

REPORT
ON
MAGNETIC AND ELECTROMAGNETIC SURVEY

## BEE 1-32 MINERAL CLAIMS

OMINECA M.D.

$$
55^{\circ} 10^{1} \mathrm{~N}-126^{\circ} 20^{1} \mathrm{~W}
$$

## OWNERS: F. Chow, T. Rolston,

 405-1112 West Pender, Vancouver 1, B. C.W. M. Sirola, P. Eng.

March, 1966

Department of
Mines and Petroleum Resources ASSESSMEIT REPORT

NO. 26 / MAP

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The Bee 1-32 Mineral Claims were staked by Fred Chow and Tom Rolston on the 28th of March, 1965. They were recorded. on April 7, 1965.

The claims are located in the Omineca M. D. on the west shore of Morrison Lake. The center of the claim group is four miles from the south end of the lake. The property is accessible most of the year by fixed wing aircraft from Smithers but during the winter of 2966 , unsafe ice conditions necessitated the use of rotary-wing aircraft.

The Kerr Addison Mines Limited began a preliminary study of the group in September 1965 at which time prospecting and stream silt sampling was done. During January and February of 1966, electromagnetic and magnetic work was done over the entire claim group. The following report is intended to cover assessment work for one year on the entire claim group.

Claim Number Tag Number Staking Date Recording Date Record Number License No.

Bee No. 1 | 526016 |  |
| ---: | ---: |
| 2 | 526017 |
| 3 | 526018 |
| 4 | 526019 |
| 5 | 526020 |
| 6 | 526021 |
| 7 | 526022 |
| 8 | 526023 |
| 9 | 526024 |
| 10 | 526025 |
| 11 | 526026 |
| 12 | 526027 |
| 13 | 526028 |
| 14 | 526029 |
| 15 | 526030 |
| 16 | 526031 |

Bee No. 1

| 17 | 526007 |
| :--- | :--- |
| 18 | 526008 |
| 19 | 526009 |
| 20 | 526010 |
| 21 | 526011 |
| 22 | 526012 |
| 23 | 526013 |
| 24 | 526014 |
| 25 | 526015 |
| 26 | 526079 |
| 27 | 526080 |
| 28 | 526081 |
| 29 | 574101 |
| 30 | 574102 |
| 31 | 574103 |
| 32 | 574104 |

DOMINION OF CANADA:
Province of British Columbia.
-
To WIT:
In the fatter of
Magnetic and
Electromagnetic Survey of:

Bee 1-32 M.C.'s
Omineca M.D.

1. William M. Sirola
of 405 - 1112 West Fender, Vancouver 1, B. C.
in the Province of British Columbia, do solemnly declare that
the following is a true and accurate statement of costs involved in the

## COST STATEMENT




SUMMARY OF TOTAL COSTS FOR 32 CLAIM GROUP


And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."


From preliminary investigation it is known that the claims are underlain by argillite, graywackes, limestones and basalts intruded by diorite and quartz diorite. All of the rock units appear to have a general northwesterly trend. There is no known mineralization on the property.

## SILT SAMPLING

Stream silts were collected wherever possible on the property. These were then analysed by the Rubeanic technique and later by the hot $\mathrm{H}^{2} \mathrm{SO}^{4}$ method for both copper and zink. One sample, number 19, was distinctively anomalous with a copper content of 260 ppm and a zinc content of 300 ppm and adjacent sample number 20 indicated 145 ppm copper and 210 ppm zinc.

## LINE CUTTING

A northwesterly trending base line 11,700 feet long was cut and profile lines were established with a Brunton compass at 800 foot centers to cover the full width of the claim group. These profile lines were flagged at 100-foot intervals. A total of 25 miles of lines was established in this manner. As work progressed, it became necessary to establish detail lines 1,000 feet long on 200-foot centers along most of the base line.

## MAGNETIC SURVEY

A 20 -mile grid on the property was covered by the magnetic survey.

A hand-held Sharpe Magcrometer, Model ES-180, with a sensitivity of 35 gammas per scale division was used for the entire survey. Approximately 20 miles of traversing was completed on lines 400 feet apart. Readings were taken at 100-foot intervals. The operator holds the instrument in a vertical position in his left hand, faces west, and nulls the magnetic needle by turning a vernier screw at the base of the instrument. The readings obtained are variations in the intensity of the total magnetic field. Diumal control was exercised by periodic checks at base stations located on the base lines.

By comparing the magnetic results with the outcrop data, it is apparent that the basalts have the highest magnetite content. However, local magnetic highs occur within the sedimentary rock units east of the base line. Examples of this phenomenon are on line $8+00 \mathrm{~N} /$

MAGNETIC SURVEY CONTINUED:-
$8+00 \mathrm{E}$ and on line $44+00 \mathrm{~N}, 6+00$ east. At these locations, the readings are 350-400 gammas above background. This suggests weak pyrrhotite development in limestone. A similar development of local highs occurs on line $16+00 \mathrm{~S}$ just east of the base line.

## BIECTROMAGNETIC SURVEY

This procedure covered the same 20 miles of line mentioned under Magnetic Survey.

In carrying out the survey, the two operators traversed the same line, the lines having been cut perpendicular to the average strike of the rocks. Both operators used similar units and kept a separation distance of 200 feet. At each station, the chief operator first transmitted until the helper operator had oriented his coil and read a dip angle, and then their roles were reversed and the chief operator read a dip angle. The two dip angles read were recorded, and the resultant obtained by adding the two readings was plotted on the station position of the mid-point between the two men.

Two large electrically conductive zones were discovered by the survey. The first of these extends from line $48+00$ northeast. This conductor has a maximum width of 800 feet at line $32+00 \mathrm{~N}$ and is very strong (greater than $30^{\circ}$ ).

The second conductor extends from line $8+00 \mathrm{~S}-4+00 \mathrm{E}$ to line $24+00 \mathrm{~S}$ at the base line. Here again, the dip angles are very/
strong, (greater than $30^{\circ}$ ).
The two conductors appear to be separated by an intrusive mass approximately 800 feet wide occuring between line $0+00$ and line $8+00$ S. This belt is separated by the magnetic picture for that area.

The E.M. conductors correlate with a northwesterly trending belt of limestone and argillite which has been intruded by quartz diorite. The high conductivity probably results from carbonaceous matter inter-bedded with the limestone. This carbonaceous matter may also carry pyrite and judging by the magnetics, some pyrrhotite.

## CONCLUSIONS

Two strong electrical conductors were located in potentially favourable geologic environment. The silt sampling done thus far does not provide sufficient detail to fully assess the base metal potential of the property; however, the combination of geological, geophysical and geochemical evidence is such as to justify additional work with a view to outlining drilling targets.

## SCHEDULE OF ACCOMPANYING MAPS



Scale 1" = 1 mile
22. MAGNETIC MAP

Scale 1" = 400 feet
33. ELECTROMAGNETIC MAP

Scale 1" $=400$ feet

Mr. Rolston, is by training, an electronics technician, but has been in the employ of Kerr Addison during the past two years as a combined electronics technician and geophysical operator. During this time, he has operated aeromagnetic equipment as well as ground electromagnetic equipment and various types of magnetometers.





