



## MINFILE NTS 092N – MOUNT WADDINGTON

*Original release date: May 1992, updated October 1999  
Researched and compiled by: C.J. Rees and J.M. Riddell*

**The Mount Waddington map area, located on the eastern edge of the Coast Mountains in the Coast tectonic belt in southwestern British Columbia, 280 kilometres northwest of Vancouver, contains 66 documented mineral occurrences.**

The southwestern two-thirds of the Mount Waddington map area is dominated by the rugged and glacier-covered Coast Mountains which are underlain by the Coast Plutonic Complex, a northwest-trending, heterogeneous complex of Jurassic to Tertiary metamorphic and plutonic rocks. At least two large intrusions are present in this belt in the map area. The Klinaklini pluton is predominantly quartz diorite, and includes older gneisses and smaller intrusions of various compositions. The Tiedemann pluton is probably early Tertiary and consists mainly of granodiorite and quartz diorite. The remainder of the belt comprises undefined metamorphic schists and gneisses, and intrusions ranging from granite to ultramafic, although quartz diorite is the most common composition.

Northeast of the main metamorphic-plutonic belt, the Coast Mountains grade into progressively less mountainous terrain underlain by volcanic and sedimentary rocks ranging in age from Late Triassic to Tertiary. Some of these rocks belong to the Stikinia and Cadwallader terranes, both representing island-arc tectonic environments; the remainder represent post-terranic accretion overlap assemblages, consisting of Jurassic, Cretaceous and Tertiary deposits. The term Coast Plutonic Complex encompasses numerous isolated intrusions within these terranes and overlap assemblages.

Two styles of faulting are important in the map area, both northeast of the main metamorphic-plutonic belt. First, an Early to Late Cretaceous phase of thrusting and folding in the Niut Range resulted in the interleaving of Upper Triassic and Cretaceous rocks, affiliated with Stikinia and the Gambier overlap assemblage, respectively. Second, a Late Cretaceous to Early Tertiary phase of northwest-striking, dextral strike-slip faulting is represented by the Yalakom fault, which is generally taken as the northeastern boundary of the Coast Belt, and the Tchaikazan fault. There are numerous other subsidiary faults and thrusts in the region.

Most of the 66 mineral occurrences covered in this compilation occur in a fairly narrow belt along the northeastern margin of the main metamorphic-plutonic complex, and southwest of the Yalakom fault. Most of these are relatively small, mesothermal quartz vein-hosted showings or prospects of precious and/or base metal mineralization. In general, mineralization and hydrothermal activity is hosted by, or can be related to, intrusions of the Coast Plutonic Complex.

To date, none of the documented prospects have been developed into producing mines, although this may partly reflect the logistical limitations of much of the area. However, some deposits have experienced underground development and bulk sampling, and there are several other occurrences which have sustained interest in this part of the Coast Mountains. For example, the **Mountain Boss** prospect (092N 010) at Perkins Peak has had a long history of exploration, and has yielded high values of gold and silver from quartz veins and silicified zones. Another area with a long history of work is the Niut Range, which hosts several significant gold-silver vein systems, such as at the **Blackhorn Mountain** (092N 019), **Homestake** (092N 035) and **Langara** (092N 036) occurrences. Further to the southeast, the **Morris** occurrence (092N 002) comprises gold-silver-antimony quartz vein mineralization; drill-indicated reserves have been provisionally estimated at 172,000 tonnes grading 8.3 grams per tonne gold. Two other areas containing gold +/- silver-bearing quartz veins, which have formed more recent exploration targets, are the area southeast of Bluff Lake (**Mac**, 092N 054), and the Mount Skinner area (**Skinner**, 092N 039).

Porphyry-type copper-molybdenum mineralization is represented by several occurrences. The **Hannah** (092N 028) and **Hoodoo North** (092N 029) occurrences are both in the interior of the Coast Plutonic Complex, although their mineralization is probably related to localized Miocene intrusive-extrusive activity in the Hoodoo Creek area. Porphyry-type mineralization is also present in the Klinaklini pluton southwest of Middle Lake in a complex of altered intrusive rocks hosting the **PW** (092N 042) occurrence.

Relatively uncommon deposit types in the Mount Waddington area include epithermal mineralization, which is represented primarily by the **Alexis** occurrence (092N 045), where there is a potentially extensive copper-mercury-silver alteration zone associated with the Tchaikazan fault zone. Skarn mineralization is restricted to the copper-molybdenum-silver-tungsten **Daisie** occurrence (092N 026). Volcanogenic massive sulphide mineralization is not represented except for the minor **Cindy** occurrence (092N 016).