

RESUME
MAGNETOMETRIC SURVEY DATA
of the
B. C. NICKEL PROPERTY

SUMMARY

1. Approximately 400 acres were surveyed with over 12,000 stations observed.
2. Four areas are of paramount importance in the development of the property, namely, the Brunswick, Pride of Emory, Molly-Butte, and the Nickel Star.
3. All other areas thus far surveyed have been eliminated.

DISCUSSION OF AREAS OF MAGNETIC ANOMALIES.

1. Brunswick.

This appears to be a most attractive area. Every possible interpretation indicates that the ore continues to a depth of several hundred feet below the level of the main tunnel.

2. Pride of Emory.

Interpretations here indicate that the ore body continues to at least 300-350 feet below the surface.

There are good indications of one, two, or even three smaller ore bodies adjacent to the Pride of Emory, and occurring at the same level.

The dip is northerly as shown by the magnetic data.

The magnetic anomaly known as the Pride of Emory No. 3 is now considered as lacking in economic possibilities.

3. Molly-Butte.

The four Molly magnetic anomalies, which have been demonstrated by surface trenching to possess some pyrrhotite mineralization, are not considered to have any economic value at or near the surface.

The Molly showings are interpreted as having easterly dips and, in some manner, are associated with a north-south trending structural feature.

The possibilities for one or two ore bodies at a depth of 100 to 300 feet are very good. The most likely looking area, considering all the data available at this time, is in and adjacent to O and N on the main base line. The point P is in the original Molly showing.

The Butte area appears to lack economic possibilities at or near the surface. There are strong indications for the occurrence of one or two ore bodies above the present explored tunnel level.

4. Nickel Star.

The Nickel Star area presents splendid possibilities for several ore bodies of commercial importance. These are interpreted as occurring not only at or near the surface, but as continuing to a depth of several hundred feet.

This area, which has six marked anomalies in a matrix of strong intensities, could have one or more ore bodies below the

present known ones. These could have escaped detection in such an area where the intensities, as a whole, are so strong.

The dip is northerly at approximately 70 degrees.

TRAIL

The magnetic highs in the Trail area were disappointing in that the mineralization lacks uniform distribution. The ore bodies, with one small exception, do not continue to any considerable depth.

CLIMAX

The importance of the Climax magnetic highs was predicated on the possibilities of the Trail area. Underground exploratory work in the Trail anomalies failed to uncover anything of unusual importance.

The surface diamond drilling in two of the Climax magnetic highs found disseminated mineralization of only minor importance.

The area can be considered as lacking in economic value.

DOLLY

The indications for the Dolly No. 1 high are for a small body of commercial ore. Diamond drilling and trenching thus far have failed to locate the mineralization causing this very interesting magnetic anomaly.

The other Dolly highs are of no commercial importance.

IDA

The Ida highs were shown to be due either to disseminated pyrrhotite and magnetite mineralization or to the presence of

increased amounts of magnetite in the pyroxenite. The economic importance of the Ida highs are considered to be nil.

SUMMIT

The Summit highs were shown to be due to increased amounts of magnetite in the Diorite. They have no economic value.

BERGMAN

The Bergman highs are now considered as being caused by increased amounts of magnetite in the pyroxenite with small amounts of disseminated pyrrhotite mineralization. The percentage of nickel is too small to be considered of economic importance.

These conclusions are based on the results of the open trenching of Pride of Emory No. 3 and on susceptibility tests of rock from this area.

BLACK KNIGHT

The magnetic anomalies here are similar to the Summit area. The increased intensities are the result of increased amounts of magnetite in the Diorite.

TEXAS

The Texas magnetic high is similar to the Pride of Emory No. 3, or the Bergman highs. It is not worth trenching or diamond drilling.

TED

The Ted highs lack sufficient strength in the magnetic responses to indicate anything more than minor mineralization from

an economic standpoint.

UNDERGROUND SURVEYING

The results of the preliminary underground magnetic surveying were interesting. A number of stations were observed in the 512 X-Cut, 1900 X-Cut, and the main tunnel where marked anomalies found.

Susceptibility tests of samples of rock from the respective stations resulted in the elimination of all of the anomalies but one in the 512 X-Cut. Here, there are good indications of an ore body adjacent to station 625 feet from the main tunnel. Probably the mineralization is above, but it could be in any direction from the station.

The 1900 X-Cut has two areas where indications were found of the presence of nearby ore bodies.

An indication was observed at approximately 1100 feet in the main tunnel, but this was subsequently eliminated by by susceptibility tests.

The survey in the main tunnel was of the nature of a reconnaissance. Several indications of nearby mineralization were observed which were not eliminated by susceptibility tests. One of these was in the Brunswick area, where an ore body was discovered by diamond drilling in the opposite direction to the one interpreted from the observed intensities.

STRUCTUREL CONTROL

The trend of the pyroxenite mass, as a whole, is N 80 W with a dip of 75 degrees N 10 E.

A very definite structural feature was observed in the Brunswick-Pride of Emory area. The trend is Northeasterly with a northerly dip. It crosses the Brunswick No. 1 and No. 2 ore bodies and continues to the Pride of Emory No. 1 and on towards the Pride of Emory No. 3. About half way up the mountain towards this later Magnetic anomaly, it apparently loses its strength.

This structural feature may be associated with fracturing, or with a zone of weakness. It has definite magnetic properties which are detectable, so that it must have played a significant role in the control of the deposition of the ferro magnetic mineralization.

The dip of the Pride of Emory has always been clearly indicated as northerly. The Brunswick ore bodies have a northerly dip, as shown by the exploratory work thus far. The fact that the Brunswicks dip to the north and are associated with the structural feature which has a northerly dip, rather substantiates the northerly dip of the Pride of Emory, which is intimately associated with this same structural feature.

A similar feature was observed in the Molly area. Here the showings are associated with a northerly trending magnetic zone, with an easterly dip. The possibilities for ore bodies in the Molly area are along this zone at a depth of 100 to 300 feet.

A somewhat similar magnetic zone was observed striking northwesterly in the Nickel Star area. It is indicated as trending from the Nickel Star A to the Nickel Star B. and C. magnetic highs.

The dip is northerly at a steep angle. This structural feature is one reason why there are good possibilities for the discovery of unknown magnetic anomalies below the known Nickel Star showings.

SUSCEPTIBILITIES

It was discovered during the recent survey of July 24th to August 1st, 1935 that the observation of relative magnetic susceptibilities of all rocks in place, in any area of increased intensity, is of paramount importance in ascertaining the true economic importance of any anomaly.

The discovery of magnetic anomalies in the future will be immediately followed by susceptibility tests as well as magnetic separation analyses in the laboratory of the rocks causing the unusual intensities.

The susceptibilities of the nickle ores of the property vary over such wide ranges that it is impossible to establish any criteria whereby the different types of ferro magnetic mineralizations may be recognized.

(Signed) EUGENE E. BERGMAN

Seattle, Washington
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