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GEOSEARCH CONSULTANTS LIMITED



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PROJECTS
SECTION

TURAM ELECTROMAGNETIC AND MAGNETIC SURVEYS

for

DOME EXPLORATION (CANADA) LIMITED

on

PROJECT 44

JESSOP TOWNSHIP

TIMMINS AREA, ONTARIO.

(To Accompany Map 72-270)

April 11th, 1972.

SUMMARY

During March 1972, we carried out Turam electromagnetic and magnetic surveys for Dome Exploration (Canada) Ltd., on Project 44 in the Timmins area, Ontario.

The property is located in Jessop Township, north of the Timmins airport. Access to the property was made via motor toboggan.

Several conductor indications occur in a broad north-easterly striking zone which is also magnetically anomalous. The conductors tend to be short and appear to be closely associated with the magnetic highs.

Further exploration is recommended.

METHOD AND INTERPRETATION OF RESULTS

Turam Electromagnetic Survey

The model 2S Turam equipment was used for this survey. It was manufactured and developed in Sweden by the ABEM Instrument Group of the Craelius Company.

In common with other electromagnetic inductive systems the Turam method is based on the fact that a secondary current is induced in an electrical conductor when the conductor is subjected to an electromagnetic field. This secondary current creates its own electromagnetic field which, together with the primary applied field, produces a resultant electromagnetic field. This resultant field, which can be detected and measured, differs both in phase and amplitude from the calculated primary field; these differences may indicate the presence of a conductor.

The primary alternating field is created by the use of a large horizontal rectangular loop, energized by a current at 660 Hz or 220 Hz. The receiving system consists of two coils 100 feet apart, connected to a compensator-amplifier which measures the complex field-strength ratios and phase-differences between successive points on traverses outside and perpendicular to a long side of the primary loop. Both the phase-difference readings and the reduced field-strength ratios are plotted as curves at points mid-way between the coil positions. The reduced ratios are the measured ratios divided by the normal ratios. The normal ratios may be calculated from the geometry of the primary loop and from the location of the points at which the readings were taken in relationship to the loop.

The conductivity of steeply dipping conductors may be estimated from the following chart:

Ratio Anomaly > 1.00	Negative Phase-difference	Conductivity
Very small or nil	Small to medium	Very poor
Small	Medium to large	Poor
Large	Medium	Good
Large	Small	Very good

In areas of conductive overburden, the amplitudes of anomalous readings, both the phase and the ratio, increase as their distance from the primary loop increases.

Magnetic Survey

The magnetic measurements were made with a Scintrex MF-2 magnetometer. This instrument is a vertical force, flux-gate type with a measuring accuracy of 5 gammas at the most sensitive scale.

Corrections for diurnal variations and/or instrument drift were made by repeating previously established base stations at frequent intervals.

RESULTS

A north east trending magnetic anomaly extends across the property. The magnetic high has an intensity of 200 to 500 gammas over background over most of this length, however local magnetic highs of three to four times this magnitude were measured on Line 36N to 48N.

Several apparently short conductors are closely associated with the magnetic anomaly. The conductors appear to lie at a moderate depth at the south end of the property and near surface at the north end. This may in part account for the more intense magnetic anomaly to the north. Conductivities are generally medium to good.

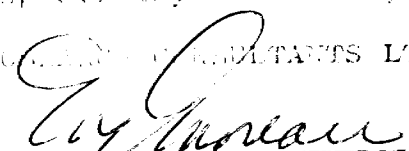
RECOMMENDATIONS

Diamond drilling on the conductors is recommended subject to a review of previous work in the area.

Good conductivity responses are noted on 4N at 2W; 8N at 1E; 40N at 12E and 48N at 7+50E.

Respectfully submitted,

GEOTECHNICAL CONSULTANTS LTD.


H. J. Abreau, P. Eng.

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 490 EM 490 MAG. Number of Readings 490 EM 490 MAG. Station interval 100 FT. Line spacing 400 FT. Profile scale or Contour intervals 1 in = 40% RATIO } TURAM 1 in = 20% PHASE } MAG. 50 GAMMAS (specify for each type of survey)

MAGNETIC

Instrument SCINTREX MF 2 Accuracy - Scale constant 5 GAMMAS ON MOST SENSITIVE SCALE Diurnal correction method REPEATING BASE STATIONS ALONG BASELINE Base station location BASE LINE - SECTION LINE INTERCEPTS

ELECTROMAGNETIC

Instrument ABEM TURAM 2S Coil configuration HORIZONTAL COPLANAR Coil separation 100 FT RECEIVING COILS VARIABLE TX DISTANCE Accuracy 1% PER SCALE DIVISION Method: TURAM [X] Fixed transmitter [] Shoot back [] In line [] Parallel line Frequency (specify V.L.F. station) Parameters measured FIELD STRENGTH RATIO & PHASE DIFFERENCE

GRAVITY

Instrument Scale constant Corrections made Base station value and location

Elevation accuracy

INDUCED POLARIZATION - RESISTIVITY

Instrument Time domain Frequency domain Frequency Range Power Electrode array Electrode spacing Type of electrode

Kidd Twp. - M.291









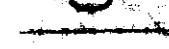
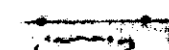





THE TOWNSHIP OF
OF
JESSOP

DISTRICT OF
COCHRANE

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND 
- CROWN LAND SALE 
- LEASES 
- LOCATED LAND 
- LICENSE OF OCCUPATION 
- MINING RIGHTS ONLY 
- SURFACE RIGHTS ONLY 
- ROADS 
- IMPROVED ROADS 
- KING'S HIGHWAYS 
- RAILWAYS 
- POWER-LINES 
- MARSH OR MUSKEG 
- MINES 
- CANCELLED 

NOTES

400' surface rights reservation around
all lakes and rivers.

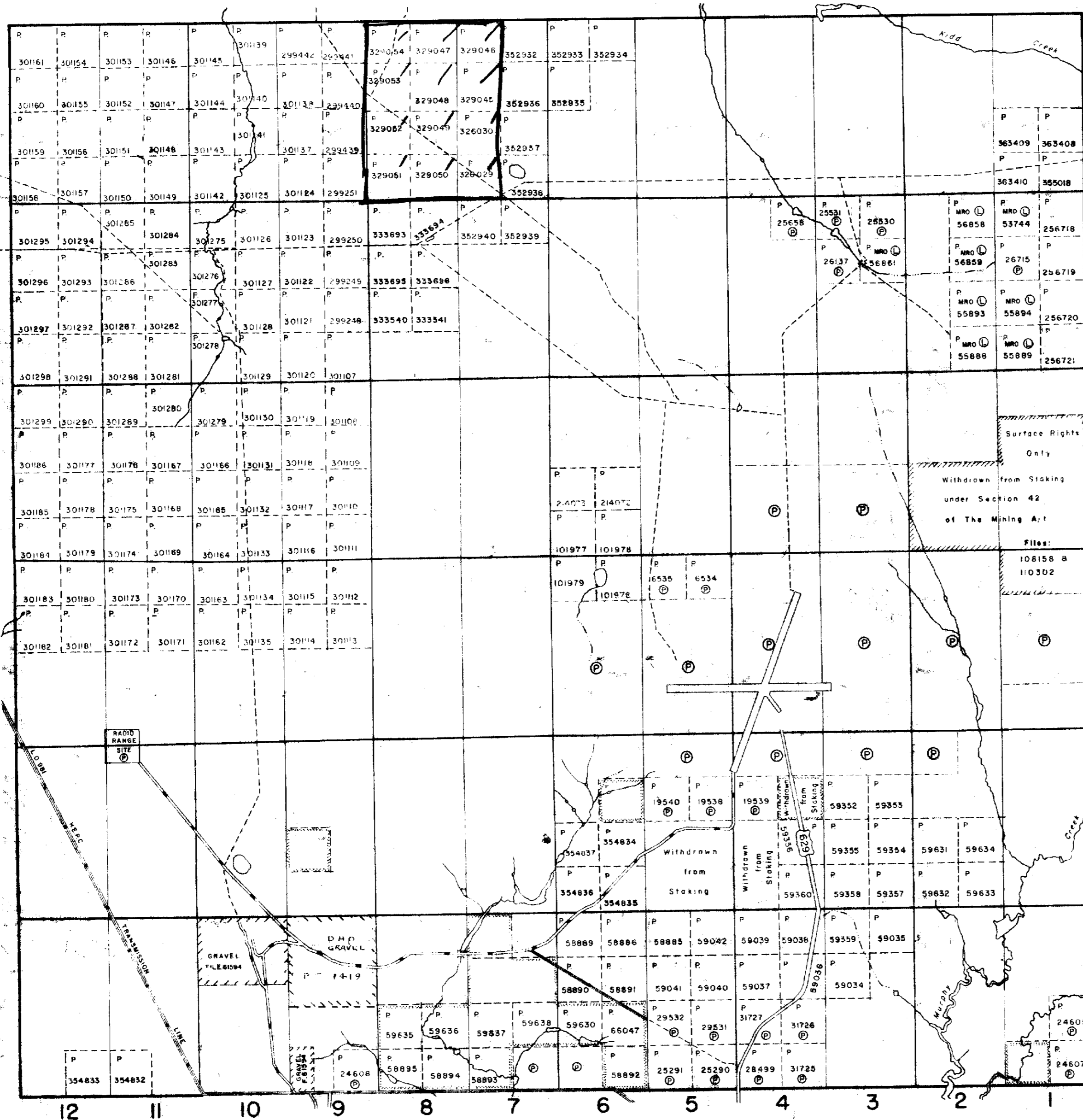
MINING LANDS -
DATE OF ISSUE
JAN 9 1973
MINISTRY
OF NATURAL RESOURCES

PLAN NO. **M.289**

**ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS**

Jamieson Twp. - M.288

Murphy Twp. - M.303



Mountjoy Twp. - M.302



