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Feb. 26, 1990

Mr. Barry Way
Newhawk Gold Mines Ltd.
suite 860-625 Howe street
Vancouver, B.C.
V6C 2T6

Dear Barry

It was a pleasure to meet you and your staff during the Roundup and to see the excellent progress made on understanding the ore shoots within the west zone. I have completed my studies on the samples that you gave me after the poster session and the small black mineral from the R-8 zone.

The black mineral is tetrahedrite with 16.3 wt.% Ag (see Table 1 for complete analysis). The mineralogy of the specimens from the R-8 zone taken after the poster session consists of electrum (fineness 555), polybasite as the major silver mineral, minor Ag-tetrahedrite, sphalerite, pyrite and traces of chalcopyrite and galena. Most of the electrum is fairly coarse, but inclusions of electrum were observed in pyrite as well as some polybasite and tetrahedrite inclusions.

I had the opportunity to meet Gary Hawthorn at the Roundup and to discuss the identification of the mineral "jalpaite" that he reported during some testing on your ore. The mineral was tentatively identified using a EDX on a SEM. I am convinced that the mineral is polybasite, since the antimony peak is difficult to see in the presence of major silver and I understand that polybasite, which is a major silver mineral in the west zone was not observed in the metallurgical testing.

I trust this data will assist in your future work and I look forward to receiving other representative samples from the R-8 zone to determine the reason for the change in Ag/Au ratios with depth.

Yours Sincerely,

Donald C. Harris
Geological Survey of Canada
601 Booth Street, Ottawa, Ontario
K1A 0E8

cc. B. Ballantyne
R. Kirkham

Table 1
Electron microprobe analysis of R-8 minerals

Tetrahedrite

Black Mineral	Hand Specimens
Cu 26.7	28.6
Ag 16.3	14.6
Fe 1.5	1.9
Zn 5.4	5.1
Sb 25.9	22.9
As 1.5	3.8
S 24.1	24.3
101.4	101.2

Polybasite

Cu 7.0
Ag 67.9
Sb 6.0
As 2.8
Se 2.9
S 14.2
100.8

Electrum

Av. 18 grains	
Au 55.4	
Ag 44.3	
99.7	

Sphalerite

Zn 66.1	65.6
Fe 0.6	1.5
Cd 0.4	0.4
S 33.4	33.4
100.5	100.9

Galena

Pb 87.0
Ag 0.0
Se 1.2
S 13.7
101.9