

INTRODUCTION

In late summer and early fall, 1964, United Geophysical Company of America - a geophysical contracting firm headquartered in Calgary, Alberta - undertook to conduct a gravity survey for Kerr Addison Mines in the Swim Lakes area, Yukon Territory. Line-cutting and surveying were provided by Kerr Addison, and stations were metered by Mr. Tony Rich (using Worden meter #251), a United employee (home address: Edmonton, Alberta). Mr. Rich computed gravity values and prepared a Bouguer map. This map was drafted in final form in the United Calgary office and forwarded to the Kerr Addison Vancouver office with interpretive comment by R. B. Galeski. In 1965, Kerr Addison asked United to extend this survey.

1965 PROGRAMME

Line cutting by Kerr Addison Mines.

Surveying by Mr. D. Worrall, United Geophysical Company.

Meter reading by Mr. Mike McCombe, United Geophysical Company.

Mr. McCombe is based in Whitehorse, Y.T.

Gravity meter: Worden #251

Computations: D. Worrall, M. McCombe, D. Parker.

Extent of survey: Approximately 34,400 feet of line surveyed and metered at a station spacing of 100 feet. Lines were interspersed within the grid of the 1964 programme to add more detail, and the area worked was extended (see maps).

- Dates:**
- (a) Field surveying: August 3 - August 20, 1965
 - (b) Survey computations completed in Whitehorse: September 1, 1965.
 - (c) Gravity readings in field: August 7 - 20, 1965.
 - (d) Gravity computations in Whitehorse: August 21 - September 1, 1965.
 - (e) Final computations and map preparation completed by D. V. Parker (Calgary), October 11, 1965.

INTERPRETATION

The 1965 results confirm the presence of the significant positive anomaly found in the northwest part of the surveyed area in 1964. In addition, a very small, sharp anomaly was found this year a few hundred feet west of the larger one mentioned above. The small one is caused by a small mass of high density material very close to the surface.

In the southeasterly portion of the area there is a broad positive feature about 3000 feet wide apparently trending SW - NE. Northeasterly closure appears to be established, but the survey did not extend far enough to the south and southwest to find southwesterly closure. This positive appears to be caused by a flat lying slab of high density material approximately 50[±] thick (or possibly more). Depth of burial is uncertain, as of this writing.

RECOMMENDATIONS

1. Extend gravity work to the south and southwest to determine lateral extent of the apparent high density slab in the southeasterly part of the area.
2. Drill the gravity positive in the southerly corner of the prospect. This may represent a high point on the slab.
3. Consider drilling at the southwesterly end of line 18 where gravity values are especially high.
4. Drill a shallow hole on the small sharp anomaly west of the large one in the northwest part of the area.

CONCLUSIONS

Two of the gravity anomalies appear to have considerable potential in that they may represent large tonnages of high density material. They deserve further investigation by more gravity work and drilling.



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