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Geophysical Report: "Aeromagnetic Survey
of Magnetron Claims".
Niilo, Rega & Jackal claims groups.
Seven Sisters Mountains, Omineca Mining
Division, B.C., Canada.
54°57' N Latitude by 128°17' W Longitude.
by: Charles A. Ager, geophysicist.
For: Magnetron Mining Ltd. (n.p.l.)
August 25, 1971 - February 2, 1972

3541

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AEROMAGNETIC SURVEY OF MAGNETRON CLAIMS
(Niilo, Rega and Jackal claims groups)

SUMMARY

A reconnaissance aeromagnetic survey over the Magnetron Mining Ltd (n.p.l.) claims, Seven Sisters Mountains, B.C. has revealed three significant anomalies. Two of these anomalies are magnetic highs, located down dip from extensive outcrops of slightly magnetic lead-zinc mineralization. The cause of the third anomaly, a magnetic low, is basically unknown. All these anomalies occur at the intersections of sets of magnetic lineations which, on the basis of field evidence, have been interpretated to be fault of fracture zone intersections. These anomalies together with their related mineral outcrops are considered prime targets for ore bodies and warrant further detailed investigation.

February 2, 1972

Charles A. Ager
Geophysicist

LOCATION & DATE OF SURVEY

Location: Magnetron Mining Ltd. (n.p.l.) mineral claims;
Niilo, Jackal and Rega Claims Groups,
Seven Sisters Mountains, Omineca Mining Division,
British Columbia, Canada.
54°57' N Latitude by 128°17' W Longitude.
NTS map sheets 103 I/16e,w.

Date: August 25,1971 - February 2, 1972

SURVEY SPECIFICATIONS

Total field measurements were made using a Scintrix Map 2 proton precession magnetometer with a reading accuracy of ± 1.0 gammas. The sensing unit was towed at 300 foot terrain clearance, 50 feet below a Bell 206A helicopter. Measurements were taken along east-west flight lines spaced 1/8 mile apart. Terrain clearance control was monitored using a radiometric altimeter. Azimuthal control was maintained using a photomozaic enlarged to 1"=¼ mile. Flight track was recorded on 16mm film, thereby allowing good recovery of survey line positions.

Instrument operator and navigator was Carl Mohagen of Seigel Associates, and pilot was Al Eustis of Okanagan Helicopters.

Diurnal variations were monitored and the survey lines were tied to each other by three north-south tie lines. All residual field values are relative to an arbitrary base of 57,000 gammas.

INTERPRETATION

The residual field values for the survey area are plotted in Figure 1. Contour interval is 20 gammas. Close scrutiny of the flight record revealed a negligible correlation of magnetic field variations with terrain clearance fluctuations. (This was as expected since the survey is over sedimentary rocks). The anomalies can therefore be considered to be caused by susceptibility contrasts within the local geological units.

Qualitative interpretation of the magnetic map reveals the presence of parallel sets of magnetic lineations. Ground reconnaissance over the claims area shows that at least two of these lineaments are caused by faults. The others are covered by overburden, but because of their en echelon nature, they are probably fault related as well.

As shown in Figure 1, these faults intersect at three major magnetic anomalies. They are referred to as the J-R, Niilo,and Flint Anomalies, and are interpretated as follows:

(1) The J-R Anomaly

The anomaly is centered around the Niilo-Rega Lake area. It is located down dip from outcrops of sphalerite-galena mineralization of economic grade. Ground examination shows no change in surface rock type. Magnetic pyrrhotite is known to occur in association with the ore minerals. The anomaly is located at the intersection of what appears to be faults or fracture zones. The ore is known to be structurally controlled.

All the above factors combine to point to this target as being of prime importance. The chances that the anomaly is caused by a buried ore zone are extremely good. If this is true, then its areal extent is large enough to constitute a sizable deposit.

(2) The Niilo Anomaly

The anomaly is located to the south-west of the old Seven Sisters workings where outcrops of lead-zinc mineralization occur extensively. A major north-west striking fault has been observed to cut the center of the anomaly. Another north-east striking fault has been interpretated from the magnetics to intersect the same zone. Surface observations reveal no major change in the rock type. Again, magnetic pyrrhotite is known to occur in association with the mineralization. The dip of the beds on either side of the anomaly suggests that it is centered on the nose of an anticlinal structure.

As before, this high correlation of magnetic anomaly with ore occurrances and with mapped and inferred ore controls strongly suggests further investigation into the nature of the source. If the cause of the anomaly is an ore deposit, then its lateral extent is large enough to be of economic size.

(3) The Flint Anomaly

The magnetic anomaly is also located at the intersection

of two faults - one observed, the other inferred from the magnetics. No outcrops that occur in the vicinity of this anomaly can account for it. Because this feature is a magnetic low, it implies a negative susceptibility contrast for the source. In this sedimentary environment, the source can be attributed to a local thinning of the sedimentary sequence, or to a buried intrusion of igneous material deficient in magnetic minerals.

The proximity of the magnetic low to mineral zones and to fault intersections warrants a thorough investigation into the economic nature of its cause.

RECOMMENDATIONS & CONCLUSIONS

The aeromagnetic survey points to three areas of economic interest. The high correlation of the magnetic anomalies to known occurrances of lead-zinc mineralization of mining grades and widths is of great importance. This knowledge together with known and inferred structural ore controls in the area make these anomalies prime targets for further investigation.

It is recommended that reconnaissance gravity and geochemical surveys be conducted along selected traverses that include the anomalies and the mineral outcrops. These surveys will give valuable information concerning the economic nature, the depth, and the tonnages of these magnetic sources and their related outcrops.

The above recommendations should be carried out early in the exploration season. Proper interpretation will pinpoint initial drilling sites necessary for a proper apprasial of the economic worth of the Magnetron property.

February 2, 1972

Charles A. Ager

Geophysicist

CERTIFICATE OF QUALIFICATIONS

I, Charles A. Ager, do hereby certify that:

(1) I am a practising Geophysicist with offices and residence at 815B Cambie Road, Richmond, B.C., Canada.

(2) I have received (or expect to receive) the following university degrees:

(a) B.A. (Honours) in Mathematics/Physics from Sacramento State College, Sacramento, Calif., 1968.

(b) M.Sc. in Applied Geophysics from the University of British Columbia, Vancouver, B.C., 1972.

(3) I am a member of the B.C. Geophysical Society, and a member of the Society of Exploration Geophysicists.

(4) The following is a true summary of my employment record and experience:

1961-65 Electronics, United States Air Force, U.S.A., Far East, Middle East.

1965-68 Sacramento State College, Sacramento, Calif.

1968-71 Exploration-Geophysicist, Magnetron Mining Ltd, Vancouver, B.C.

1970-72 Geophysics Graduate Student and Teaching Assistant, Dept of Geophysics, University of B.C., Vancouver, B.C.

1971 Geophysicist, Mineralogical Branch, B.C. Dept of Mines and P.R., Victoria, B.C.

1971-72 Independent consulting geophysicist, Richmond, B.C.

(5) I am the author of several reports, maps, etc. on mining and exploration geophysics.

DATED at Richmond, British Columbia, this 2nd day of February 1972.

Charles A. Ager
Geophysicist

MAGNETRON mining ltd. (n.p.l.)

2020 - 777 Hornby Street Vancouver 1, B.C. Phone 688-9114

March 16, 1972

STATEMENT OF COSTS

Re: "Aeromagnetic Survey of Magnetron Claims"; (Niilo, Rega and Jackal claims groups)

ENGINEERING

For geophysical services rendered in performance of aeromagnetic survey:

Field Observations, Field Data Reduction, Analysis & Interpretation	1 geophysicist = 14 days @ $150.00/day	$ 2100.00
Report writing	1 assistant geop. = 20 days @ $50.00/day	1000.00

EXPENSES

For expenses incurred in the performance of the survey and the reduction to interpretation of the data:

Helicopter, Four wheel drive lease	$ 1967.90	
Instrumentation	499.06	
Aerial photos, mosaics, engineering supplies	218.35	
Digitising, computer prog., etc	930.53	
Camp costs	429.25	
Mobilization/demobilization	385.58	4430.67

TOTAL $ 7530.67

Declared before me at the City of Vancouver, in the Province of British Columbia, this 20 day of March 1971, A.D.

A.H.C. Haines

A Commissioner for taking Affidavits within British C
A Notary Public in and for the Province of British Co

MAGNETRON MINING LTD. (N.P.L.)

A.H.C. Haines

A.R. Haines, President and Managing director

Sub-Mining Recorder

128° 20'

128° 15'

55° 00'

54° 55'

C.N.R.

SKEENA RIVER

HIGHWAY

TERRACE (40 MI.)

KITSUMKALUM (2 MI.)

CEDAR CR.

FLINT CREEK

COPPER ROAD

SEVEN SISTERS PEAKS

8734'

NIILO, REGA & JACKAL CLAIMS GR. PROPERTY BOUNDARY (APPROX.)

NIILO ANOMALY

CAMP

J-R ANOMALY

FLINT ANOMALY

OLIVER CREEK

N_{MAG}

30°45'

N_T

CONTOUR INTERVAL = 20γ

PROBABLE FAULT

POSSIBLE FAULT

LOCATION MAP

SEVEN SISTERS MTNS

KITIMAT

VANCOUVER

AEROMAGNETIC SURVEY

LOCATION	Seven Sisters Mountains, B.C. (OMINECA MINING DIVISION) (NTS Sheets 103 I/16e,w)
SURVEY SPECS.	300' terrain clearance 57,000 γ base (scintrex mapII)
To accompany geophysical report dated Feb 2, 1972 by C. Ager, geophysicist, titled "Aeromagnetic Survey of Magnetron Claim"	DATE FEB 72
	SCALE 1" = 1/4 MI
Magnetron Mining Ltd.	Charles A Ager geophysicist

Department of Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 3541 MAP #1

FIGURE 1

3541 M-1

3541 M-1