

Gold Mineralization at the Tillicum Gold Property, Southeastern British Columbia

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At the Tillicum Gold Property, situated 30 km southeast of the town of Nakusp, in southeastern British Columbia, gold mineralization occurs in upper Paleozoic-age rocks of the Milford Group. On the property, the Milford Group is divisible into a series of basaltic andesite flows and agglomerates that are gradational into a series of andesitic tuff, tuffaceous siltstones and volcano-sedimentary wackestones, and occasional andesitic flows. Intrusive into the Milford Group are sills and dykes of diorite porphyry, that are possibly related to andesitic flows higher in the sequence. The Milford Group and diorite porphyry have been intruded and metamorphosed to lower greenschist facies by quartz-diorites of the Cretaceous-age Goat Canyon and Halifax Creek stocks. Subsequent to emplacement of the quartz-diorite stocks, lamprophyre dyke swarms intruded the Milford Group.

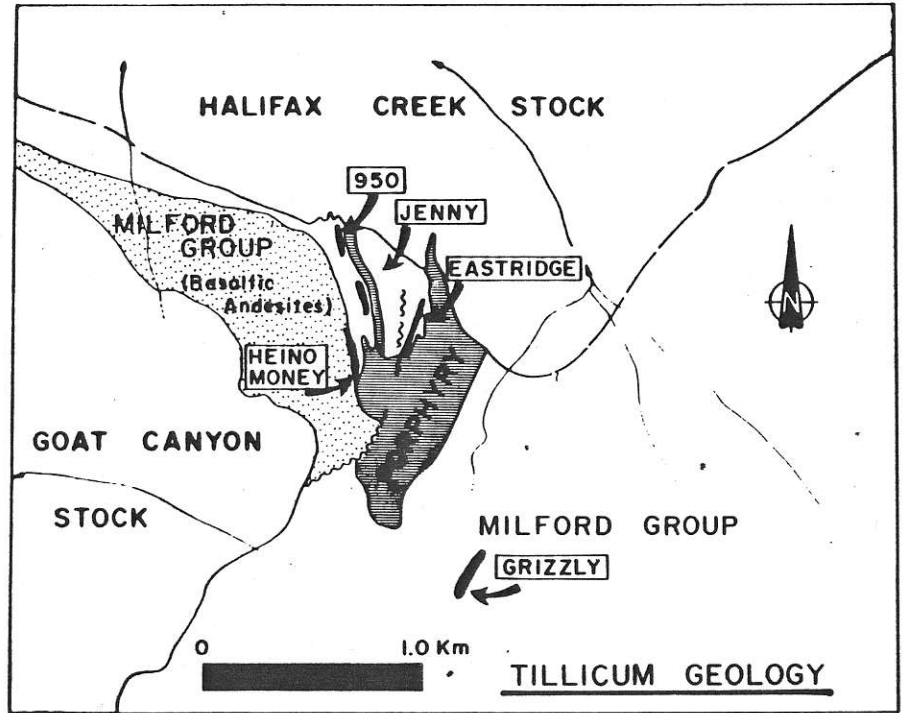
Gold occurs in calc-silicate-quartz skarns that have been developed in andesitic tuffs and tuffaceous sedimentary rocks. The skarns are spatially related to diorite-porphyry sills and dykes. Within the skarns, free gold forms fine to coarse disseminated grains and fracture fillings in and along the walls of quartz impregnations. Gold is often associated with minor amounts of pyrrhotite, pyrite, sphalerite and galena.

Several distinct auriferous skarn zones have been discovered of which the five most prominent are: Heino-Money, East Ridge, Jenny, 950 and Grizzly zones. To date, most of the exploration effort has been directed to the Heino-Money and East Ridge zones with the remaining zones receiving only preliminary evaluation. In addition to the known gold-showings, several prominent gold and silver soil anomalies remain to be tested.

In the Heino-Money zone, a thin andesitic tuff adjacent to the lower, basaltic andesite series has been selectively skarnified. Within the skarn, a 600 by 150 foot ore shoot with an average thickness of 6 feet has been outlined by trenching and drilling. Drill indicated reserves of the zone are 40,000 tons of 0.6 oz/T Au.

The East Ridge zone occurs at the contact between a diorite porphyry sill and volcano-sedimentary wackestone. Intrusion of the diorite has altered a 50 to 100 foot thick section of the adjacent clastic sedimentary rocks to skarn. Gold in the skarn is erratically distributed, characterized by short, higher-grade sections separated by lower-grade material, with an average gold content of the skarn in the order of 0.5 oz/T over 50 feet. The East Ridge zone has been traced by drilling over a 1650 foot strike length and remains open both along strike and to depth.

It is postulated that the introduction of gold and associated skarnification of the Milford rocks is related to the intrusion of the diorite porphyry sills and dykes. Subsequent remobilization and reconcentration of the gold to form coarse disseminations and fracture fillings occurred during intrusion of the lamprophyre dykes or during low-grade metamorphism by the Halifax and Goat Canyon stocks.



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