

*Deformed*

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**Sulphurets Lower Jurassic Porphyry Cu-Au System,  
northwest British Columbia**

R.V. Kirkham<sup>1</sup>, S.B. Ballantyne<sup>1</sup>, D.C. Harris<sup>1</sup>,  
J.R. Henderson<sup>2</sup>, M.N. Henderson<sup>1</sup>, T.O. Wright<sup>3</sup>

Pyritic gossans in the Sulphurets region are part of a large, deformed and metamorphosed Lower Jurassic porphyry copper-gold system. The system was emplaced in deformed Upper Triassic Stuhini Group sedimentary rocks and the basal part of the Lower Jurassic Hazelton Group volcanic sequence and is associated with intrusions coeval with Hazelton Group volcanism.

The area is complexly deformed with pre-Hazelton Group north-trending upright folds affecting Stuhini Group rocks while southeast-vergent overturned folds and thrusts and steep north-south faults postdate all stratigraphic units. Deformation was accompanied by greenschist to subgreenschist facies metamorphism obscuring hydrothermal alteration and mineral distribution patterns.

High-grade gold- and silver-bearing vein systems and bulk-tonnage Cu-Au, Cu-Au(-Mo) and Au(-Mo) zones have been the main exploration targets. The bulk-tonnage zones are thought to be part of a large, complex porphyry system(s), whereas some precious metal veins are thought to be part of the porphyry system and others related to younger syntectonic processes. Lack of good stratigraphic control and a complex postmineral fault history make exploration difficult.

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<sup>1</sup> Mineral Resources Division, Geological Survey of Canada

<sup>2</sup> Continental Geoscience Division, Geological Survey of Canada

<sup>3</sup> U.S. National Science Foundation