

Geology and Mineral Deposits of the Taku-Tulsequah Region, NW B.C.

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Geological study of the Ericksen Ashby property in 1979 confirmed its volcanogenic origin, and suggested a link with other known deposits of this type in the region (Big Bull, Tulsequah Chief). A regional study was made in 1980. Further examination of properties is continuing in 1981. Numerous other exploration companies are active in the area.

Two broad divisions of layered rocks are separated by a major period of deformation. The older division to the west is part of the Stikine assemblage as reported by Monger, 1980 in studies mainly to the south. In the map area, these rocks are divided into an older, more highly metamorphosed unit to the west (Tulsequah gneiss), and a younger, less highly metamorphosed unit to the east (Mt. Eaton formation). These rocks are complexly folded, with abundant evidence for more than one period of major folding.

Upper Triassic and younger strata in the Taku embayment to the east (Stuhini group, King Salmon formation, Sinwa limestone, and Takwahoni facies of the Laberge group) are gently to moderately folded about axes trending 110-120°, and plunging gently northwest and southeast. The fold axes parallel major thrust faults further east (King Salmon and Nahlin faults); probably folding and thrusting are tectonically related over a moderately long time interval.

The Sloko Group of Late Cretaceous to Early Tertiary age were formed during a major period of block faulting, possibly in part related to late stages of the deformation of the rocks in the Taku Embayment, and in part related to intrusion of medium to high level plutons and stocks.

Plutonic rocks ranging in age from Early Triassic to Early Tertiary intrude the Stikine assemblage along the eastern margin of the Coast Plutonic Complex. Plutons of Upper Cretaceous to Early Tertiary age intrude the rocks in the Taku embayment.

A late period of faulting produced moderate right-lateral displacement along a set parallel to the Taku River.

Massive volcanogenic deposits occur in the Mt. Eaton formation, and are associated with felsic volcanic centers in several stratigraphic levels. The deposits range widely in detail, occurring in felsic volcanic rocks, chert, and limestone.

The Polaris-Taku Au deposit occurs in rocks of the Mt. Eaton formation, probably associated with major faults, the nose of a steeply plunging anticline, and possibly with a small diorite.

A belt of several small intrusions (Lester Jones Intrusions) cuts the rocks of the Taku embayment. Associated with these are broad zones of country rock alteration, dominated by pyrite and carbonate, with veins containing quartz, carbonate, and a wide variety of sulfides. The Red Cap deposit may occur in a felsic volcanic center in the Stuhini rocks which has been modified by hydrothermal solutions associated with the intrusions.

The Omni Mo deposit occurs just outside the mapped area in a Na-rich leucocratic quartz monzonite (alaskite) which intrudes schists and gneisses of the Stikine terrain.