

Report On

Combined Magnetic Electromagnetic Survey

Carscallen Twp. Claim Group

Porcupine Mining Division, Ontario

January 10, 1969

J.E. Steers, FGAC., P.Eng.

INTRODUCTION

PREVIOUS WORK

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The property consists of 10 unpatented, contiguous mining claims registered in the name of Claw Lake Molybdenum Mines Ltd., Suite 405, 67 Yonge St., Toronto, Ont.

The claims are numbered P-98475 to 98484 inclusive.

LOCATION and ACCESS ...

The property is located in West-central Carscallen Twp., approximately 18 miles South 75°West of the Town of Timmins, Ont.

The property may be reached via Highway 101 from Timmins and then via the Mallette Lumber Co. access road.

During the summer the west boundary is accessible by car however, during winter the nearest usable road is approximately 0.4 miles west of the property.

GENERAL GEOLOGY

The rocks of the area are generally steeply dipping, easterly trending volcanic rocks of acidic to intermediate composition with intercalated bands of sulphide and/or oxide type iron formation. To the north is a large gabbroic intrusive mass and smaller bodies variously mapped as porphry or granite. To the east a mass of extrusive material thought to be rhyolite occurs, portions of which are probably of pyroclastic origin.

Carscallen Twp. has previously been extensively prospected for gold and several gold occurrences have been reported in the southeast portion of the area howeverno viable deposits have been located.

Ontario Department of Mines preliminary map No. P-23 is the most recent publication on the area.

Airborne magnetic and electromagnetic surveys hve been conducted over the property, one of which is filed with the Resident Geologist, Ontario Department of Mines, Timmins, Ont.

Lucky Strike Explorations Ltd. had a magnetic and electromagnetic survey carried out over the western portion of the property and subsequently drilled four holes totalling 1338 feet. One of the holes intersected massive pyrite and pyrrhotite over a core length of 117.5 feet.

INSTRUMENTS USED AND SURVEY METHOD

Magnetic and electromagnetic surveys were carried out over a grid system established between Nov. 5, 1968 and Dec. 15, 1969. North bearing lines were establised at 200 foot intervals. 13.3 miles of line were establised.

"VLF" receiving unit utilizing Seattle Washington as the transmitting station. The inclination of the magnetic component of the
resultant electromagnetic field was recorded at 100 foot
intervals along picket lines. The results are plotted on the
accompanying maps in profile form.

The magnetic survy was carried out with a Scintrex MF-1-100 fluxgate magnetometer. The vertical component of the earths magnetic field was measured at 100 foot intervals. All readings were reduced to a common base level and corrected for diurnal

variation. The value at each station is recorded on the accompanying plan.

SURVEY RESULTS

Six definite conductive zones were indicated as well as three possible conductive zones.

All definite conductive zones have direct magnetic correlatiion with peak intensities ranging from 2000 to 39,000 gammas.

Magnetic relief is high with maximum relief in excess of 46,000 gammas.

SUMMARY AND CONCLUSIONS

Two strong zones of anomalous conductivity were outlined on the property by a previous airborne electromagnetic survey.

One zone has been partially investigated by ground geophysical methods and diamond drilling.

Recent work has indicated the presence of several other zones of conductivity having direct magnetic correlation.

There is a strong possibility that at least 3 of these zones contain significant quantities of sulphide mineralization with some magnetite.

RECOMMENDATIONS

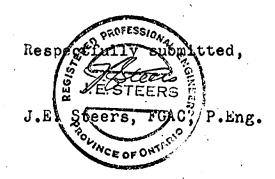
It is recommended that 3 diamond drill holes, outlined below,

be planned to test the anomalous areas previously mentioned.

It is also recommended that limited Crone JEM work be carried out on lines 44E, 40E, 36E, 18E, 4E, 2E, to establish dip and a conductivity-width product for the conductive zones. It is also recommended that the old drill sites be located and tied to the new grid system to aid in the correlation of recent work and previous drilling.

Recommended Diamond drill holes:

| | | | · . | 1300 ft. |
|------------|-----------|------|--------|-----------------|
| # 3 | line 44E, | 8008 | -50 N | 4501 |
| #2 | line 4E, | 200N | -50 N | 4501 |
| #1 | Line 46E, | 800N | -50° S | 400 F t. |



ELECTROMAGNETIC SURVEY

The "Radem" unit is essentially a spacially designed radio receiver which receives very low frequency radio signals from transmitters located at various points throughout the world.

The receiving unit is used to measure the direction of the magnetic component of the transmitted field.

The normal VLF magnetic field is horizontal, however, the field is distorted by the presence of a conductive body.

The presence of a conductive body can, therefore, be determined by measuring the dip angle of the resultant field at regular intervals.

The instrument is so designed that when in the position of minimum coupling, the arrow on instrument points towards the conductive body. The exis of the body will be located at the zero or "cross-over" point between sets of dip angles which point towards the zero point.

The magnitude of the dip angle and the direction in which the arrow points are recorded at each field station.

The direction of the magnetic component of the field from a VLF transmitting station is horizontal and perpendicular to the line between the operator and the transmitting station.

For best results, a station is selected so that the magnetic field is perpendicular to the suspected strike of possible conductive bodies.

Justed so that the signal is clearly heard. The unit is then held in a horizontal position and rotated until an audio null is obtained. The unit is then aligned parallel to the field direction. The receiver is then rotated into the vertical position and rotated about a vertical axis until an audio null is heard. The dipangle is then noted as well as the direction in which the arrow points.

If, when reading a station to the south, a dip angle of 20 degrees is obtained and the arrow points to the east the conductor is located to the east.

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PERFORMANCE & COVERAGE CREDITS

| ASSESSMENT WORK DETAILS | MINING CLAIMS TRAVERSED | |
|--|---|---------------|
| | List numerically | |
| Township or Arca Carscallen Twp. | 2 2015 | |
| Type of Survey Crone Radem "VLF" EM | | |
| Olif Line Cutter J.B. Steers | 98476 | |
| or Contractor 13.7 Inglewood 6re., Thunder Bay "F" Address | 98477 | |
| | 98478 | |
| Party Chief Wm. Wilson, Name | *************************************** | |
| 143 Cedar St., Timmins, Ont. | 98479 | |
| ConsultantJ_E_Steers , Name | 98480 | |
| 137 Inglewood Gres., Thunder Bay, "F" Address | 98481 | |
| Address | | list |
| COVERING DATES | 984.82 | attach |
| Linc Cutting Nov. 5 to Dec 15, 1968 | | |
| | 98484 | insufficient, |
| Field Nov. 20 to Dec 15, 1968 Instrument work, geological mapping, sampling etc. | | |
| Office Dec. 16 to Jan 10, 1969 | | space |
| | | Ħ |
| Make, Model and Type Crone VLF EM | | |
| | | |
| Scale Constant or Sensitivity 1 degree Or provide copy of instrument data from Manusacturer's brochure. | | |
| Radiometric Background Count | ••••••• | |
| Number of Stations Within Claim Group 6240 | | |
| Number of Readings Within Claim Group6240 | | |
| Number of Miles of Line cut Within Claim Group 13.3 | | |
| Number of Samples Collected Within Claim Group | | |
| Number of Samples Concetted William Communication | | - |
| <u>CREDITS REQUESTED</u> 20 DAYS per claim 40 DAYS per claim (Line cutting) | TOTAL 10 | |
| Geological Survey | | ٦ |
| Geochemical Survey DATE Feb 24, 1971 Geochemical Survey DATE Feb 24, 1971 Geochemical Survey DATE Feb 24, 1971 | Send in duplicate to: FRED W. MATTHEWS | |
| Geochemical Survey | SUPERVISOR-PROJECTS SECTION DEPARTMENT OF MINES & | |
| Geochemical Survey | NORTHERN AFFAIRS WHITNEY BLOCK | |
| The standard of the standard o | QUEEN'S PARK TORONTO, ONTARIO | |
| SIGNED | | |
| Performance and soverage ceredits do not apply to | airborne surveys | |

PERFORMANCE & COVERAGE CREDITS

| ASSESSMENT WORK DETAILS | MINING CLAIMS TRAVERSED |
|--|---|
| Township or Area Carscallen Twp. | List numerically |
| Type of Survey Magnetic A separate form is required for each type of survey | P-98475 |
| Objet Time Cutton T D Otroppe | 98i.76 |
| or Contracton 37 Inglewood Cres., Thunder Bay "F" | 98477 |
| Address | 98478 |
| Party Chief W. Wilson Name | |
| 143 <u>Cedar St. N., Timmins, Ont.</u> Address | 98479 |
| Consultant J.E. Steers, Name | 98480 |
| 137 Inglewood Cres., Thunder Bay "F" | 98481 |
| Address | 98480 |
| COVERING DATES | *************************************** |
| Line Cutting Nov. 5 to Dec. 15, 1968 | 9848 3 |
| FieldNov. 5 to Dec. 15, 1968 | 98484 |
| Office Dec. 16 to Jan. 10, 1969 | *************************************** |
| Office Dec. 16 to Jan. 10, 1969 | ••••••••••••••••••••••••••••••••••••••• |
| INSTRUMENT_DATA | *************************************** |
| Make, Model and Type MF-1-100 Fluxgate Magnetometer (Scintrex) | |
| Scale Constant or Sensitivity 1 gamma | |
| Or provide copy of instrument data from Manufacturer's brochure. | ••••••••••••••••••••••••••••••••••••••• |
| Radiometric Background Count | |
| Number of Stations Within Claim Group 6914 | |
| Number of Readings Within Claim Group 6914 | |
| Number of Miles of Line cut Within Claim Group 13.3 | ······································ |
| • • • | ••••••••••••••••••••••••••••••••••••••• |
| Number of Samples Collected Within Claim Group | *************************************** |
| CREDITS REQUESTED 20 DAYS 40 DAYS Includes | 10 |
| Geological Survey per claim per claim (Line cutting) | TOTAL 10 |
| | Send in duplicate to: |
| | FRED W. MATTHEWS |
| Geochemical Survey | SUPER VISOR-PROJECTS SECTION DEPARTMENT OF MINES & NORTHERN A FEALURE |
| DATE TEL 24/7/ STEFES | NORTHERN AFFAIRS WHITNEY BLOCK OUEFN'S BARK |
| SIGNED SIGNED | QUEEN'S PARK TORONTO, ONTARIO |

Performance and coverage credits do not apply to airborne surveys

