>350'</td>
</tr>
<tr>
<td>7</td>
<td>720E/2140N</td>
<td>170°</td>
<td>-50°</td>
<td>500'</td>
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<tr>
<td>8</td>
<td>360E/1200N</td>
<td>180°</td>
<td>-50°</td>
<td>400'</td>
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<table>
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<tr>
<th>Contingency</th>
<th>600'</th>
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<tbody>
<tr>
<td></td>
<td>5200'</td>
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A total number of 5200 feet or 1585 metres of diamond drilling is recommended based on the available data. The following budget is proposed to cover the cost of drilling, mobilization, supervision, assaying and core splitting:
**BUDGET for**

**COLBY RESOURCES LTD.**

<table>
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<th>Description</th>
<th>Cost</th>
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<tr>
<td>(a) Drill Mobilization &amp; Pad Cutting</td>
<td>$26,000.</td>
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<td>(b) Drilling BQ @ $25./ft x 5200</td>
<td>$130,000.</td>
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<tr>
<td>(c) Supervision</td>
<td>$15,000.</td>
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<td>(d) Assays &amp; Core Splitting</td>
<td>$10,000.</td>
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<tr>
<td>(e) Subsistence and transportation</td>
<td>$15,000.</td>
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<tr>
<td><strong>Sub Total</strong></td>
<td><strong>$196,000.</strong></td>
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<td>(f) Contingency</td>
<td>$20,000.</td>
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<td><strong>Total</strong></td>
<td><strong>$207,000.</strong></td>
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Drilling of these targets could be carried out in both winter and summer months since it would be more convenient to airlift the drill to the different collar locations using a Bell 206 Long Ranger helicopter or an A-Star helicopter. This procedure would save breaking new roads into the area and the drill could be transported from the Pic River at a point where a gravel road connects Trans Canada highway No. 17 at the Marathon exit, (i.e.) within 2 1/2 miles of the Colby property.

Respectfully submitted:

Robert S. Middleton, P.Eng

Robert S. Middleton Exploration Services Inc.
REFERENCES

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1983
Results of SURTRACE Geochemical Surveys over The Marathon and Marshall Lake Areas, District of Thunder Bay; Ontario Geological Survey Study 25, Ministry of Natural Resources, Ontario

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The Geology of Gold in Ontario, Ontario Geological Miscellaneous Survey Paper 110, Ministry of Natural Resources, Ontario

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Aeromagnetic Map, Goodchild Creek 2157G. Scale 1" = 1 mile

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Stratigraphic Keys to the Gold Metallogy of the Abitibi Belt, Canadian Mining Journal, Vol. 97, No. 6, p.81-87

Tagliamonte, F.P.
1983
Thomson, J.E.
1931

Shell Minerals of Canada Ltd.
1975
Airborne Helicopter EM and Magnetic Survey, 3 map sheets 1" = 1/4 mile, assessment file 2.2011

Sutherland, H.H.
1965
Report on the E.M. Survey conducted over the property of Seeley Mining Corporation, assessment file No. 63.1755

Zurowski, M.
1965
Report on the geophysical surveys on the property of Irish Copper Mines Ltd., Seeley Lake Area, assessment file No. 63.1690.

1982-1983
Several issues of: The Northern Miner; The George Cross Newsletter
CERTIFICATION

I, Robert S. Middleton, P.Eng., of 136 Cedar Avenue South, in the City of Timmins, Province of Ontario, certify as follows concerning my report on the Seeley Lake, - Pic River Hemlo area property of Colby Resources Corporation dated October 22, 1983.

1) I am a member in good standing of:

   a) Geological Association of Canada (FGAC)
   b) The Association of Professional Engineers of Ontario
   c) European Association of Exploration Geophysicists
   d) Society of Exploration Geophysicists
   e) Canadian Institute of Mining and Metallurgy

2) I am a graduate of the Michigan Technological University, Houghton, Michigan, U.S.A. with a B.S. degree in Applied Geophysics obtained in 1968, and an M.S. degree in Geophysics in 1969.

3) I have been practising my profession in Canada, occasionally in the United States, Central America, Europe and South Africa for the past 14 years.

4) I have no direct interest in the properties, leases or securities of Colby Resources Corporation nor do I expect to receive any.

5) The attached report is a product of:

   a) Data listed in the references.
   b) Assessment work files - Ministry of Natural Resources, Toronto, Ontario.
   c) Discussions with colleagues who have worked in the area.
   d) My personal acquaintance with the Hemlo area which I have examined and reported on for other companies.
   e) My involvement in exploring gold throughout the Canadian Shield, in Nevada, U.S.A. and in Central America.
   f) A personal visit to the property.

Dated this 22nd day of October, 1983,
TIMMINS, Ontario

The IPC-8/250W is a portable battery-powered transmitter for time domain Induced Polarization and D.C. Resistivity operation. It is designed primarily for use with Scintrex remotely-triggered I.P. and D.C. resistivity receivers.

In operation, the IPC-8/250W transmitter lends itself to all types of electrode arrays and especially provides a new speed of operation for dipole-dipole arrays.
TECHNICAL DESCRIPTION OF
IPC-8 250 W
TRANSMITTER

- POWER: 250 W max.
- OUTPUT VOLTAGE: 150 V to 850 V in 5 steps, 1.4 ratio
- OUTPUT CURRENT: 1.5 A max.
- METER RANGES: 0 — 0.5 A F.S. and 0 — 1.5 A F.S. ± 3%
- CYCLE: 1:1:1:1 on:off:reverse:off
- PULSE DURATIONS: 1, 2, 4 secs.
- POWER SOURCES: 8 GC 660-1 lead-acid gel-type batteries 24 V at 12 Ah or external 24 V D.C.
- 1 penlite battery Eveready E 91 or equivalent
- POWER REQUIREMENTS FOR CHARGER: 115/230 V, 50 to 400 Hz, 100 W
- DIMENSIONS AND WEIGHTS:
  - Transmitter pack and two battery packs: 5½ x 12 x 18” (14 x 30 x 46 cm) 35 lbs (15.5 kg)
  - Charger: 5½ x 12 x 6” (14 x 30 x 15 cm) 12 lbs (5.5 kg)
- OPERATING TEMPERATURE: —30°C to +55°C

SCINTREX LIMITED
222 SNIDERCROFT ROAD, CONCORD, ONTARIO, CANADA
A rugged I.P. Receiver designed for Simplicity of Operation and Reliability in the field.
CRONE-NEWMONT I.P. - IV RECEIVER

SPECIFICATIONS

- Dimensions: Instrument - 31 x 27 x 16 cm; 12" x 11" x 6"
  Shipping Box - 38 x 33 x 22 cm; 15" x 13" x 8.5"
- Weight: Instrument - 4 kg.; 9 lbs.
  With shipping box - 8 kg.; 18 lbs.
- Battery Power Supply: Standard Throw Away Batteries
  - 5 of "C" cells, 1.5 volt each, 60MA drain, Eveready types
    E93 or 1035
  - One 9 volt transistor battery for S.P. buckout, #216
  Battery life - 3 months to 6 months
- Primary Voltage "Vp": .0005 to 60 volts, accuracy ± 5%
- Standard receivers set for 2.0 seconds on, 2.0 seconds off current cycle
  Off period must be greater than 1.8 seconds
- Chargeability M and N readings directly in milliseconds

- Both M and N readings are automatically corrected to the Newmont 33M1 Standard. M and N readings should be the same with a normal polarization decay. Unequal readings indicates the presence of Inductive coupling and then the N reading should be used.
- Both M and N readings are taken for 3 current cycles (6 samples) then they are automatically averaged and stored for direct read out.
- Self Potential: Automatic buckout effective when SP less than .6 Vp
  Manual buckout - 0 to 1.0 volts calibrated (>1.0 volts uncalibrated)
  Fine SP buckout for low signal levels
- Pot Resistance Check: Check of potential contacts on millisecond meter; Green - good contact,
  Orange - marginal contact (M-N readings are accurate, Vp and resistivity readings have error),
  Red - nil or unacceptable contact.
- Input Impedance: 300,000 Ohms
- Noise Filters: 30 DB At 50 or 60 Hz (factory set)
  30 DB/Octave above 8 Hz
  6 DB/Octave above 35 Hz
- Automatic Time Lock to ground signal
- Amplifier drift correction by one control
Dear Madam:

We have received reports and maps for a Geophysical (Induced Polarization) survey submitted on Mining Claims TB 651270 et al in the Area of Seeley Lake.

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

We do not have a copy of the Report of Work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

D. Kinving:mc

cc: Ingamar Explorations
    Cedar Hill
    Connaught, Ontario
    PON 1AO
### Report of Work

**(Geophysical, Geological, Geochemical and Expenditures)**

**Ontario Ministry of Natural Resources**

#### Report of Work

- **Type of Survey(s):** Induced Polarization
- **Claim Holder(s):** Ingaran Explorations Limited
- **Address:** PO. Box 1037, Timmins, Ontario
- **Survey Company:** DATYAN, P. R. M. M. E. N.
- **Name and Address of Author (of Geo-Technical report):**

#### Credits Requested per Each Claim in Columns at right

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<th>Geological</th>
<th>Days per Claim</th>
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<td>Other</td>
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<td></td>
</tr>
<tr>
<td>Enter 40 days. (This includes line cutting)</td>
<td>Magnetometer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For each additional survey: using the same grid:</td>
<td>Radiometric</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enter 20 days (for each)</td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Man Days**

Complete reverse side and enter total(s) here

<table>
<thead>
<tr>
<th>Geophysical</th>
<th>Days per Claim</th>
<th>Geological</th>
<th>Days per Claim</th>
<th>Geochemical</th>
<th>Days per Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electromagnetic</td>
<td></td>
<td></td>
<td>Magnetometer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnetometer</td>
<td></td>
<td></td>
<td>Radiometric</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. P.</td>
<td>31.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Airborne Credits**

Note: Special provisions credits do not apply to Airborne Surveys.

<table>
<thead>
<tr>
<th>Electromagnetic</th>
<th>Days per Claim</th>
<th>Magnetometer</th>
<th>Days per Claim</th>
<th>Radiometric</th>
<th>Days per Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Expenditures (excludes power stripping)**

**Type of Work Performed**

- Perform on Claim(s)

**Calculation of Expenditure Days Credits**

<table>
<thead>
<tr>
<th>Total Expenditures</th>
<th>Total Days Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>15</td>
</tr>
</tbody>
</table>

#### Mining Claims Traversed (List in numerical sequence)

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Number</th>
<th>Exp. Days Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>W0848</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0859</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0860</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0861</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0862</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0863</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0864</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0865</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0866</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0867</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>W0868</td>
<td></td>
</tr>
</tbody>
</table>

**For Office Use Only**

- **Total number of mining claims covered by this report of work:** 758
- **For Mining Recorder:**
  - **Min. Commissioner:**
  - **Mining Recorder:**

**Certification Verifying Report of Work**

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

**Name and Postal Address of Person Certifying:**

Allan Wells, P.O. Box 1037, Timmins, Ontario

**Date Certified:** January 31, 1984

**Certified by (Signature):**

M. Hayter

**Date (1984):**
Assessed

Approved Reports of Work
sent out

Notice of Intent filed

Approval after Notice of Intent
sent out

Duplicate sent to Resident
Geologist

Duplicate sent to A.F.R.O.
ASSESSMENT WORK BREAKDOWN

1. Type of Survey
   INDUCTION POLARIZATION

2. Township or Area
   SEELEY LAKE AREA

3. Numbers of Mining Claims Traversed by Survey
   TB 660845 - 660850 inclusive 661270 - 69 inclusive
   660851 - 66 inclusive 660855 - 62 inclusive

4. Number of Miles of Line Cut
   Flown

*5. Number of Stations Established
   448

*6. Make and type of Instrument Used
   DAKOTA CRONE MK IV

*7. Scale Constant or Sensitivity
   .

*8. Frequency Used and Power Output

9. Summary of Assessment Credits (details on reverse side)

   Total 8 hour Technical Days (Include Consultants, Draughting etc.) 108.5
   Total 8 hour Line-Cutting Days

Calculation

\[
\frac{108.5 \times 7 - 289.5}{24} = \frac{289.5}{24} = 31.6
\]

Assessment credits per claim

The dates listed on this form represent working time spent entirely within the limits of the above listed claims. Check

If otherwise, please explain

Dated: Dec 14/83
Signed: 

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side
(C) Submit separate breakdown for each type of survey
(D) Submit in duplicate.
### ASSESSMENT WORK BREAKDOWN

#### 1. FIELD WORK

<table>
<thead>
<tr>
<th>Type of Work</th>
<th>Name &amp; Address</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>James Laxmore</td>
<td>Aug 28 - Sept 4-23</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Mike Tredway</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Howard McGowan</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Stuart Winchester</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Bryan Blanket</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>All of Bryan Exploration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 2. CONSULTANTS

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Dates Worked (specify in field or office)</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.D. McArthur</td>
<td>Nov 1 - 6 office</td>
<td>6</td>
</tr>
<tr>
<td>Bruce Doogan</td>
<td>Nov 6, office</td>
<td>1</td>
</tr>
</tbody>
</table>

#### 3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Type of Work</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan Wells</td>
<td>Oct 5 - 10</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Marilyn Tabor</td>
<td>Typing, Oct 20 - 22</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Chris Jones</td>
<td>Oct 10 - 12</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>All of Robert S. McArthur Exploration Services</td>
<td></td>
<td>TOTAL 8 HOUR TECHNICAL DAYS</td>
<td>108.5</td>
</tr>
</tbody>
</table>

#### 4. LINE-CUTTING

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 1637 Timmins</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 8 HOUR LINE-CUTTING DAYS
ASSESSMENT WORK BREAKDOWN

1. Type of Survey: INDUCED POLARIZATION

2. Township or Area: SEELEY LAKE AREA

3. Numbers of Mining Claims Traversed by Survey:
   - LB 660848-49 incul. 651270-79 incul.
   - LB 660851-54 incul. 660855-62 incul.

4. Number of Miles of Line Cut - Flown

5. Number of Stations Established: 648

6. Make and type of Instrument Used: DL CRONE Mk IV. T. Scintilla IPC-8

7. Scale Constant or Sensitivity

8. Frequency Used and Power Output

9. Summary of Assessment Credits (details on reverse side)

   Total 8 hour Technical Days (Include Consultants, Draughting etc.): 108.5

   Total 8 hour Line-Cutting Days

Calculation:

\[
\text{Technical} \times 7 = \frac{759.5}{\text{Line-cutting} \div 24} = 31.6
\]

The dates listed on this form represent working time spent entirely within the limits of the above listed claims. Check if otherwise, please explain

Dated: Dec 16/83

Signed: [Signature]

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.
### ASSESSMENT WORK BREAKDOWN

1. **FIELD WORK**

<table>
<thead>
<tr>
<th>Type of Work</th>
<th>Name &amp; Address</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
</table>
| Field 
Exploration | James Lamoureux | Aug 28 - Sept 23 | 18 |
| " | Mike Treblay | " | 18 |
| " | Howard McGowan | " | 18 |
| " | Stuart Winchester | " | 18 |
| " | Bryan Beamish | " | 18 |

All of Rayan Exploration
452 North Bay Rd.

2. **CONSULTANTS**

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Dates Worked (specify in field or office)</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Muddleston</td>
<td>Nov 1 &amp; 6, office</td>
<td>6</td>
</tr>
<tr>
<td>Bruce Dawson</td>
<td>Nov 6, office</td>
<td>1</td>
</tr>
</tbody>
</table>

3. **DRAUGHTSMAN, TYING, OTHERS (specify)**

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Type of Work</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan Wells</td>
<td>Oct 5 - 10</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Marilyn Johns</td>
<td>Typing, Oct 20 - 22</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Chris Jones</td>
<td>Oct 10 - 12</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**All of Robert S. Muddleston Exploration Services**

Total 8 Hour Technical Days: 108.5

4. **LINE-CUTTING**

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
</table>

Total 8 Hour Line-Cutting Days
To: Geophysics

Mr. R. B. [Handwritten]

Comments

☐ Approved ☐ Wish to see again with corrections

Date: 13/2/86
Signature: [Handwritten]

To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections

Date: [Blank]
Signature: [Blank]

To: Geochemistry

Comments

☐ Approved ☐ Wish to see again with corrections

Date: [Blank]
Signature: [Blank]

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

☐ [Blank]

[Handwritten] L.D.
Ministry of Natural Resources

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

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

Type of Survey(s) Induced Polarization
Township or Area Seeley Lake Area
Claim Holder(s) ZINGAMAR EXPLORATIONS

Survey Company RAZAN EXPLORATIONS
Author of Report R. S. MONCETON
Address of Author P.O. Box 1637 Timmins
Covering Dates of Survey Aug 15 - Nov 6/83
(linecutting to office)
Total Miles of Line Cut 26164 miles

SPECIAL PROVISIONS

CREDITS REQUESTED

<table>
<thead>
<tr>
<th>DAYS per claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geophysical</td>
</tr>
<tr>
<td>- Electromagnetic</td>
</tr>
<tr>
<td>- Magnetometer</td>
</tr>
<tr>
<td>- Radiometric</td>
</tr>
<tr>
<td>- Other</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Magnetometer</th>
<th>Electromagnetic</th>
<th>Radiometric</th>
</tr>
</thead>
<tbody>
<tr>
<td>(enter days per claim)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DATE: Dated By: SIGNATURE: Author of Report or Agent

<table>
<thead>
<tr>
<th>Res. Geol.</th>
<th>Qualifications</th>
</tr>
</thead>
</table>

Previous Surveys

<table>
<thead>
<tr>
<th>File No.</th>
<th>Type</th>
<th>Date</th>
<th>Claim Holder</th>
</tr>
</thead>
</table>

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

TOTAL CLAIMS

837 (6/79)
**GEOPHYSICAL TECHNICAL DATA**

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Stations</td>
<td>648</td>
</tr>
<tr>
<td>Number of Readings</td>
<td>1296</td>
</tr>
<tr>
<td>Station interval</td>
<td>40 m</td>
</tr>
<tr>
<td>Line spacing</td>
<td>120 m</td>
</tr>
<tr>
<td>Profile scale</td>
<td></td>
</tr>
<tr>
<td>Contour interval</td>
<td>10 m</td>
</tr>
</tbody>
</table>

**MAGNETIC**

<table>
<thead>
<tr>
<th>Instrument</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy – Scale constant</td>
<td></td>
</tr>
<tr>
<td>Diurnal correction method</td>
<td></td>
</tr>
<tr>
<td>Base Station check-in interval</td>
<td></td>
</tr>
<tr>
<td>Base Station location and value</td>
<td></td>
</tr>
</tbody>
</table>

**ELECTROMAGNETIC**

<table>
<thead>
<tr>
<th>Instrument</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil configuration</td>
<td></td>
</tr>
<tr>
<td>Coil separation</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td></td>
</tr>
<tr>
<td>Method:</td>
<td>□ Fixed transmitter □ Shoot back □ In line □ Parallel line</td>
</tr>
<tr>
<td>Frequency</td>
<td></td>
</tr>
<tr>
<td>Parameters measured</td>
<td></td>
</tr>
</tbody>
</table>

**GRAVITY**

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

**INDUCED POLARIZATION**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Ta. Saldiner EPC. B. Dr. Cerec M U. U.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>□ Time Domain □ Frequency Domain</td>
</tr>
<tr>
<td>Parameters – On time</td>
<td>2 sec</td>
</tr>
<tr>
<td>– Off time</td>
<td>2 sec</td>
</tr>
<tr>
<td>– Delay time</td>
<td>0 to 45 sec</td>
</tr>
<tr>
<td>– Integration time</td>
<td>45 to 90 sec</td>
</tr>
<tr>
<td>Power</td>
<td>250 W</td>
</tr>
<tr>
<td>Electrode array</td>
<td>Dipole – Dipole</td>
</tr>
<tr>
<td>Electrode spacing</td>
<td>40 m</td>
</tr>
<tr>
<td>Type of electrode</td>
<td>Steel Steel</td>
</tr>
</tbody>
</table>
ASSESSMENT WORK BREAKDOWN

1. Type of Survey  
   Induced Polarization

2. Township or Area  
   Seeley Lake Area

3. Numbers of Mining Claims Traversed by Survey
   " 669248 - 48 inclusive 669270 - 79 inclusive  
   669281 - 54 inclusive 669255 - 62 inclusive"

4. Number of Miles of Line Cut
   Flown

5. Number of Stations Established
   448

6. Make and type of Instrument Used
   KK-CRANE MK IV T S India 14-8

7. Scale Constant or Sensitivity

8. Frequency Used and Power Output

9. Summary of Assessment Credits (details on reverse side)
   Total 8 hour Technical Days (Include Consultants, Draughting etc.) 108 5
   Total 8 hour Line-Cutting Days

Calculation
   \[ \frac{108.5}{7} = 759.5 \quad \text{Technical} \]
   \[ \frac{108.5}{24} = 31.6 \quad \text{Line-cutting} \]
   \[ \frac{759.5}{24} = 31.6 \quad \text{Assessment credits per claim} \]

The dates listed on this form represent working time spent entirely within the limits of the above listed claims. Check
If otherwise, please explain

Dated: 16/12/83
Signed: [Signature]

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.
## ASSESSMENT WORK BREAKDOWN

### 1. FIELD WORK

<table>
<thead>
<tr>
<th>Type of Work</th>
<th>Name &amp; Address</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Work</td>
<td>James Lacombe</td>
<td>Aug 18-23</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Mike Treglia</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Howard McGowan</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Stuart Winchester</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Bryan Bealder</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>All of Exxon Exploration</td>
<td></td>
<td>Nov 1-10</td>
<td></td>
</tr>
</tbody>
</table>

### 2. CONSULTANTS

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.S. Middleton</td>
<td>Nov 1-6</td>
<td>6</td>
</tr>
<tr>
<td>Bruce Daftory</td>
<td>Nov 6</td>
<td>1</td>
</tr>
</tbody>
</table>

### 3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Type of Work</th>
<th>Dates Worked</th>
<th>Number of 8 hour days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan Wells</td>
<td>Oct 2-10</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Marilyn Toast</td>
<td>Typing</td>
<td>Oct 20-22</td>
<td>2.5</td>
</tr>
<tr>
<td>Chris Jones</td>
<td>Oct 10-12</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>All of Robert S. Mitchell Exploration Services</td>
<td></td>
<td></td>
<td>TOTAL 8 HOUR TECHNICAL DAYS 108.5</td>
</tr>
</tbody>
</table>

### 4. LINE-CUTTING

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Dates Worked</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Dates Worked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Address</td>
<td>Dates Worked</td>
</tr>
</tbody>
</table>

TOTAL 8 HOUR LINE-CUTTING DAYS
The said MINING CLAIMS situated in the SEELEY LAKE AREA and more particularly described as:

<table>
<thead>
<tr>
<th>claim number</th>
<th>recording date</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB-660848</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-660849</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651270</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651271</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651272</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651273</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651274</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651275</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651276</td>
<td>October 5, 1982</td>
</tr>
<tr>
<td>TB-651277</td>
<td>October 5, 1982</td>
</tr>
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</table>
SELF POTENTIAL
Instrument ___________________________________________ Range _______________________________________
Survey Method _____________________________________________
Corrections made _____________________________________________

RADIOMETRIC
Instrument _____________________________________________
Values measured _____________________________________________
Energy windows (levels) _____________________________________________
Height of instrument ___________________________ Background Count _____________________________________________
Size of detector _____________________________________________
Overburden (type, depth – include outcrop map) _____________________________________________

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)
Type of survey _____________________________________________
Instrument _____________________________________________
Accuracy _____________________________________________
Parameters measured _____________________________________________
Additional information (for understanding results) _____________________________________________

AIRBORNE SURVEYS
Type of survey(s) _____________________________________________
Instrument(s) _____________________________________________ (specify for each type of survey)
Accuracy _____________________________________________ (specify for each type of survey)
Aircraft used _____________________________________________
Sensor altitude _____________________________________________
Navigation and flight path recovery method _____________________________________________
Aircraft altitude _____________________________________________ Line Spacing _____________________________________________
Miles flown over total area _____________________________________________ Over claims only _____________________________________________
GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken...

________________________________________

Total Number of Samples

Type of Sample
(Nature of Material)

Average Sample Weight

Method of Collection

Soil Horizon Sampled

Horizon Development

Sample Depth

Terrain

Drainage Development

Estimated Range of Overburden Thickness

________________________________________

ANALYTICAL METHODS

Values expressed in:

- per cent □
- p. p. m. □
- p. p. b. □

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

Others

Field Analysis (tests)

Extraction Method

Analytical Method

Reagents Used

Field Laboratory Analysis

No. (tests)

Extraction Method

Analytical Method

Reagents Used

Commercial Laboratory (tests)

Name of Laboratory

Extraction Method

Analytical Method

Reagents Used

General

________________________________________

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis

________________________________________

General

________________________________________
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CLAIM INDEX MAP - SEELY LAKE CLAIM MAP No. 6-613

DECLINATION

INDUCED POLARIZATION

TIME DOMAIN MODE

DIPOLE-OPOLE ARRAY

SCHEME OF PULSES

ON-OFF

ON-OFF

EQUIPMENT USED

Tx - Scintrex 250 watt

Rx - Crone Mk IV Newmont type

B Claim post, located

Z Claim post, not located

position approximate

LI56ON

LI44ON

LI32ON

LI20ON

L1080N

L96N

L72ON

L60ON

L48ON

L36ON

L24ON

L12ON

LI0ON

L0ON

REVISIONS

ROBERT S. MIDDLETON

EXPLORATION SERVICES INC.

CLIENT

COLBY

TITLE

HEMLO-SEELY LAKE PROPERTY

HEMLO AREA

THUNDER BAY MINING DIVISION ONT

CHARGEABILITY IN DETAIL IP

DATE Aug /93

DRAWN

APPROVED

FILE RSM-1
CLAIM INDEX MAP - SEELY LAKE CLAIM

No. G

- 613

1.2640'

Declination

3030 TW

INDUCED POLARIZATION

TIME DOMAIN:

DIPOLE - DIPOLAR ARRAY

PLOTTING POSITIONS

c, c2 P, px P3

SCHEME OF PULSES

tte, te2

OFF

ON

LJ

a s 40m

detail I.R. chargeability r

eading n, S n2

EQUIPMENT USED

Tx - Scintrex 250 watt

Rx - Crone Mk IV Newmont

Claim post, located

Claim post, not located

position approximate

L 1560 N

L 1440 N

L 1320 N

L 1200 N

L 1080 N

L 960 N

T L 840 N

L 720 N

L 600 N

L 480 N

L 360 N

L 240 N

L 120 N

B L 0400

Uj

Ci

O

kj

Uj

ki

Ci

Uj

REVISIONS

CLIENT

ROBERT S. MIDDLETON

EXPLORATION SERVICES INC,

COLBY RESOURCES

TITLE

HEMUO - SEEULY LAKE PROPERTY

HEMUO AREA

THUNDER BAY MINING DIVISION, ONT.

CHARGEABILITY: He DETAIL I.P

Fig. 5

DATE: AUG 83

DRAWN: C J

SCALE: 1:2000

APPROVED

N.T.S.: 42D/16

FILE: RSM-1
CLAIM INDEX MAP

SEELY LAKE CLAIM MAP No. 6-613

Declination

INDUCED POLARIZATION

TIME DOMAIN MODE

DIPOLE-DIPOLE ARRAY

PLOTTING POSITIONS

SCHEME O

EQUIPMENT USED

Tx- Sclntrex 250 watt

Rx- Crone Mk I

Newmont type

Claim post, located

Claim post, not located

approximate

LI40N

LI20N

L1080N

L960N

T.L.840N

L720N

L600N

L480N

L360N

L240N

L120N

L00N

REVISIONS

ROBERT S. MIDDLETON

EXPLORATION SERVICES INC.

COLBY RESOURCES

TITLE

HEMLO-SEELY LAKE PROPERTY

HEMLO AREA

THUNDER BAY MINING DIVISION, ONT.

RESISTIVITY Ni DETAIL IP

FIG. 6
CLAIM INDEX MAP

-2640' SEELY LAKE CLAIM M

AP No. G-613

Ded nation

3030TW

INDUCED POLARIZATION
TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
RDTTING POSITIONS
SCHEME OF PULSES

EQUIPMENT USED

Tx - Scinlrex 250 watt
Rx - Crone MR IV Newmont type

Claim post, located
Claim post, not located

Position approximate

360N - 240N 200 260 METRES
L 1560 N
L 1440 N
L 1320 N
L 1200 N
L 1080 N
L 960 N
T L 840 N
L 720 N
L 600 N
L 480 N
L 360 N
L 240 N

ROBERT S. MIDDLETON
EXPLORATION SERVICES INC.

CLIENT
TITUE
HEMLO-SEELY LAKE PROPERTY
HEMLO AREA
THUNDER BAY MINING DIVISION, ONT.

RESISTIVITY NAV DETAIL IP

FIG. 7
DATE Aug/SS
DRAWN AL
APPROVED
N.T.S. 4Z D/ 16
FILE RSM-I