GEOPHYSICAL REPORT
ON THE
PERRON PROPERTY - WESTERN HALF

HARKER AND ELLIOTT TOWNSHIPS
LARDER LAKE MINING DIVISION

DISTRICT OF COCHRANE, ONTARIO

FEBRUARY 10th, 1982

MARY GREER,
Geophysical Technician.
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</table>

## MAPS:

- V.L.F.-EM Survey (in pocket at back of report)
- MAGNETIC SURVEY TOTAL FIELD (in pocket at back of report)
LOCATION MAP

SCALE: 1" to 120 miles
INTRODUCTION:

The Perron Property consists of 15 unpatented mining claims and 15 patented claims known as the Iris Gold Mines Ltd. The Iris Gold Mines has been idle in the Perron family since the late 1940's and due to the recent interest in the property, exploration for possible future development has begun.

However, for the purpose of this report only the western half of the property was examined, with the eastern half to follow in the near future.

During October, 1979, the staked claims were recorded by A.H. Perron, and in the summer of 1981 subsequently established a geophysical grid at a 400 foot line spacing.

During the period of December 7 - 12, 1981 two geophysical surveys (electromagnetic and magnetic) were completed over the 12 staked claims and half of the Iris Gold property. Two Geonics VLF-EM16 and one Geometric Proton Magnetometer were used for the above mentioned surveys.

This work was conducted and supervised by Bob Leliever assisted by Calvin Black, Mary Greer and John Daley, who are
members of the Canadian Gold & Metals Geophysical staff.

Drafting, plotting and contouring of the data was by Mary Greer assisted by Garth Elliott. The finished maps were interpreted by Mary Greer.

The purpose of this report is to briefly describe the results attained in said surveys.

The anomalies detected therefrom are shown on the accompanying plan maps, at a scale of one inch to 200 feet, that form an integral part of this report.

PROPERTY DESCRIPTION:

The western half of the Perron Property consists of a contiguous block of 12 unpatented mining claims and 4 patented mining claims. Eight of the unpatented mining claims are found in the Elliott Township and the other claims in question are located in Harker Township. All the claims are part of the Larder Lake Mining Division, District of Cochrane, Ontario and are further described as follows:

<table>
<thead>
<tr>
<th>CLAIM NO.</th>
<th>NO. OF CLAIMS</th>
<th>TOWNSHIP</th>
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<tbody>
<tr>
<td>L-545251-53</td>
<td>3</td>
<td>Harker</td>
</tr>
<tr>
<td>L-547462</td>
<td>1</td>
<td>Harker</td>
</tr>
<tr>
<td>L-545254-50</td>
<td>7</td>
<td>Elliott</td>
</tr>
<tr>
<td>L-547461</td>
<td>1</td>
<td>Elliott</td>
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</table>

12

plus the 4 patented claims:
<table>
<thead>
<tr>
<th>CLAIM NO.</th>
<th>NO. OF CLAIMS</th>
<th>TOWNSHIP</th>
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</thead>
<tbody>
<tr>
<td>L-9739</td>
<td>1</td>
<td>Harker</td>
</tr>
<tr>
<td>L-9921</td>
<td>1</td>
<td>Harker</td>
</tr>
<tr>
<td>L-9922</td>
<td>1</td>
<td>Harker</td>
</tr>
<tr>
<td>L-8650</td>
<td>1</td>
<td>Harker</td>
</tr>
</tbody>
</table>

(12 unpatented claims plus 4 patented claims = 16 claims)

Holder of the aforementioned twelve claims has been attested to by John E. Perron, 103 Government Road, E., Kirkland Lake, Ontario and was not independently ascertained by the writer.

LOCATION AND ACCESS:

The Perron Property is located in the southeastern corner of Harker Township and the northeastern corner of Elliott Township, approximately at 48°28' north latitude and 79°46' west longitude, or 25 miles NNE of the Town of Kirkland Lake, Ontario.

Included in this report are key map No.s 1 and 2 which show the property location.

Access to Harker Township can be gained via secondary forestry access roads off of Highway 101 extending east approximately 24 miles from the Town of Matheson, Ontario.

Direct access to the property, however, is limited to an A.T.V.
on a secondary bush road in the summer or snowmobile in the winter or a one hour hike along an old abandoned corduroy road.

PREVIOUS WORK:

There showings were discovered on the Perron Property (more specifically Iris Gold). In the summer of 1947 surface work was carried out by R. Storen on the No. 1, 2 and 3 showings, involving surface pits and trenches and a small diamond drill program on the number 1 vein (found on the eastern half of the property).

On patent claim L-8650 the No. 2 showing was explored by trenching two pits and channel samples were taken from each pit. This showing is a narrow shear zone at the contact between a rhyolite flow and a fine grained basic lava.

The No. 3 showing; a quartz vein in pillow lava trending N70°E; is found on claim L-5520 and this showing was trench for 120 feet. This vein was reported to be a narrow quartz vein mineralized with pyrite, chalcopyrite and galena.

Some trenching and pitting was conducted on the Elliott claims L-545254-255-257 and detailed geological mapping by R. Storen. The work was conducted on two veins trending northeast to southwest.

SURVEY PROCEDURE:

A baseline was established N54°E starting at the #3
corner of patent claim L-9739. Station 0 + 00 was established there by chaining along the Harker-Elliott Township line from the X mile post.

A grid system of picket lines at 400 foot spacing with stations each 100 feet was established at right angles to the baseline.

Readings were taken at each 100 foot station and on the baseline for the magnetometer. The Primary Base station was set up 350 feet from the #3 post of claim L-547462 with secondary check stations established for the purpose of this survey at 400 foot intervals along the baseline. The time interval between each secondary base check was one half hour to 45 minutes.

TOPOGRAPHY:

The western half of the Perron Property is flat with very gently sloping hills and in scattered areas, such as claim L-545255, large outcrops give the ground a more rugged appearance. The average difference in elevation is approximately 75 - 90 feet.

The claims in Harker are open with light regeneration of poplar due to previous logging operations. Elliott Township is covered with spruce, balsam, fir and white birch. The ground is high enough to remain dry, but a few swampy sections can be found particularly in the Elliott claims and the northern
boundary of the Iris Property. A small creek crosses the baseline at 400' E.

GENERAL GEOLOGY:

ODM Geological Map 1951-4 covering Harker Township at a scale of one inch to 1,000 feet indicates that the bedrock is predominantly mafic flows with 2 inner rhyolite flows and one diabase dyke and one small stock of course syenite.

The trend of the mafic flows appear to be northeast-southwest and the most common mafic flow is a diabasic flow with a flow breccia top. The tops of these flows are facing south.

The other mafic flows can be andesite, basalt, pillow lavas, diabasic lavas and some spherulitic lavas as well as some fragmental lavas and tuffs and chert. The shapes of the pillows indicate that the flows flow south.

The rhyolite flows range from 100 feet to 300 feet and strike N75°E. They have steep dips and face south.

The Matachewan diabase dyke is quartz diabase, diabase, in composition and is the youngest of the rocks. The dyke trends north-south ranging from 30°-45° east of north and width of the dyke varies from 50 to 100 feet. Lamprophyre dykes are rare, but frequently found at flow contacts or in a flow brecciated top. There are scattered quartz veins
throughout the property, some with sulphide mineralization. According to O.D.M. Geological Map 2368, covering Elliott and Thackeray Townships, the main flows are pillowed mafic flows (with the pillows facing south) and diabasic to gabbroic textured flows trending northeast-southwest.

Further research of Map No. 34a, Part of the Lightning River Area, by T.L. Gledhill, 1924, indicates that the N75°E rhyolite flows of Harker Township continues on into Elliott Township, these rhyolite flows are also mapped in R. Storen's detailed geological mapping of Goodfish Mines Ltd.

ECONOMIC GEOLOGY:

The neighbouring property to the north of Iris Gold is held by Harker Gold Mines and during the years 1924, 1925 and 1928 underground development of over 7,000 feet of drifting and cross-cutting was carried out on the number one vein.

The number one vein strikes N58°E, dips 80°S and is roughly parallel to the surrounding basalt flows.

Exploration at that time was very active but due to poor accessability interest was lost. Harker Township has only been active in recent years due to improved access roads and a new found interest in the Destor-Porcupine Fault zone. At one time the southerly part of Harker was unreachable by roads until logging activity opened the interior up.

The gold deposits of the Harker area can be generalized in three ways; in sheared and fractured zones, in mineralized
dykes; and in quartz veins, fillings and stockworks.

The sheared and fractured zones are usually found in sediments, lavas and intrusives. The mineralization is usually pyrite and occasionally visible gold can be seen. The mineralized dykes can be carbonatized or silicified with or without quartz stringers. Some dyke types are lamprophyre, syenite porphyry and feldspar porphyry.

Iris Gold Mines has always been an ideal site geologically for gold and has many samples and assays taken for gold. Some of the gold assays from the channel sampling for showing No. 2 are shown in figure 1.
### Figure 1

**Showing No. 2**

<table>
<thead>
<tr>
<th>WIDTH OF SAMPLES</th>
<th>DESCRIPTION</th>
<th>ASSAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Pit 8&quot;</td>
<td>Quartz with 5% pyrite</td>
<td>0.03 oz/ton</td>
</tr>
<tr>
<td>West Pit 7.5&quot;</td>
<td>Quartz with 3% pyrite</td>
<td>0/04 oz/ton</td>
</tr>
</tbody>
</table>

Showing No. 3 and 3 channel samples taken and the assays ran from .02 oz/ton to .11 oz/ton with some visible gold reported in the quartz veins.
SURVEY METHODS:

ELECTROMAGNETIC SURVEY:

The instruments used for this EM Survey were two Geonics VLF-EM16 Units. The sensitivity of these units is \( \pm 1\% \) for the in-phase and \( \pm \) for the quadrature. The operating frequency for the EM16 is from 15-25 kHz and the station selection is made by plug-in units.

For the purpose of our EM Survey the station used was Cutler, Maine, which was a frequency of 17.8 kHz.

All the readings were taken facing north at 100 foot intervals along the grid and the topography was noted for future use in the interpretation of the EM results.

MAGNETIC SURVEY:

The entire grid, including the baseline was read at every 100 foot interval with a Geometrics G-816 Proton Mangetometer, this instrument has a sensitivity of one gamma.

The diurnal variation was monitored by closing each loop at any secondary base station at a grid line - baseline intersection.

Diurnal corrections were applied by linear distribution of an observed variation over the time between base stations. The corrections were calculated by using a time vs drift graph.
PRESENTATION AND DISCUSSIONS OF RESULTS:

Electromagnetic Survey:

Three (3) VLF-EM conductors were found on the Perron Property. These conductors are further described as follows:

<table>
<thead>
<tr>
<th>CONDUCTOR NO.</th>
<th>TREND</th>
<th>APPROXIMATE LOCATION</th>
<th>INTENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor A</td>
<td>East-Northeast to West-southwest</td>
<td>L 36 W 14+00 N to L 24 W 10+00 N</td>
<td>Good</td>
</tr>
<tr>
<td>Conductor B</td>
<td>Northeast to Southwest</td>
<td>L 20 W 12+00 N to L 4 W 9+00 N</td>
<td>Good</td>
</tr>
<tr>
<td>Conductor C</td>
<td>near east-west</td>
<td>L 32 W 3+50 S to L 20 W 9+50 S</td>
<td>Good</td>
</tr>
</tbody>
</table>

Conductor A follows a topographic boundary between sloping dry ground with scattered outcrops to a flat wet section on L 24 W and L 28 W. L 32 W and L 36 W do not appear to have the same topographic characteristics as the former lines.

Conductor B does not follow any set topographic boundary. It is located under dry, hilly topography.

Conductor C has two (2) associations with topographic boundaries; a beaver pond on L 32 W 3+50 to 0+00 S and a wet area on L 20 W 5+00 E. This conductor appears to trend across the trend of the underlying geology as indicated by the magnetic survey.

On L 20 E 8+00 N a conductor (conductor D) was picked
up with a very good intensity. No further discussion can be made of this conductor due to the fact that no notes are available to see where this conductor extends to and in which direction.

CONCLUSIONS AND RECOMMENDATIONS:

Conductor B requires further exploration. One possible method would be by using a Inductive Vertical Loop System with a fixed transmitter which would further describe the conductor. This conductor follows the magnetic trend but is not associated with a magnetic high. The same can be said for conductor A; it is very possible, however, to be caused by a topographic boundary.

With regards to the magnetic highs and the rapid magnetic changes between the mafic flows and the andesite-dacite flows, it is recommended that a detailed grid of a maximum 50 foot interval be carried out over the said anamolies. A 50 foot spacing should also be read over the diabase dyke to better locate its boundaries and any sulphide mineralization that occurs in the mafic flows.

This is also recommended over the three (3) VLF-EM conductors; with a 50 foot spacing you can receive a more discriminate reading for the conductors in question. The 50
foot spacing will help filter out the near surface "geological noise".

FEBRUARY 10th, 1982

MARY GREER,
Geophysical Technician.

Respectfully Submitted,

MARY GREER,
Geophysical Technician.
BIBLIOGRAPHY

-Sixtieth Annual Report of the Ontario Department of Mines
being Vol. LX, Part VII, 1951

-Plan of Goodfish Mining Co. Ltd.
Lightning River Area showing Geology and Workings
of North portion
-Drafted by R. Storen,
Kirkland Lake, Ontario
November 1947
Traced by: E. Norppa
Kirkland Lake, Ontario
December 29, 1948

-Map No. 28b, Ontario Department of Mines
Geology by T.L. Gledhill, 1924
-Part of the Lightning River Area,
District of Cochrane, Ontario

-Ontario Geological Survey
Map 2368
Thackeray and Elliott Townships
CERTIFICATE

I, MARY M. GREER, of Gogama, Ontario, in the Province of Ontario, certify as follows with respect to my report on the Catharine Six Group in Catharine Township, Larder Lake Mining Division in the District of Timiskaming dated February 10th, 1982:

1. That I am a Geophysical Technician and reside at Box 89, Gogama, Ontario, POM LWO.

2. That I graduated from Sir Sanford Fleming College at Lindsay, Ontario in 1978 with a diploma as a Geological Technician.

3. That I was employed as a Geophysical Technician by H.E. Neal & Associates Ltd. for eighteen months.

4. That I have been practising my profession for a period of three years and am qualified to write this report.

5. That I employed by Canadian Gold & Metals Inc. as a Geophysical Technician.

6. That I participated in and supervised this survey.

February 10th, 1982
TIMMINS, Ontario.

Mary Greer,
Geophysical Technician
### Report of Work

**Geophysical, Geological Geochemical and Expenditures**

**Company:** Canadian Gold & Metals Inc.

**Prospector's License No.:** K18983

**Prospector:** John E. Perron, 103 Government Rd E., Kirkland Lake, Ontario

**Prospector's Address:** 3 Pine Street S., Timmins, Ontario, P4N 2T9

---

### Geophysical Work

- **Electromagnetic:**
  - Days Per Claim: 20
  - Days Per Claim: 40

- **Magnetometer:**
  - Days Per Claim: 60

- **Radiometric:**
  - Days Per Claim: 60

- **Other:**
  - Days Per Claim: 60

---

### Geological Work

- **Geochemical:**
  - Days Per Claim: 60

---

### Expenditures

- **Total Expenditures:**
  - Dollars
  - Days
  - Costs

---

### Mining Claim Traversed

- **Mining Claim Prefix Number:**
  - 545251
  - 545252
  - 545253
  - 545254
  - 545255
  - 545256
  - 545257
  - 545258
  - 545259
  - 545260
  - 545261

---

### Work Performed

- **First Survey:**
  - Enter 40 days (This includes line cutting)

- **Subsequent Surveys:**
  - Enter 20 days (for each)

---

### Signatures

- **Holder or Agent (Signature):**
  - John E. Perron

- **Date:**
  - January 18, 1981

---

### Verification

- **Certification:** I, the holder or agent of the mining claim, hereby certify that I have examined and verified the information contained in this report of work and that the work was performed in accordance with the provisions of the Mining Act, 1981.
**Type of Survey(s)**
- Geophysical (Mag and E.M.)
- Geochemical

**Claim No.**
John E. Perron, 103 Government Rd E., Kirkland Lake, Ontario

**Survey Dates (linecutting to office)**
- Day |
- Mo. |
- Yr. |
- Day |
- Mo. |
- Yr. |

**Total Miles of line Cut**

**Name and Address of Author (of Geo-Technical report)**
3 Pine Street S., Timmins, Ontario, P4N 2T9

### Special Provisions

**Credits Requested**

<table>
<thead>
<tr>
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<tr>
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**Man Days**

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**Airborne Credits**

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**Expenditures (excludes power stripping)**

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**Calculation of Expenditure Days Credits**

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**Mineral Claims Traversed**

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**For Office Use Only**

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**Report Completed**

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<th>Date of Report</th>
<th>Recorded Holder or Agent (Signature)</th>
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<tbody>
<tr>
<td>Dec. 18/81</td>
<td></td>
</tr>
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**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 annexed hereto, 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
Hermann Tittley, 147 Hemlock Street, Timmins, Ontario.

<table>
<thead>
<tr>
<th>Date Certified</th>
<th>Certified by (signature)</th>
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<td>Dec. 18/81</td>
<td></td>
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Mining Lands Comments

To: Geophysics

Comments

To: Geology - Expenditures

Comments

To: Geochemistry

Comments

To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)
November 16, 1982

Mr. Fred Matthews
Land Management Branch
Whitney Block, Room 6450
Queens Park
Toronto, Ontario
M7A 1W3

Dear Sir:

I am returning the VLF plans (in duplicate) for the Geophysical (Electromagnetic and Magnetometer) Survey on Mining Claims L 545251 et al in the township of Elloit and Harker as well as VLF plans for mining claims L 565520 et al in the township of Catharine.

I am the author of the Geophysical Reports and have added the readings to each station. Since the original mylars are not at my disposal I had to put the readings directly on the prints.

I'm sorry to put you to so much trouble, I was aware that it was necessary for the readings to be shown but at the time I wrote the reports I could not convince my superiors of this requirement.

I'm sorry to delay you and hope this is what you required.

Your very truly,

Mary Greer
Geological Technician
Site 3, RR#2, Box 9
Swoastie, Ontario
POK 1TO
### Mining Lands Comments

- VLF survey needs readings (raw data)

To: Geophysics

Comments

- VLF survey needs readings on map

☑ Approved  ☐ Wish to see again with corrections  Date: Oct 5/82  Signature: [Signature]

To: Geology - Expenditures

Comments

☑ Approved  ☐ Wish to see again with corrections  Date  Signature

To: Geochemistry

Comments

☐ Approved  ☐ Wish to see again with corrections  Date  Signature

☑ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)
Mr. John E. Perron  
103 Government Road East  
Kirkland Lake, Ontario  
P2N 1A9

Dear Sir:

RE: Geophysical (Electromagnetic and Magnetometer) Survey submitted on Mining Claims L 545251 et al in the Townships of Elliott and Harker

Enclosed are the V.L.F. plans (in duplicate) for the above mentioned survey. In order to complete your submission readings (i.e. raw data) must be shown at each station.

For further information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly

E.F. Anderson  
Director  
Land Management Branch  
Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

A. Barr:sc

Encls:

cc: Mining Recorder  
Kirkland Lake, Ontario
Dear Sirs:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims L 545251 et al in the Townships of Elliott and Harker.

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

Yours very truly,

E. F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

J. Skura/cm

cc: Canadian Gold & Metals Inc.
Timmins, Ontario
February 18th, 1982

LOOMIS

Lands Administration Branch,
Mining Lands Section,
Ministry of Natural Resources,
Room 6450 Whitney Block,
Queen's Park, Toronto,
M7A 1W3

Dear Sir:

Re: Technical Reports for
-Catharine Township
-Elliott & Harker Townships
-Lebel Township
Larder Lake Mining Division

Enclosed herewith please find duplicate copies of the following:

Report dated February 10th, 1982 by Mary Greer entitled:

Geophysical Survey Report
on the A.H. Perron Property
Catharine Six Group
Catharine Township
Larder Lake Mining Division
District of Timiskaming, Ontario

Report dated February 10th, 1982 by Mary Greer entitled:

Geophysical Report
on the Perron Property - Western Half
Harker and Elliott Townships
Larder Lake Mining Division
District of Cochrane, Ontario

Report dated February 18th, 1982 by H.Z. Tittley entitled:

Report on Geophysical Survey
on the Gull Lake Property of
Jokabo Resources Inc.
Lebel Township
District of Timiskaming, Ontario
Min. of Natural Resources February 18th, 1982

I trust this is the information required as per the Report of Work sheets filed with the local Mining Recorder's office in the district concerned.

Yours truly,

CANADIAN GOLD & METALS INC.

/mc
Encl.

Mary Charbonneau

c.c. A. Perron
February 19, 1982

Canada Gold & Metals Inc.
Exploration Office
3 Pine Street South
Suite 204
Timmins, Ontario
P4N 2T9

Attention: H. Z. Tittley

Dear Sir:

Re: VLF EM Survey Plan (Incomplete)
Claims L-545252 & L-545254

With reference to your letter of February 17, 1982 it is my understanding that the field notes for the electromagnetic survey done on claims L 545252 and 545254 were lost and therefore you will have to survey the claims again when the weather permits.

If that is the case, then Section 77 (22) of the Mining Act does not apply. This is not a case where the survey data exists and a delay has occurred in drafting and report writing.

May I suggest that you voluntarily withdraw your report of work form for these two claims from the Mining Recorder and request that he delete the entry from the claim record sheets. If your claims are thus placed in jeopardy you should then make arrangements with the Mining Recorder to apply to the Mining and Lands Commissioner for relief from forfeiture and an extension of time.

Sincerely,

E. F. Anderson
Director
Land Management Branch

FWM/mcr
Mr. Fred Matthews  
Lands Administration Branch  
Mining Lands Section  
Ministry of Natural Resources  
Room 6450, Whitney Block  
Queens Park, Toronto  
M7A 1W3

Dear Mr. Matthews:

I am submitting a supplementary report on the geophysical survey of the Perron Property of Harker and Elliott townships. When the initial report was being prepared, it was discovered that some notes were missing. Permission was obtained from George Kolezar, Mining Recorder of the Harder Lake Mining Division, to complete these missing lines as soon as such conditions were available.

You would do a great service if you would attach these two reports to the two copies in Queen's Park and show that the work has been completed as required for a assessment report.

Sincerely yours,

Mary Green  
Geological Technician  
R.R. # 2, Box 9  
Swastika, Ontario
March 21, 1982

Dear Sir:

I am submitting a supplementary report on the geophysical survey of the Perron Property of Harker and Elliot townships. When the initial report was being prepared, it was discovered that some notes were missing. Permission was obtained from George Kalezar, Mining Recorder of the Larder Lake Mining Division, to complete these missing lines as soon as both conditions were available.

You would do a great service if you would attach these two reports to the two copies in Queen's Park and show that the work has been completed, as required for a assessment report.

Sincerely yours,

Mary Greer

Geological Technician

P.R. 2, Box 9

Suestika, Ontario
SUPPLEMENTARY REPORT

OF THE

GEOPHYSICAL REPORT

OF THE

PERRON PROPERTY - WESTERN HALF

HARKER AND ELLIOTT TOWNSHIPS

LARDER LAKE MINING DIVISION

DISTRICT OF COCHRANE, ONTARIO

FOREWORD:

The initial geophysical report was written on February 10, 1982, by the writer, for Alexander Perron. Due to last notes and poor bush conditions, picket lines: L 00 (north), L 4 + 00 E, L 8 + 00 E, L 12 + 00 E and L 16 + 00 E (north) were not completed with the VLF. Therefore, claims L 545252 and L 545254 due not have the total amount of work presented to qualify these lines for the number of days required. This supplementary report is written to present the required information.
ELECTROMAGNETIC SURVEY:

The instrument used for this EM Survey was a Geonics VLF-EM16 unit. The sensitivity of this unit is ±1% for the in-phase and ±1% for the quadrature. The operating frequency for the EM16 is from 15-25 kHz and the station selection is made by plug-in units.

For the purpose of the EM survey the station used was Cutler, Maine which has a frequency of 17.8 kHz.

All the readings were taken by Alex Perron, facing north at 100 foot intervals along the grid.
PRESENTATION AND DISCUSSIONS OF RESULTS:

Electromagnetic Survey:

Conductor B, found with the previous work, was found to extend on the same strike, through lines L0+00 7+00 N; L 4+00 E 6+00 N L 8+00 E 5+00 N; and L 12 N 2+00 N.

Conductor D was found to have a northwest southeast strike and is found between L 12 E 19+00 N; L 16 E 12+00 N and L 20 E 8+00 N. This conductor appears to follow a topographical boundary between higher dry ground and a low wet cedar swamp.

Respectfully submitted

Mary Greer

March 21, 1982

Mary Greer
Geological Technician
February 17, 1982

Lands Administration Branch  
Mining Lands Section  
Ministry of Natural Resources  
Room 6450 Whitney Block  
Queen's Park, Toronto  
M7A 1W3

Dear Sirs:

Re: VLF EM Survey Plan (Incomplete)  
Claims L-545252 & L-545254

Further to our letter of February 8th, 1982,  
to Mr. George Kolezar, Mining Recorder, Larder Lake  
Mining Division, with attached Affidavit (copy attached),  
we would like to apply for an extension on the above  
mentioned claims under section 77 (22).

As mentioned in the February 8th letter, Mary  
Greer did attempt to acquire the data by repeating the  
survey along the lines in question but was unable to do  
so because of deep snow conditions along the existing roads.

We would appreciate receiving this extension until  
we are able to repeat the survey when snow conditions  
improve. Hopefully, this will not be in the too distant  
future.

Yours very truly,

CANADIAN GOLD AND METALS INC.

HZT/sg
attach.

H. Z. Tittley
February 8th, 1982

Mr. George Kolezar,
Mining Recorder,
Larder Lake Mining Division,
4 Government Road East,
Kirkland Lake, Ontario,
P2N 3L1

Dear Mr. Kolezar:

As per our recent telephone conversation, here is the Affidavit from the operator whose field notes could not be located resulting in the incomplete survey coverage on our V.L.F. E.M. survey plan which we are submitting for assessment credit. The missing data are on claims L-545252 and L-545254.

Mary Greer, also an employee of Canadian Gold and Metals, attempted to acquire the data by repeating the survey along the lines in question but was unsuccessful due to the deep snow conditions along the existing roads.

When conditions improve, Canadian Gold & Metals or other parties, on their behalf, will complete the survey. Completed maps will be forwarded to your office shortly thereafter.

I thank you for your patience and apologize for the inconvenience.

Yours truly,

CANADIAN GOLD & METALS

H.Z. Tittley,
Field Geophysicist.
AFFIDAVIT

I, Kalvin Black, of Gogama, Ontario, and an employee of Canadian Gold & Metals, declare that I have made geophysical observations using the V.L.F. Electromagnetic unit serial number 19047 along lines 0 4E 8E and 12E'over claims L-545252 and L-545254 on December 9th, 1981.

The recorded field notes taken during these observations were, to the best of my recollection, transported to Matheson, the base of operation and submitted to the supervisory personnel.

Subsequently, these data were supposedly forwarded to Canadian Gold & Metals Exploration Office near Gogama but recently during the preparation of field plans for the purpose of submitting for assessment credits, the field notes in question could not be encountered.

Witness ___________________________  Kalvin Black

Date _______________________________
Type of Survey(s) Geophysical (Ground Magnetic & Electromagnetic)

Township or Area Harker and Elliott

Claim Holder(s) John E. Perron

Survey Company Canadian Gold & Metals Inc.

Author of Report Mary Greer

Address of Author Box 89, Gogama, Ontario

Covering Dates of Survey August 1981 to Feb. 1982

Total Miles of Line Cut

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<tr>
<th>SPECIAL PROVISIONS CREDITS REQUESTED</th>
<th>DAYS per claim</th>
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<tbody>
<tr>
<td>Geophysical</td>
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<td>Electromagnetic</td>
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<tr>
<th>AIRBORNE CREDITS</th>
<th>(Special provision credits do not apply to airborne surveys)</th>
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<tbody>
<tr>
<td>Magnetometer</td>
<td>Electromagnetic</td>
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<tr>
<td>Radiometric</td>
<td>(enter days per claim)</td>
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DATE: Feb. 10/82 SIGNATURE: Mary Greer

Res. Geol. ___________________ Qualifications ___________________

Previous Surveys

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<tr>
<th>File No.</th>
<th>Type</th>
<th>Date</th>
<th>Claim Holder</th>
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TOTAL CLAIMS 12
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
HARKER TWP
ELLIOTT TWP

V.L.F-EM SURVEY
APPROVED BY

HZ. TOTTLEY
TRACED BY G. G. ELLIOTT

INSTRUMENT USED: GEONICS V.F.-EM 16
STATION USED - CUTLER, MAHE
FREQUENCY 17.8 KHz

LOCATION MAP
SCALE 1/2 in = 1 mi