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Mr. P. O. Hachey
Amoco Minerals Company
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Dear Os:

Re: FALCONBRIDGE COPPER DISCOVERY; SUSTUT LAKE AREA, BRITISH COLUMBIA

Further to your telephone call yesterday, I have enclosed what available information we have on Falconbridge's copper discovery, in the Sustut Lake area of North Central British Columbia, as well as some other bits of information that I acquired verbally from Falconbridge geologists familiar with the Sustut occurrence.

About two months ago, in February, we were aware of claim staking in the Sustut area and I had Sonny Putter check the claim status in that area while he was in Smithers at that time. I also 'phoned an acquaintance of mine in Falconbridge and his remarks then were that they had found copper showings in the Takla volcanics and had been carrying on investigations for about the last ten years but located this main one in 1971. He said then that the mineralization was lensy and irregular but of good grade (about 1%). He thought that the tonnage would probably be limited and not of the order generally favoured by large companies. He said that the mineralization encountered was similar to that at another of their prospects farther to the south (the Drone Group) and which was described in the 1971 G. E. M. publication of the B. C. Department of Mines as "Disseminated chalcocite, bornite, and chalcopyrite occur in an andesitic tuff horizon."

I mentioned this to Ed Wozniak over the telephone at that time and we have been aware of the situation although very little information other than the above has been available.

I discussed the situation with the same Falconbridge acquaintance after talking to you on the telephone yesterday and basically his original

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thoughts haven't changed appreciably. He feels that the recent news release in Toronto by Falconbridge, in this regard, is premature and possibly somewhat overstated. He believes that it will be a mine one day, but probably a relatively small one (20 to 30 million tons was intimated). It has good grade, however, (1% ±) and will be a good money maker. He feels they will require another year or two of drilling before they will know what they have.

The following are some of his general comments regarding the occurrence:

- Very little surface expression such as staining, etc. It was found by prospecting and detailed mapping in 1971 and not by geochemistry. Mainly by careful observation from a very close in, slow flying helicopter to detect very subtle staining.

- They now hold a total of about 1200 claims in the area.

- The showings are fairly high up on a mountain and the mineralized zone is near surface and dip slope (19° average). Much of the exposures were probably covered by ice until about 50 years ago so that the deposit has not been subjected to any significant weathering. Much of the best part of the deposit, he believes, has been eroded away.

- The drilling is by vertical holes at 600 foot centres. Some of them failed to intersect mineralization so that much fill-in drilling will be required to assess the deposit. The plan is apparently roughly similar to a bent horseshoe in shape and is about 4 miles around the perimeter or about 1 mile in a straight line.

A summary of some information I have just now been able to acquired regarding some of the drilling in the main zone, is as follows:-

- Of 26 holes drilled (possibly there have been more), 6 holes did not intercept mineralization. The longest ore mineral intercept was 164' (1.47% Cu). The shortest ore mineral intercept was 5' (0.65% Cu). The highest grade intercept was 2.47% Cu (50'). The lowest grade intercept was 0.36% Cu (40'). The average grade of this mineralization is 1.00%.

The mineralization known to date apparently occurs in several large lenses within Takla pyroclastics. It varies in width from about 20' to 140'. It is mainly chalcopyrite with bornite. Some chalcocite and native copper occur in cross fractures. The native copper is not considered to be appreciable and, therefore, probably not too important. The chalcocite and native copper are not necessarily considered to be secondary. The mineralization grades in the order of 1%; it is very fine grained and difficult to mill.

Bench tests to date indicate an expected 40% copper concentrate with a small (?) amount of silver.

Extremely strong and extensive epidote is associated and also some specular hematite. Metamorphism is low grade.

Mineralization is considered to be a replacement of pyroclastics by chalcopyrite and bornite with chalcocite and native copper on cross fractures. There is probably considerable material containing much lower grade mineralization in the vicinity.

The mineralized area is probably bounded by large faults but not itself faulted appreciably internally.

I will look forward to discussing this further with you when you visit next week and we may have further information by then.

Best regards.

Yours very truly,

J.M. Anderson
Regional Geologist

Enc.
JMA/wy

cc E.R.Wozniak