SUMMARY

During the latter part of July, 1967 a limited vertical loop electromagnetic check survey was carried out on two specific areas within a portion of the company's large claim group. Subsequently two diamond drill holes totalling 660 feet were drilled, Hole No. 1 of 350 feet to investigate an E. M. conductor, and Hole No. 2 of 310 feet to investigate a surface sulphide showing. No economic mineralization was encountered, however, several sections of fine mineralization were intersected over extensive widths.

During October, 1968 a further twenty claims of the group were covered with magnetic and electromagnetic surveys with reasonably encouraging results. In light of the results to date additional geophysical detailing is required to be followed by diamond drilling as warranted. It is estimated that this additional program will cost approximately $7,500.00 exclusive of the diamond drilling.

PROPERTY

The property of Mogar Mines Limited consists of 106 contiguous unpatented mining claims numbered as follows:

P96194 - 96208 incl.
P 96988 - 97002 incl.
P 97003 - 97012 incl.
P 97021 - 97030 incl.
P 97041 and 97042

P97047 - 97049 incl.
P97056 - 97058 incl.
P97205 - 97216 incl.
P97218 - 97229 incl.
P97313
P97773 - 97775 incl.
P98731 and 98732
P98967 - 98972 incl.

LOCATION

The group straddles the township boundary between the Townships of Massey and Turnbull in the Disteict of Cochrane of the Porcupine Mining Division, Ontario. Twenty-one claims are in the east central part of Massey Township and the remaining eighty-five in the west central part of Turnbull Township.

ACCESS

The property is reached by Highway 101 from Timmins southwest some 18 miles to the Lumber Company road (permission required) in Denton Township thence northwest on this private road to a point in Massey Township about 15 miles from Highway 101 from which point a bush road leads north and east to a trapper's cabin on the claim group.

HISTORY

The area generally has had considerable superficial

exploration in the last few years following the discovery of commercial copper ore bodies in the Kamiskotia Area and more recently in Kidd Township.

A portion of the Mogar Property itself was covered by magnetic and electro-magnetic survey in March 1965. A previously known sulphide showing which had had minor stripping was cleaned out and sampled recently. Two diamond drill holes totalling 66 feet were completed on the property during early 1968.

GEOLOGY

The property is underlain for the most part by gabbro and diabase intrusive as well as a minor amount of granitic material in several places. These rocks are classified as of Archean Age in most recent provincial geological mapping. Two known showings of gold and two of copper mineralization are shown to occur in Turnbull Township.

PREVIOUS WORK

In 1965 your company had 15 claims within this group geophysically surveyed by both magnetometer and electro-magnetic methods. The results of this work indicated via horizontal loop that nine relatively weak conductors existed within this portion of the present claim group. The magnetometer coverage of these

conductor areas did not indicate any coincidence except in one instance. In this case anomolous magnetic conditions did coincide with the conductive anomolous readings.

During July 1967 your company had some old trenches cleaned out and sampled. This showing of material heavily mineralized with sulphides, some of which is massive, occurs on the common boundary between Massey and Turnbull Townships. The strike of the mineralization is unknown and the original electromagnetic survey failed to register any appreciable response in this vicinity. Depth of overburden in the area makes it impractical to extend the stripping sufficiently to arrive at the attitude. Copper mineralization is observed in some of the character samples examined.

The results of the sampling of the showing on the Townships common boundary show low values in copper up to one half of one percent as well as minor values in silver, nickel, cobalt, chromium, titanium and molybdenum.

A vertical loop check survey was carried out in the latter part of July 1967 to investigate the immediate vicinity of the above described sulphide showings as well as in the vicinity of anomoly No. 9 from the previous horizontal loop survey. Subsequently in early 1968 two diamond drill holes were completed and one of these intersects extensive minor sulphides.

Copies of the logs and sections of these holes are included in the back of this report for reference purposes.

GROUND GEOPHYSICAL SURVEYS

During October of this year ground magnetic and electromagnetic surveys were carried out over twenty (20) claims of the company's property as outlined on the property map enclosed with this report. A precut grid was prepared to facilitate the survey program with an east-west base line and north-south picket lines at 400' interval stations were established at 100 foot intervals along the picket lines.

MAGNETOMETER SURVEY

A ground magnetic survey, using a Barringer Research portable magnetometer G. M. -102A, was completed with stations at 100 foot intervals along precut lines. The technical details of the instrument are outlined in Appendix "A" of this report.

RESULTS OF MAGNETIC SURVEY

As is illustrated on the accompanying magnetometer map the area covered is magnetically flat with the exception of one trend running diagonally across this area from the

northwest to the southeast intersecting the base line at Line 20, 24 and 26 respectively. The magnetic intensity appears to increase towards the northwest in an area of swarms of electromagnetic conductors. In order to clarify the relationship between the magnetics and electromagnetic conductors additional geophysical work will be required along the current features and possible extensions to the northwest.

ELECTROMAGNETIC SURVEY

This survey was conducted on the same grid as the magnetometer survey. Both in-phase and out-of-phase readings were taken in each instance. The instrument used was a Ronka E. M. -16 unit and technical details of this unit will be found in Appendix "B" of this report.

It may be noted that transmitter station NAA was used for all readings.

RESULTS OF ELECTROMAGNETIC SURVEY

There are four basic conductive zones contained within the portion of the property surveyed, all located in the northwest portion of the survey. These are noted as Conductors "A", "B",

"C" and "D" and are shown on the attached map. In addition, there are numerous other features that are probably related to overburden conditions; however, a limited amount of check work should be done prior to absolute classification of these subsidiary features.

Conductors "A" and "B" are associated with the magnetic feature discussed earlier in the report with "A" lying on the north flank of the magnetic anomaly and "B" on the south flank. Conductors "C" and "D" are further south in the same area and on the fringe of the current work area and cannot be assessed fully.

CONCLUSIONS

In light of the results obtained within the current survey area further geophysics is required to delineate features established. There are known sulphides to the northwest of the current area of survey as is discussed earlier in this report and the letter report by Mr. Sutherland which is enclosed with this report.

Conductors "A" and "B", because of their association with a magnetic feature traversing the property from southeast to northwest and building intensity toward the northwest, should

be further investigated by geophysics and then diamond drilling as warranted. The current survey area should be extended to the north and the west.

RECOMMENDATIONS

It is therefore recommended that:

(1) The survey area be extended to cover claims P 97205 to P 97211 inclusive, and claims P 97218 to P 97224 inclusive.

(2) Further detail electromagnetic work be carried out along the strike of the magnetic feature discussed earlier in this report. The line direction should be adjusted by 45°.

(3) Based on this additional survey work provision be made of a minimum diamond drill program of say 2000 feet to test the geophysical features.

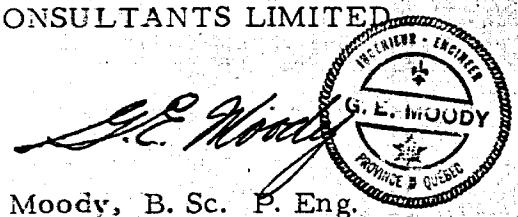
COST ESTIMATE

1.	Magnetic and electromagnetic surveys on an additional 14 claims Estimated Cost	$ 2,550.00
2.	Geophysical detailing of existing features Estimated Cost	1,500.00
3.	Diamond drilling 2000 feet Estimated Cost $6. /ft.	12,000.00

4.	Engineering and contingencies	$ 2,500.00
	Total cost estimate	$18,550.00

Respectfully submitted,

GHD CONSULTANTS LIMITED



G. E. Moody, B. Sc. P. Eng.

CERTIFICATE

I, George E. Moody, of the Town of Beaverton,

in the Province of Ontario, hereby certify:

1. That I am a consultant mining engineer with offices situated at 541 Osborne Street, Beaverton, Ontario, and Suite 209, 185 Bay Street, Toronto, Ontario.

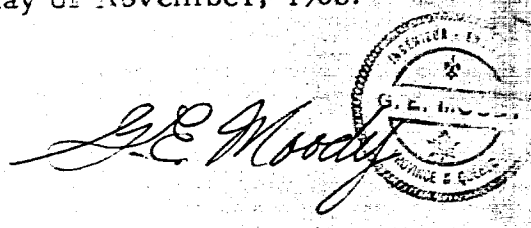
2. That I am a graduate of the University of Alberta (1931) and have practised my profession continuously since my graduation.

3. That I am a member of the Corporation of Engineers of the Province of Quebec and a Fellow of the Geological Association of Canada.

4. That my report on the Massey and Turnbull Townships property of Mogar Mines Limited is based on Ontario Government publications and data in the Company's files.

5. That I have no direct or indirect interest nor do I expect to receive any direct or indirect interest in the properties described herein. I do not own beneficially, directly or indirectly any shares in Mogar Mines Limited nor shares in any affiliate of that Company.

DATED at Toronto this 14th day of November, 1968.



G. E. Moody, P. Eng.
Corporation of Engineers of Quebec

ACKNOWLEDGEMENTS

Geophysical Report - Sheridan Geophysics Limited

Geology - Ontario Department of Mines P. 141

Report of July 11, 1967. D. A. Duff, B. Sc., P. Eng.

Report of August 1, 1967. D. A. Duff, B. Sc., P. Eng.

Letter Report of H. Sutherland - May 9th, 1968.

APPENDIX "A"

PRINCIPLE OF OPERATION

The VLF-transmitting stations operating for communications with submarines have a vertical antenna. The antenna current is thus vertical, creating a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary fields radiating from these bodies. This equipment measures the vertical components of these secondary fields.

The EM 16 is simply a sensitive receiver covering the frequency band of the new VLF-transmitting stations, with means of measuring the vertical field components.

The receiver has two inputs, with two receiving coils built into the instrument. One coil has normally vertical axis and the other is horizontal.

The signal from one of the coils (vertical axis) is first minimized by tilting the instrument. The tilt-angle is calibrated in percentages. The remaining signal in this coil is finally balanced out by a measured percentage of a signal from the other coil, after being shifted by 90^{o}. This coil is normally parallel to the primary field.

Thus, if the secondary signals are small compared to

the primary horizontal field, the mechanical tilt-angle is an accurate measure of the vertical real-component, and the compensation $\widetilde{11}$ /2- signal from the horizontal coil is a measure of the quadrature vertical signal.

APPENDIX "B"

SPECIFICATIONS

Type	EM 16
Designer	Vaino Ronka
Manufacturer	Geonics Limited
Primary Field	Horizontal from any selected VLF transmitting station.
Station Selection	By plug-in units. Two stations selected by a switch on front panel.
Measured Field	Vertical field, in-phase and quadrature components.
Accuracy of Readings	$\pm$ 1% resolution.
Range of Measurements	In-phase $\pm$ 150% or 90°, quadrature $\pm$ 40%
Output Readout	Null-detection by an earphone, real and quadrature components from mechanical dials.
Batteries	6, size AA penlight cells. Life about 200 hours.
Size	16 x 5.5 x 3.5 in. (42 x 14 x 12 cm).
Accessories	1 earphone and cord 1 carrying bag 1 set of batteries 1 manual of operation 3 plug-in units for station selection - additional units available.

APPENDIX "C"

SPECIFICATIONS

Type	Portable Nuclear Precession Magnetometer GM-102A
Manufacturer	Barringer
Features	Direct digital gamma readout Absolute measurement of total magnetic field intensity
Range	42,300-83,000 gammas
Accuracy	$\pm$ 10 gammas
Operating Temperature Range	- 40°F to + 120°F (-40°C to + 50°C) (using battery belt for low temperatures)
Storage Temperature Range	- 60°F to + 180°F (-50°C to + 75°C)
Power Supply	10 size D(U2) flashlight cells (3000-5000 readings)
Headphones	High impedance type for monitoring precession signals, specially shielded and ruggedized
Counter Unit	11 x 7 x 9 in. - 14 lb. including batteries
Noise Cancelling Sensing Head	5 x 6 x 3 in. - 4 lb. including cable.

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Robb Twp. (M.306)

Massey Twp. (M.296)

Godfrey Twp. (M.284)

Carscallen Twp. (M.267)

17M BASE LINE 16 M. surveyed in 1905 15M OLS A NIVEN 4M 13M

29 M. 28M. BASE LINE 27 M. surveyed in 1899 by OLS A NIVEN 26M 25M

5M 4M 3M 2M 1M

Rodd Creek

Godfrey Creek

Mt Rutledge

CLAIM 15

THE TOWNSHIP OF CLAIM MAP TURNBULL

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS.	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C

NOTES

400' Surface Rights Reservation around all lakes and rivers.

DATE OF ISSUE
SEP 9 1969
ONTARIO DEPT. OF MINES

X - claims Covered

● - claims Recorded.

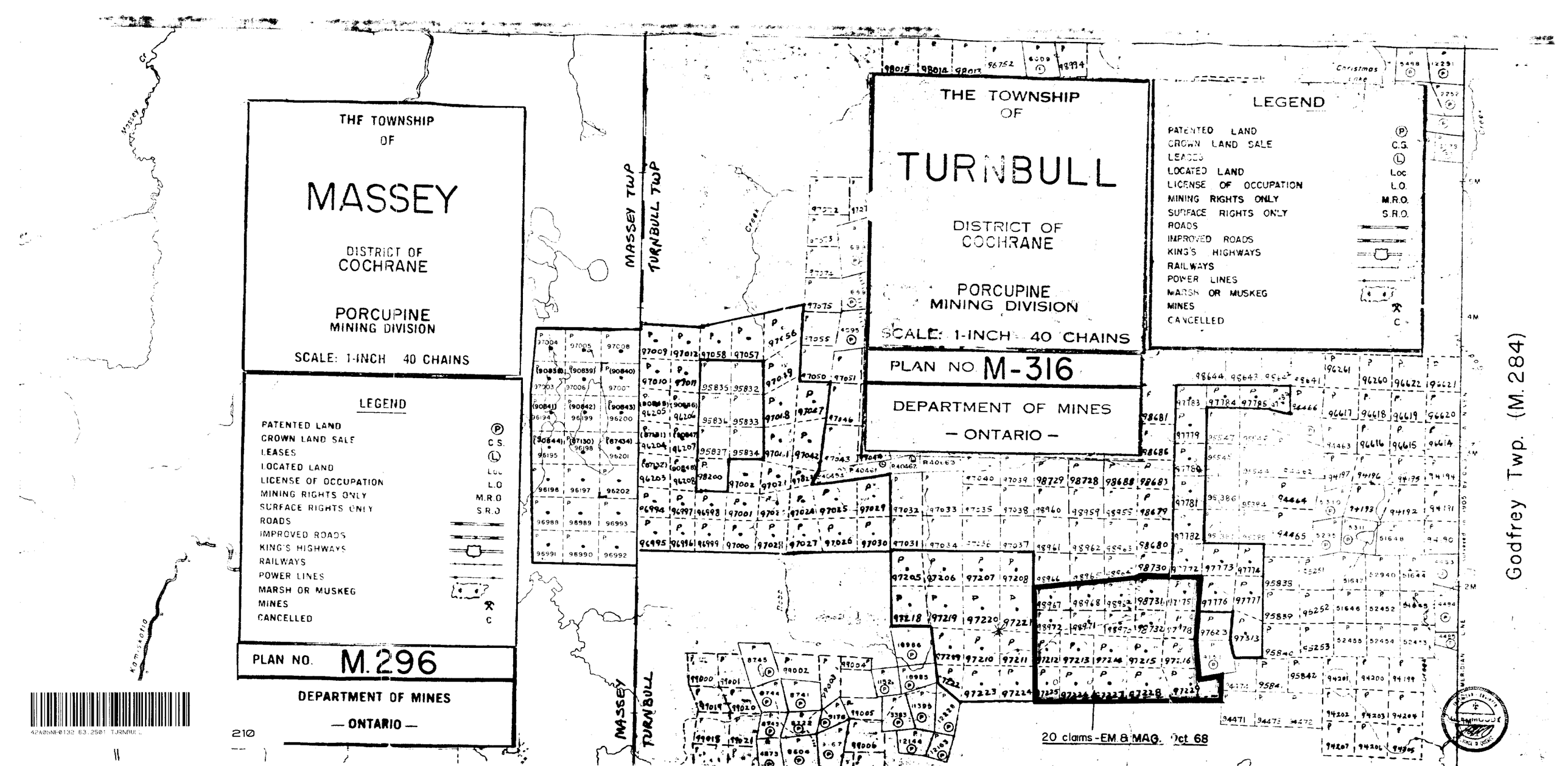
PLAN NO. M-316

DEPARTMENT OF MINES
— ONTARIO —

42A05NE0132 63.2501 TURNBULL

200

K Kalamov


THE TOWNSHIP OF
MASSEY
DISTRICT OF COCHRANE
PORCUPINE MINING DIVISION
SCALE: 1-INCH 40 CHAINS
LEGEND
PATENTED LAND P
CROWN LAND SALE C.S.
LEASES L
LOCATED LAND Loc
LICENSE OF OCCUPATION L.O
MINING RIGHTS ONLY M.R.O
SURFACE RIGHTS ONLY S.R.O
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED C
PLAN NO. M.296
DEPARTMENT OF MINES
— ONTARIO —
THE TOWNSHIP OF
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LEGEND
PATENTED LAND P
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POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED C
MASSEY TWP
TURNBULL TWP
MASSEY
TURNBULL
Christmas Lake
Creek
20 claims-EM & MAG. Oct 68
Godfrey Twp. (M.284)
210

30+00N
20+00N
10+00N
0+00
10+00S
20+00S
26+00S

0+00
4+00E
8+00E
12+00E
16+00E
20+00E
24+00E
28+00E
32+00E
36+00E
40+00E
44+00E
48+00E
52+00E
56+00E

Claim boundary, location approximate

A
B
C
D

OUTCROPS
SWAMP
REPORTED SHOWING (No Sign of it)

98967
98968
98969
98970
98971
98972
98731
98732
97212
97213
97214
97215
97216
97775
97778
97225
97226
97227
97228
97229

Claim boundary, approximate location

n

LEGEND

VLF ELECTROMAGNETIC: LINES SOUTH TO NORTH, INSTRUMENT FACING SOUTH

DIP ANGEE PROFILE - REAL COMPONENT } POSITIVE DIPS ARE PLOTTED EAST OF LINE
DIP ANGLE PROFILE - QUADRATURE } NEGATIVE " " " WEST " "

SCALE OF PROFILE :- 1 inch to 10% or tilt.

INDICATED CONDUCTOR

MAGNETICS: BASE LEVEL 59700 GAMMAS

MAGNETIC PROFILE

SCALE OF PROFILE: 1 inch to 1000 GAMMAS

PROPERTY · TWO

MOGAR MINES LIMITED
TURNBULL TOWNSHIP, TIMMINS AREA

ELECTROMAGNETIC AND MAGNETIC SURVEY

by

G.H.D. CONSULTANTS LTD.

200 0 200 400 600 800
FEET

G.S. 2501

220

drawn by des o'shannessy mapping service/a.günther.