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*Gold Deposits in the Iskut-Stikine, Northwestern British Columbia.*

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Porphyry Cu-Au, mesothermal shear vein and breccia systems, and a variety of epithermal systems are represented by eight major mineral deposits in the Iskut-Stikine. These include early-stage stratiform mineralization and late-stage epithermal mineralization at Eskay Creek. While many of the deposits exhibit variations on both local and regional scales, there are a number of similarities indicating a common genetic origin.

Galena lead isotopes indicate the ore-forming episode was a short-lived event or regional extent. Radiometric ages of alteration minerals and spatially and temporally related igneous rocks constrain the age of mineralization to between 175 and 204 Ma.

Mesozoic, calc-alkaline, island arc volcanics are the major, but not exclusive, host to mineralization. At the south end of the Iskut-Stikine three lithologies of the Lower Jurassic Hazelton Group are closely associated with major mineralizing events.

North-trending, regional structural breaks are spatially related to several of the mineral deposits. These are marked by the alignment of mineral occurrences and extensive zones of alteration; in some cases they are also the focus of significant post-mineral shear. Second-order structures are major mineral controls at the deposit scale.

Variations of alteration assemblages, sulphide mineralogy, and other empirical features commonly reflected differences in the depth of emplacement of the deposits. The Sulphurets district combines telescoped porphyry Au, Cu-Au and Cu-Mo mineralization, shear-hosted gold-silver veins and high-level advanced argillic alteration of probable epithermal origin.