



42A05NE0029 63.1181 GODFREY

INTRODUCTION

A geophysical survey was carried out over a property held by Utopia Mines Limited which is located in Godfrey Township, Ontario during the latter part of August and September of this year.

The property consists of 9 claims located in Concession II, Godfrey Township which are more particularly described as follows:

- P-49089 being the S.E. 1/4 of N 1/2 lot 7 Concession II
- P-49090 " " N.E. 1/4 of S 1/2 " " "
- P-49091 " " S.E. 1/4 of S 1/2 " " "
- P-49092 " " SW 1/4 of N 1/2 " " "
- P-49093 " " N.W. 1/4 of S 1/2 " " "
- P-49094 " " S.W. 1/4 of S 1/2 " " "
- P-49095 " " S.E. 1/4 of N 1/2 lot 8 " "
- P-49096 " " N.E. 1/4 of S 1/2 " " "
- P-49097 " " S.E. 1/4 of S 1/2 " " "

A grid of north south picket lines were cut over the property at 300 foot intervals. Chainage pickets were set up along the lines at 100 foot intervals and magnetic and electromagnetic readings were taken at the chainage pickets.

A Sharpe A-2 magnetometer having a scale constant of 20 gammas per scale division was used in the magnetic survey. All the readings have been corrected to a common base station.

An electromagnetic galvanic instrument was used in the electromagnetic survey.

The results of the geophysical work have been plotted on the accompanying map which is on the scale of 1 inch equals 400 feet.

ELECTROMAGNETIC SURVEY METHOD

The survey was done with an electromagnetic-galvanic apparatus. An alternating current of 1000 cycles per second is applied to the ground between two widely separated electrodes, which are connected by an insulated wire running at right angles to the direction of survey lines.

Current passing through the ground tends to concentrate in the more conductive formations, and this leads to a relatively strong alternating magnetic field in the immediate vicinity of such conductors. Readings of direction of field (tilt angle) or intensity of field can be used to locate the conductors. In the present case the horizontal component of field intensity was read.

The normal intensity over uniform ground is an exponential function of distance from the spread wire. Over the apex of a conducting body there will be a peak of horizontal intensity. One way of eliminating the normal background is to take a ratio of readings. This will be a constant value over uniform ground, because of the exponential relation. The conductor will then show a high on one side and a low on the other -- somewhat like the "cross-over" of vertical-loop electromagnetic surveys.

GENERAL GEOLOGY

The general geology of the area is shown on map No. 1954-4, Township of Godfrey published by the Ontario Department of Mines.

Traverses were made along the picket lines in an attempt to discover outcrops.

The eastern half of the property is covered by heavy green bush consisting of spruce, cedar and tamarack. The western half is covered by sand and boulders with some gravel and is underlain by rhyolite and quartz porphyry.

Only one outcrop was located which occurs on line 2100W and extends from chainage 1650 S to 1800 S. The outcrop is rhyolite. Several boulders were found especially on the western part of the property. Most of the boulders consist of andesite but some granite boulders were observed on the south western part of the property.

RESULTS OF THE SURVEY

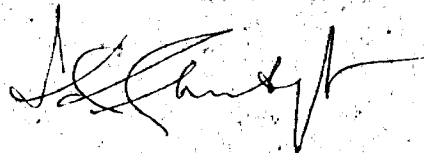
Some south-north trending magnetic zones were outlined by the geophysical work. These magnetic zones are not very strong, about 100 to 200 gammas above background. They are suspected to represent quartz diabase dykes.

Two medium strength conducting zones were outlined by the electromagnetic survey. One occurs on line 60W at chainage 2500S and extends east to chainage 2650 S on line 30 W. The second conductor occurs just to the west of a magnetic zone, which as mentioned before is believed to represent a diabase dyke. The conductor extends from chainage 1450 S on line 30 W to chainage 1400 S on line 33W.

RECOMMENDATIONS

Two medium strength conductors have been outlined.
They occur in an area where base metal mineralization has been found.
It is recommended that a program of diamond drilling
be undertaken to investigate the indications.

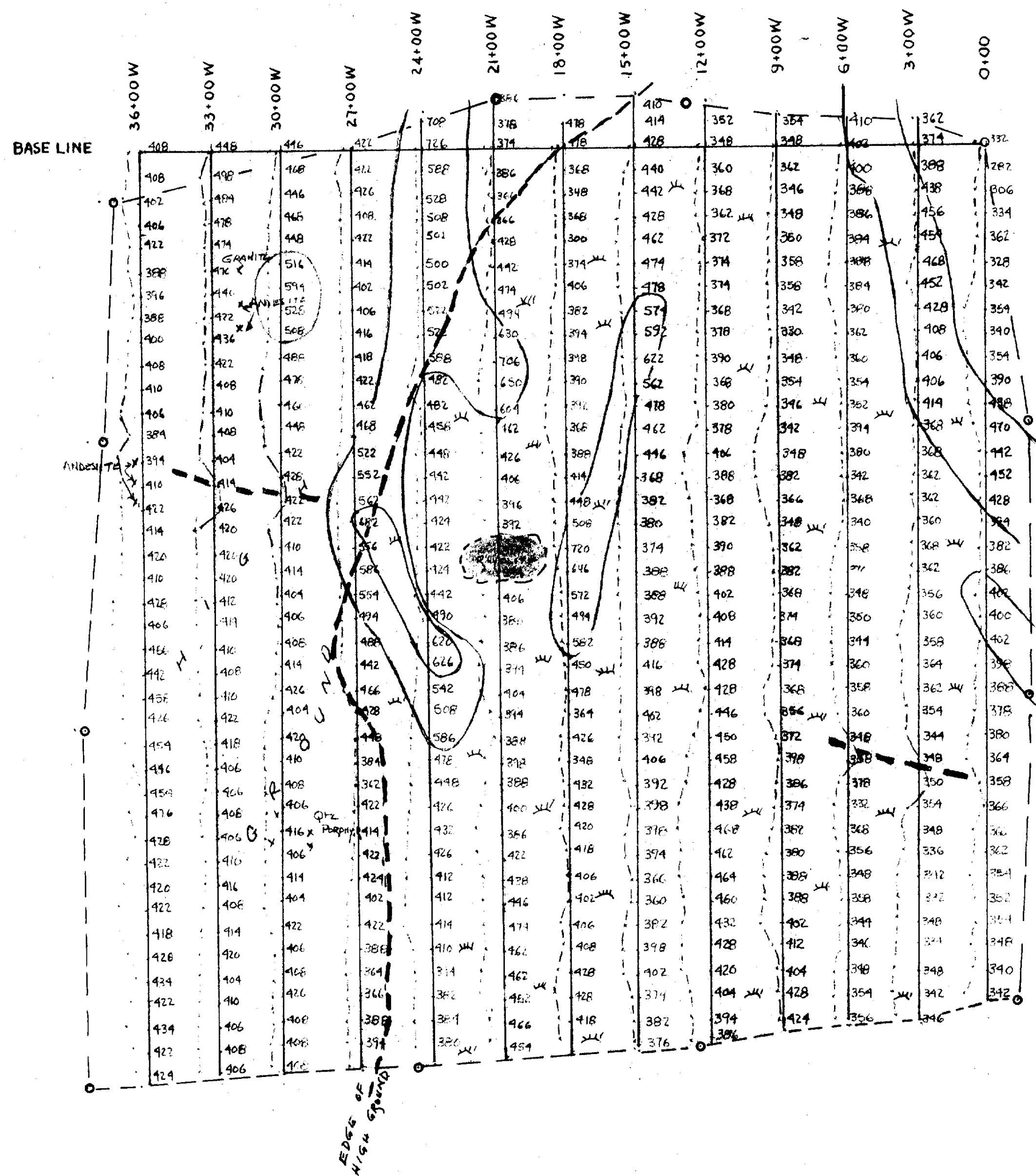
Respectfully submitted,



I.C. Christopher, B.Sc. P.Eng.

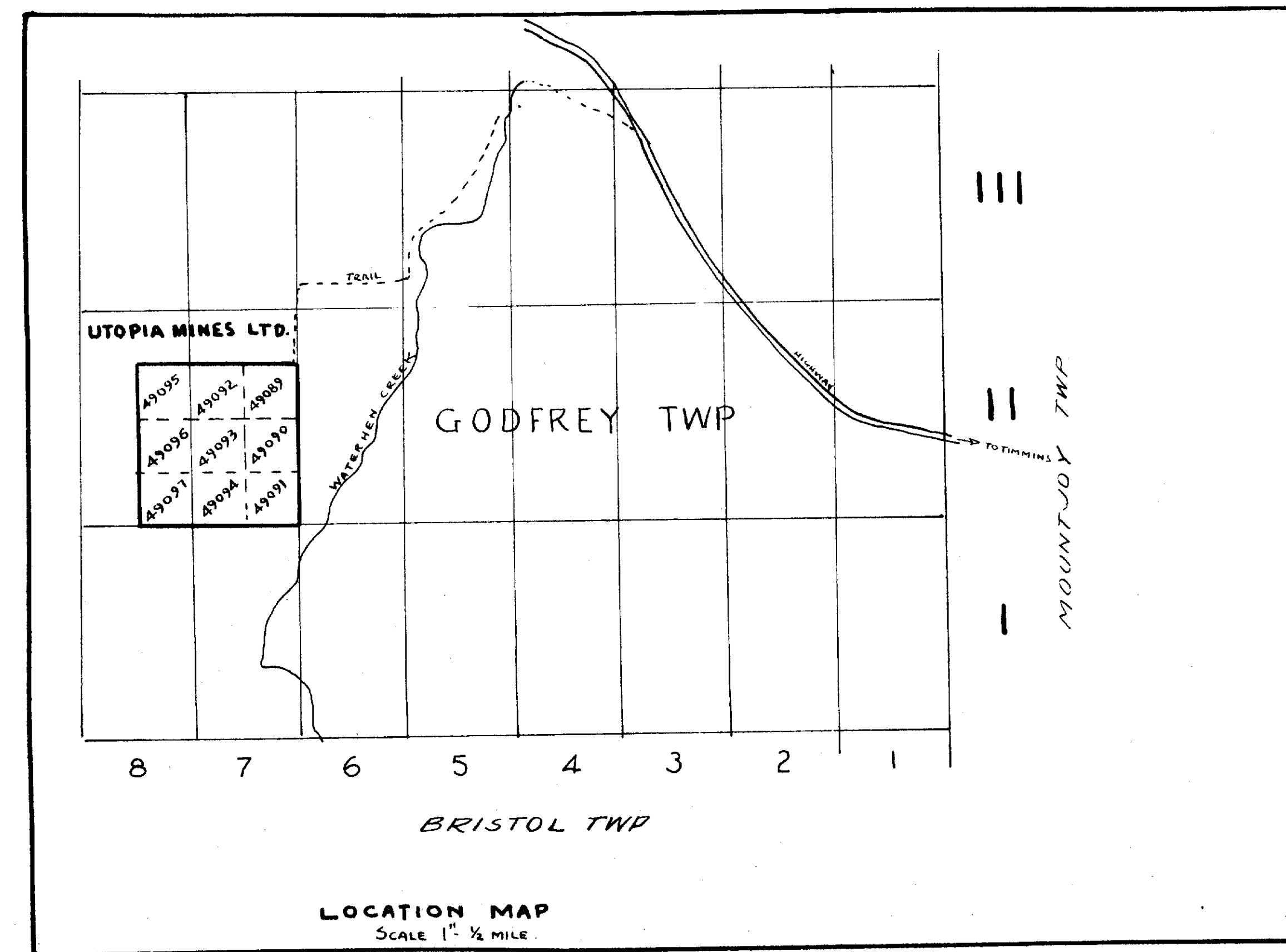
Toronto, Ontario

September 26, 1962



LEGEND & SYMBOLS

- 400 | MAGNETOMETER READINGS IN GAUSS
- ∠ | ELECTROMAGNETIC READINGS IN DEGREES OF DIP
1" = 40"
- ⊗ | OUTCROP - RHYOLITE
- ⊗ | CEDAR SWAMP
- | CLAIM POSTS
- x | FLOAT
- | ELECTROMAGNETIC CONDUCTOR



MAGNETOMETER & ELECTROMAGNETIC & GEOLOGICAL SURVEYS
UTOPIA MINES LIMITED
 GODFREY TOWNSHIP ONTARIO.
 SCALE 1" = 400'

Handwritten signature and date: [Signature] Sept 6

