



42A05NE0353 63.1410 CARSCALLEN

REPORT ON
MAGNETIC AND ELECTROMAGNETIC SURVEYS
ON
CARSCALLEN TOWNSHIP CLAIMS
PERFORMED FOR
FIDELITY MINING INVESTMENTS LIMITED

Fidelity Mining Investments Limited holds 10 contiguous unpatented claims in the northeast part of Carscallen Township, Timmins area, Ontario. Claim numbers are F70950 to -54, 70959, and 70961 to -64 inclusive. Highway #101 passes about 5 miles to the southeast, and access is by foot from the highway, or alternatively by Godfrey or Kamiscotia Creek which crosses the claim group.

In December, 1964, and January 1965, magnetometer and electromagnetic surveys were carried out under the writer's supervision. The following is a resume of observations.

WORK DONE

A north-south line grid was out with lines at 300 foot interval. Lines were chained and stations established at 100 foot interval. A total of 11 miles of line were out and 570 stations established.

A magnetometer survey was carried out over this grid using a Sharpe flux-gate type magnetometer with 20 gamma per scale division sensitivity. Readings were taken at all stations, corrected for diurnal variation, plotted and contoured on an accompanying 200 foot to the inch plan.

An electromagnetic survey was carried out over the same line grid using the parallel line method and a Sharpe S.E. 300 vertical coil unit. Coil separation was 300 feet throughout. Results again are plotted on an accompanying 200 foot to the inch plan.

A tabulation of men employed and working dates is appended for assess-

ment work credits.

GENERAL GEOLOGY

Geological maps of the area indicate the claims are in large part underlain by near-vertical, northwest striking, rhyolites, with a belt of andesites at or close to the northeast corner of the group. Outcrops seen are in the north-central part of the group and consist of rhyolite breccias, sheared and somewhat carbonated.

An acid porphyry body lies northeast of the andesites, probably beyond the limits of the property, while a large basic intrusive mass is situated about two miles to the northwest.

MAGNETIC RESULTS

The dominant magnetic feature on the property is a northwest-trending row of highs, with accompanying lows, extending completely across the easterly part of the claim group. This is interpreted as indicating a northwest-striking and east-dipping basic dike, probably diabase.

A second, smaller high, also believed to represent a basic intrusive, is situated in the north-central part of the group in claim P70952.

Apart from these features there is remarkably little magnetic relief, suggesting the claims are entirely underlain by rhyolites, apart from the two dikes mentioned above. The area to the east of the large dike is 50 to 100 gammas higher than that to the west. This might indicate the dike is at the rhyolite-andesite contact; however, there is a fairly regular easterly gradient to the magnetics in this area, and it is considered probable that the higher readings here merely reflect an east dip of the dike.

ELECTROMAGNETIC RESULTS

One definite zone of conductivity was detected on the group. It is situated in 70954 and -63, is of moderate intensity, about 1,000 feet

long, strikes in a northeasterly direction and coincides exactly with a slight magnetic high,

At two other locations, on and just east of the magnetic high in 70952 interpreted as being the smaller basic intrusive, there are weak, one line cross-over indicative of slight conductivity.


CONCLUSIONS AND RECOMMENDATIONS

The main conductor, with exact magnetic coincidence, is of definite interest and should be investigated further.

It is possible drilling will eventually be recommended. However the target is relatively small and the area is a difficult one in which to move heavy equipment, hence drilling costs are quite high per foot. Before going to this expense it is considered advisable that the anomaly be more fully evaluated by checking with another geophysical method.

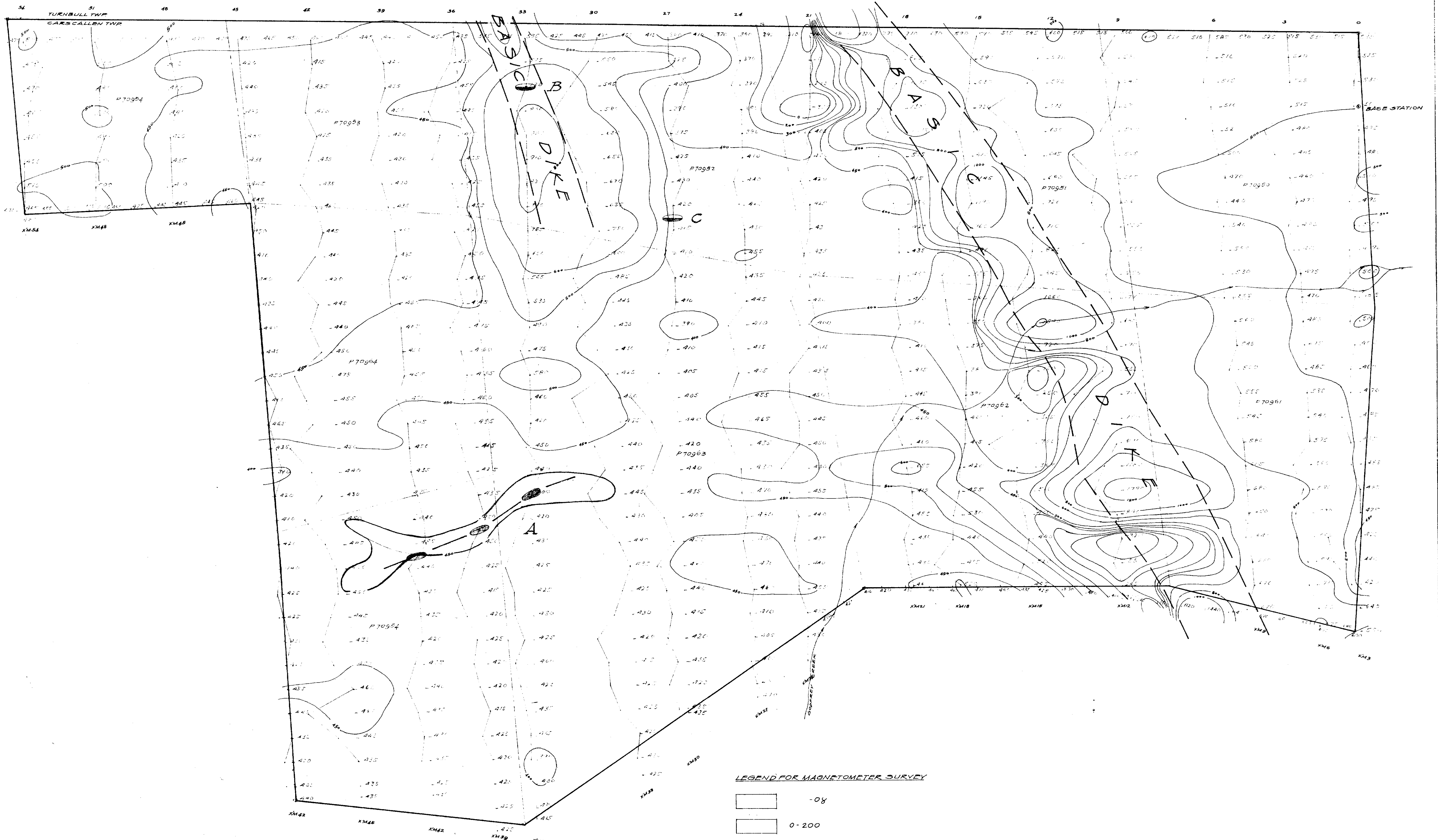
While any good and continuous conductor, even though paper-thin, such as a stringer of pyrite or a graphitic slip, could cause the electromagnetic response, only a conductor of greater magnitude would give appreciable response to induced polarization methods. It is therefore recommended that this anomaly and the other two weaker features be checked by I. P. methods before making a decision re drilling. Cost is estimated to be of the order of \$1200 to \$1500.

Respectfully submitted,

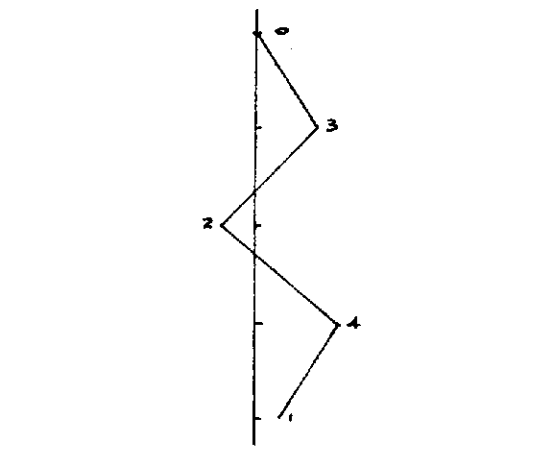


L. G. Phelan, M.A.Sc., P.Eng.
Consulting Geologist

TORONTO, Ontario
17 February, 1965

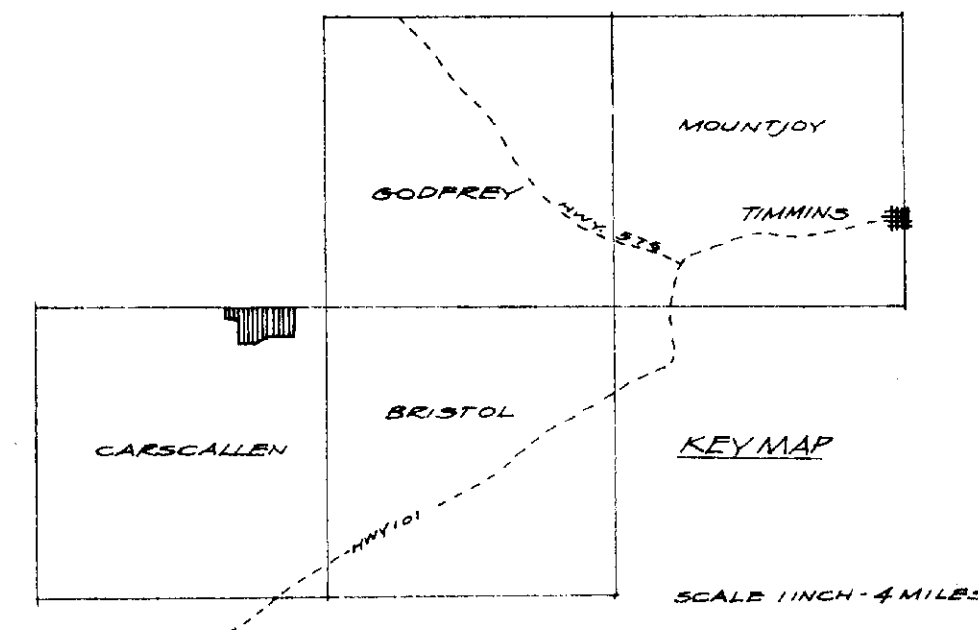


LEGEND FOR EM SURVEY



SOUTH TILTS NORTH TILTS
SCALE 1/8 INCH = 1 DEGREE OF TILT

CONDUCTOR DEFINITE INDEFINITE POSSIBLE



KEYMAP

SCALE 1 INCH = 4 MILES

LEGEND FOR MAGNETOMETER SURVEY

[White box]	-0g
[Lightest gray box]	0-200
[Light gray box]	200-300
[Medium-light gray box]	300-400
[Medium gray box]	400-450
[Medium-dark gray box]	450-500
[Dark gray box]	500-600
[Very dark gray box]	600-800
[Darkest gray box]	800-1000
[Black box]	1000-1500
[Black box]	1500+

FIDELITY MINING INVESTMENTS LIMITED
PROPERTY IN CARSCALLEN TOWNSHIP ONTARIO
MAGNETOMETER & ELECTROMAGNETIC SURVEYS
SCALE 1 INCH = 200 FEET

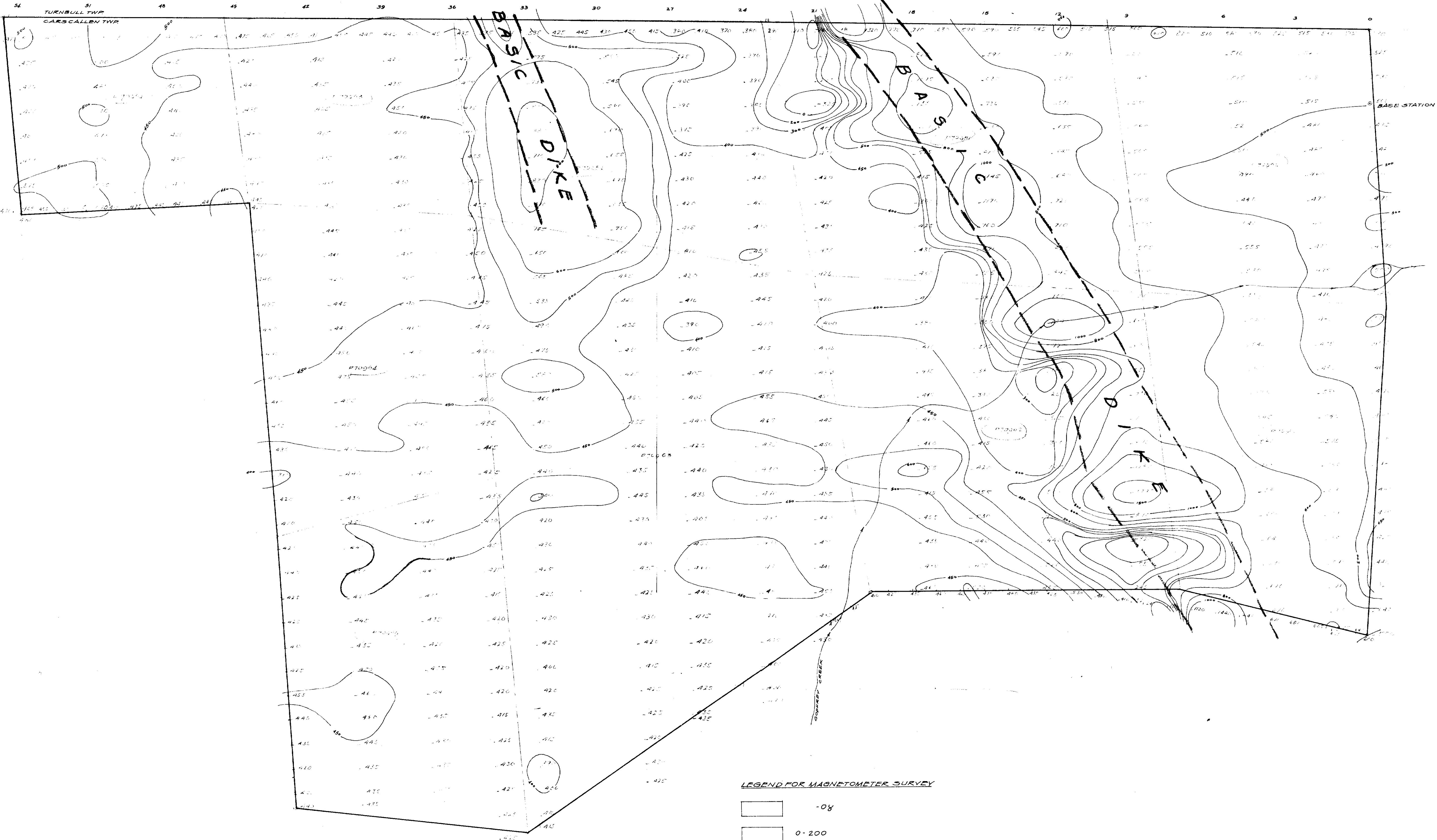
JANUARY 1965

[Handwritten signature]

(2x26) 5

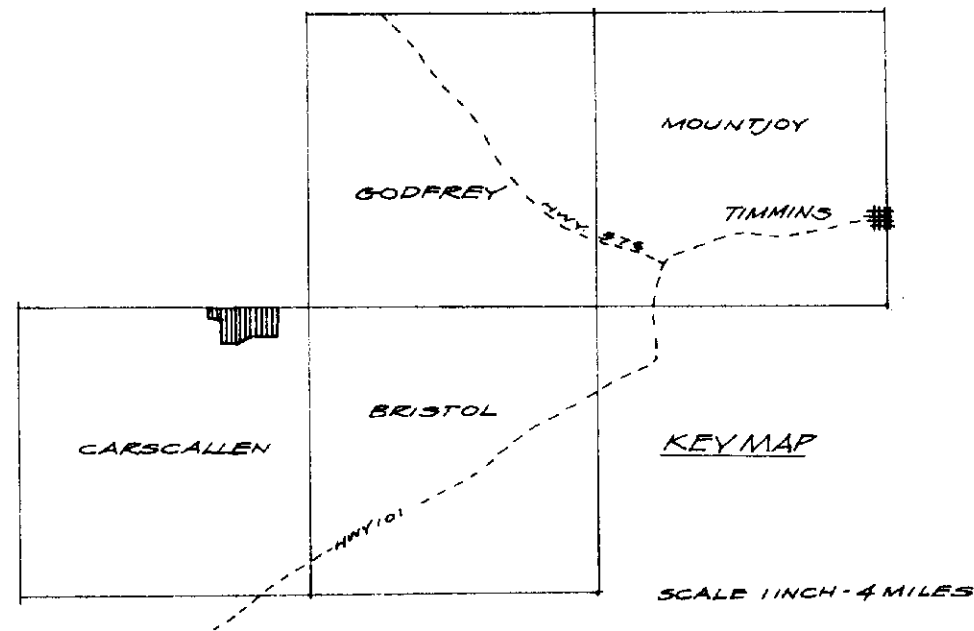


424598353 63.1418 CARSCALLEN



LEGEND FOR MAGNETOMETER SURVEY

[White Box]	-0g
[Lightest Gray Box]	0-200
[Light Gray Box]	200-300
[Medium-Light Gray Box]	300-400
[Medium Gray Box]	400-450
[Medium-Dark Gray Box]	450-500
[Dark Gray Box]	500-600
[Very Dark Gray Box]	600-800
[Darkest Gray Box]	800-1000
[Black Box]	1000-1500
[Thick Black Box]	1500+



FIDELITY MINING INVESTMENTS LIMITED
 PROPERTY IN CARSCALLEN TOWNSHIP ONTARIO
 MAGNETOMETER SURVEY
 SCALE 1 INCH = 200 FEET
 JANUARY 1965

[Handwritten Signature]

(212/1) 5

