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ABSTRACT

During January 1960 an electromagnetic survey using the long wire method was completed on 12 claims surrounding Tetapaga Lake.

Five anomalies were outlined for tests with the self-potential method.

The results are described in a three (3) page report with accompanying map on a scale of 1 inch to 200 feet.

Drawing No. 1415

LONG WIRE ELECTROMAGNETIC SURVEY

TETAPAGA RIVER CLAIMS

KEEVIL CONSULTANTS LIMITED

BRIGGS & STRATHCONA TOWNSHIPS

ONTARIO

INTRODUCTION

In a gravel pit between the mine access road and Tetapaga River some of the gravel was discovered cemented together to form a gossan type material. Assays of the rusty gravel gave some good copper values. A geophysical survey was decided upon to attempt to find the source of the mineralization.

LOCATION AND ACCESS

The group consisted of three claims in Briggs Township and nine claims in Strathcona Township centred approximately around Tetapaga Lake.

The mine road crossed the south-east claims and made access to the property easy.

GEOPHYSICAL SURVEY

The long wire electromagnetic method was used on the property. A wire joining the grounded electrodes was along the base line which was approximately parallel to the Tetapaga River on the west side of the property. The wire was fed with 3/4 ampere of 1000 cycle current.

The horizontal component perpendicular to the wire of the total field was measured using a test coil, the plane of whose turns was vertical.

Voltages induced in the test coil at points along lines normal to the base line were measured at 100 foot intervals and plotted. The results are shown on the accompanying map.

DISCUSSION OF RESULTS

Five anomalies were outlined and are lettered A to F.

Anomalies A & B

Both anomalies are caused by narrow conductors very close to surface and could be narrow stringers of sulphide material.

Anomaly C

The conductor below this anomaly is very narrow and shallow. It also could be due to a stringer of sulphides. It is probable that the sulphides causing the rusty cement in the gravel pit come from below this anomaly.

Anomaly D

The conductor lies farther from the wire than the previous three. It occurs at a general steep gradient of the field and appears as though it might be where a change in rock type takes place. It is not nearly as good a conductor as A, B or C.

Anomaly E

This is a broad erratic anomaly close to the wire. It is more likely due to a change in rock type than by sulphide mineralization.

Anomaly F

The anomaly is long and continuous and is similar to the anomalies encountered over shear zones near the mine although its strike is not north-east as most of these were. It is not likely due to mineralization.

RECOMMENDATIONS

All anomalies should be tested by the self-potential method and if favourable results are obtained they should be investigated by short diamond drill holes.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED,

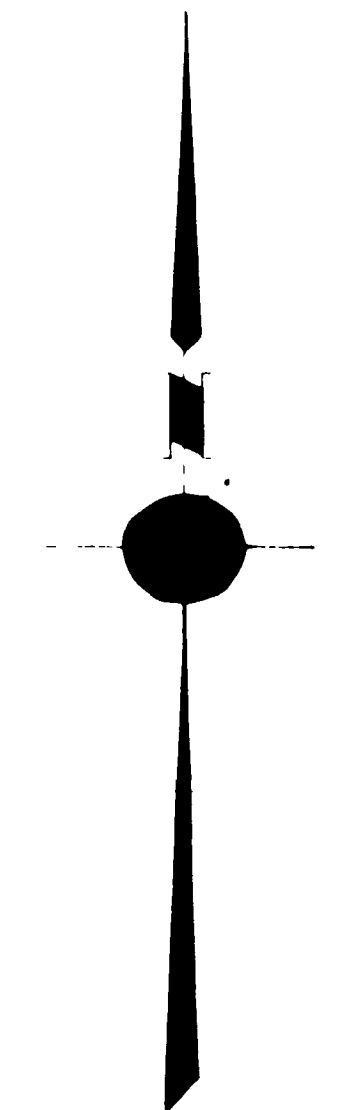
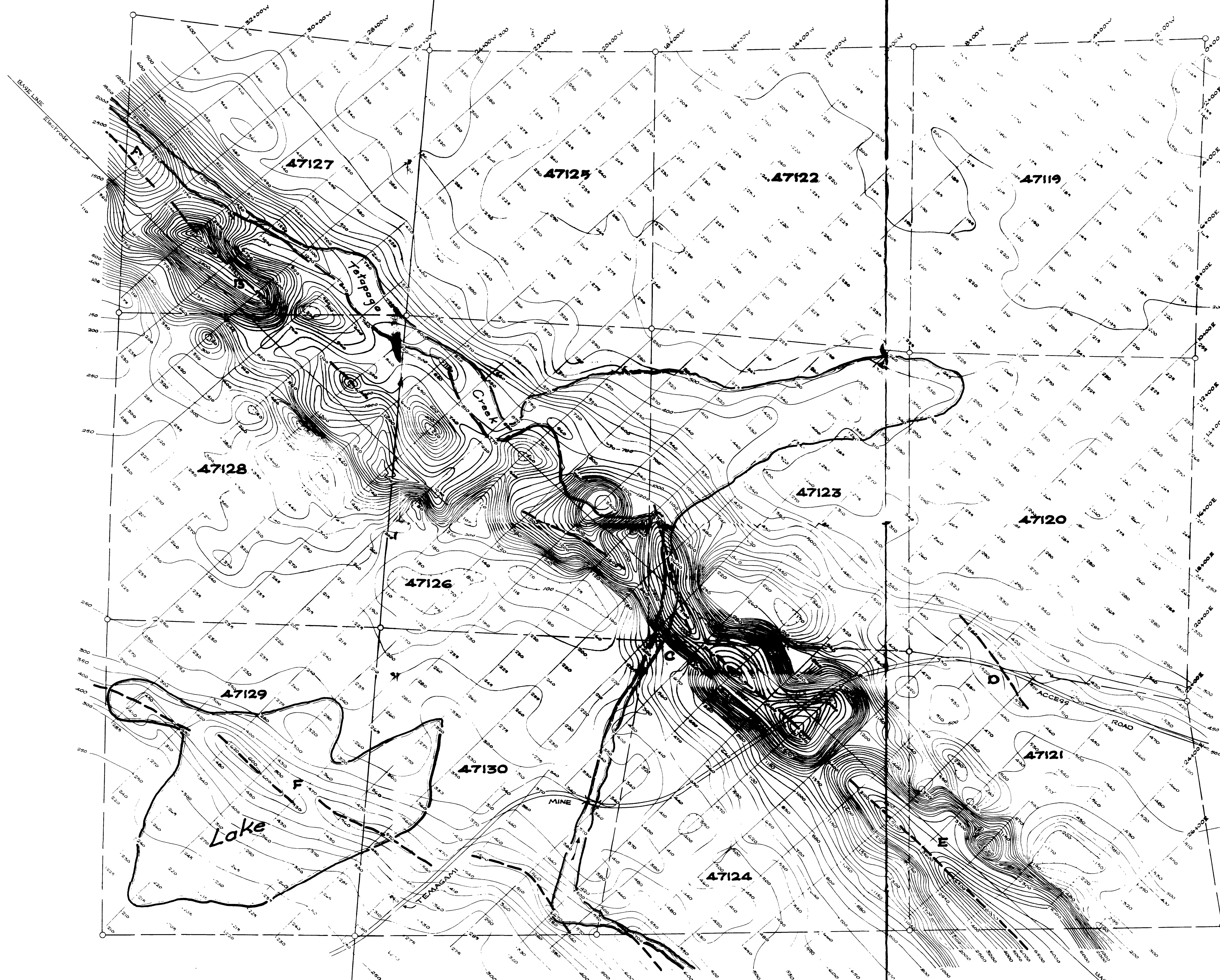
A. R. Clark,
President.

Toronto, Ontario,
February 3, 1960.

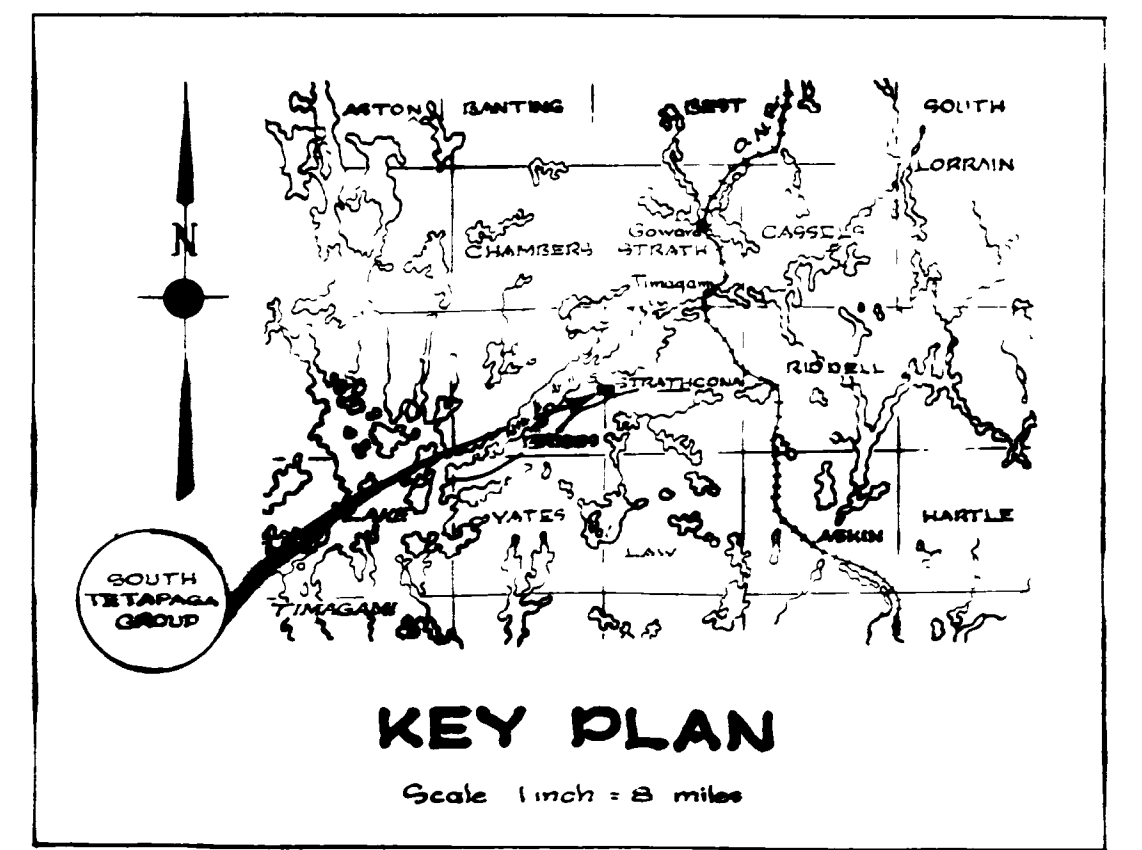
*Qualifications
on file 63.1060*

TOWNSHIP
OF
BRIGGS

TOWNSHIP OF STRATHCONA



Note
 Values shown thus $\frac{500}{200}$ are in microvolts
 isodynamic contours of no interval intervals
 except as noted, shown thus $\frac{500}{200}$
 Conductor axis shown thus $\frac{500}{200}$
 See also Dwg. 1872 for Self-potential Survey



ELECTROMAGNETIC SURVEY
 LONG WIRE METHOD
 OF
SOUTH TETAPAGA GROUP
 TOWNSHIPS OF BRIGGS AND STRATHCONA
 PROVINCE OF ONTARIO
 FOR
N.B. KEEVIL
 BY
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 200 FEET

