



MINFILE NTS 104M – SKAGWAY

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The Skagway map area, located in northwestern British Columbia, extends north to the Yukon border and west to the Alaska border. The map area contains 88 mineral occurrences, including 25 new occurrences recorded since 1988. The area straddles the contact between the Coast Crystalline Belt to the west and the Intermontane Belt to the east. The Intermontane Belt (Whitehorse Trough) is represented by Lower Jurassic Laberge Group sediments and younger volcanics of the Inklin overlap assemblage and rocks of the Upper Triassic Stuhini Group and Devonian to Permian Boundary Ranges Metamorphics of the Stikine Terrane. These link Mississippian and older Nisling Assemblage units (Nisling Terrane?), to the west, with Cache Creek Complex and Peninsula Mountain oceanic rocks of the Cache Creek Terrane.

All these units are intruded by Cretaceous to Tertiary granitic rocks of the Coast Plutonic Complex. The northwest trending Llewellyn and Nahlin faults cut through the map area. The Llewellyn Fault was the locus for a large hydrothermal system and the majority of the mineralization in the area is associated with this fault.

The area, discovered as a result of the Klondike gold rush, has been explored since at least 1899 when the Engineer mine and the Laverdiere skarn were discovered. Little activity took place from the mid-1920s to the late 1960s. Increasing base metal prices generated new exploration in the 1970s and discovery of the Mount Skukum gold deposit in the 1980s triggered intensive precious metal exploration.

Mineralization in the area, consists of sulphide-rich and sulphide-poor precious and base metal quartz and quartz-carbonate veins, gold-copper skarns, massive sulphide pods and gold associated with listwanite-altered ultramafic rocks.

Historic production came from the Engineer, Ben-My-Chree and Gridiron deposits. The **Engineer** (104M 014) deposit consists of sulphide-poor gold and gold-tellurium-silver bearing quartz veins hosted in Laberge Group greywacke. The **Ben-My-Chree** (104M 011) deposit produced minor amounts from a sulphide-rich gold-silver bearing quartz vein in Cretaceous diorite. The **Gridiron** (104M 001) deposit produced small amounts from a gold-silver vein hosted in gneiss of the Boundary Ranges Metamorphics.

The **Spokane** (104M 006) prospect consists of the Lawsan gold-silver vein hosted in schistose gneiss of the Boundary Ranges Metamorphics. Inferred ore reserves are calculated to be 77,216 tonnes grading 5.83 grams per tonne gold in the area above 1035 metres elevation between the Blacksmith and Incline adits.

The **Happy Sullivan** (104M 013) prospect is similar to the Engineer mine, however, arsenopyrite is locally up to 20 per cent and dendritic crystals of native gold have been found. The **Rupert** (104M 008) prospect is a gold-silver quartz vein in gneiss of the Boundary Ranges Metamorphics. The **Laverdiere** (104M 022) and newly discovered **Skarn** (104M 085) prospects are gold-copper skarns and the **TP-Main** (104M 048) prospect is a gold-copper-cobalt skarn. The Laverdiere skarn is hosted in limestone of the Stuhini Group, the Skarn is hosted in porphyritic volcanics of the Stuhini Group and the TP-Main occurs in marble of the Boundary Ranges Metamorphics. The **Crine** (104M 081) prospect is a gold-silver-stibnite vein hosted in schist of the Boundary Ranges Metamorphics. The **LQ** (104M 044) prospect is a gold-silver vein hosted in gneiss of the Boundary Ranges Metamorphics. The **UM** (104M 084) prospect is a gold-silver vein hosted in listwanite-altered peridotite. The new **Falcon** (104M 087) prospect is a silver-gold vein with a high base metal content hosted in schist of the Nisling Assemblage.

Potential exploration targets include: veins hosted in Laberge Group sediments associated with splays of the Llewellyn Fault or intrusions; late cross-cutting veins in Boundary Ranges Metamorphics; sheared and altered or quartz veined rocks within and near the Llewellyn Fault; brecciated contact zones between Cretaceous to Tertiary volcanics and Boundary Ranges Metamorphics and mafic and ultramafic rocks next to fault structures or capped by volcanics.