

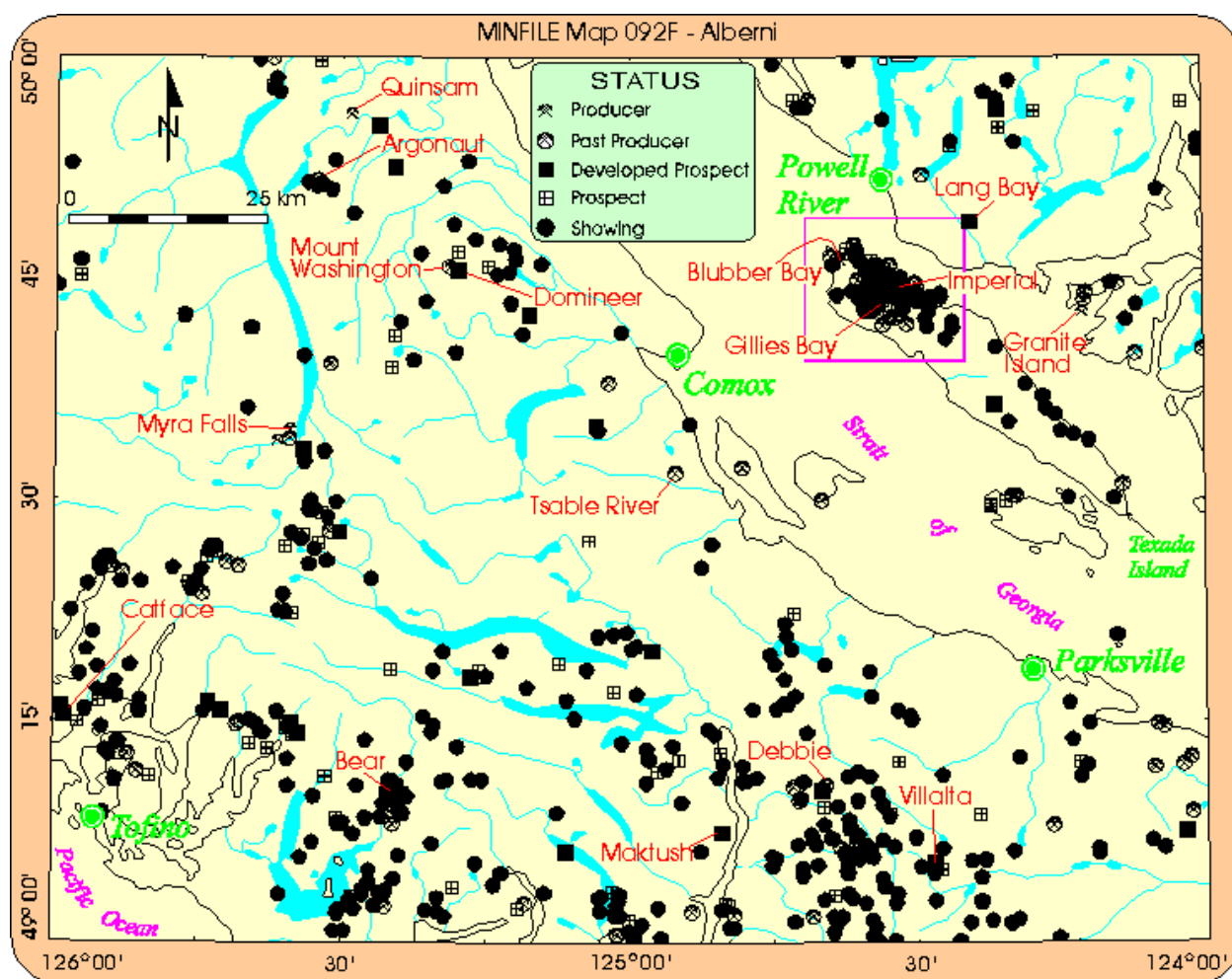


MINFILE NTS 092F - ALBERNI

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The Alberni map area straddles Georgia Strait, encompassing a portion of Vancouver Island, all of Texada Island and a section of the south coastal mainland. The mineral wealth of the area has been exploited since the late 1800's, resulting in the discovery and documentation of 566 occurrences. In 1986, a 4-year program of regional mapping was initiated under the Canada-British Columbia Mineral Development Agreement focusing on the Paleozoic Sicker Group. This work, by N. Massey of the Geological Survey Branch, has led to major stratigraphic revisions and associated nomenclature changes. In 1992, a province-wide mineral potential study was launched with Vancouver Island as the initial study area. Data resulting from this study are available on the Ministry web-site.



The Vancouver and Texada islands sections of the Alberni map area lie within the Insular belt and are underlain mainly by rocks of the Wrangellia terrane. The strata consists of several volcano-sedimentary cycles of the Upper Paleozoic Sicker and Buttle Lake groups, the Upper Triassic Vancouver Group and the Lower Jurassic Bonanza Group, overlapped by sediments of the Cretaceous Nanaimo Group. These sequences have been subsequently intruded by stocks of the Jurassic Island Plutonic Suite (formerly the Island Intrusions). Tertiary intrusions (previously called Catface Intrusions) also disrupt the strata and have recently been divided into the Mount Washington and Tofino intrusive suites. The former are Late Eocene to Early Oligocene in age and are

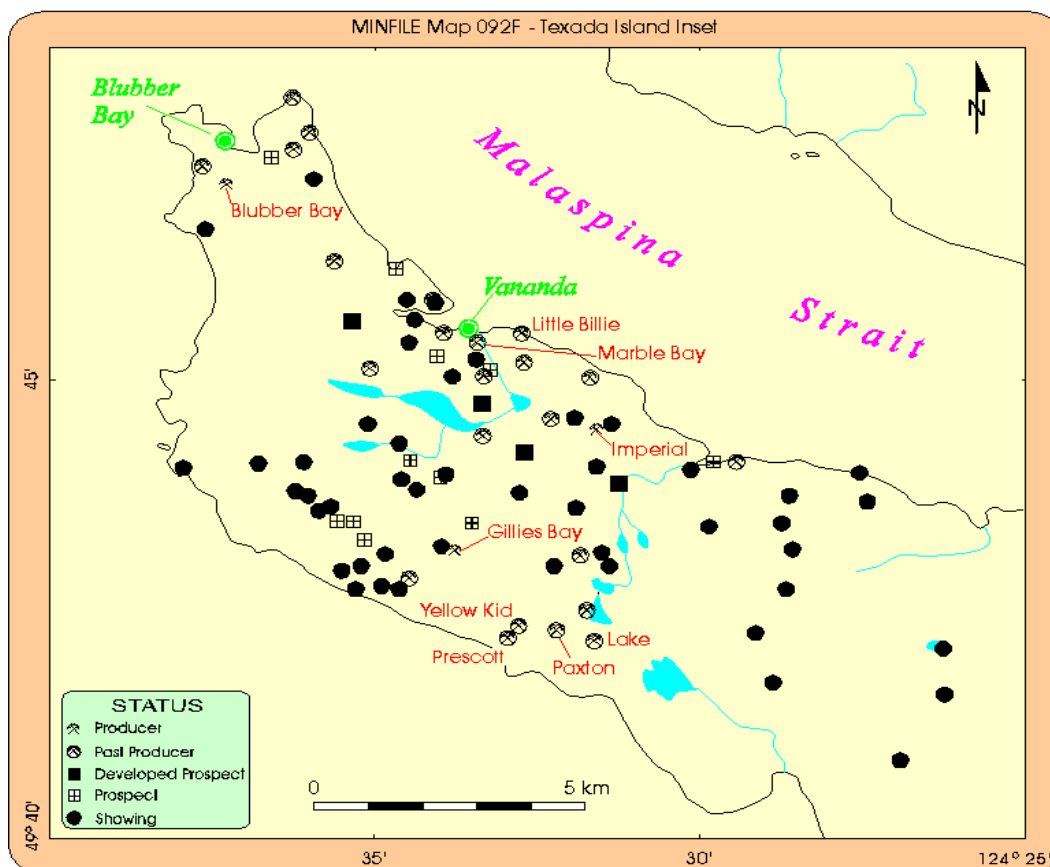
found mainly in the Cowichan uplift and Mount Washington areas; the latter are Early to Middle Eocene in age and are found in the Tofino-Kennedy Lake area.

The Paleozoic strata is an important exploration target and is exposed mainly within three uplifts: (1) Buttle Lake; (2) Cowichan; and (3) Nanoose. In the Buttle Lake uplift, Westmin Resources has a 4000 tonnes per day mill operating on its **Myra Falls** (092F 330) polymetallic volcanogenic massive sulphide deposits. Reserves (at the beginning of 1996) total more than 11 million tonnes grading 1.5 grams per tonne gold, 27.5 grams per tonne silver, 1.6 per cent copper, 0.3 per cent lead, and 6.1 per cent zinc.

The **Mount Washington Copper** (092F 117) past producer is a porphyry-copper deposit, with an epithermal overprint, containing gold and silver. The nearby **Domineer** (Lakeview) (092F 116) epithermal deposit contains 550,000 tonnes grading 6.75 grams per tonne gold and 32.23 grams per tonne silver. The **Catface** (092F 120) porphyry-copper deposit, located near the southwest corner of the map area, contains 181,400,000 tonnes of ore grading 0.45 per cent copper.

Coal has played an important role in the development of the region, with over 50 million tonnes having been mined from Nanaimo Group strata. The **Quinsam** coal mine (092F 319) has reserves of about 44 million tonnes of which 36 million tonnes are proven high-quality thermal coal. Production is expected to reach capacity of 125,000 tonnes per month by the first quarter of 1997. The Quinsam Coal Corporation has expanded the coal reserve of its **Tsable River** coal property (092F 333) to 38.5 million tonnes by drilling 27 holes in 1996.

Texada Island contains a varied suite of polymetallic skarns, that between 1896 and 1976, produced 10 million tonnes of magnetite iron ore, 35,898 tonnes of copper, 39.6 tonnes of silver and 3.3 tonnes of gold. Three quarries (**Gillies Bay** (092F 395)), **Blubber Bay** (092F 479) and **Imperial** (092F 394)) produce about 5 million tonnes per year of high calcium limestone, largely for the manufacture of cement and lime.



Other important deposits on the Vancouver Island portion of the Alberni map area include the **Debbie** (092F 079) (gold, silver), **Villalta** (092F 384) (gold, silver), **Bear** (092F 044) (gold, silver, copper), **Maktush** (092F 012) (gold, silver, copper), and **Argonaut** (Iron Hill) (092F 075). A proposal has been put forward to recover fine-grained magnetite and garnet from the tailings and waste pile of the latter.

The mainland section of the map area occurs within the Coast Crystalline belt and is underlain mainly by granitic rocks of the Tertiary to Jurassic Coast Plutonic Complex. Dimension stone (granodiorite) is presently being quarried at **Granite Island** (092F 196) and until recently was also quarried on nearby Nelson and Fox islands. To the north, the **Lang Bay** kaolin clay deposit (092F 137) has a reserve of about 6 million tonnes of 15 per cent kaolin. Metallic minerals have been mined in two skarn occurrences; a number porphyry-type deposits are also documented.

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