

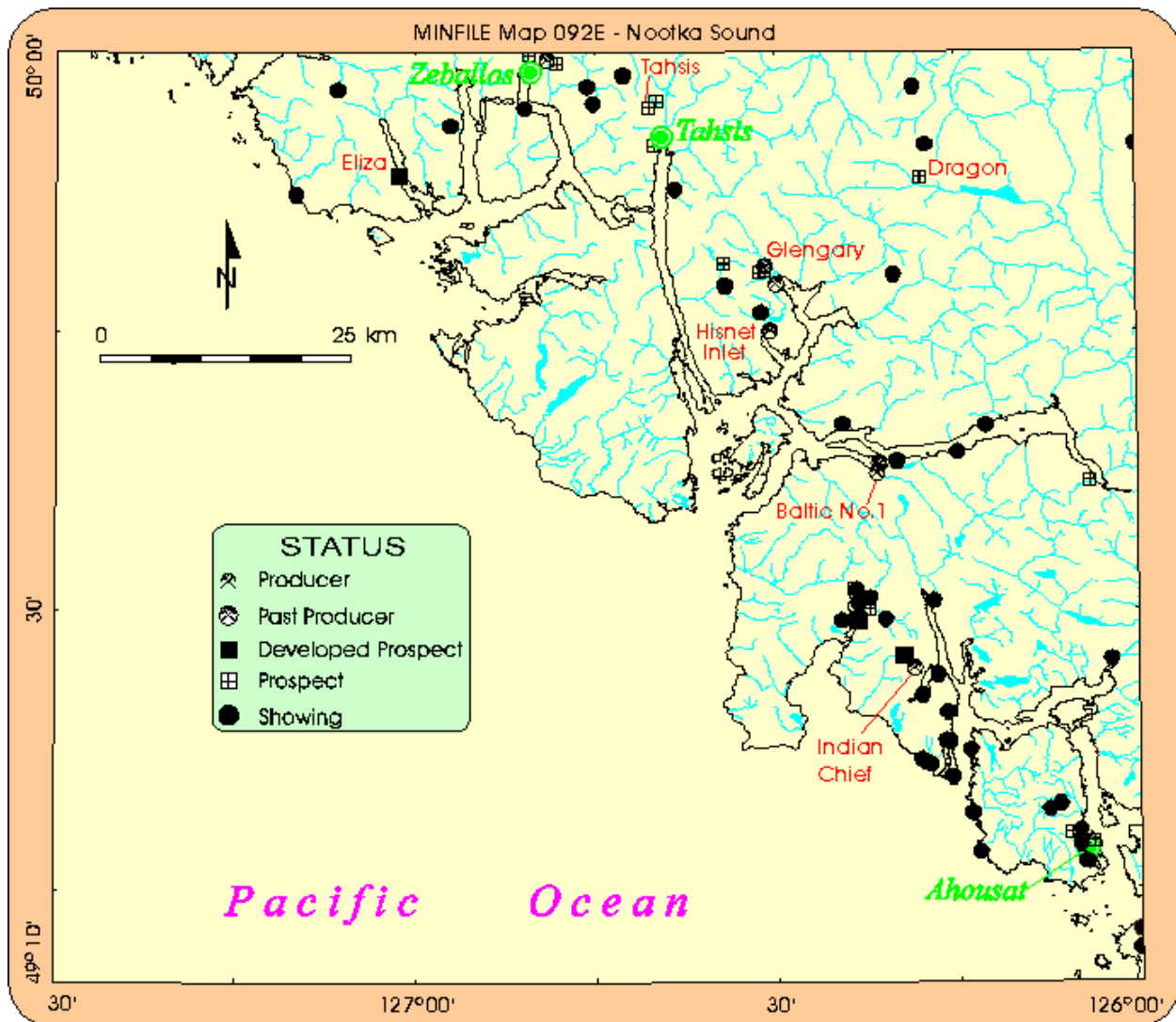


MINFILE NTS 092E - NOOTKA SOUND

Original release date: June 1989

Researched and compiled by: W. Vanderpoll and L.L. Duffett

The Nootka Sound map area covers the western portion of Vancouver Island that is deeply incised by the Tahsis and Muchalat inlets. The area contains 71 recorded mineral occurrences and lies within the Wrangellia Terrane of the Insular Belt.



Paleozoic to Early Mesozoic sediments and volcanic rocks of the Sicker, Vancouver and Bonanza groups are intruded by stocks of the Jurassic Island Plutonic Suite (formerly the Island Intrusions). Tertiary intrusions (previously called the Catface Intrusions) also disrupt the strata and have recently been divided into the Mount Washington and Tofino intrusive suites. Western portions of the map area are underlain by metamorphic and granitic rocks of the Westcoast Complex. These are thought to have formed by migmatization of pre-existing volcanic and sedimentary rocks of the Sicker and Vancouver groups

Mineral occurrences in the map area include several magnetite skarn and copper skarn deposits associated with the Island Plutonic Suite. The **Glengary** deposit (092E 001) produced a small tonnage of high-grade magnetite ore in 1959, and the **Indian Chief** mine (092E 011) on Sidney Inlet recorded intermittent production from a copper skarn between 1904 and 1938.

Epigenetic polymetallic veins, with or without silver and gold, occur throughout the area. Some of these veins, such as the **Baltic No. 1** (092E 026) and the **Eliza** (092E 043) produced small tonnages of high grade material during the 1930s and 1940s.

A deposit of marble at the head of **Hisnet Inlet** (092E 020) was quarried in the early part of the century and several other limestone and/or marble prospects, such as the **Tahsis** (092E 070) are found along or near the areas inlets.

A new occurrence, the **Dragon** (092E 072), was discovered by Westmin Resources in 1995. Located in the northeast part of the map area, this volcanogenic massive sulphide (VMS) deposit hosted by Sicker volcanics contains gold-bearing disseminated and massive lenses of galena (lead mineralization) and sphalerite (zinc mineralization). Exploration and diamond drilling continued on the Dragon in 1996.

Exploration activity in recent years has focused on the precious metal potential of known occurrences, particularly near Hesquiat Lake, Tahsis Inlet, Sidney Inlet, and Tlupana Inlet, and on the southward extension of the Zeballos gold camp in the north part of the map area.

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.

SELECTED REGIONAL REFERENCES (NTS 092E - NOOTKA SOUND)

- Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks and Mineral Deposits, Ph.D. Thesis, *Carleton University*.
- Carson, D.J.T. (1973): The Plutonic Rocks of Vancouver Island, British Columbia *Geological Survey of Canada*, Paper 72-44.
- Gravel, J.L., Matysek, P.F. (1989): 1988 Regional Geochemical Survey, Northern Vancouver Island and Adjacent Mainland (092E, 092K, 092L); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1988.
- Hudson, R. (1997): A Field Guide to Gold, Gemstone and Mineral Sites of British Columbia, Vol. 1: Vancouver Island; *Orca Book Publishers*, pp. 181-185.
- Massey, N.W.D. and Friday, S.J. (1987): Geology of the Cowichan Lake Area, Vancouver Island; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1986.
- Massey, N.W.D., Friday, S.J., Tercier, P.E., Rublee, V.J. (1987): Geology of the Cowichan Lake Area, Vancouver Island; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File Map 1987-2, 1:20,000.
- Massey, N.W.D. and Friday, S.J. (1988): Geology of the Port Alberni - Nanaimo Lakes Area, Vancouver Island; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1988.
- Massey, N.W.D., Friday, S.J., Tercier, P.E., Potter, T.E. (1987): Geology of the Duncan and Chemainus River Area, Vancouver Island; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File Map 1988-8, 1:50,000 and 1:20,000.
- Massey, N.W.D. and Friday, S.J. (1988): Geology of the Chemainus River - Duncan Area, Vancouver Island; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1987.
- Massey, N.W.D., Riddell, J.M., and Dumais, S.E. (1989): Geology of the Port Alberni - Nanaimo Lakes Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File Map 1989-6, 1:50,000 and 1:20,000.
- Massey, N.W.D., Day, (1989): Moss-Mat Stream Sediment Sampling in the Port Alberni - Nanaimo Lakes Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Exploration in British Columbia 1988.

- Massey, N.W.D., Friday, S.J., Riddell, J.M., and Dumais, S.E. (1991): Geology of the Port Alberni - Nanaimo Lakes Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geoscience Map 1991-1, 1:50,000 (with Paper 1992-2).
- Massey, N.W.D., Friday, S.J., Tercier, P.E., Rublee, V.J. and Potter, T.E. (1991): Geology of the Cowichan Lake Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geoscience Map 1991-2, 1:50,000 (with Paper 1992-3).
- Massey, N.W.D., Friday, S.J., Tercier, P.E., Potter, T.E. (1991): Geology of the Duncan Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geoscience Map 1991-3, 1:50,000 (with Paper 1992-4).
- Massey, N.W.D. (1992): Geology and Mineral Resources of the Alberni - Nanaimo Lakes Sheet; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1992-2.
- Massey, N.W.D. (1992): Geology and Mineral Resources of the Cowichan Lake Sheet; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1992-3.
- Massey, N.W.D. (1992): Geology and Mineral Resources of the Duncan Sheet; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1992-4.
- Massey, N.W.D. (1994): The Vancouver Island Mineral Potential Project (92B, C,F,G,K,L and 102I; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1994.
- Massey, N.W.D. (1995): Geological Compilation, Vancouver Island, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1994-6, 1: 250,000.
- Matysek, P.F., Day, S.J., (1988); Geochemical Orientation Surveys: Northern Vancouver Island Fieldwork and Preliminary Results; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1994.
- McConnell, R.G. (1914): Texada Island, B.C.; *Geological Survey of Canada*, Memoir 58.
- Muller, J.E. (1977): Geology of Vancouver Island; *Geological Survey of Canada*, Open File 463, 1: 250,000.
- Muller, J.E. (1981): Geology and Mineral Deposits of the Nootka Sound Map-Area; *Geological Survey of Canada*, Paper 80-16 (contains Map 1537A).
- Muller, J.E. (1981): Nootka Sound; *Geological Survey of Canada*, Map 1537A.
- Muller, J.E. (1980): The Paleozoic Sicker Group of Vancouver Island, British Columbia; *Geological Survey of Canada*, Paper 79-30.
- Roddick, J.A., Muller, J.E. and Okulitch, A.V., Compilers (1976): Fraser River; *Geological Survey of Canada*, Map 1386A, 1: 1,000,000.
- Stevenson, J.S. (1950): Geology and Mineral Deposits of the Zeballos Mining Camp, British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 27.