

LEE GROUP

(Supplementary Report)

YUKON TERRITORY

GRAVITY INTERPRETATION

for

ANVIL MINING CORP.

by

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INTRODUCTION

Approximately 815 stations had been metered and surveyed on the Lee Group in 1967 by United Geophysical Company of America, for the account of Anvil Mining Corporation. In September of that year, the writer submitted a report on the interpretation of the data acquired by United. The attention of the reader is directed to that report.

In late summer, 1968, Overland Exploration Services added gravity programme in the Lee group in accordance with recommendations made in the 1967 report. Approximately 240 new stations were surveyed and metered. Earlier base stations were found in the field, so the 1968 work was tied to the 1967 work. The following interpretation is based on an integration of old and new data, Bouguer profiles being used for the extraction of residual values.

INTERPRETATION

A new map of all the Lee group work is attached. Programme added to the south necessitated a shift in the regional as it had been drawn - more or less uncontrolled - in the southern part of the 1967 work area (i.e. vicinity of 30S-45S). Principal effect of this shift is as follows:

1. More conclusive data pertaining to a fault in the southwest part of the area has been delineated.
2. The "G" anomaly reported in 1967 is eliminated.
3. The "E" anomaly reported in 1967 is eliminated.
4. The "A" anomaly is better defined.

New lines east and west of the original work add the following information:

1. The "C" anomaly appears to continue westerly as a trend, but the local apex shown on line 24W remains unchanged.
2. The "F" anomaly, which had been downgraded because it was at the edge of regional control and because it was thought to be possibly open to the east, is now closed to the east. It may be upgraded now as a drilling target.

Two dashed lines are shown on the new map, representing the boundaries of a positive area. They may, in fact, be fault traces at the edges of a horst, or they may simply represent the contacts of a heavy intruded mass which lies at a depth of about 500' (\pm). Residual relief is about 1.0 mgal. The western one indicates stronger relief (and shallower depth of causative mass?) at the south end, and it appears to weaken to the north. The eastern one has strong relief at the north end and weakens to the south.

It is significant that the best developed anomalies in the area - A, F and B - are associated with these fault (?) trends. Further, the southern-most end of line 16 west, is strongly and sharply positive. Another anomaly - with causative mass shallower than that of "A" - may exist near 58 south on line 16W in association with the same fault(?) that underlies the "A" anomaly.

Anomalies A, F, B and perhaps one at the south end of line 16W are all distorted by the effects of the faults (?). That is, the extractions of the residual values are uncertain, and the usual depth and shape calculations may be misleading. However, the area has more possibilities than many the writer has seen in the general area, and it deserves further attention. A greater amount of drilling may be required to evaluate the residual anomalies here than is necessary in the less complex areas.

The "A" anomaly has been reshaped somewhat, but the apex has not been changed. In the light of the new data, it now seems likely that the causative mass has east dip and that it may be deeper than originally thought.

RECOMMENDATIONS

1. Drill the "A" anomaly from a position on the tie line at 3+50W at a 60° angle to the west

to a drilled depth of 350'.

2. Drill the "F" anomaly with a vertical hole located midway between 18S on line 28E and 20S on line 24E to a depth of 250'.
3. Investigate the area around the south end of line 16W by extending gravity lines 16W and 20W to 70S. Prospecting for surface mineralization may be useful if there is no overburden here.



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