Property Submission - Snow Peak Property 826057

OCT 20 1972

KERR ADDISON MINES LIMITED

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To G. M. Hogg *From* W. M. Sirola

Subject TOURNIGAN MINING EXPLORATIONS LIMITED
SNOW PEAK PROPERTY, DEASE LAKE AREA, B.C. 104J/8 *Date* OCTOBER 16, 1972

John Lund has summarized the various maps and reports which we have received on the above property.

The Snow Peak property is 16 miles west of Dease Lake and has been classified by Tournigan as a porphyry copper - molybdenite type of concurrence on which some mapping, geochemistry and geophysics have been conducted. The targets at the moment are two Cu-Mo soil anomalies which have not been tested by diamond drilling. These anomalies are large enough in extent and high enough in amplitude to justify a property examination, but it is not possible to conclude from the mapping which has been done whether or not there is significant alteration or rock preparation. Unfortunately, one attempt to run an I.P. survey failed for some reason and since the anomalous areas do not outcrop one would have to depend on adjacent exposure in order to evaluate the property.

I concur with John that if we liked the appearance of the exposed rocks we could then consider optioning the property with a view to doing an I.P. survey. In the meantime we will advise John Hembling, who provided the information, that we would like to see the property next summer.

Bill

WMS/ah W. M. Sirola

Copies sent Oct 20/72.

To: W. M. Sirola October 10, 1972

From: J. C. Lund

Subject: SNOW PEAK PROPERTY (130°20' , 58°30'N)
TOURNIGAN MINING EXPLORATIONS LIMITED

The Snow Peak property consists of 106 Mining Claims situated on Snow Peak about 16 air miles west of Dease Lake. The claims were staked and are owned by :-

Tournigan Mining Explorations Limited,
704 - 535 Thurlow Street,
Vancouver, B.C.

Access to the property is by helicopter from Dease Lake, B.C. Dease Lake can be reached by (a) a DC3 aircraft from Vancouver operated by Harrison Airlines, or (b) Trans Provincial Airlines flight from Terrace, or (c) via CPA to Watson Lake then by road on charter float plane to Dease Lake. Dease Lake is the projected northern terminus for the British Columbia Railroad. A gravel road now extends from Terrace to Dease Lake, a distance of about 300 miles.

Snow Peak is one of the highest mountains in the region - elevation of the property is about 5,200 ft; that of Dease Lake 2,500 ft. A camp is located near a small lake at 5,225 ft on the property.

HISTORY:

Tournigan Mining staked the original 28 Mack claims in 1969 and in 1972 added 78 new claims to enlarge the block.

Work done

1970 - Reconnaissance geological mapping.

1971 - Soil sampling over a restricted area on a grid with line spacing at 400 ft and sample interval at 200 ft. Work was done by D. Cochrane, Consultant.

1972 - Increase area of soil sampling, conducted a magnetometer survey and completed detailed geological mapping. Mapping was done by N. H. Mistry, geologist for Tournigan Mining; the other work was done by D. Cochrane.

GEOLOGY:

Very briefly the geology can be described as an assemblage of metasedimentary rocks of Jurassic age that have been intruded by a Cretaceous granodiorite stack 2 miles by 3 miles in size. Peripheral to the granodiorite but confined to the westerly margin are areas of feldspar porphyry dykes. John Hembling states that rocks of quartz morzonite in composition occur within the intrusive area. The isomagnetic maps show a district north easterly trending eliptical

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magnetic low area that could be the magnetic expression of a quartz monzonite or other more acidic phase of the granodiorite intrusion. Mapping by Mistry does not show that this does occur, however, there is a lack of outcrop over much of the area and Mr. Hembling is not satisfied that mapping was well done. Much of mapping was done using float.

Alteration is described as "mild" K feldspar with pyritzation and silicification.

Mineralization consists of MoS_2 and chalcopyrite with pyrite on fractures and in quartz veins. The extent of fracturing and quartz veining was not discussed in reports and Mr. Hembling was not able to give an accurate estimate of fractures per foot in outcrops with mineral that they had examined.

GEOCHEMISTRY:

There are two significant coincident Cu-Mo soil anomalies. These are referred to as anomaly # 1 which occurs parallel to and at the base of a north easterly trending bluff, and anomaly # 2 which is situated 2,500 ft south east of anomaly # 1. Values of 300 and greater are taken as anomalous for Copper and 170 for Mo. Cochrane considers values 100 - 200 ppm Cu as weakly anomalous, greater than 300 ppm as strongly anomalous. Arithmetic mean of all values is 77 ppm, therefore, background would be less than 77 ppm Cu. For molybdenum, Cochrane shows the arithmetic mean as 45 ppm Mo. and 66 - 170 weakly anomalous with greater than 170 strongly anomalous.

Copper Anomaly # 1:

NE trending; 400' x 2,500' in size, located at base of a bluff in a cirque. Cochrane states that overburden could be deep hence north western extent of anomaly could be cut off by deep overburden.

Copper Anomaly # 2:

This anomaly has 2 centres of high values and although connected by the 300 ppm contours will be described separately. The # 2 north is 900' x 1,700' in size and trends north westerly. A test pit dug on the north west end of the anomaly to obtain soils from different soil horizons showed an increase in Cu value with depth. The pit was within the 300 contour - the value obtained at 28" was 600 ppm Cu.

The # 2 south is 600' x 900' in size, maximum Cu value obtained is 1550 ppm Cu. No outcrops occur on either anomaly.

Mo Anomaly # 1:

Size is 1,400' x 400' elongate in a north easterly direction and coincident with the Cu anomaly. Maximum value obtained is over 400 ppm Mo.

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Mo Anomaly # 2. The highs are more irregular than with Cu values. There are 3 separate features, two of which coincide with the Cu anomaly, the third lies between two Cu anomalies. The largest coincides with Cu anomaly # 2 south. It is 1,100' x 1,000' in size with a maximum value of 940 ppm Mo.

There are no outcrops within the anomalous areas which could be used to evaluate the anomalies. Attempts were made by D. Cochrane to run an I.P. survey but because of excessive noise due to sun spot activity, the survey was abandoned. The anomalies remain untested.

CONCLUSIONS AND RECOMMENDATIONS:

1. If the magnetic low area does reflect a rock type other than the surrounding granodiorite then the presence of a 2 phase intrusion with accompanying quartz feldspar porphyry dykes intruding the Jurassic rocks provides a favourable environment for a copper- moly mineral deposit.

2. Both the Cu and Mo soil anomalous areas have sufficiently high values and are of a size to be of interest and need to be tested.

3. The geology as mapped may be unreliable. In addition, much of the mapping is based on rock debris which is either float or mapped as"possible outcrop". Variations in rock types and possible alteration should be checked to determine if a two phase intrusion does exist.

4. Chalcopyrite and Molybdenite is present in quartz veins and fractures along with pyrite in float and outcrop. There are no definite outcrops within Anomaly # 2, consequently the cause of the high Cu and Mo values in soil is unexplained.

5. The property lies within 16 miles of the projected terminus of the B.C. Railway at Dease Lake. Cost of transport of concentrate to Vancouver, based on $0.64/hwt/1,000 miles quoted by the B.C. Railroad for rates from Fort Nelson to Vancouver, could be in the order of 1.28 cents per ton mile. The railroad is expected to be completed to Dease by 1975.

6. Topography is amenable to open pit mining methods - average slope at Anomaly # 2 is about 10°.

7. The showings are above 5,000 ft hence show can be expected by late September and remain until late May. An examination could not be made until June, 1973.

I recommend we arrange an examination of the property in the spring. If we are satisfied after the examination that the prospect warrants further work an option agreement based on a work commitment should be presented to Tournigan Mining Explorations Ltd. Recommended work would initially include about 20 line miles

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of I.P. to check out the geochem anomalies and more detailed geological mapping. Further work would depend on results of the I.P. survey. Cost of the I.P. survey using a contractor would be about $400/line mile ($8,400 total) and would include transportation camp costs, and final report on results. Figures quoted are from Peter Fomanoff of Scintrex.

JCL/ah

J. C. Lund