



Gravity Interpretation

CARIBOO CREEK CLAIMS

for

This report has been examined by  
the Geological Evaluation Unit  
Approved as to technical worth by:

*J. J. Sullivan*  
RESIDENT GEOLOGIST

Approved as to cost in the amount  
of \$ *1200.00*

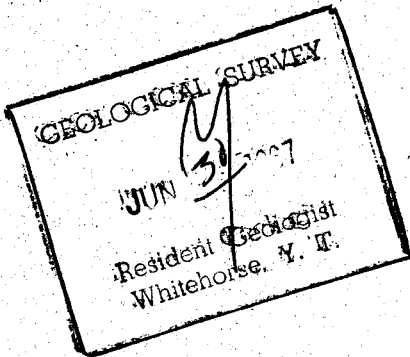
*R. E. Decker*  
RESIDENT MINER

Iola Mines

Approved as reclassification work  
under Section 50(4) taken Quartz  
Mining Act.

by

*R. B. Galeski*  
COMMISSIONER OF THE STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



R.B. Galeski, P. Geoph.

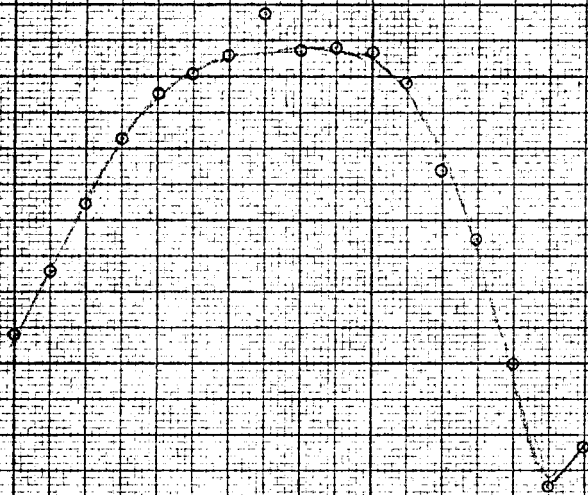
July 1966

During August 1965, February 1966 and July 1966, United Geophysical Company of America conducted small amounts of gravity programme on the Cariboo Creek claims. The 1965 work, done with high station density, showed a uniformly dipping NNW gravity flank of moderate relief. At the extreme westerly extension of the work values dropped off markedly.

In the February programme a single line (Line A) was run from base "C" southeasterly for 900 feet. This line had a peak value at station 204, but was reasonably flat between stations 203 and 207. There was a 0.25 mgal. drop in value in 100 feet between stations 208 and 209.

In the July 1966 work, line A was extended 400 feet farther southeastward, parallel line B was run southeast of station 62, parallel line C was run 200 feet west of line A and line X was run to tie together lines B, A and C. There are some irregularities in the July 1966 surveying, but I believe it is sufficiently accurate to firmly establish a good gravity anomaly.

GRAVITY PROFILE



Line A

IOLA MINES

Scale:

Horizontal: 1 cm. = 200'

Vertical: 1 cm. = 0.2 mgal

R. B. Galeski

July 1966

The anomaly (see enclosed map and profile of line A) has relief comparable to that of known sulphide deposits in other areas in which I have worked. The heavy mass causing it appears to be of sufficient size to have affected to a measurable extent nearly all of the readings taken. It is open to the northeast and appears to have an abrupt southwesterly edge.

The work done did not cover sufficient area to allow me to establish any regional gradient. Also, the density contrasts involved are unknown. Therefore depth and tonnage calculations, made from Bouguer values and assumed densities of 2.7 for country rock and 3.6 for the causative heavy mass, may be grossly misleading. However they are tabulated below:

1. The heavy mass has a slab-like appearance with a sharp edge along line C (see red line on map). Work did not extend far enough northeastward to reach the edge in that direction.
2. Dip is easterly (gentle dip?).

3. Depth to top along crest of line A gravity profile: 150'-175'.
4. Thickness of slab 110' at maximum gravity values on line A.
5. Thickness along maximum values on line B = 45'.
6. Areal dimensions 1000' x 500'±.
7. Tonnage: 5 million between lines C and B.

Should the shape of the heavy mass more nearly resemble the geometrical shape of a horizontal cylinder rather than a slab, depth to top could be 250'-300'.

Regional gravity gradient (assumed to be zero in the above calculations) could shift the apex somewhat.

Density contrast greater than 0.9 would tend to make the depth greater and tonnage less than calculated. Conversely, a lesser contrast would give shallower depths and greater tonnage.

Regardless of the uncertainties because of the lack of regional control, I consider this a significant gravity anomaly. The fact that total relief is of the order of a full milligal on the Bouguer map and that there are gradients on the flanks of the order of 0.2 mgals./100 feet puts this anomaly in the high quality category.

RECOMMENDATIONS:

1. Drill a test hole in the vicinity of station 204. Plan to go to 500 feet.
2. If the first hole does not encounter mineralization drill holes at stations 202 and 207. A regional gradient could shift the apex of the anomaly.
3. If terrain permits extend the gravity programme northeastward.

550

Very truly yours,

*R. B. Galeski*

R.B. Galeski, P. Geoph.



12000

12500

13000

13500

8500

8000

7500

7000

MAIN FORK IN STREAM



UNITED GEOPHYSICAL CO. OF AMERICA	
PARTY 598	
<b><u>BOUGUER GRAVITY</u></b>	
IOLA MINES	
CONTOUR INT. 0.1 Mgals.	INTERPRETED BY RBGALESKI
SCALE 1 INCH 100 FEET	
DATE JULY 1966	APPROVED BY R.B. GALESKI