

675167

Galore
Creek

104G/3

CIM Bull Mar 91 p 89

ng

el-

B-

m

as

ial

ts,

rd

es

g,

u

ng

as

rd

Paper No. 66 — 11:00

Late Triassic - Early Jurassic Alkaline Magmatism and Cu-Au Mineralization, Galore Creek Area, Northwestern British Columbia.

J.M. LOGAN and A. PANTELEYEV, B.C. Geological Survey Branch, Ministry of Energy, Mines and Petroleum Resources, Victoria, British Columbia

A Late Triassic - Early Jurassic alkalic volcanic centre at Galore Creek hosts ten synvolcanic copper-gold deposits, the largest, Stikine Copper Limited's central zone, contains 125 000 000 T at 1.06% Cu, 0.4 g/T Au and 7.7 g/T Ag. Alkaline magmas emplaced in a plutonic-subvolcanic island arc setting form a complex of orthoclase porphyry syenites, shoshonitic basalts and alkali-enriched pyroclastic rocks. These overlie a submarine edifice of plagioclase- and clinopyroxene-phyric calc-alkaline basaltic and andesite breccias. Mineralization overlaps north and northeast-trending synvolcanic structures which in part controlled emplacement of the early phases of syenite. Pervasive potash metasomatism by orthoclase and biotite is accompanied by various amounts of pyrometasomatic garnet, epidote, diopside, anhydrite and magnetite. Mineralization consists of chalcopyrite with lesser pyrite or bornite and minor chalcocite, sphalerite and galena.