

This tunnel will run in on the lead, from a point down the hill to which it has already been traced, and if continued to a point vertically underneath the present workings, will give a depth of 1,700 feet, according to a rough estimate.  
—Kaslo Kootenian.

The Alaska and Northwest Mining Journal of Seattle prints a short summary of the Howe Sound Copper Company, which is the holding or controlling company of the Britannia Mining & Smelting Company, operating the Britannia copper mines and concentrating mills, situated near Howe Sound, and in Vancouver mining division. The Howe Sound Copper Company also controls the El Potosi Mining Company, with mining property eighteen miles from Chihuahua, Mexico. The figures now available appear to combine the joint companies, but it is evident that the Britannia's output and receipts are by far the larger of the two. The summary of receipts and expenditures is as under:

Receipts—	
From ore shipments.....	\$6,042,537
Miscellaneous .....	78,246
<b>Total .....</b>	<b>\$6,120,783</b>
Expenditures—	
On mining .....	\$1,500,604
On transportation .....	189,762
On milling .....	323,181
On smelting and marketing .....	1,245,370
<b>Total operating charges .....</b>	<b>\$3,258,917</b>
Overhead and interest charges, including depreciation .....	1,287,006
	\$4,545,923
Net profit for year.....	1,574,860
<b>Total .....</b>	<b>\$6,120,783</b>

The greater part of the profit shown above was obtained from operating the Britannia mines, as those in Mexico have been practically closed for the last eighteen months. The Britannia Company's operations showed a profit for 1916 of \$1,327,024, as compared with \$194,238 for 1915, in which latter year there were produced 9,058,045 lb of copper, 50,306 oz. of silver, and 398 oz. of gold, having a gross value of \$1,616,133.55, which, with sundry receipts, made a total of \$1,674,650.81.

In the Preliminary Review of the Department of Mines for 1916, it was stated that "the production of the Britannia Company for the year 1916 is expected to have been about 421,000 tons of ore, containing 836 oz. gold, 98,000 oz. silver, and 18,000,000 lb copper. This shows an increase of 207,850 tons over the production of 1916. Milling facilities have been increased during the year, and it is expected that in the future the mine will steadily increase its yearly production."

The estimates of ore reserves show an increase, the total given at the end of 1916 having been 18,754,502 tons, as compared with 17,197,789 tons at the end of 1915, and this after having made an output in 1916 of about 421,000 tons. The figures lately published are as follows:

Fairview Mine—	Tons
Positive ore.....	4,979,980
Broken ore reserve .....	917,936
Probable ore.....	2,095,150
Possible ore .....	2,817,050
<b>Total .....</b>	<b>10,810,116</b>

Bluff Mine—	
Positive ore.....	1,286,800
Broken ore reserve .....	1,386
Probable ore.....	4,413,200
<b>Total .....</b>	<b>5,701,386</b>
Jane Mine—	
Positive ore.....	96,000
Probable ore.....	105,000
Possible ore .....	799,000
<b>Total .....</b>	<b>1,000,000</b>
Empress Mine—	
Positive ore.....	100,000
Probable ore.....	143,000
Possible ore .....	1,000,000
<b>Total .....</b>	<b>1,243,000</b>
Summary—	
Total positive ore .....	6,462,780
Total broken ore reserve.....	919,322
Total probable ore .....	6,756,350
Total possible ore .....	4,616,050
<b>Total ore.....</b>	<b>18,754,502</b>

The average copper content of this ore is 1.97 per cent., or 39.4 lb of copper to the ton of ore. This gives a total of 738,927,379 lb of copper, estimated to be contained in the Britannia mines so far as exploration and development permit of a calculation being made. How much more future development will warrant being added to this estimate can only be, at the present time, a matter of conjecture.

Mining operations are now mainly confined to the Fairview mineral zone, which is developed by five levels below the outcrop—500, 600, 700, 850, and 1,050 feet, respectively. The new main level, which is 1,200 feet below the fifth level, is to be the main working-level of the mine. It has been driven in 4,336 feet and a 1,200-foot raise put up to the No. 5 level. All construction work has been most thorough, and the equipment throughout very complete. Provision for the storage of a considerable amount of reserve broken ore has been made by means of raises and ore-chutes.

The ore milled in recent years averages about 0.33 oz. silver to the ton and 2.75 per cent. copper. The concentrates, which are shipped to Tacoma for smelting, contain about 1.8 oz. silver to the ton and 15 per cent. copper. The mill makes an extraction of about 94 per cent. of the copper contents and 95 per cent. of the silver. Gold value in the ore is almost negligible.

The Hon. William Sloan, Minister of Mines, British Columbia, has appointed Mr. William M. Brewer District Mining Engineer for the Western mineral survey district under the Mineral Survey Act. This district includes the old mining divisions of Nanaimo, Alberni, Clayoquot, Quatsino, Victoria, Vancouver and New Westminster. Mr. Brewer has been for the past twenty years closely identified with the mining industry of the Province, and for the last four years has been associated with the Provincial Mineralogist's Department as reporting engineer.

The Minister has also appointed Mr. Philip B. Freeland of Grand Forks Mining Engineer of the Southern mineral survey district, which includes the Similkameen, Greenwood, Grand Forks and Osoyoos. Mr. Freeland is a graduate of the Camborne School of Mines, Cornwall, and for the past three years has been associated with the Granby Company at Grand Forks.

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