

MAIN PRODUCT: PRINC. PROD.: COPPER	PROV. OR TERR.: BRITISH COLUMBIA PROV. OU TERR.: BRITISH COLUMBIA	DEPOSIT N.T.S. AREA: S.N.R.C. DU GÎTE : 92F/15	REF.: CU 003 RÉF.: CU 003	MINSYS NO: 511335- 0 NO MINSYS:
NAME OF DEPOSIT: LITTLE BILLIE, NOM DU GÎTE : LITTLE BILLY		HISTORY OF EXPLORATION AND DEVELOPMENT HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR		
Object located: Uncertainty : Objet localisé: Facteur d'incertitude: 200 (meters/mètres) Latitude/Latitude: 49°45'30 Longitude/Longitude: 124°32'32 UTM zone/Région UTM: 10 UTM North./UTM Nord: 5512683 UTM East./UTM Est: 388918 Mining division/Division minière: NANAIMO District/District: TEXADA ISLAND		<p>The Little Billie workings are located on the east coast of Texada Island, half a mile south east of Vananda Bay on McLeod Fractions #1 and #2.</p> <p>The property is reported to be discovered in the 1880's although the earliest record of work is in 1897 by Van Anda Copper and Gold Company. This company held the property until 1928, but only worked on it in 1898 when they drove a tunnel for 60 feet, sunk a shaft for about 90 feet and carried on drifting and stoping. After this, Little Billie, as with Copper Queen and Cornell, was worked by several leasees. During this period, little exploration and development work was carried out on this property.</p> <p>In 1925, the owners made preparations which did not materialize to operate Little Billie, Copper Queen and Cornell as a group. In 1928, Central Copper & Gold Co., Limited, acquired these properties. In that and the following year they did some diamond drilling and geophysical surveying.</p> <p>From 1929, the properties remained idle until 1943 when Industrial Metals Mining Company Limited acquired the properties. In the winters of 1943 and 1944 they built a camp, installed mining machinery and a diesel power plant. During this period they unwatered Little Billie, cleaned up the levels and started diamond drilling. By July, 1949, 77 holes totalling 7,700 feet had been drilled.</p> <p>In January 1945, the three properties were sold to Vananda Mining Company Limited. By this time the shaft had attained a depth of 280 feet with levels at 42, 70, 170 and 270 feet. This company started to explore the properties at greater depth. By 1947, the shaft was 600 feet deep with new levels at 480 and 600 feet. They completed over 1,550 feet of drifting, 1,000 feet of crosscutting, 280 feet of raising and 16,500 feet of diamond drilling.</p> <p>This company's successor, Vananda Mines (1948), Limited, had done over 1,000 feet of drifting and crosscutting, 800 feet of raising and 4,450 feet of diamond drilling before operations ceased in June 1952. They also completed over 550 feet of crosscutting and 163 feet of raising to connect the #6 level of Little Billie with the old workings of Copper Queen.</p> <p>Ore reserves in 1951 were 14,500 tons with 0.2 oz/ton of gold; 0.6 oz/ton of silver, and 1.3% copper.</p> <p>In 1956, diamond drilling and a magnetometer survey was conducted on Little Billie to find extensions of the ore bodies.</p> <p>In 1965, Bethex Explorations Ltd. optioned the property from Ideal Cement Company Ltd. They sampled the 80 level, diamond drilled 4 holes for 988 feet and subsequently dropped the option.</p> <p>Ideal Cement carried out an aeromagnetic survey in 1976. Shima Resources leased the property between 1977 and 1980 and carried out gravity, magnetic and IP surveys and diamond drilling of 16 holes. Between 1981 and 1984, the property was optioned by Marble Bay Holdings Ltd. from Ideal Cement. In 1984, Cartier Resources Inc. acquired an option on the property and diamond drilled one hole intersecting 1.98% Cu, 7.89 grams per tonne Au and 29.8 grams per tonne Ag over 2.65 metres below the sixth level.</p> <p>In 1986, Vananda Gold Ltd. optioned the property and in 1988 made a joint venture agreement with Freeport-McMoran Gold Company. They diamond drilled 7 holes for 7,843 feet and carried out IP survey. One of the intersections was 13.5 feet of 0.772 ounce per ton Au; 2.31 ounces per ton Ag and 3.04% Cu.</p>		
OWNER OR OPERATOR / PROPRIÉTAIRE OU EXPLOITANT Name: Nom :				
DESCRIPTION OF DEPOSIT / DESCRIPTION DU GISEMENT <p>The Little Billie deposits carry copper, gold, silver and molybdenum values and appear to be pneumatolytic, very closely related with the intrusion of the Coast Range Batholithy. The orebodies are found in altered volcanic material of the Triassic Vancouver Series near the contact with Marble Bay limestone. These bodies contain bornite and chalcopyrite with occasional molybdenite, pyrite and magnetite in a gangue of andradite, diopside, tremolite, actinolite, epidote and calcite.</p> <p>The rocks consist of crystalline limestone, underlain by intrusive granite, both being cut by more recent felsite dykes. Bedding in the limestone is poorly defined and strikes a few degrees west of north and dips gently eastward. Minor folding occurs in the limestone and there are a major and several minor faults. These faults occurred both before and after mineralization. There are three sets of pre-mineralization faults, the earliest of these being filled with greenstone dykes which strike northeast and dip 50° south.</p> <p>-----</p> <p>Associated minerals or products / Minéraux ou produits associés AU AG WLST</p>				
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HISTORY OF PRODUCTION / HISTORIQUE DE LA PRODUCTION

1896-1916; 6,296 tons yielding 1,610% oz Au; 7,088 oz Ag; and 301,679 lbs Cu.
 1948-1952; 63,934 tons yielding 10,066 oz Au; 31,439 oz Ag; and 1,504,135 lbs Cu.

REFERENCES / BIBLIOGRAPHIE

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M.C. File 167-M5-2-4.

LeRoy, O.E.; Preliminary Report on a Portion of the Main Coast of British Columbia and Adjacent Islands; Pub.#996, pp. 53, 54, G.S.C., Reports published during 1908 - Part 1.

McConnell, R.G.; Texada Island; M-58, pp. 9, 45, 46, 62, 63, 64, G.S.C., 1914.

Mineral Policy Sector; Corporations Files: "Vananda Gold Ltd."
 Muller J.E. & Carson, D.J.T.; Geology and Mineral Deposits of the Alberni Map-Area; Paper 68-50, pp. 39-40, G.S.C. 1968.

MAP REFERENCES / RÉFÉRENCES CARTOGRAPHIQUES

Map 1321, Texada Island, (Geol.), Sc. 1": 2 miles-M-58, GSC.
 Map 112 A. Vananda, Texada Island, (Geol. & Topo.), Sc. 1": 2,000 feet - M-58, GSC.
 Map 17-1968, Alberni, B.C., (Geol. & Topo.), Sc. 1" 250,000 - Paper 68-50, GSC.
 Sheet 92 F (M1), Preliminary Mineral Inventory Map, Sc. 1: 250,000 - B.C. Dept. Mines and Petroleum Resources.
 NTS Map Sheet 92 F/15 E, Powell River, (Topo.), Sc. 1: 50,000 - Mines & Tech. Surveys, 1966.

REMARKS / REMARQUES

PROVINCIAL LINK: BCI 92F-105

Last rev./Dernières m-à-j: By/Par:	/ /	05/30/1991 YJL	06/03/1991 YJL	06/03/1991 YJL
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NAME OF DEPOSIT: LITTLE BILLIE, NOM DU GÎTE : LITTLE BILLY				
HISTORY OF EXPLORATION AND DEVELOPMENT (continued) HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR (suite) By early 1991, there were diamond drilled 5 holes outlining 170,000 tons of 0.21 ounce per ton Au, 1.5% Cu. (Northern Miner, April 8, 1991). There are about 100,000 tonnes of wollastonite skarn material. (BC Minfile 092F 105).				