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INTER-OFFICE

TO: Dr. W. R. Bacon
FROM: J. C. Stephen
COMPANY: MASTODON-HIGHLAND BELL MINES LTD.
DATE: December 7th, 1962
SUBJECT: JIB GROUP MAGNETIC SURVEY

The following are my conclusions after an examination of the magnetometer results obtained on the JIB Group.

1. Three main anomalous areas have been outlined which, by their size and intensity, indicate magnetic bodies of some considerable size.

2. The strike of the main zone, covering two of the anomalous areas, appears to be approximately parallel to the shore line in a direction N 32° W.

3. These two zones appear, from visual examination of the contour line, to dip to the northeast - away from shore.

4. The intensity and size of the main anomaly close to survey station 'A' indicated the magnetic body to be fairly close to surface. This is the conclusion if we assume the magnetic body to be somewhat similar in nature to the bodies at Jedway.

Profiles of the magnetic intensity were drawn parallel to assumed strike and dip of the two in-shore anomalies. Other profiles were made across the third, off-shore, anomaly. A rule of thumb method "half width formula" was applied to each of these profiles to give an indication of the probable depth to the magnetic bodies. In this method the point of inflection (i.e. change in curvature of the profile from concave to convex) on either side of the anomaly is located and the probable depth is assumed to be one half the horizontal distance between these points. From these profiles I have concluded that:

(i) The peak of the magnetic body indicated by the main anomaly near station 'A' is about 100' east of this station and 75' below low tide level of December 3rd.

(ii) Dip of the magnetic body, which is assumed to be roughly tabular, is indicated to be 30° to the northeast.

(iii) Survey station 'A' is probably west of the highest peak of the magnetic body indicating that a vertical hole from this point could very easily miss the target.

A section is attached showing the profile of the ground through station 'A' together with the supposed location of the magnetic body.

The off-shore anomaly is indicated to be about 100 feet below low tide level and from the hydrographic charts appears to lie below about seven fathoms of water, but is not far from a sharp drop to depths of 27 fathoms. It is not considered a practical drill target.

J. C. Stephen

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