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ATLAS EXPLORATION LTD.

Gravity Interpretation

Owl Claim Group

Yukon Territory

by

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INTRODUCTION

Data were presented to the writer in the form of Bouguer values and elevations plotted in profile form. Regionals were run on the profiles and tied at the base line. These regional values were plotted on a base map, smoothed and adjusted on the profiles. Residuals were then extracted from the profiles, plotted and contoured. The residual map is the key map in the interpretation.

REGIONAL MAP

Regional values decrease from north to south at a rate of 2 milligals per ½ mile in the west and 1 milligal per ½ mile in the east. A flexure in the vicinity of line 8E suggests the possible presence there of deep-seated, north-south trending fault. (east side downthrown).

RESIDUAL MAP

A number of positive closures within the claim group indicates the presence of local areas of shallow, heavy rocks. These could be due to the accumulation of sulphide masses, or they could be due to differential overburden effects.

The most important positives, identified as such on the basis of amplitude and flank gradients, are labelled "A" through "F".

A. Peak value - 1¼ milligals, at station 5s on line 20W. A very small, sharp local negative occurs at stations 6s through 8s on line 20 near the apex. This indicates a surficial accumulation of light materials. The small negative does not detract from the importance of the anomaly, but it does mask the true apex position which could be anywhere between 5s and 7s. Two magnetic lineations join near the apex.

Causative mass appears to be slab-shaped, possibly southward dipping. If a sulphide body, it could be of the order of 15MM tons in size. Computed maximum depth to top is 270' (0.9 density contrast assumed).

B. Small anomaly with a peak value of 0.8 milligals. Apex value is at 6N on line 20E. Causative mass appears somewhat spherical in shape. Computed maximum depth to top is 210'. It is related to -

C. Another small anomaly similar to B, but sharper and shallower. Computed maximum depth to top is 145'. Apex value is at 4N on line 12E. The northwest flank is distorted by the presence of a high amplitude steep-sided negative of limited areal extent near the north end of line 4E. This negative indicates the presence of a steep-sided depression in the country rock filled with very light materials.
The vicinity of 4N and 5N, line 12E, is strongly positive -- a saddle between B and C. It is likely that the causative masses of B and C are separated, but closely related.

D. Amplitude of 0.6 milligal, apex between 6s and 7s on line 20E. Calculated maximum depth to top of causative mass is 130'. This anomaly has been downgraded because of the lack of regional control at its position near the end of the line and because of the possibility that it represents a sub-till, near surface feature.

E. Extends from 5s on line 4W, past the south end of line 4E to 14s on line 12E. Amplitude is 0.8 mgal. on the west to 1.0 mgal. on the east. A topographic irregularity is roughly coincident with the axis of the anomaly, and it is thought to be related to near-surface topographic and overburden effects.

F. Amplitude of 0.8 mgal. at the north end of line 24W. Downgraded because of a lack of regional control on the north extremity of line 24W.

RECOMMENDATIONS

1. Test the A anomaly with 2 - 300' holes. The first should be drilled at 5s on line 20W, and the second at 8s on line 28W. If either indicates the possibility of an ore body, extend the gravity programme southward to 25s on all lines between 4W and 36W, inclusive. In the process, re-run all of line 8W.

2. Test the B anomaly with a 300' hole at 6N on line 20E. If mineralization is present, extend lines 8E to 20E, inclusive, northward to 20N and run a transverse line between 3N on line 4E to 7N on line 24E.

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