



31M04SE0007 63.1764 STRATHCONA

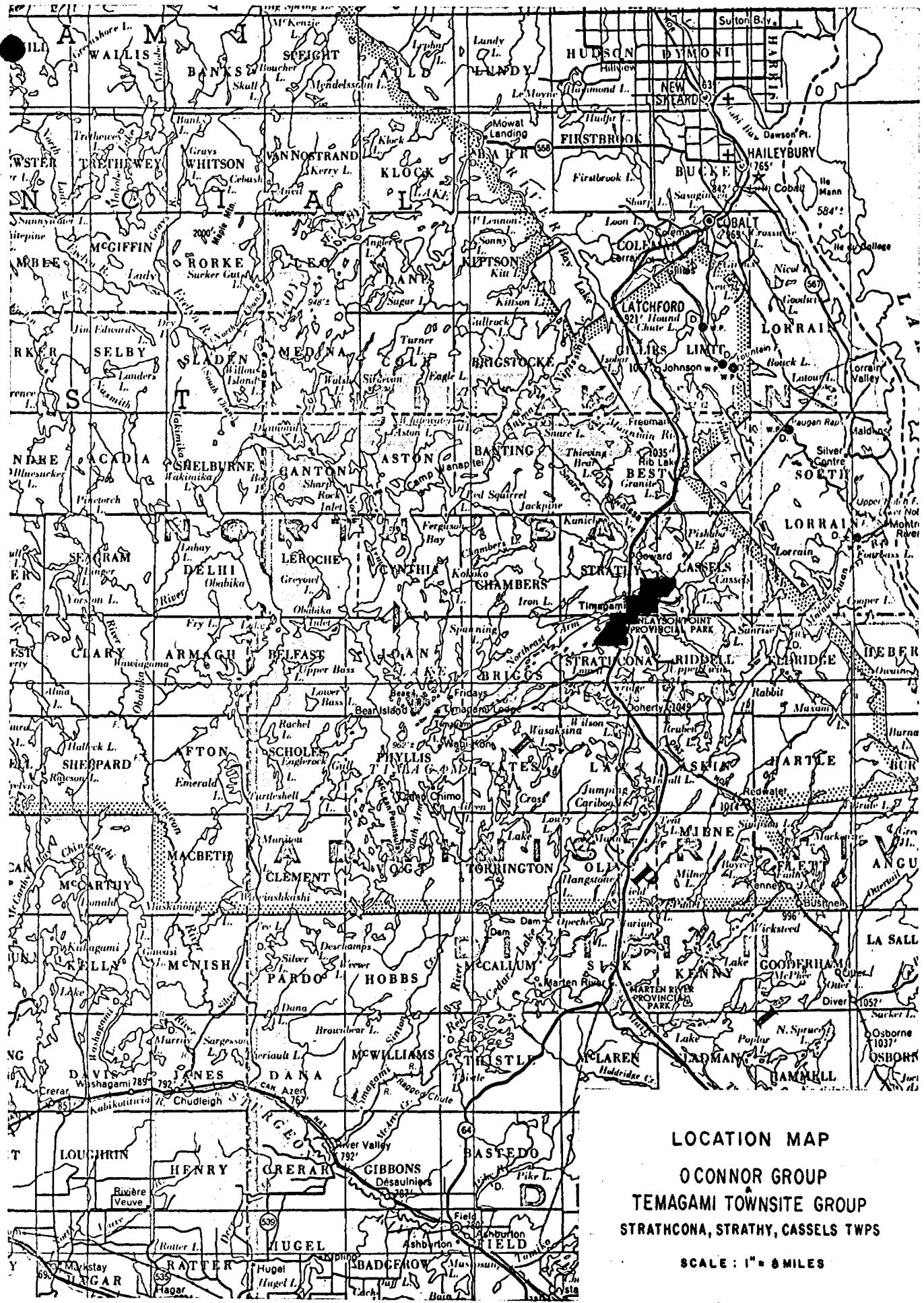
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ABSTRACT

On September 14th and 16th 1965, 70 claims known as the O'Connor Group and the Temagami Townsite group located in Strathcona Strathy and Cassels Townships were investigated by a combined airborne EM and magnetometer survey.

No electromagnetic anomalies were located. Several magnetic anomalies were discovered and two of them have not been explained to date.

The results of the surveys are described in a 4 page report and are shown on drawings 2778 and 2779 enclosed in the pocket at the back in the report.



LOCATION MAP
O'CONNOR GROUP
TEMAGAMI TOWNSITE GROUP
STRATHCONA, STRATHY, CASSELS TWPS
SCALE: 1" = 8 MILES

AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY
O'CONNOR GROUP AND TEMAGAMI TOWNSITE GROUP
STRATHCONA, STRATHY AND CASSELS TOWNSHIPS
TEMISKAMING MINING DIVISION

INTRODUCTION

The claims were staked because of the interesting geological conditions in the area. As a preliminary investigation the property was surveyed by a combined airborne E.M. and magnetic survey. The claims were flown as part of a larger survey.

PROPERTY AND LOCATION

The property consists of 70 unpatented mining claims located in Strathcona, Strathy and Cassels Townships, Temiskaming Mining Division. The claims are numbered T-46998-47000, T-47113-14, T-53553-55, T-54899, T-55820-21, T-54928-36, T-54953-57, T-54967-71, T-55084-101, T-55104-17, T-55270-75, and T-55540-41.

ACCESSIBILITY

The claims are accessible by Highway 11 that runs through the property and by various subsidiary roads.

GEOLOGY

The geology of the claims is shown on maps 51e, 35c and 34b of the Ontario Department of Mines. The claims are underlain mainly by acid volcanics and tuffs

with some interbedded iron formation. Huronian sediments overlie the volcanics on claims T-55272-3, T-54936, T-54970, T-54971, T-54967, T-54933-35, T-54968-9, T-55101, T-55095, T-55094, and T-55084.

GEOPHYSICAL SURVEY

The survey was carried out with electromagnetic and magnetic instruments in a Beaver aircraft. Direction of flight lines was approximately N 25° W.

Method of Positioning and Flight Details

The flight of the aircraft was recorded by photographing topographic features at selected spots along a line with a Praktina FX camera. Whenever a photograph was taken a mark was made on both the magnetic and electromagnetic record and a fiducial number assigned it. Lines were approximately 1/8 mile apart and the aircraft was approximately 75 feet above the ground. A radio altimeter, APN-1 was used. The data is recorded on a 5 channel recorder with a speed of 2.5 mm/sec.

Magnetic Instrument

The changes in total magnetic intensity were measured using a Varian Nuclear Precession Magnetometer. At the flying speed of the Beaver, the instrument sampled the magnetic field every 80 feet.

The base level was 58,717 gammas and the magnetic values could be read from the tape to an accuracy of ± 5 gammas.

Electromagnetic Equipment

The electromagnetic unit consisted of a vertical 322 cycle transmitting coil on one wing and a vertical receiving coil on the other wing.

The effect of the transmitted field at the receiver coil was kept balanced out to a few parts per million of the primary field.

The 322 cycle residual field was divided into parts which were in and out of phase with the primary field and recorded separately.

PLOTTING RESULTS

- (a) The flight paths were plotted on one inch to one-half mile photo mosaics.
- (b) Changes in magnetic intensities, above a base value of 58,717 gammas, were plotted along the flight lines and contoured in a standard manner.
- (c) There were no E.M. anomalies recorded so no values have been plotted.

DISCUSSION OF RESULTS

Electromagnetic

No electromagnetic anomalies were located by this survey. Therefore, it is unlikely that any near surface bodies of massive sulphides occur on the claims.

Magnetic

A magnetic high zone stretching from claim T-54953 on the southwest corner of the property to claim T-54955 on the west end of Snake Island Lake is caused by

iron formation. Just to the north of the west end of Snake Island Lake a N 70° E trending magnetic anomaly of about 400 gammas is probably caused by an olivine diabase dike that is known in this area. On claim T-54957 a 1,000 gamma anomaly is present and has not been explained to date. A linear magnetic high zone of 300 to 1,000 gammas stretches from claim T-55111 in a northeast direction to claim 55084 at the extreme northeast corner of the property. This anomaly has not been satisfactorily explained to date. One possible explanation of the anomaly is that a basalt zone exists here.

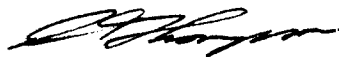
RECOMMENDATIONS AND CONCLUSIONS

The E.M. survey indicates that no large bodies of massive sulphides exist within 150 feet of the surface and that no conductive shear zones are present. The magnetic results show two anomalous areas that have not been explained to date and should be investigated further.

Further ground geophysical work must be on a deep penetration type of E.M. or an I.P. survey.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED



E.G. Thompson.

Toronto, Ontario
November 9, 1965

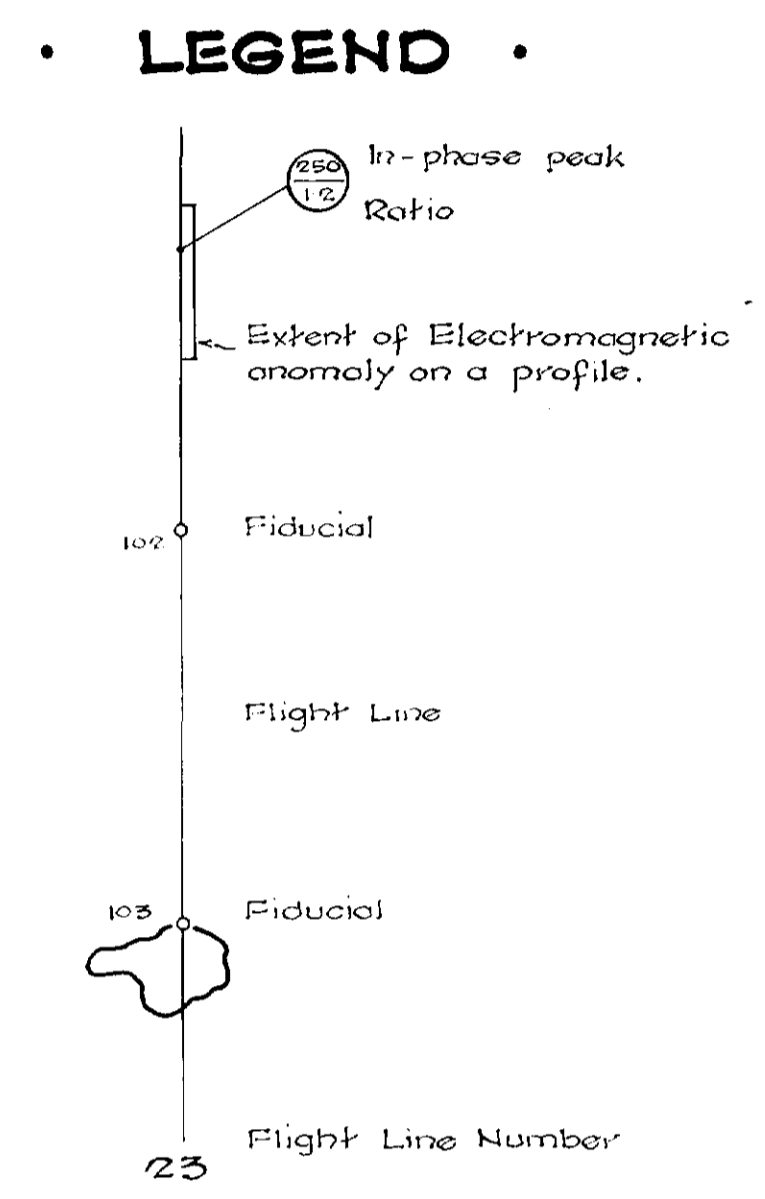
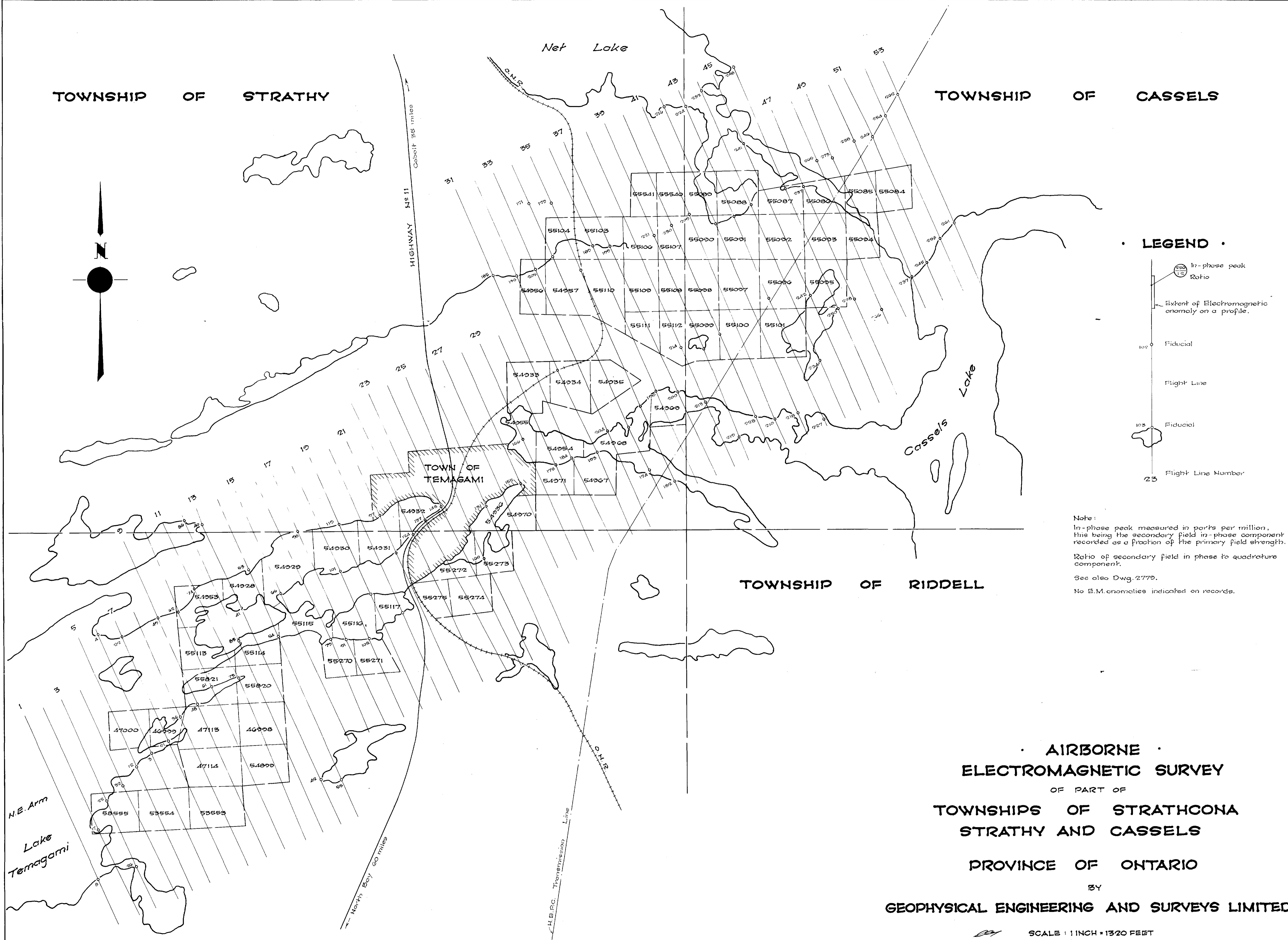
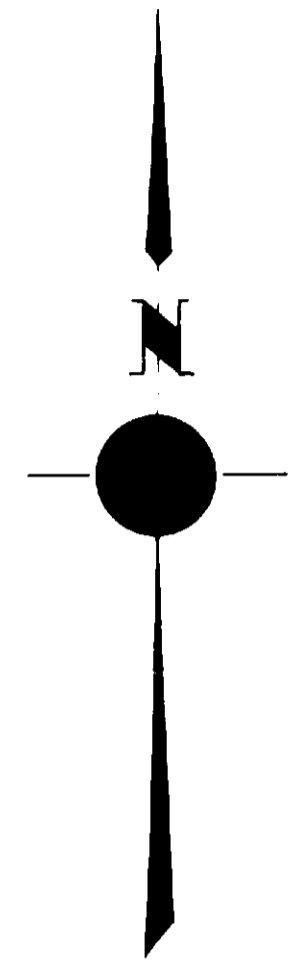
Drawings 2778 and 2779 accompany this report.



Nov 10/65

TOWNSHIP OF STRATHY

TOWNSHIP OF CASSELS



Note:
 In-phase peak measured in parts per million, this being the secondary field in-phase component recorded as a fraction of the primary field strength.
 Ratio of secondary field in phase to quadrature component.
 See also Dwg. 2775.
 No E.M. anomalies indicated on records.

**AIRBORNE
 ELECTROMAGNETIC SURVEY**
 OF PART OF
**TOWNSHIPS OF STRATHCONA
 STRATHY AND CASSELS**
PROVINCE OF ONTARIO

BY
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 1320 FEET



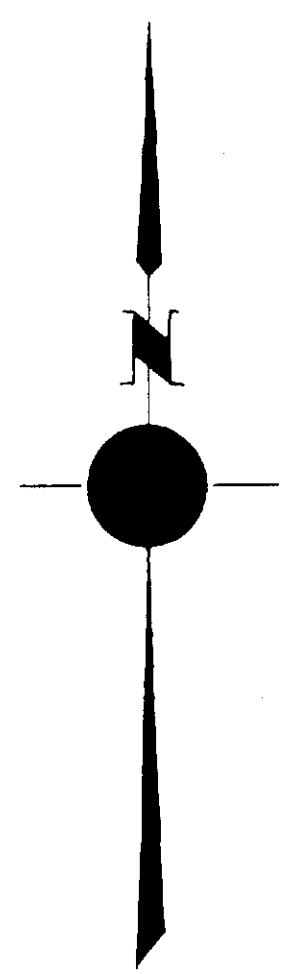
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Drawn by: H.D.
 Checked: N.T.S. 31 1/4 OCT. 1995 JOB 700 **DWG. 2778**

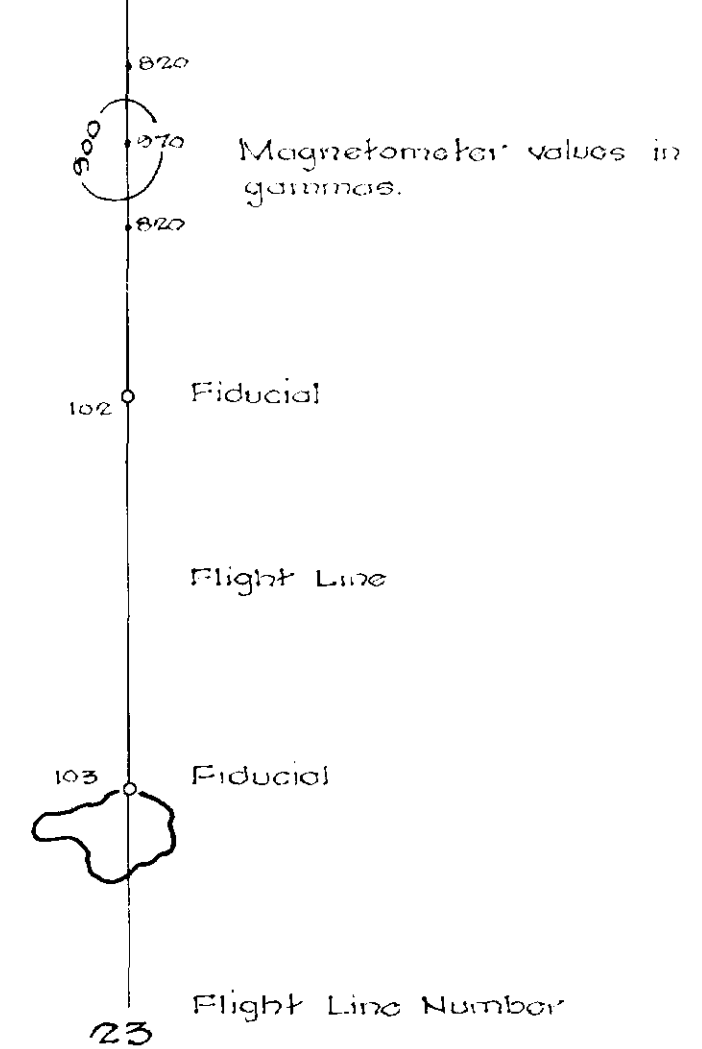
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TOWNSHIP OF STRATHY

TOWNSHIP OF CASSELS



• LEGEND •



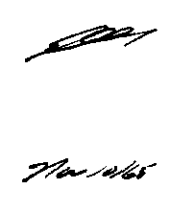
Note:
Magnetic values contoured at 100 & 500 gamma interval, as noted, are above a datum of 58,717 gammaes the sum equalling the total earth's magnetic field.
See Dwg. 2778 for claim group sub-division and mining claim numbers.

TOWNSHIP OF RIDDELL

• AIRBORNE •
MAGNETOMETER SURVEY
OF PART OF
TOWNSHIPS OF STRATHCONA
STRATHY AND CASSELS
PROVINCE OF ONTARIO

BY
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 1320 FEET



Drawn by: H.D. N.T.S. 31 M/4
Checked: OCT. 1965 JOB 799 DWG. 2779

