Location/Identification

MINFILE Number: 092F 270
National Mineral Inventory Number: 092F15 Cu1
Name(s): **MARBLE BAY (L.154)**
MARBLE BAY, MARBLE BAY FR. NO. 2 (L.157)

Status: Past Producer
Mining Method Underground
Regions: British Columbia, Vancouver Island, Texada Island
BCGS Map: 092F078
NTS Map: 092F15E
Latitude: 49 45 24 N
Longitude: 124 33 30 W
Elevation: 27 metres
Location Accuracy: Within 500M
Mining Division: Nanaimo
Electoral District: Powell River-Sunshine Coast
Resource District: Sunshine Coast Forest District
UTM Zone: 10 (NAD 83)
Northing: 5512742
Easting: 387758
Comments: Shaft on the boundary of Lots 154 and 154, on the outskirts of the community of Vananda on Texada Island (Open File 1990-3).

Mineral Occurrence

Commodities: Copper, Gold, Silver, Molybdenum

Minerals
Significant: Chalcopyrite, Magnetite, Pyrrhotite, Bornite, Silver, Molybdenite, Gold, Tetrahedrite
Alteration: Garnet, Pyroxene, Wollastonite, Diopside, Tremolite, Calcite, Epidote
Alteration Type: Skarn
Mineralization Age: Unknown

Deposit
Character: Disseminated
Classification: Skarn
Type: K01: Cu skarn

Host Rock

Dominant Host Rock: Sedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Triassic	Vancouver	Quatsino	------
Jurassic	------	------	Unnamed/Unknown Informal

Isotopic Age	Dating Method	Material Dated
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Lithology: Limestone, Hornblende Diorite, Hornblende Porphyritic Diorite Dike, Skarn, Marble

Geological Setting

Tectonic Belt: Insular
Physiographic Area: Georgia Depression
Terrane: Wrangell
Metamorphic Type: Contact

Inventory

No inventory data

Summary Production

	Metric	Imperial

	Mined:	285,028	tonnes	314,189	tons
	Milled:	0	tonnes	0	tons
Recovery	Silver	12,621,753	grams	405,799	ounces
	Gold	1,555,180	grams	50,000	ounces
	Copper	6,789,882	kilograms	14,969,127	pounds

Capsule Geology

Northern Texada Island is underlain by Karmutsen Formation pillowed and massive basaltic flows with thick units of pillowed breccias conformably overlain by massive limestone of the Quatsino Formation, both formations of the Upper Triassic Vancouver Group. Various stocks and minor intrusions (Middle Jurassic) ranging in composition from gabbro through diorite to quartz monzonite, intrude the volcanics and limestones, and are locally associated with iron and copper-gold skarn mineralization. A major episode of folding (F1) has resulted in the limestones and, to a lesser extent, the underlying volcanics, being deformed into a series of broad, northwest trending open folds that plunge northwards. Three subparallel northwest striking lineaments are also recognized and coincide with the Ideal, Holly and Marble Bay faults. These faults cut a set of northeast striking faults. The Marble Bay fault, and to a lesser extent the Ideal fault, have apparently controlled the emplacement of some of the Jurassic intrusions and their associated skarn mineralization.

The Marble Bay occurrence area is near the Marble Bay fault and underlain by massive recrystallized limestone of the Quatsino Formation intruded by hornblende diorite stocks and numerous hornblende porphyritic diorite dykes. The limestones are brecciated in places and crossed by a number of fractures with variable strikes. Mineralized skarn often forms irregular pipe-like bodies that plunge moderately, subparallel to the contacts between limestone and intrusive rocks.

The Marble Bay orebodies contain predominantly chalcopyrite, bornite and native silver within extensive, steeply dipping, skarn- altered fracture zones that cut brecciated limestone. The skarn mineralogy is dominated by garnet, diopside, tremolite and calcite; considerable amounts of epidote occurs locally with garnet and diopside. Minor amounts of molybdenite occur throughout the mine. Rare tetrahedrite and native gold have also been reported. Pyrite and pyrrhotite occur in the intrusive rocks in small quantities.

The sulphide and silver mineralization tends to be concentrated along one margin of the fracture zones at the contact between skarn and marble or skarn and unaltered limestone; the other margin is commonly occupied by barren garnet-diopside-epidote-tremolite-calcite skarn. The orebodies pitch to the northwest at an angle of approximately 17 degrees and, although extremely irregular and disjointed, the host garnet-diopside-tremolite skarn is practically continuous from surface down to the 13th mine level, 353 metres below the surface.

The Marble Bay mine has been developed by extensive underground workings and production from 1899 to 1929 totalled 285,028 tonnes of ore yielding 6,789,882 kilograms of copper, 1,555,180 grams of gold, and 12,621,753 grams of silver.

The property is held by Consolidated Van Anda Gold Ltd.

Bibliography

EMPR AR 1898-1137,1144; 1899-607,804; 1900-926; *1901-1102,1105-1111; 1902-H23,H235; 1903-H204; 1904-G246; 1905-J25,J214; 1906-H26,H202; 1907-L152,L163,L215; 1908-J146,J152-J154; 1909-K149; 1910-K166; 1911-K195,K212; 1912-K197; 1913-K287,K288; 1914-K378-K380; 1915- K368; 1916-K351-K353; 1917-F258; 1918-K275-K277,K306; 1919-N219, N220; 1920-N215,N216; 1921-G222; 1922-N235; 1925-A284; 1929-C393; 1945-A114; 1946-A177

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EMPR PF (Underhill, J.T. (1945): Plan of 400 and 500 Foot Levels; Consolidated Van Anda Gold Ltd. Website (Apr. 1998): Texada Island Mines History, 3 p.)

EMR MP CORPFILE (Marble Bay Mine; Marble Bay Mining Co. Ltd.)

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Ettlinger, A.D. (1990): A Geological Analysis of Gold Skarns and Precious Metal Enriched Iron and Copper Skarns in British Columbia; unpublished Ph.D. Thesis, Washington State University, 246 pages

EMPR PFD 7509, 7510, 810006, 600197, 600198, 671477, 680578, 680579, 680581, 680582

Date Coded:	1985/07/24	**Coded By:**	BC Geological Survey (BCGS)	**Field Check:**	N
Date Revised:	1990/03/08	**Revised By:**	George Owsiacki (GO)	**Field Check:**	N