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MINING LANDS SECTION

REPORT
ON
V.L.F. ELECTROMAGNETIC SURVEY
ON PROPERTY OF
VAL D'OR EXPLORATIONS LTD.
GARRISON TOWNSHIP, ONTARIO

by

PROSPECTING GEOPHYSICS LTD.

Toronto, Ontario

May 16, 1981

REPORT
ON
V.L.F. ELECTROMAGNETIC SURVEY
ON PROPERTY OF
VAL D'OR EXPLORATIONS LTD.
GARRISON TOWNSHIP, ONTARIO

INTRODUCTION

Val D'Or Explorations Ltd. holds a group of claims in Garrison Township, Ontario in close proximity to the Murphy property owned by Kerr Addison Mines Ltd. A gold deposit has been outlined on the Murphy property that is suitable for open pit mining and Kerr Addison plans production from this deposit later this year.

A V.L.F. electromagnetic survey has recently been completed on the property in conjunction with a similar survey carried out on the adjacent property of Cream Silver Mines Ltd. This method was chosen as it is quite sensitive and will outline such poor conductors as shear zones, faults and geological contacts as well as good sulphide conductors.

The following report and accompanying map describe the results of the survey.

PROPERTY

The property consists of 41 claims in the east portion of Garrison Township, Larder Lake Mining Division of Ontario. The claims are registered with the Ministry of Natural Resources under the following numbers:

L576513 to L576527 inclusive
L565345 to L565354 inclusive
L576534 to L576539 inclusive
L576549 to L576554 inclusive
L576561 to L576564 inclusive

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GEOLOGY

The area generally is underlain by Keewatin lavas that trend slightly northwest and dip to the southwest. These have been intruded by numerous granitic bodies of Algomian age which are usually in the form of bosses and dikes.

Gold mineralization in the area has been found in quartz veins and porphyries which are associated with the igneous intrusions. Shears and faults in the vicinity of the intrusive bodies appear to represent the best environment for gold mineralization. The Kerr Addison gold deposit is in the volcanics but in close proximity to an Algomian granite intrusive located in the southeast quarter of Garrison Township.

The southern two-thirds of the Val D'Or property appears to be underlain by the Algomian granite intrusive mentioned above while the northern one-third of the property is probably underlain by the Keewatin volcanics. From geological data available, the eastern contact of the granite with the volcanics is probably on the eastern line of claims just west of Thackeray Creek. This provides a fairly large portion of the favourable contact on the Val D'Or property and gold mineralization can be found in both the volcanics and the granite.

SURVEY METHODS AND INSTRUMENT DATA

The V.L.F. (very low frequency) electromagnetic survey was conducted over previously cut lines at 400 foot intervals

SURVEY METHODS AND INSTRUMENT DATA (cont'd)

in a north-south direction as shown on the accompanying map. The equipment used was a Geonics EM-16 system.

The V.L.F. method uses the radiation from powerful military radio transmitters at low frequencies (15 to 20 kHz) as a primary signal as opposed to portable transmitters in the conventional EM methods. The instrument has two receiving coils built into it with one coil having a vertical axis and the other is horizontal. The instrument is oriented along the survey lines which should approximate the lines of the magnetic field and the operator tilts the instrument to minimize the signal from the vertical axis coil. The mechanical tilt angle is a measure of the vertical real-component and the reading from the horizontal coil is a measure of the quadrature vertical signal.

The interpretation of the results uses the relative measurements of these two parameters and it is possible to outline such poor conductors as shear zones, breccia zones, faults and alteration zones, as well as good sulphide conductors.

RESULTS OF THE ELECTROMAGNETIC SURVEY

An examination of the map shows a number of rather strong conductive zones with strikes ranging from northeast to northwest. The variation in strike is probably due to the granite intrusion as the schistosity tends to conform to the strike of the granite-volcanic contact which is variable. The major

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RESULTS OF THE ELECTROMAGNETIC SURVEY (cont'd)

conductive zones have been lettered A, B, C, D, etc. for reference purposes and are described below:

"A" zone has a variable strike changing from northwest to east-west and it also shows a fault or fold near line 24E. Geologically, the conductor appears to lie along the granite-volcanic contact and this would account for the variation in strike. The conductivity is strongest adjacent to the fault or fold and this would appear to be the most favourable area for gold mineralization.

"B" zone is in the northern part of the property and is a strong conductor well within the range of a shear zone. It would appear to be in the volcanics but roughly parallel to the contact. It also shows a fault or fold near line 20E which provides a favourable environment for mineralization. The zone has a length of 2,800 feet on the property and continues to the west onto the property of Cream Silver Mines Ltd. where it is referred to as "D" zone.

"C" zone is in the northern corner of the property in the volcanics and is the continuation of "F" zone on the Cream Silver property. It has a length of some 2,000 feet on the Val D'Or property.

"D" zone is a fairly continuous rather weak zone with a northeast strike. This zone would be entirely within the granite and the northeast strike probably conforms with the strike of the granite-volcanic contact in this area.

RESULTS OF THE ELECTROMAGNETIC SURVEY (cont'd)

"E" zone is situated to the south of "D" zone but has a more east-west strike. It has a length of about 2,000 feet on the property and continues off the property to the east. This zone appears to straddle the east contact of the intrusive but the contact is rather indefinite. Geologically, it is a very favourable environment for gold mineralization.

"F" and "G" zones include three closely spaced conductors with fair conductivity situated in the southern portion of the property. These show some contortion and appear to be almost along the granite-volcanic contact. As such, they represent a very favourable geological environment and warrant further investigation.

CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic survey outlined a number of conductive zones that are in a favourable geological environment for gold mineralization. The conductivity is generally within the range of shear zones and further investigation is recommended.

Since the geophysical surveys on the Val D'Or property and the adjacent property of Cream Silver Mines were carried out as one project, it is recommended that the next stage of exploration also be carried out as a joint venture. This will reduce costs and it is particularly convenient as

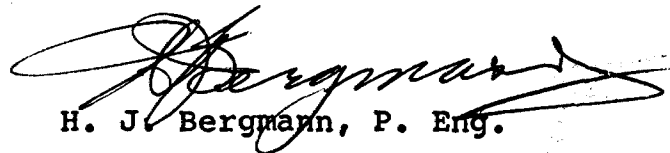
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CONCLUSIONS AND RECOMMENDATIONS (cont'd)

several conductors extend from one property to the other.
The program should initially include prospecting and geological
mapping to obtain priorities for a diamond drilling program.

Respectfully submitted,
PROSPECTING GEOPHYSICS LTD.

Toronto, Ontario
May 18, 1981



H. J. Bergmann, P. Eng.



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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) Electromagnetic

Township or Area Garrison

Claim Holder(s) D. McKinnon

Survey Company Prospecting Geophysics Ltd.

Author of Report H. J. Bergmann

Address of Author 70 Chiswell Cres. Willowdale
M2N 6E1

Covering Dates of Survey March 8 - May 16, 1981
(linecutting to office)

Total Miles of Line Cut 35.49

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

See attached list

If space insufficient, attach list

**SPECIAL PROVISIONS
CREDITS REQUESTED**

DAYS
per claim

- Geophysical
 - Electromagnetic 40
 - Magnetometer _____
 - Radiometric _____
 - Other _____
- Geological _____
- Geochemical _____

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: May 20/81 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications 63.1061

Previous Surveys

File No.	Type	Date	Claim Holder
			<u>H.D.</u>

TOTAL CLAIMS 41

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1664 Number of Readings 1664
Station interval 100 ft Line spacing 400 ft
Profile scale
Contour interval Fraser filter values 10

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base Station check-in interval (hours)
Base Station location and value

ELECTROMAGNETIC

Instrument Geonics EM-16
Coil configuration
Coil separation
Accuracy - 1%
Method: [X] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency Approx. 15 - 25 kHz Cutler, Maine
Parameters measured Vertical in-phase component (tilt angle)
Vertical out-of-phase component (quadrature)

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

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LISTS OF CLAIMS

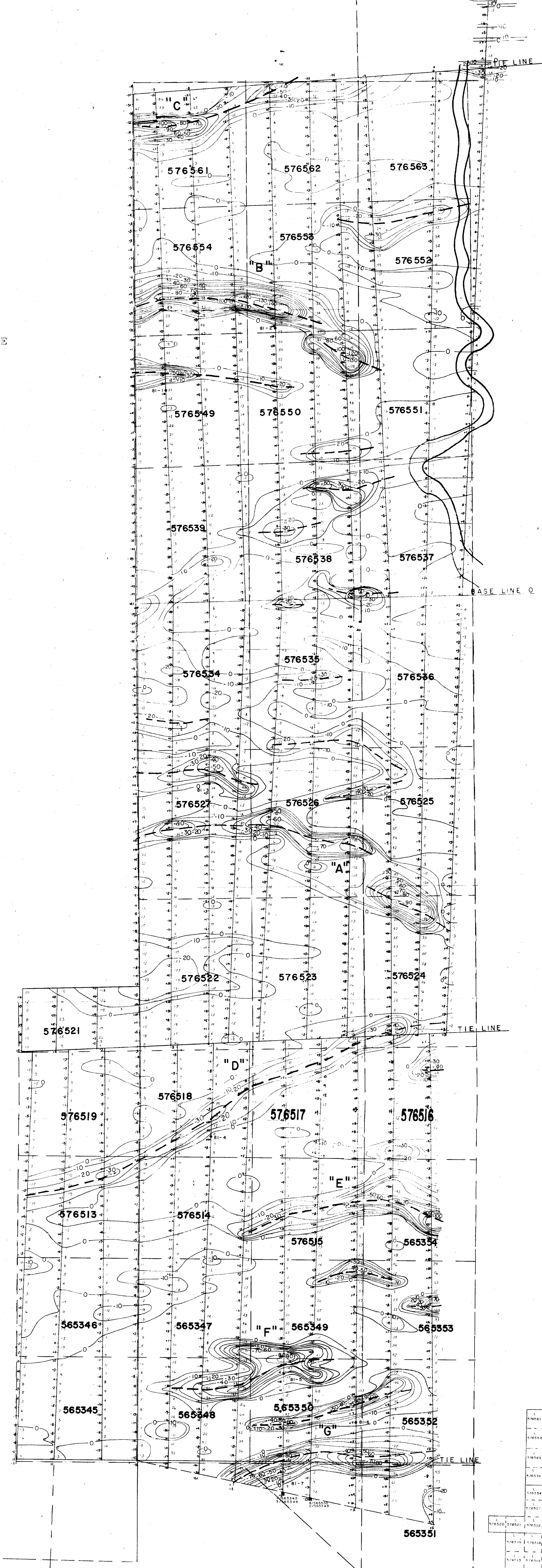
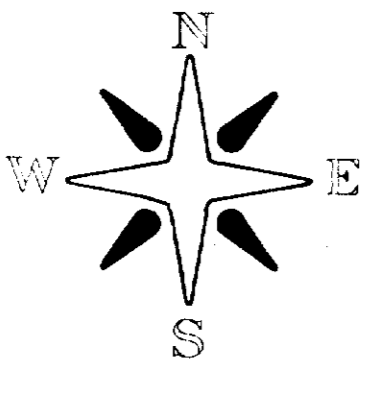
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LEGEND

- MEASUREMENT STATIONS ALONG PICKET LINES
- FRASER REDUCTION METHOD USED
- CONTOUR INTERVAL: -10
- INSTRUMENT USED: GEONICS EM-16
- ELECTRICAL CONDUCTOR
- CLAIM POST
- DIAMOND DRILL HOLE

NOTE: IN PHASE RAW DATA TO LEFT OF LINE

ELECTROMAGNETIC SURVEY.
VAL-D'OR EXPLORATION

GARRISON TWP. ONT.
1" = 400 ft MARCH 1981



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