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M E M O R A N D U M

Date: June 2, 1991

To: Fred Hewett
North Air Mines Ltd.
860 - 625 Howe Street
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From: Mark Rebagliati,
Rebagliati Geological Consulting Ltd.

Re: Shear Claims, Aspen Grove, B.C.

On June 1st and 2nd I examined the Shear Claims to assess the favourability of the geological environment for the formation of alkaline intrusive related copper-gold porphyry deposits. The Big Kid Breccia, Big Sioux and Blue Jay mineral occurrences and many outcrops in their vicinity were examined.

My observations are summarized as follows:

1. The diorite intrusions extending from the Big Kid Breccia to the Blue Jay prospects are emplaced along a northerly trending structural lineament that has been reactivated after pluton emplacement.

2. There are multiple generations of intrusions which show textural and compositional diversity and cross-cutting relationships.

3. The Big Kid Breccia is a monzonitic intrusion breccia, with associated intrusive and hydrothermal breccias cutting a diorite stock. Pink hydrothermal potassium feldspar potassic alteration and propylitic alteration have developed within and adjacent to the monzonitic breccia. Samples collected by other geologists (Richardson and Matthew) indicate that anomalous gold concentrations are associated with the disseminated and fracture controlled pyrite and chalcopyrite mineralization.

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4. At the Big Sioux prospect there are three texturally distinct phases of diorite: a) microdiorite b) subporphyritic diorite with thin laths of plagioclase and c) a blocky feldspar porphyritic diorite. Pervasive propylitic alteration is accentuated by fracture controlled epidote. Disseminated and fracture controlled pyrite and chalcopyrite are unevenly distributed across the road-side exposure. Several generations of sulphide are apparent. The enclosing volcanic strata are also propylitically altered and carry iron and copper sulphides. Sampling by other geologists (Miller and Visagie) clearly demonstrate the auriferous character of the porphyry copper mineralization.

   From my observations of the mineralization in the roadside exposures it is my opinion that the high grade gold mineralization (in a porphyry context concentrations exceeding 0.05 oz/ton are "high grade") reported by Miller are confined to narrow (2 to 12 inch) late stage shear controlled veins and do not represent 3 to 5 ft. sample lengths.

   Numerous fragments of mineralized diorite rubble were seen in the old trenches to the north of the highway (Bald Hill Trenches) indicating that the diorite intrusion hosting the Big Sioux prospect is more extensive than indicated on the government geological map.

CONCLUSIONS:

1. The cluster of dioritic and monzonitic intrusions, with their associated potassic and propylitic alteration, is typical of the productive alkaline porphyry systems occuring throughout the Quesnel Belt.

2. Sampling has oonfirmed a strong gold association with the copper mineralization. In comparison to other alkaline porphyry copper deposits, gold concentrations at the Big Kid Breccia are high relative to the copper concentrations, i.e. sample #3413 0.103% Cu, 0.071 oz/ton gold (see Richardson map Trenches 82-1 and 80-4, 1980 and 1982 sampling). The relatively low copper concentrations at the porphyry copper prospects in the Aspen Grove area have discouraged earlier exploration crews, as a result, the indicated gold potential has never been adequately assessed. Gold deposits similar to the QR or the 66 Zone at Mt. Milligan occur in the same porphyry environment and may have very little copper.

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3. A combination of overburden coverage and the lack of recognition of the fine-grained intrusive units by earlier workers has resulted in the underestimation of the extent of the favourable geological environment.

4. The Shear claims have been under-explored and the presence of alkaline intrusive related porphyry copper-gold mineralization has been confirmed. An aggressive exploration program is warranted.

EXPLORATION TECHNIQUES

1. Detailed geological mapping. In the alkaline porphyry environment economic concentrations of gold and/or copper may occur within either the areas of potassic or propylitic alteration. These alteration assemblages must be carefully and systematically mapped. To be effective, samples from all outcrops must be stained for potassium feldspar. Not all secondary k-spar is pink, and as a result has often been overlooked. Alteration assemblages will overlap and intrusive and volcanic units may have different alteration mineralogies, i.e. K-spar vs. biotite or epidote vs. chlorite.

2. Sampling. All sulphide-bearing samples must be analyzed for gold and copper. Bornite and chalcocite are difficult to recognize in weathered samples and even low sulphide concentrations may be accompanied by high gold concentrations.

   The Big Sioux road cut exposure must be continuously chip sampled to determine representative gold and copper concentrations. Grab samples are inadequate.

3. IP Surveys. East of Highway #5 run IP on east-west lines spaced at 100 m intervals. Use a 50 m spread and read to n=4. Drill all indicated sulphide zones.

   West of the highway where little data is available and outcrops are rare, the lines should be 200 m apart. Anomalies can be detailed at the end of the preliminary survey.

4. Drilling. To adequately evaluate the economic potential of an auriferous porphyry it is essential to know if gold concentrations are uniformly distributed or confined to narrow high grade veins.

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Therefore, diamond drilling is strongly recommended over percussion drilling techniques. The general public is also more inclined to believe diamond drill assays. In porphyry systems vertical structures and ore controls are common and are best tested by cross sections of 45° angle holes.

5. Multi-element gold-copper soil surveys are normally employed but may not be necessary in this instance. Gold-copper mineralization has already been confirmed at the Big Kid and Big Sioux zones (which may be the northern and southern extensions of the same zone). West of Highway #5 deep overburden will make soil geochemistry ineffective.

Sincerely,

for

C.M. Rebagliati, P.Eng.

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