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THE MT. MILLIGAN AU-CU PORPHYRY DEPOSIT GEOLOGY AND ALTERATION By R.C. DeLong and C.I. Godwin, U.B.C. M.W. Harris and N.M. Caira, Continental Gold Corp C.M. Rebagliati; Rebagliati Geological Consulting Ltd.

ALTERATION AND MINERALIZATION

Alteration and mineralization assemblages at Mt. Milligan are either potassic or propylitic--emphasized by statistics. This is compatible with detailed geological observations, although detailed patterns are complex where alteration assemblages overlap. The two-fold division of alteration is an important economic guide because gold and copper are concentrated in the potassic assemblage.

Potassic alteration is concentrated around the contacts of the monzonite intrusions. Hydrothermal biotite is an indicator of intense areas of potassic alteration. Note the distribution of gold and copper with respect to biotite characteristic of the potassic assemblage.

Chalcopyrite has broad association with potassic alteration and gold. Secondary magnetite occurs throughout the potassic assemblage, and only locally in the propylitic assemblage. Most commonly it occurs as disseminations in biotite-rich areas.

Propylitic alteration is characterized by epidote with varying amounts of calcite, chlorite, albite and pyrite. The greatest volume of propylitic alteration is peripheral to the potassic alteration zone. Epidote is the most common propylitic mineral.

The three dimensional figures were prepared by collecting and examining samples from drill-hole intersections at the 1000metre elevation in the Mt. Milligan deposit. The area surveyed lies between the coordinates on the property grid of 8000 and 10000 meters north, and 11750 and 13750 meters east. The assays assigned to each 10-metre interval are averages of assay data. Assays of post-mineral dikes have been excluded. About 100 piercing points on the 1000 metre level were examined. All data were collated into a computer file for statistical examination and computer plotting to show the qualitative geometry of the distribution of the alteration minerals. ACKNOWLEDGEMENTS

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