MINFILE
NTS 092HNW – YALE

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The Yale map area, centred 130 kilometres northeast of Vancouver, contains 78 documented mineral occurrences. The area encompasses the Coast and Intermontane belts, which are separated by the north-northwest trending Pasayten fault.

The oldest rocks occur in the Settler Mountain area and have been assigned to the Proterozoic and Paleozoic Yellow Aster Complex (Baird Diorite). These rocks are in fault contact with Pï¿½leozoic and Mesozoic aged metasedimentary and ultramafic rocks which underlie the Cogburn Creek area. East of the Coldwater River, amphibolite, foliated diorite and mylonite derived from members of the Late Triassic Nicola Group have been intruded, from the north, by Late Triassic and Early Jurassic Mount Lytton Complex rocks, and from the west, by Late Jurassic and Early Cretaceous Eagle Plutonic Complex granodiorite. Granite assigned to the latter complex is in contact with Cretaceous Pasayten Group sediments along the Pasayten fault. East of the Fraser River, Permian to Jurassic Hozameen Complex rocks are in contact with Lower and Middle Jurassic Ladner Group sediments along the Hozameen fault. Locally, this fault bounds ultramafic rocks of the Coquihalla serpentine belt, which forms a steeply dipping unit varying up to two kilometres wide. Intermediate pyroclastics and flows of the Jurassic and Cretaceous Brokenback Hill Formation have been mapped on the west side of Harrison Lake, while metamorphic rocks assigned to the Mesozoic Slollicum Schist crop out along much of the eastern shore. Intrusive rocks of the Early and Middle Cretaceous Spuzzum and Late Cretaceous Scuzzy plutons together underlie approximately one third of the map area. They are bound to the east by the Fraser fault system and intrude Mesozoic aged schists to the north and west. Granodiorite assigned to the Eocene Needle Peak Pluton intrudes both Pasayten and Ladner Group rocks east of the Fraser River. The youngest rocks have been assigned to the Upper Oligocene to Lower Miocene Coquihalla Formation and have been mapped near the summit of Coquihalla Mountain. The formation comprises intermediate and felsic pyroclastics and flows which unconformably overlie Eagle Plutonic Complex rocks.

Of primary interest in the area are numerous precious (ï¿½base) metal deposits spatially associated with the Coquihalla serpentine belt and Hozameen fault. The **Carolin** mine (092HNW007) produced 1,450 kilograms of gold and 110 kilograms of silver between 1981 and 1984 and currently has indicated reserves of 898,000 tonnes grading 4.3 grams per tonne gold. Several other past producers, including the **Aurum** (092HNW003), the **Pipestem** (092HNW011) and the **Ward** (092HNW015) mines, are also situated adjacent to this fault-bound belt of ultramafic rocks.

Near the headwaters of the Coldwater River, several base and precious metal occurrences, including the formerly producing **Keystone** mine (092HNW024), are associated with Early Tertiary quartz diorite intrusions emplaced within granodiorites of the Late Jurassic and Early Cretaceous Eagle Plutonic Complex.

Quartz-sulphide veins related to small, Miocene aged dioritic intrusions on the west side of Harrison Lake have also been actively explored. Measured geological reserves of 113,600 tonnes grading 6.2 grams per tonne gold and 2.16 grams per tonne silver have been outlined to date at the **Doctors Point** prospect (092HNW071).

Also, of interest is the **Gem** prospect (092HNW001) near the headwaters of Clear Creek. This molybdenum occurrence was developed in the 1960's and is estimated to contain nearly 16 million tonnes grading 0.125 per cent MoS2.

In addition to metallic minerals, talc has also been produced at several localities within the Yale map sheet. By 1923, approximately 91 tonnes of talc were reportedly extracted from workings on the Gisby occurrence (092HNW002). More recently, one million tonnes grading 60 per cent talc and 30 per cent magnesite were outlined at the **Pacific Talc** prospect (092HNW047) near the Nahatlatch River. Tests indicate that the talc may be suitable for use in paper manufacturing.