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Stratigraphic and structural setting of the Sulphurets porphyry Cu-Au system, northwest British Columbia

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The Sulphurets porphyry Cu-Au system was emplaced in Upper Triassic Stuhini Group and basal Lower Jurassic Hazelton Group rocks. The Stuhini Group marine sedimentary and volcanic rocks were deformed into north-trending upright folds and uplifted and eroded prior to deposition of the fossiliferous Lower Jurassic sedimentary Jack Formation (new name) and overlying volcanic succession of the Hazelton Group. The Jack Formation has not been recognized yet in the vicinity of the mineral deposits at Sulphurets. A major unconformity to disconformity with considerable erosion has also been recognized under the felsic volcanic Mount Dilworth Formation at the top of the Hazelton Group. In some areas under the unconformity the Hazelton Group and Jack Formation are missing and the Mount Dilworth Formation sits directly on the Stuhini Group.

The Hazelton Group is overlain conformably or possibly slightly unconformably by marine clastic sedimentary rocks of the Bowser Lake Group. Pillow lavas, breccias, tuffaceous units and exhalative sulphides in the Salmon River Formation occur locally near the base of the Bowser Lake Group. Hazelton and Bowser Lake Group rocks exhibit large-scale overturned folds and thrusts.

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