

### Location/Identification

<b>MINFILE Number:</b>	092F 270	<b>National Mineral Inventory Number:</b>	092F15 Cu1
<b>Name(s):</b>	<b>MARBLE BAY (L.154)</b> MARBLE BAY, MARBLE BAY FR. NO. 2 (L.157)		
<b>Status:</b>	Past Producer	<b>Mining Division:</b>	Nanaimo
<b>Mining Method</b>	Underground	<b>Electoral District:</b>	Powell River-Sunshine Coast
<b>Regions:</b>	British Columbia, Vancouver Island, Texada Island	<b>Resource District:</b>	Sunshine Coast Forest District
<b>BCGS Map:</b>	092F078		
<b>NTS Map:</b>	092F15E	<b>UTM Zone:</b>	10 (NAD 83)
<b>Latitude:</b>	49 45 24 N	<b>Northing:</b>	5512742
<b>Longitude:</b>	124 33 30 W	<b>Easting:</b>	387758
<b>Elevation:</b>	27 metres		
<b>Location Accuracy:</b>	Within 500M		
<b>Comments:</b>	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

<b>Commodities:</b>	Copper, Gold, Silver, Molybdenum		
<b>Minerals</b>	<b>Significant:</b>	Chalcopyrite, Magnetite, Pyrrhotite, Bornite, Silver, Molybdenite, Gold, Tetrahedrite	
	<b>Alteration:</b>	Garnet, Pyroxene, Wollastonite, Diopside, Tremolite, Calcite, Epidote	
	<b>Alteration Type:</b>	Skarn	
	<b>Mineralization Age:</b>	Unknown	
<b>Deposit</b>	<b>Character:</b>	Disseminated	
	<b>Classification:</b>	Skarn	
	<b>Type:</b>	K01: Cu skarn	

### Host Rock

<b>Dominant Host Rock:</b>	Sedimentary		
<b>Stratigraphic Age</b>	<b>Group</b>	<b>Formation</b>	<b>Igneous/Metamorphic/Other</b>
Upper Triassic	Vancouver	Quatsino	-----
Jurassic	-----	-----	Unnamed/Unknown Informal
<b>Isotopic Age</b>	<b>Dating Method</b>	<b>Material Dated</b>	
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<b>Lithology:</b>	Limestone, Hornblende Diorite, Hornblende Porphyritic Diorite Dike, Skarn, Marble		

### Geological Setting

<b>Tectonic Belt:</b>	Insular	<b>Physiographic Area:</b>	Georgia Depression
<b>Terrane:</b>	Wrangell		
<b>Metamorphic Type:</b>	Contact		

### Inventory

No inventory data

### Summary Production

<b>Metric</b>	<b>Imperial</b>
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<b>Mined:</b>	285,028 tonnes	314,189 tons
<b>Milled:</b>	0 tonnes	0 tons

<b>Recovery</b>	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
- EMPR BC METAL MM00172
- EMPR BULL 101, pp. 57, 166
- EMPR FIELDWORK \*1989, pp. 257-265
- EMPR GEM 1970-282
- EMPR OF 1988-28; 1990-3; 1998-10
- EMPR P 1989-3, pp. 51-53
- 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.)
- GSC EC GEOL 3, pp. 86-102
- GSC MAP 1386A; 17-1968
- GSC MEM \*58, pp. 48-56
- GSC OF 463
- GSC P 68-50
- GSC SUM RPT 1924 Part A, pp. 106-144
- 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

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