



REPORT ON  
GEOLOGICAL SURVEY  
HEARST TOWNSHIP, ONTARIO

**RECEIVED**  
M.L.C. - 6 1982  
MINING LANDS SECTION

I. INTRODUCTION

A geological survey was carried out during June to September 1982 over lines cut in the fall of 1980. Results are shown on the enclosed plan.

II. LOCATION, ACCESS AND OWNERSHIP

The claims covered by the survey are located in the south-central part of Hearst Township, District of Temiskaming, Ontario. The claims are numbered L476794 to 476797; L522769 to 522782; L522787 to 522789; L532256 to 532257; L545062 to 545063; L565043 to 565044; and L578356 to 578357 all inclusive. They are recorded in the name of Superior Northwest Inc., P.O. Box 1110, Sault Ste. Marie, Ontario.

The claims are crossed by Highway 624 about 6 miles south of Larder Lake, Ontario. Logging roads and trails give access to the claims from the highway.

III. PREVIOUS EXPLORATION

There has been a considerable amount of surface prospecting in the past. A number of deep pits were noted during the survey but no information is available on when they were dug or what, if anything, was found.

#### IV. TOPOGRAPHY

The major part of the property is covered by Pleistocene drift, gravel and swamp. Rocky hills up to 20 feet above the surrounding area with fair to good rock exposure occur in a few areas. A large part of the claims are covered with drift, swamp or beaver ponds with scattered very small outcrops in some of the higher areas. The property is covered with a dense second growth of poplar, birch, alder and wild cherry with black spruce in the more swampy parts. With this is a thick growth of underbrush which makes the location of small outcrops difficult. A number of beaver ponds or now dry beaver meadows cover many of the stream courses.

The area has recently been logged over with destruction of picket lines in some places. In general the logging has been helpful in making outcrop more easily seen where moss has been scraped off or tree trunks overturned.

#### V. SURVEY PROCEDURE

A grid line was laid out across the property with a baseline running about S 60° E across the property. Crosslines were cut perpendicular to the baseline at 400-foot intervals. The picket lines were marked with fluorescent red paint for easier observation. Trial lines were run east and west from the picket lines by pace and compass in search of poorly exposed outcrop. All outcrops were noted in a field book as to rock type and distance from picket lines. This information was then plotted on a 1" = 400' scale plan.

## VI. GEOLOGY

The general geology of Hearst Township has been described by J.E. Thomson (1).

The claims are underlain by a volcanic-sedimentary sequence of rocks cut by small intrusions of felsic to mafic composition. The approximate trend of the rocks is north, north-west and forms the north limb of a synclinal basin.

The volcanic rocks are basic, fine to medium grained and green to dark green in colour. In places they have been altered to chlorite schist with carbonatization.

The sediments consist largely of fine grained greywackes which grade to coarser material up to conglomerates. Due to extensive drift cover, even in areas of outcrop, it is difficult to trace any individual bed. Interbedded with the greywacke is a black graphitic argillite or tuff, particularly along the baseline on claim L476796. Float would indicate the band is probably more extensive than the limited outcrop seen in a few pits and trenches. Conglomerate occurs as one band about 300-400 feet wide and as many smaller bands scattered through the greywackes. It consists of a heterogenous mixture of boulders to pebbles with mafic volcanic clasts predominating. At one location just north of 7 NW on the baseline, sulphide clasts up to 1" were noted. The matrix is a coarse greywacke, or dark green chloritic material.

Intrusives consist of small bodies of diorite or quartz porphyry.

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(1) O.D.M. Report Vol. 56 part 8, 1947

VII. CONCLUSIONS

The geological survey shows a volcanic sedimentary sequence of rocks with interbedded graphitic material. A strong VLF-EM conductor which appears to follow the sediment-volcanic contact is everywhere, obscured by overburden. It may be caused by a graphitic material similar to that from 4 NW to 8 NW along the baseline. However, sulphide clasts in the same area indicate that sulphides are also present and may warrant further work.

A narrow quartz vein, with the surrounding rock highly carbonatized was found on claim L522769. The area warrants further prospecting for gold.

Respectfully submitted



Robert A. MacGregor, P. Eng.

October 15, 1982

CERTIFICATE

I, Robert A. MacGregor, certify:

1. I am a Mining Engineer residing at 134 Palace Drive, Sault Ste. Marie, Ontario. I have worked as a mining engineer and geologist for the past 17 years.
2. I am a member of the Association of Professional Engineers of the Province of Ontario and a member of the Canadian Institute of Mining and Metallurgy.
3. I attended Queen's University for two years in the Mining-Geology course.
4. I personally carried out or supervised the field work on the subject claims.

... Oct. 15/82 ..

Date





32D04SE0211 2.5256 HEARST

900

July 15, 1983

2.5256

Superior Northwest Inc.  
P.O. Box 1110  
Sault Ste. Marie, Ontario  
P6A 5N7

Attention: R.A. MacGregor

Dear Sirs:

RE: Geological Survey submitted on Mining Claims 522769  
et al in the Townships of Hearst and Skead

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Enclosed are the plans, in duplicate, for the above-mentioned survey. Please show all claim numbers on the plans and return them to this office.

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

R. Pichette:mc

Encl.

cc: Mining Recorder  
Kirkland Lake, Ontario

#329

Type of Survey(s) **Geological** Township or Area **Hearst & Skead**

Claim Holder **Superior Northwest Inc.** Prospector's Licence No. **T-626**

Address **P.O. Box 1110, Sault Ste. Marie, Ontario P6A 5N7** **2.5256**

Survey Company **Colex Explorations Inc.** Date of Survey (from & to) Day **9** Mo. **80** Day **10** Mo. **82** Total Miles of line Cut **23.36**

Name and Address of Author (of Geo-Technical report) **R.A. MacGregor, 134 Palace Drive, Sault Ste. Marie, Ontario P6B 5H5**

Credits Requested per Each Claim in Columns at right

| Special Provisions  | Geophysical       | Days per Claim |
|---|-------------------|----------------|
| For first survey:<br>Enter 40 days. (This includes line cutting)                | - Electromagnetic |                |
|   | - Magnetometer    |                |
| For each additional survey:<br>using the same grid:<br>Enter 20 days (for each) | - Radiometric     |                |
|   | - Other           |                |
|   | Geological        | <b>40</b>      |
|   | Geochemical       |                |

  

| Man Days                                      | Geophysical       | Days per Claim |
|---|-------------------|----------------|
| Complete reverse side and enter total(s) here | - Electromagnetic |                |
|   | - Magnetometer    |                |
|   | - Radiometric     |                |
|   | - Other           |                |
|   | Geological        |                |
|   | Geochemical       |                |

  

| Airborne Credits   | Geophysical     | Days per Claim |
|--|-----------------|----------------|
| Note: Special provisions credits do not apply to Airborne Surveys. | Electromagnetic |                |
|  | Magnetometer    |                |
|  | Radiometric     |                |

Mining Claims Traversed (List in numerical sequence)

| Prefix | Mining Claim Number | Expend. Days Cr. |
|--------|---------------------|------------------|
| L      | 522769              |                  |
|        | 522770              |                  |
|        | 522771              |                  |
|        | 522772              |                  |
|        | 522773              |                  |
|        | 522774              |                  |
|        | 522775              |                  |
|        | 522776              |                  |
|        | 522777              |                  |
|        | 522778              |                  |
|        | 522779              |                  |
|        | 522780              |                  |
|        | 522781              |                  |
|        | 522782              |                  |
|        | 522787              |                  |
|        | 522788              |                  |
|        | 522789              |                  |
|        | 532256              |                  |
|        | 532257              |                  |
|        | 545062              |                  |
|        | 545063              |                  |
|        | 565043              |                  |
|        | 565044              |                  |

**RECEIVED**  
OCT 19 1982  
MINING LANDS SECTION

LARDER LAKE MINING DIV.  
**RECEIVED**  
OCT - 6 1982  
7:8 AM 9 10 11 12 1 2 3 4 5 6 PM

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$  ÷ 15 = Total Days Credits

Instructions  
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **24**

For Office Use Only

Total Days Cr. Recorded **061** Date Recorded **6 1982** Mining Recorder *[Signature]*

Date Approved as Recorded **July 26/83** Branch Director *[Signature]*

Date **Oct. 4/82** Recorded Holder of Agent (Signature) *[Signature]*

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 **R.A. MacGregor, P.O. Box 1110, Sault Ste. Marie, Ontario P6A 5N7**

Date **Oct. 4/82** Certified by (Signature) *[Signature]*



*Jan 31/83*

Mining Lands Comments

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To: Geophysics

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| <input type="checkbox"/> Approved | <input type="checkbox"/> Wish to see again with corrections | Date | Signature |
|-----------------------------------|---|------|-----------|

To: Geology - Expenditures

*W/R Kustrea*

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| <input checked="" type="checkbox"/> Approved | <input type="checkbox"/> Wish to see again with corrections | Date <i>Mar 7/83</i> | Signature <i>Kustrea</i> |
|--|---|----------------------|--------------------------|

To: Geochemistry

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| <input type="checkbox"/> Approved | <input type="checkbox"/> Wish to see again with corrections | Date | Signature |
|-----------------------------------|---|------|-----------|

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



329

1982 12 29

2.5256

Mining Recorder  
Ministry of Natural Resources  
4 Government Road East  
P.O. Box 984  
Kirkland Lake, Ontario  
P2N 1A2

Dear Sir:

We have received reports and maps for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 522769 et al in the Townships of Hearst and Skead.

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: 416/965-1380

DW:sc

cc: R.A. MacGregor  
Sault Ste. Marie, Ontario



Ministry of Natural Resources

File \_\_\_\_\_

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) Geological  
Township or Area Hearst  
Claim Holder(s) Superior Northwest Inc.  
  
Survey Company Colex Explorations Inc.  
Author of Report Robert A. MacGregor  
Address of Author 134 Palace Dr. S.S. Marie, Ont.  
Covering Dates of Survey 10/80 to 10/82  
(linecutting to office)  
Total Miles of Line Cut 23.36

| MINING CLAIMS TRAVERSED                 |   |
|---|---|
| List numerically                        |   |
| L476794.....<br><small>(prefix)</small> | L532256.....<br><small>(number)</small> |
| L476795.....                            | L532257.....                            |
| L476796.....                            | L545062.....                            |
| L476797.....                            | L545063.....                            |
| L522769.....                            | L545043.....                            |
| L522770.....                            | L545044.....                            |
| L522771.....                            | L578356.....                            |
| L522772.....                            | L578357.....                            |
| L522773.....                            |   |
| L522774.....                            |   |
| L522775.....                            |   |
| L522776.....                            |   |
| L522777.....                            |   |
| L522778.....                            |   |
| L522779.....                            |   |
| L522780.....                            |   |
| L522781.....                            |   |
| L522782.....                            |   |
| L522787.....                            |   |
| L522788.....                            |   |
| L522789.....                            |   |
| TOTAL CLAIMS <u>29</u>                  |   |

| <u>SPECIAL PROVISIONS</u><br><u>CREDITS REQUESTED</u>           | Geophysical           | DAYS<br>per claim |
|---|-----------------------|-------------------|
| ENTER 40 days (includes<br>line cutting) for first<br>survey.   | -Electromagnetic..... |                   |
|   | -Magnetometer.....    |                   |
|   | -Radiometric.....     |                   |
|   | -Other.....           |                   |
| ENTER 20 days for each<br>additional survey using<br>same grid. | Geological.....       | <u>40</u>         |
|   | Geochemical.....      |                   |

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: Oct. 15/82 SIGNATURE: [Signature]  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 2.1102

| <u>Previous Surveys</u> |      |      |              |
|-------------------------|------|------|--------------|
| File No.                | Type | Date | Claim Holder |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |
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|                         |      |      |              |

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations \_\_\_\_\_ Number of Readings \_\_\_\_\_

Station interval \_\_\_\_\_ Line spacing \_\_\_\_\_

Profile scale \_\_\_\_\_

Contour interval \_\_\_\_\_

**MAGNETIC**

Instrument \_\_\_\_\_

Accuracy – Scale constant \_\_\_\_\_

Diurnal correction method \_\_\_\_\_

Base Station check-in interval (hours) \_\_\_\_\_

Base Station location and value \_\_\_\_\_

**ELECTROMAGNETIC**

Instrument \_\_\_\_\_

Coil configuration \_\_\_\_\_

Coil separation \_\_\_\_\_

Accuracy \_\_\_\_\_

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency \_\_\_\_\_  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

**GRAVITY**

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

**INDUCED POLARIZATION RESISTIVITY**

Instrument \_\_\_\_\_

Method  Time Domain  Frequency Domain

Parameters – On time \_\_\_\_\_ Frequency \_\_\_\_\_

– Off time \_\_\_\_\_ Range \_\_\_\_\_

– Delay time \_\_\_\_\_

– Integration time \_\_\_\_\_

Power \_\_\_\_\_

Electrode array \_\_\_\_\_

Electrode spacing \_\_\_\_\_

Type of electrode \_\_\_\_\_