Location/Identification

MINFILE Number: 082ESE014
National Mineral Inventory Number: 082E2 Cu9
Name(s): **STEMWINDER (L.588)**
MONTEZUMA (L.915), PHOENIX MINE, BROOKLYN-STEMWINDER

Status: Past Producer
Mining Method Underground, Open Pit
Regions:
BCGS Map: 082E018
NTS Map: 082E02E
Latitude: 49 06 04 N
Longitude: 118 35 54 W
Elevation: 1125 metres
Location Accuracy: Within 500M
Mining Division: Greenwood
Electoral District: Boundary-Similkameen
Resource District: Selkirk Natural Resource District
UTM Zone: 11 (NAD 83)
Northing: 5439926
Easting: 383333
Comments: Part of the Phoenix Mine. Location of Glory hole is shown in Annual Report 1949. Production is included with Brooklyn (082ESE013) and Phoenix (082ESE020).

Mineral Occurrence

Commodities: Copper, Gold, Silver

Minerals
Significant: Chalcopyrite, Pyrite
Associated: Calcite, Garnet, Epidote, Chlorite, Amphibole, Hematite, Magnetite
Mineralization Age: Jurassic-Cretaceous

Deposit
Character: Massive, Disseminated
Classification: Skarn, Replacement
Type: K01: Cu skarn, K04: Au skarn

Host Rock

Dominant Host Rock: Sedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Triassic	Brooklyn	Unnamed/Unknown Formation	------

Isotopic Age	Dating Method	Material Dated
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Lithology: Limestone, Sharpstone Conglomerate, Siltstone

Geological Setting

Tectonic Belt: Omineca
Physiographic Area: Okanagan Highland
Terrane: Plutonic Rocks, Quesnel

Inventory

No inventory data

Capsule Geology

The Stemwinder mine is 300 metres east of the Brooklyn and Idaho workings (082ESE013) and 500 metres north of the Phoenix pit (082ESE020).

See Phoenix for additional details on development, geology and mineralization. Production is included with the Brooklyn and Idaho until 1960 and the Phoenix thereafter.

Production from the Stemwinder began with a trial shipment of 4.5 tonnes of ore in 1895, seven years after the claim was first located by prospectors. Intermittent production between 1900 and 1949 yielded 32,014 tonnes of ore from workings consisting of an open stope and glory hole connected to 450 metres of tunnelling on two levels, at 32 and 61 metres depth, serviced by an inclined shaft and two portals. These workings were the focus of later excavations, in the period 1964 to 1967, which produced a 55 by 146- metre open pit from which 73,322 tonnes of ore was supplied to the Phoenix mill. A total of 718,475 tonnes of waste rock from this operation aided in the construction of a tailings pond and water reclamation site in the vicinity of the Idaho workings. The Stemwinder claim (Lot 888) was staked in 1891 by J. Attwood and J. Schofield and Crown granted to F. Farrell and Migeon in 1896. The Dominion Copper Company, Limited began development work in 1899. The Stemwinder claim was leased by J. Cunningham, of Phoenix in 1919 but no work was reported. By 1926 the property had been acquired by R. Forshaw, of Greenwood. Pacific Tidewater Mines Limited acquired an option in 1928 and a new adit was begun on the Stemwinder before the option was given up the following year. Later in 1929 Hercules Consolidated Mining, Smelting and Power Corporation, Limited, optioned the property and the new adit was extended to 22 metres before the option was given up.

Brooklyn-Stemwinder Gold Mines, Limited was incorporated in 1933 to acquire the Stemwinder, Standard Fraction, Joker, Montezuma, New York, and Brooklyn claims. Intermittent exploration work was carried out by the company and by lessees. W.E. McArthur leased the property in 1937 and some 30 metres of drifting and 90 metres of raising was done. Production is believed to be from the Brooklyn. The lease was given up in March 1940. The company resumed exploration work in 1946 with a diamond drill program which was completed in 1947. Several zones of mineralization were indicated and these were investigated by underground work during 1948-1949, including 80 metres of crosscut adit, 38 metres of drifting, and 360 metres of diamond drilling in 22 holes. The mine closed in 1949 and the company charter was surrendered in 1952. Columbia Copperfields Ltd. apparently held the property in the 1950's but no work was reported. Continental Consolidated Mines Ltd. acquired the property in 1959 and underground work was carried on until mid December; ore recovered from the Stemwinder workings was shipped the following year to the Granby concentrator.

The Granby Mining Company Limited purchased the property in 1963. An open pit was established on the Idaho claim from which during 1963-1964, 137,333 tonnes of ore were removed. During 1966-1967 an open pit on the Stemwinder claim produced 63,339 tonnes of ore.

The most widespread rock around the Brooklyn and Stemwinder is a peculiar aggregate of subangular to subrounded fragments of white, red, and green chert; various types of volcanic and coarse grained granitic rocks; and occasionally, finely crystalline limestone. The rock may be called chert breccia. It is one type of cherty material comprising the sharpstone unit.

Two northerly trending, curved, lenticular bodies of another peculiar rock, which will be referred to as limestone breccia, occur near and in the Stemwinder mine. It consists of subangular fragments of greyish white finely crystalline limestone ranging in size from one to several centimetres, together with a few smaller fragments of chert, set in a fine grained matrix of carbonate, chlorite, quartz, and clay minerals. Where faults are absent, the contact with the chert breccia is abrupt rather than gradational. Westward, near the Brooklyn mine, the chert breccia is in sharp contact along a northerly trending line with finely crystalline, thin bedded, siliceous or argillaceous limestone. The distinct and regular bedding of the latter strikes north and dips 75 to 80 degrees eastward. Although the bedded limestone is more than 300 metres thick on the north side of Twin Creek, it appears to be absent a short distance to the south, on the opposite side of the drift filled valley bottom.

In the old part of the Stemwinder mine, faults are the most conspicuous feature. Two important fault sets strike variably west of north. Faults of one set dip moderately to steeply east, and faults of the other set dip 25 to 40 degrees westward. Faults of a third set appear to cut those of the other two sets. The third set strikes northeasterly and dips moderately or steeply to the northwest or to the southeast. They are characterized by much gouge and by fluting that is close to horizontal. Although on the surface the limestone breccia appears to be fairly continuous, in the workings it is found to be cut into isolated blocks by the numerous faults. The blocks, ranging in size from a metre to several metres, are in fault contact with chert breccia on all sides. On No. 1 level the segmentation occurs in a northerly trending belt roughly 60 metres wide. This belt is bounded on the west, almost directly below the glory hole, by a fault, beyond which the rock is all chert breccia.

All of the ore of the old part of the Stemwinder mine occurs in this belt. The ore bodies are fault blocks of limestone breccia which have been partly recrystallized as coarse grained grey calcite containing irregular veinlets and larger masses of chalcopyrite and pyrite. Usually the mineralization ends at the faults bounding the limestone breccia blocks, but in a few places the chert breccia, for a few feet beyond such a fault, is brecciated and moderately well mineralized. The ore is striking different to that of the Brooklyn mine. It contains no garnet or other lime silicate gangue minerals, no specularlite, and no quartz. However, it is similar to the Brooklyn ore in its virtual restriction to carbonate rocks and in its relation to faults which may well be pre-ore in age. The orebody mined in the Stemwinder glory hole was a block of mineralized limestone breccia bounded on both sides and below by faults. The lower bounding fault dips 25 degrees westward and contains a thin sheet of pulaskite porphyry. The intensity of the mineralization of the limestone breccia shows a marked increase near this fault.

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1897-592; 1898-1123, 1899-604,771,; 1900-877; 1901-1054,1058,1188;
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1907-110; 1918-470; 1919-166; 1926-477; 1928-243-247; 1929-257;
1930-223; 1932-129; 1933-160; 1939-36; 1940-23; *1949-149-155;
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EMPR PRELIM MAP 59

EMR MP CORPFILE (The Granby Mining Company Limited; Phoenix Copper
Company Limited; Brooklyn-Stemwinder Gold Mines, Limited; The
Dominion Copper Company, Limited; New Dominion Copper Company;
Limited; Hercules Consolidated Mining, Smelting and Power
Corporation, Limited; Continental Cinch Mines Ltd.)

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Date Coded:	1985/07/24	**Coded By:**	BC Geological Survey (BCGS)	**Field Check:**	Y
Date Revised:	2020/07/22	**Revised By:**	Karl A. Flower (KAF)	**Field Check:**	Y