Electromagnetic & Magnetic Survey
for
Dome Exploration (Canada) Limited
on
PROJECT 313
CORLESS AND DENT TOWNSHIPS, ONTARIO
(to accompany Maps 87-100 - A,B
and 87-101 - A,B)

RECEIVED
JUN 26 1987
MINING LANDS SECTION

June 22, 1987
INTRODUCTION

A horizontal loop electromagnetic survey and a total field magnetic survey were carried out for Dome Exploration (Canada) Limited on Project 313, Corless and Dent Townships, Ontario in March, 1987.

The property consists of 16 unpatented mining claims the numbers of which are listed at the back of this report. The claims are located on and around Surprise Lake, on the boundary between Corless and Dent Townships, approximately 70 km E/NE from the town of Red Lake, Ontario. Access to the property was made by fixed wing aircraft from Pickle Lake, Ontario.

The purpose of the survey was to locate sub-surface geo-electrical conductors and outline structures as revealed by the magnetic survey which may prove conducive for gold mineralization.

No conductors were located. Two intersecting dyke-like structures were outlined by the magnetic survey. The accompanying maps show the area surveyed and the results obtained.

A technical data sheet is appended to this report.
METHOD AND INTERPRETATION OF RESULTS - ELECTROMAGNETIC SURVEY

Operating Principle: When an electrical conductor is subjected to a primary alternating field, a secondary current is induced in the conductor. This current produces a secondary alternating field which together with the primary field produces a resultant field of different amplitude and phase from the applied primary field. These differences may indicate the presence of a conductor.

Operation: The battery-powered transmitter sets up a primary field while the in-phase and out-of-phase (quadrature) components of the complex secondary vertical field are detected by a receiving coil and measured by means of a compensator-amplifier unit located a fixed distance from the transmitter unit. These parameters are expressed in percentage of the primary field.

Conductor Recognition: The typical curve over a steeply-dipping conductor shows a low (negative - greater than 5%) over the centre of the conductor, flanked by positive readings on both sides of the conductor. Both the in-phase and the out-of-phase components usually produce the same general shape of curve. An asymmetrical curve may indicate one or more of the following conditions: (1) more than one conductor (2) variable conductive overburden (3) a shallow dipping conductor.

Conductivity Determination: The ratio of the amplitudes of the two measured components, in-phase to out-of-phase, is directly proportional to the conductivity of the conductor, in areas of non-conductive overburden.

Conductor Location: For a single conductor, both component readings are normally zero when either the transmitting or receiving coil is directly above the conductor. The location of the conductor is calculated by adding one-half the distance between the transmitting coil and the receiving coil (coil interval) to the co-ordinate at which the readings are zero. A unique solution is generally not possible in the case of multiple conductors spaced less than one coil interval apart. This results in the possibility that an apparently wide conductor may actually consist of two or more narrow conductors.

Depth of Penetration: The maximum depth of penetration for detection of a steeply-dipping conductor in a geo-electrically neutral background is about 0.7 times the coil interval. Over horizontal or flatly-dipping conductors, penetration of up to 1.5 times the coil interval is possible.
RESULTS

The horizontal loop electromagnetic survey located no conductors. The negative response of the high frequency out-of-phase noted on Lines 23+00S and 24+00S around 15+00W, (Map 87-100A) and also on Lines 21+00S and 22+00S around 2+50W (Map 87-100B) is deemed to be caused by conductive lake bottom sediment and are not considered bedrock responses.

The magnetic survey was tied to previous magnetic surveys, to maintain continuity. (Ref: Geosearch report on Project 242, on adjoining claim groups, April 23, 1986).

With a few notable exceptions the survey area is quiet magnetically, with a background of approximately 60,400 gammas.

The most prominent feature is an east-west trending, narrow, dyke-like structure extending from Line 20+00S, 17+50W (Map 87-101-A) to Line 30+00S, 2+00W (Map 87-101B). Typical magnetic values delineating the dyke are on the order of 60,800 gammas and higher to a maximum value of 64,910 noted on Line 22+00S, 13+37W. The width of this feature varies along its length within a range of 50 to 150 metres.

Intersecting this long dyke is a second narrow dyke-like feature extending from Line 32+00S, 10+00W to Line
27+00S, 7+50W (Map 87-101B) where it intersects the larger dyke. This second dyke is not as magnetic as the first with magnetic values ranging from 60,500 gammas to 60,800 gammas. It is also not as wide ranging between 20 to 40 metres in width.

North of the first dyke there exists a number of small magnetic "highs". As such the second dyke is not well defined. The anomaly on strike with the second dyke is located from Line 25+50S, 6+25W to Line 24+00S, 4+75W. This magnetic anomaly of 60,800 gammas is quite narrow, with a width of only 20 metres.

Many localized "highs" punctuate the area. Two of some interest outline a narrow lineament trending in a northwest direction. These are located on Map 87-101A and occur on Lines 30--+00S, 11+67W to Line 29+00S, 12+54W and Line 27+00S, 12+87W to L26+00S, 13+25W. Magnetic values are up to 61,380 gammas.

The other noteworthy feature is located outside of the claim group. It is a highly magnetic, (values up to 62,000 gammas), north-south trending feature extending from Line 24+00S, 2+50E to Line 33+00S, 1+00E. This feature has a variable width ranging from 100 to 200 metres.
RECOMMENDATIONS

No drilling is recommended on the results obtained. The magnetic survey outlined a number of linear structures which should be used in conjunction with the known geology to plan further work. Special interest should be paid to the area of intersection of the two dyke-like features.

GEOSEARCH CONSULTANTS LIMITED

Louis Racic, B.Sc.
Geophysicist
Ministry of
Northern Development
and Mines

Geophysical-Geological-Geochemical
Technical Data Statement

PROJECT 313

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 & Magnetic
Township or Area Corless & Dent Twp.
Claim Holder(s) Dome Exploration (Canada) Ltd.
P.O. Box 350, IBM Tower, TD Centre
Survey Company Geosearch Consultants Ltd.
Author of Report Louis Racic
Address of Author 360-111 Queen St. E., Toronto, Ont.
Covering Dates of Survey Mar. 6/87 - 22 June 87
(linecutting to office)
Total Miles of Line Cut 35.0 km.

SPECIAL PROVISIONS
CREDITS REQUESTED

Geophysical

Electromagnetic 40
Magnetometer 20
Radiometric
Other

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: June 22/87 SIGNATURE: Author of Report or Agent

Res. Geol. Qualifications

Previous Surveys

File No. Type Date Claim Holder

TOTAL CLAIMS 16
### GEOPHYSICAL TECHNICAL DATA

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

<table>
<thead>
<tr>
<th>Number of Stations</th>
<th>Station interval</th>
<th>Number of Readings</th>
<th>Line spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1330</td>
<td>25m (12.5m)</td>
<td>MAG 1553</td>
<td>EM 1288</td>
</tr>
</tbody>
</table>

Profile scale: 1 cm to 20%

Contour interval: 100 gammas

**Instrument:** Scintrex MP2

Accuracy: Scale constant 1 gamma

Diurnal correction method: Base station recorder with readings taken at 30 second intervals

Base Station check-in interval (hours): 60,394

Base Station location and value: L17+005, 7+50W

**Instrument:** APEX MAXMIN II

Coil configuration: Co-planar

Coil separation: 100 metres

Accuracy: 1%

Method: [ ] Fixed transmitter [ ] Shoot back [ ] In line [ ] Parallel line

Frequency: 444 Hz, 1777 Hz (specify V.L.F. station)

Parameters measured: In phase and quadrature response of the secondary vertical field.

**Instrument**

Scale constant

Corrections made

Base station value and location

Elevation accuracy

**Instrument**

Method: [ ] Time Domain [ ] Frequency Domain

Parameters -- On time

-- Off time

-- Delay time

-- Integration time

**Power**

Electrode array

Electrode spacing

Type of electrode
ELECTROMAGNETIC AND MAGNETIC

DOME EXPLORATION (CANADA) LIMITED

P.O. Box 350, IBM Tower, T.D. Centre, Toronto, Ontario, MSK 1N3

Total Miles of Line Cut

Date of Survey: 06/03/87

To: A-21304

LOUIS RACIC, 360-111 Queen St., E., Toronto, Ontario, M5C 1S2

Special Provisions

For first survey:
Enter 40 days. (This includes line cutting)

For each additional survey:
Using the same grid:
Enter 20 days (for each)

Man Days

Complete reverse side and enter total(s) here

Airborne Credits

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

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures

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 column at right.

Date Certified

LOUIS RACIC, 360-111 Queen Street W., Toronto, Ontario, M5C 1S2

Name and Postal Address of Person Certifying
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.

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Survey Company Geosearch Consultants Ltd.
Author of Report Louis Racic
Address of Author 360-111 Queen St. E., Toronto, Ont.
Covering Dates of Survey Mar. 6/87 - 22 June 87
(linecutting to office)
Total Miles of Line Cut 35.0 km.

MINING CLAIMS TRAVERSED
List numerically

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AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: June 22/87 SIGNATURE: Author of Report or Agent

Res. Geol. Qualifications 28017

Previous Surveys
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<thead>
<tr>
<th>File No.</th>
<th>Type</th>
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</table>

TOTAL CLAIMS 16
GEOPHYSICAL TECHNICAL DATA

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<th>Number of Readings</th>
<th>MAG 1553 EM 1288</th>
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<tr>
<td>Line spacing</td>
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**MAGNETIC**

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<tr>
<th>Instrument</th>
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<td>Base Station check-in interval (hours)</td>
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<td>Base Station location and value</td>
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**ELECTROMAGNETIC**

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<tr>
<th>Instrument</th>
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<td>Coil configuration</td>
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<td>Coil separation</td>
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<tr>
<td>Accuracy</td>
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<tr>
<td>Method</td>
<td>☑ In line</td>
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<tr>
<td>Frequency</td>
<td>444 Hz, 1777 Hz</td>
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<td>(specify V.L.F. station)</td>
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<tr>
<td>Parameters measured</td>
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**GRAVITY**

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<td>Base station value and location</td>
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<td>Elevation accuracy</td>
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**INDUCED POLARIZATION**

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<td>Method</td>
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<td>Frequency</td>
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<td>Parameters</td>
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<td>Delay time</td>
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<td>Integration time</td>
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<td>Power</td>
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<td>Electrode array</td>
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<td>Electrode spacing</td>
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<tr>
<td>Type of electrode</td>
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MINISTRY OF
Northern Development
and Mines
Ontario

Report of Work
(geophysical, geological,
geochemical and expenditures)

PROJECT #313

Instructions:
- Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s):
ELECTROMAGNETIC AND MAGNETIC

Claim Holder(s):
DOME EXPLORATION (CANADA) LIMITED

Anchorage:
P.O. Box 350, IBM Tower, T.D. Centre, Toronto, Ontario, M5K 1N3

Survey Company:
GEOSEARCH CONSULTANTS

Date of Survey:
Jun 06, 1987

Township or Area:
Coreless & Dent Twps.

Coreless & Dent Twps.

Adc ©F!o. Box 350, IBM Tower, T.D. Centre, Toronto, Ontario, M5K 1N3

Number of mining claims traversed:
65 claims

Expenditures:

- Geophysical
- Electromagnetic
- Magnetometer
- Radiometric
- Other
- Geological
- Geochronical

- Man Days
- Days per Claim

- Airborne Credits
- Days per Claim

Expenditures (excludes power stripping):

Type of Work Performed:

Performers on Claim(s):

Calculation of Expenditure Days Credits:

Date:
June 24/87

Recording Holder or Agent (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 and Postal Address of Person Certifying:
LOUIS RACIC, 360-111 Queen St., E., Toronto, Ontario, M5C 1S2

Date Certified:
June 22/87

Certified by (Signature):

Printed Name:
LOUIS RACIC

Date Approved as Recorded:

Mining Recorder:

Branch Director:

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc.

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<th>Type of Survey</th>
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<th>Line-cutting Days Credits</th>
<th>Total Credits</th>
<th>No. of Claims</th>
<th>Days per Claim</th>
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AREAS WITHDRAWN FROM DISPOSITION

f. 'M.fto.-MiNiNG RIGHTS ONLY'

S.R.O. -SURFACE RIGHTS ONLY

M.+S.-MINING AND SURFACE RIGHTS

Ordtn No. O

IAKE WNIMG ONISM
MAY -4 1987

ONTARIO

2.10171 CORLESS

200

disposition FS*

SKINNER TOWNSHIP

LEGEND

HIGHWAY AND ROUTE No.

OTHER ROADS

TRAILS

SURVEYED LINES

TOWNSHIPS, BASE LINES, ETC.

UNSURVEYED LINES:

LOT LINES

PARCEL BOUNDARY

MINING CLAIMS, ETC.

RAILWAY AND RIGHT OF WAY

UTILITY LINES

NON PERENNIAL STREAM

FLOODING OR FLOODING RIGHTS

SUBDIVISION OR COMPOSITE PLAN

RESERVATIONS

ORIGINAL SHORELINE

MARSH OR MUSKEG

MINES

TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT

PATENT, SURFACE & MINING RIGHTS

SURFACE RIGHTS ONLY

MINING RIGHTS ONLY

LEASE, SURFACE & MINING RIGHTS

SURFACE RIGHTS ONLY

MINING RIGHTS ONLY

LICENSE OF OCCUPATION

GREEN TITLE

RESERVATION

CANCELLED

NOTE: MINING RIGHTS IN TINTED AREA PRIOR TO 1913 VESTED IN ORIGINAL PATENTEE UNDER THE MINING ACT, RSA 1909, CH 380, SEC. 63, SUBSEC 1

SCALE 1:20 000

RED LAKE MINING DIVISION
MAY 4 1987

RED LAKE, ONTARIO

TOWNSHIP

CORLESS

MINING DIVISION

RED LAKE

LAND TITLES/ REGISTRY DIVISION

KENORA/PATRICIA

Ministry of Natural Resources

Ontario

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

Ontario