REPORT ON GEOPHYSICA

OF ANNAMIQUE MINES LTD., JESSOP TOWNSHIP, ONTARIO.

INTRODUCTION:

The Jessop Township claim group of Annamaque Mines was acquired following the announcement in the Spring of 1964 by Texas Gulf Sulphur of the discovery of a large high grade copper zinc-silver orebody in Kidd Township some six (6) miles northeast of the Annamaque claim group.

Magnetometer and electromagnetic surveys were conducted over the twelve (12) claims group in the northwest corner of Jessop Township during the Spring of 1965, and the results are reported on herewith.

Two areas of interest were indicated and further work is recommended in an endeavour to locate suitable diamond drill targets.

PROPERTY AND LOCATION:

The Jessop Township property of Annamaque Mines consists of twelve (12) forty acre claims registered with the Ontario Department of Mines under the following Mines License Numbers:

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The property is located some ten (10) miles northwest of the City of Timmins and three miles east of the Mattagami River. A road running north from Sandy Falls passes approximately one mile to the west of the property.

**G E O L O G Y:**

The general geology of the area and of Jessop Township are well depicted on Map No. 2046 by the Ontario Department of Mines. This map shows that favourable rhyolite-andesite flow rocks occur in the area. The property itself is believed to be overburden-covered, but Map No. 2046 indicates a contact between rhyolite and andesite just to the southeast, on which a sulphide showing has been noted.

The copper-zinc deposit of Kamkatia Mines lies six miles to the west near a rhyolite-andesite contact as does the Texas Gulf deposit which is six miles to the northeast.

Intrusive rocks are not mapped in the area, but the magnetic survey indicates that north-south diabase dykes may be present on the property.

**M A G N E T O M E T E R S U R V E Y:**

In order to check the magnetic qualities of the underlying bedrock, a magnetometer survey was conducted by a crew of Quebec Geophysics on a grid of north-south lines spaced at 300 foot centers with readings taken at 100 foot intervals with a MF-1 Fluxgate...
type magnetometer. These readings were plotted on a map at a scale of one inch to 300 feet and magnetic contours drawn.

RESULTS OF MAGNETOMETER SURVEY:
The magnetic results indicate two magnetic linears running in a north-south direction - one near the west boundary of the property and the other near the east boundary.

The maximum readings along these linears occur at the north and south end respectively. The writer believes that these magnetic linears or bands either represent a flow of more basic type rock or are slightly magnetic north-south trending diabase dykes which are known to exist in the Porcupine area.

No coincident conductors were indicated by the electromagnetic survey hence the magnetic anomalous areas likely do not represent magnetic pyrrohite.

ELECTROMAGNETIC SURVEY:
The electromagnetic survey covered the same grid as the magnetometer and was performed with a Sharpe SE-300 type unit.

RESULTS OF THE ELECTROMAGNETIC SURVEY:
No major conductive zone was indicated by the survey although numerous minor "cross-overs" were indicated.
The most important "cross-over" area occurs in the southeast section of the property on Line 24E and Line 27E, and recommendations are set forth to further explore this area as the conductor may be outside the depth range of the instrument being used.

RECOMMENDATIONS:

As the magnetic anomalies occur in a north-south direction and as the survey lines were run in the same direction, it is recommended that a few east-west lines be run in the area of the anomalies.

The results of this may indicate that much higher and sharper magnetic areas occur than are indicated.

In the southeast corner of the property where the electromagnetic survey indicated a "cross-over" that may be important, it is recommended that an Induced Polarization type of survey be run in a limited area in the hope that a zone worthy of diamond drill investigation be outlined.

COST OF PROGRAM RECOMMENDED:

The cost of the program as recommended should not exceed $1,000. and the results will enable an exploration engineer to more fully assess the merits of this strategically located property.
DETAILS OF THE SURVEY:

A total of 14 miles of line were cut and picketed at 100 foot centers and on these lines a total of some 1,500 readings were taken and recorded.

The work was performed by crews of Quebec Geophysics Ltd. during March and April of 1965.

Respectfully submitted,

J.C. Shaw, Engineer.

Montreal, P.Q.

MAGNETOMETER SURVEY

FOR

ANAMAAQUE MINES LTD.

JESSOP TOWNSHIP, ONTARIO

BY

QUEBEC GEOPHYSICS LTD.