

## NAME OF PROPERTY

CORNELL

## LOCATION

Uncertainty radius: 200 m.      Lat. 49°44'29"      Long. 124°32'20"

Mining Division    Nanaimo      District    Texada Island

County      Township or Parish

Lot    201      Concession or Range

Sec.      Tp.      R.

## OWNER OR OPERATOR AND ADDRESS

c. 1948 - Vananda Mines (1948), Limited.

## DESCRIPTION OF DEPOSIT

The Cornell deposits carry copper, gold, silver and molybdenum values and appear to be pneumatolytic, very closely related with the intrusion of the Coast Range Batholith. The ore body is a mineralized dyke with well marked contacts, one wall being Marble Bay limestone, the other being a fine-grained diabase of evidently later origin. The mineralization consists mainly of chalcopyrite and bornite with small quantities of pyrite and magnetite. Molybdenum, tetrahedrite and native silver are also present. These are found in a gangue of diopside, garnet, calcite, epidote and serpentine, the latter being a result of the decomposition of basic dykes intruded prior to the formation of the orebodies. The mineralization occasionally penetrates into the limestone.

Associated minerals or products of value - Gold, silver, molybdenum.

## HISTORY OF EXPLORATION AND DEVELOPMENT

The Cornell property is located on the east coast of Texada Island near the head of Emily Lake at an elevation of 239 feet about 1¼ miles southeast from Vananda Bay.

The property was first staked by James Raper in 1898. The next year, it was Crown granted to Van Anda Copper and Gold Company. At this time the entrance to the old workings were closed by a slide and so two tunnels were driven to tap these. This company held the property until 1928 but only worked it themselves until 1901, at which time the shaft had reached a depth of 260 feet with levels at 80, 160 and 260 feet. They also ran a crosscut tunnel for about 140 feet and completed over 950 feet of drifting, 200 feet of winzing and upraising, 100 feet of crosscutting and some stoping. They also installed an upright boiler and a steam hoist.

A period of leasing then followed. In 1901, Northwest Copper Company operated under lease and bond. The following year, shipments were suspended and the property was taken under bond by Mr. Vaughan-Rhys. By 1903, the shaft had reached a depth of 560 feet with levels set at 100 foot intervals. And in 1904 a gravity tramway connecting Cornell and Copper Queen had been completed. In 1905 the property was leased to Cordillero Mining Company, and the next year to Cornell Operating Co. Very little work was done in the following years and the mine was shut down in 1911. It reopened the next year under lease to Embelton & McLeod who still held it when it shut down again in 1914. In 1917, the mine was leased to a Seattle syndicate while the dump was leased to a Vancouver syndicate. Two years later the property was bonded to Calumet Arizona Copper Company.

In 1925, the owners made preparations that did not materialize to operate Cornell along with their other properties, Little Billie and Copper Queen, as a group. In 1928, Central Copper and Gold Co., Limited, acquired these properties and during that and the following year did some diamond drilling and geophysical surveying.

From 1929 the properties remained idle until 1943 when Industrial Metals Mining Company Limited took over. In 1945, the properties were sold to Vananda Mining Company, Limited, their successor in Vananda Mines (1948), Limited. These companies did little work on Cornell.

There are two grades of ore produced at Cornell, the coarse and the fines. The coarse assays 0.72 oz./ton Au; 3.28 oz./

p.t.o. ....

Mineral Resources Branch, Department of Energy, Mines and Resources, Ottawa.

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## HISTORY OF PRODUCTION

This property produced intermittently between 1897 and 1917. During this period, 44,894 tons of ore were mined, yielding 15,146 oz. gold, 70,555 oz. silver, and 3,017,070 lbs. copper.

## MAP REFERENCES

- Map 1321, Texada Island, (Geol.), Sc. 1":2 miles - M-58, G.S.C.
- Map 112 A, Vananda, Texada Island, (Geol. & Topo.), Sc. 1":2,000 ft. - M-58, G.S.C.
- Map 17-1968, Alberni, B.C., (Geol. & Topo.), Sc. 1:250,000 - Paper 68-50, G.S.C.
- Sheet 92 F (M1), Preliminary Mineral Inventory Map, Sc. 1:250,000 - B.C. Dept. Mines and Petroleum Resources.
- NTS Map Sheet 92 F/10 E, Comox, (Topo.), Sc. 1:50,000 - Mines & Tech. Surveys, 1955.

## REMARKS

Lat. and long. were measured on NTS Map Sheet 92 F/10 E. The point measured was the center of the lot.

Also see Copper Queen and Little Billie properties, 92 F/15, Cu 2 and Cu 3.

## REFERENCES

- B.C. Dept. of Mines Reports: 1898, pp. 1136, 1144; 1899, pp. 607, 801-806, 851; 1900, pp. 925, 943; 1901, pp. 1102, 1105, 1109, 1190; 1902, pp. 23, 235, 258; 1903, pp. 26, 204, 254; 1904, pp. 27, 247; 1905, pp. 25, 214, 221; 1906, pp. 26, 202, 216, 250; 1907, pp. 152, 153, 164, 215; 1908, pp. 146, 153; 1909, p. 274; 1910, pp. 166, 245; 1911, pp. 212, 286; 1912, p. 197; 1913, pp. 288, 324, 421; 1914, pp. 378, 380, 420, 511; 1915, p. 368; 1916, pp. 353, 354, 355, 431; 1917, p. 258; 1918, p. 306; 1919, p. 254; 1922, p. 235; 1925, pp. 284, 288-290; 1928, p. 384; 1929, p. 393; 1937, p. A-30; 1938, p. A-28; 1939, p. A-30; 1940, p. A-19; 1941, p. A-20; 1942, p. A-22; 1943, p. A-39; 1944, pp. 163, 164.
- LeRoy, O.E.; Report on a Portion of the Main Coast of British Columbia and adjacent islands; Pub. #996, pp. 52, 54; G.S.C., Reports published during 1908 - Part 1.
- McConnell, R.G.; Texada Island, M-58, pp. 9, 45, 46, 56-59; G.S.C., 1914.
- 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.

## HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

ton Ag; 9.35% Cu. The fines assay 0.63 oz./ton Au; 1.92 oz./ton Ag; 4.66% Cu.

In 1956, Vananda Mines (1948), Limited, drilled on their properties to seek extensions of these deposits.