Energy, Mines and Resources Canada
Science and Technology

Énergie, Mines et Ressources Canada
Science et Technologie

004868

Your file Votre référence

Our file Notre référence

1980 September 10

Mr. D. Tenney
Chief Geologist
Whitehorse Copper Mines Limited
P.O. Box 4280
WHITEHORSE, Yukon Territory
Y1A 3T3

Dear Dave:

I talked to Andy Hureau and Gregg Morrison on the phone last week concerning the results of some rhenium analyses on molybdenite from the War Eagle deposit. The complete results of the analyses are as follows:

Sample	Mo(%)	Re(ppm)	Cu(%)	Au(ppm)	As(ppm)
SYA77-101	55.6	655	0.83	0.5	8
SYA77-100	35.7	243	10.0	4.0	66
SYA77-100A	43.8	330	8.05	1.0	20
SYA77-100B	4.4	124	20.0	0.3	4

Sample SYA77-101 was collected from the dump and consisted mainly of fine-grained molybdenite along fractures in diopside-rich skarn. Sample SYA77-100 was collected from the decline, near the bottom, and contained coarse grained molybdenite associated with chalcopyrite and bornite in a quartz vein in diopside-rich skarn. Samples SYA77-100A and SYA77-100B represent different size fractions from sample SYA77-100. The Mo analyses reflect the purity of the MoS_2; in some cases, it was not possible to get a good concentrate. The samples were analyzed by neutron activation.

The analyses indicate that Re content in molybdenite from the War Eagle deposit is relatively high and is in the range normally encountered in porphyry copper-molybdenum deposits. (The enclosed paper by Giles and Schilling provides some comparative data.) In the case of porphyry deposits, the high Re in molybdenite usually coincides with a low molybdenite content relative to copper. In the case of porphyry molybdenum deposits, where molybdenum content is high relative to copper, the Re content of molybdenite is low.

...

Geological Survey of Canada
601 Booth Street
Ottawa Canada
K1A 0E8

Commission géologique du Canada
601, rue Booth
Ottawa Canada
K1A 0E8

This suggests that the overall Re content in both types of deposit is similar but is more concentrated in the molybdenite in molybdenite-poor deposits. In the case of the Whitehorse Copper Belt, a similar relationship may be true; the overall Re content may not be unusually high but has simply been concentrated in the available molybdenite. It will be interesting to compare the War Eagle results with analyses from other deposits in the Copper Belt. Andy and Gregg have supplied samples from Cowley Park and I will pass on the results of the analyses when they are available. Do you know of any appreciable Mo in any of the other deposits in the Belt?

The enclosed article by Sutulov provides some general information on Re.

Yours truly,

Dave

W.D. Sinclair
Mineral Deposits Geology Section

WDS/mmb
Enclosures (2)

Dave:
Sorry I didn't get a chance to visit with you this summer but as usual I didn't plan enough time in Whitehorse. Best regards,
Dave