

020943

SEA GROUP

Yukon Territory

GRAVITY INTERPRETATION

for

ANVIL MINING CORP.

by

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Field work was completed on these claims by United Geophysical Company of America during the summer of 1967. Approximately 410 stations were surveyed and metered on a line spacing of 800' and station spacing of 200. United prepared elevation and Bouguer maps of the field data. These are included in this report. Bouguer values were computed with an elevation correction factor of .059 - corresponding to surface densities of 2.75.

The writer plotted Bouguer gravity, regional and residual profiles, which are attached to this report. Regionals were drawn through the profiles and tied, and a map of profile residual values was made. Template residuals were calculated as a check against the profile residual values. The residual map is included in this report.

ELEVATION MAP

Elevation varies from a high of 3227' a.s.l. in the north central part of the area, to a low of 2742' a.s.l. in the southeast portion. Except in the vicinity of 20S on lines 8E and 16E, Bouguer gravity features are independent of terrain. In that particular area, a local topographic high coincides with a Bouguer low, indicating low density materials. For the bulk of the map area, the elevation correction factor used is adequate.

BOUGUER MAP

Because of certain contouring inconsistencies, United

has been asked to produce a new Bouguer map. The essential change to be made will modify the strong- appearing north flank of a small positive, near the east end of the north base line.

Elsewhere in the area, two local closures appear. The axis of the more important one extends from 8N on line 8E to 8N on line 16E. The other lies at 20S to 22S on line 24E. Reversals of possible significance occur at the edge of the work at 10S on line 0 and at 8N on 24E. All of these will be discussed in more detail under the section on the residual map.

RESIDUALS

Two residual positive features of significance have been labelled "A" and "B". The large negative in the central portion is related to a mass of low-density rocks (glacial debris or fractured bedrock) probably extending from the surface to a depth of about 400'. The eastern half of the area is essentially featureless.

"A" Anomaly:

Highest values are at 8N, 9N and 10N on line 8E. Approximately 0.9 mgal. of relief is mapped, but 0.45 mgal of northwest flank can be attributed to thickening of overburden from the SRH-3 hole (about 11N, 5 $\frac{1}{2}$ E) towards the SRH-5 hole (15N, 2E). SRH-4, on the north flank of the anomaly found approximately the same overburden thickness as SRH-3, in an area of residual values lower by 0.35 mgal. Inasmuch as SRH-4 found no mineralization, it may be assumed that the mineral-

ization in SRH-3 gave rise to the 0.35 mgal residual gravity difference. Since the mineralization does not extend to SRH-4, which lies on the +0.5 contour, the maximum area of mineralization can be expected to lie within this contour.

Furthermore, it is probable that more mineralization would be found in a hole at 9N on 8E than was found in SRH-3. However, the difference may be small, and the extent of the richer mineralization may be confined to the small area at the crest of the anomaly within the +0.9 contour.

"B" Anomaly:

Approximately 0.5 mgal relief, with peak values at 21S and 22S on line 24E. Estimated top of causative mass: 350'. Shape of this anomaly is distorted on the west and northeast by the concentration of low density surface materials and on the south by the lack of regional control. It is possible that the anomaly is entirely an expression of locally thin overburden between thick masses of overburden to the west and northeast. If such is the case, the estimated depth to causative mass of 350' is erroneous.

There is some suggestion that a high might extend east of the "A" anomaly. Also, at the edge of control on the 0 line, relatively high values at 10S and 28S indicate the possibility that significant anomalies may exist to the west.

RECOMMENDATIONS

1. Extend lines 32E and 40E northward to 20N to check for the presence of an anomaly on trend with "A".

2. Run line 4W from the south base line to 20N.
3. If 1 or 2, above, give encouraging results, detail the anomalies found.
4. Run lines 20E and 28E from 10S to 35S, in an effort to gain better definition of the "B" anomaly.
5. Drill the "A" anomaly at 9N on line 8E, only if the restrictions placed on the area and concentration of mineralization in the section on the "A" anomaly leave an economic target.

Respectfully submitted,

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