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BETHLEHEM COPPER CORPORATION LTD.

92I/8

HIGHLAND VALLEY OPERATIONS

(Latitude 50° 30' N, Longitude 121° 00' W, Elevation 4830 feet)

LOCATION, ACCESS AND CLIMATE

The present operations are located on a southwest exposure on the eastern side of the Highland Valley approximately 200 miles northeast of Vancouver, 30 miles southeast of Ashcroft and 40 miles northwest of Merritt. Principal access is by paved road from Ashcroft.

The Highland Valley occurs within the interior plateau of south-central B.C. and is a broad, level saddle characterized by rolling uplands of 3,000 to 6,000 feet elevation. It is drained both to the northwest and the south-east into the Fraser River system. The region is under the "rain shadow" effect of the Coast Mountains and exhibits a wide range of annual temperatures. Precipitation averages 12 to 15 inches per year with 70% of this occurring as snow. The mean annual temperature is 37°F, with a range from +90°F to -30°F. Strong southwest winds prevail.

HISTORY AND OWNERSHIP

Copper occurrences in the Highland Valley have drawn sporadic attention since 1899. In 1915/1916 over 90 tons of hand-cobbed ore grading 30% copper were shipped from the area of the present property. In 1954 the Huestis - Reynolds Syndicate staked the claims covering the present mining operations and in 1955 this group formed Bethlehem Copper Corporation Ltd. Later in 1955 ASARCO optioned the property and spent some \$1¼ million on a 2½-year exploration program. This option was dropped in 1958 and in 1960 Bethlehem negotiated a participation and financing agreement with Sumitomo Metal Mining Co. of Japan. In December 1962 the first shipment of concentrate was sent to Japan.

Initial mining took place in the East Jersey Mine until 1965; the Jersey Mine operated from 1964 until 1972, and the Huestis Mine has been worked since 1969. In December 1973 operations were renewed in the Jersey Pit expansion and some ore was taken from the Iona Pit. Currently, drilling to prove up additional reserves is being conducted around the Jersey and Iona Pits and in two other known mineralized zones.

Bethlehem is approximately 50% controlled by Granges, Newmont and Sumitomo. The balance of the shares are distributed among some 6,000 shareholders, mainly in Canada.

GEOLOGY

The Bethlehem mine is situated near the centre of the Guichon batholith of Lower Jurassic age. The rock is a massive, coarse-textured, grey quartz diorite which is locally called Guichon diorite. In certain areas the Guichon diorite has been intruded by granite, quartz Monzonite, porphyries

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and a younger quartz diorite. The term "Bethlehem quartz diorite" has been applied to the younger quartz diorite. Associated with these younger rocks are several bodies of breccia. Both the breccia and the younger intrusives are host rocks for mineralization.

Except for the granite, these rocks are mineralogically similar. The mafics are hornblende and biotite. The feldspars are chiefly plagioclase.

The following table shows the mineralogical composition of Guichon and Bethlehem quartz diorite.

Guichon Quartz Diorite, Barren, Unaltered

Plagioclase	60%
Quartz	15-20%
Hornblende	5-10%
Biotite	5%
Orthoclase	5-10%

Bethlehem Quartz Diorite, Barren, Unaltered

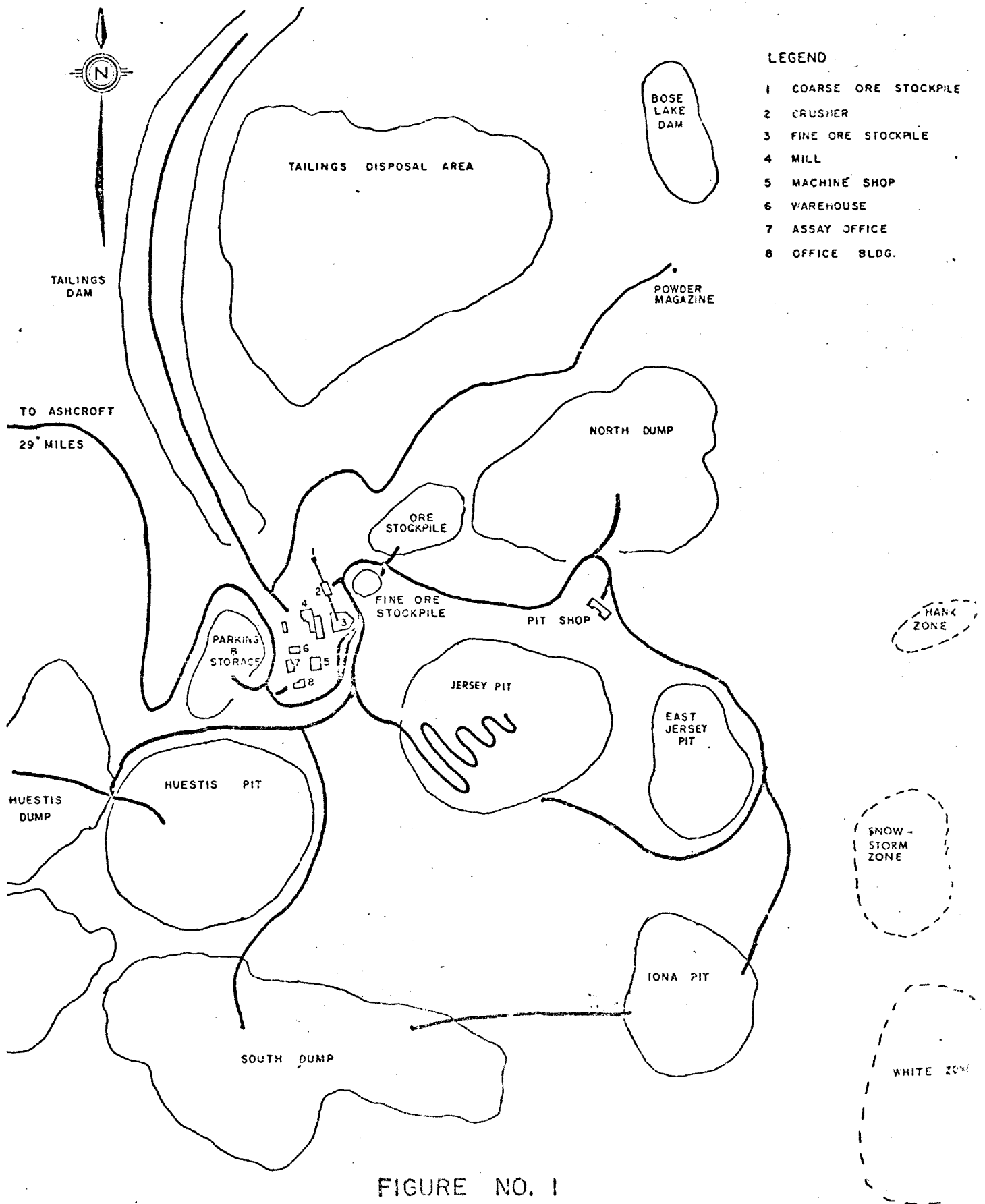
Plagioclase	65%
Quartz	15-20%
Orthoclase	5%
Hornblende	5-10%
Biotite	5%

Most of the breccias consist of similar rock fragments and vary only in the relative abundance of matrix and rock fragments. The matrix is commonly either a compact mosaic of fine-grained quartz and plagioclase or a poorly consolidated vuggy, comminuted, angular, fine-grained aggregate of quartz, plagioclase and rock fragments.

For the most part mineralization occurs in the breccia zones along contacts, faults and fractures. Space for deposition was derived through metasomatic replacement of mafic minerals in disseminated ore, but more important is the deposition provided by fractures and faults.

Metallic minerals present include chalcopyrite, bornite, pyrite, molybdenite, specular hematite, chalcocite and tetrahedrite. Secondary minerals include malachite, azurite, chrysocolla, goethite, jarosite, manganese oxide, ferromolybdenite and cuprite. The most important copper minerals are chalcopyrite and bornite.

To the west, southwest and south of the present operation there are at least four other major mineral deposits within a radius of four miles.



LEGEND

- 1 COARSE ORE STOCKPILE
- 2 CRUSHER
- 3 FINE ORE STOCKPILE
- 4 MILL
- 5 MACHINE SHOP
- 6 WAREHOUSE
- 7 ASSAY OFFICE
- 8 OFFICE BLDG.

FIGURE NO. 1

GENERAL ARRANGEMENT OF BETHLEHEM'S HIGHLAND VALLEY OPERATION