The Britannia Mine — its spirit still lives

In the June 1928 issue of *Western Miner, then titled the British Columbia Miner*, 'Sketches of BC Mines' featured an article on the Britannia Mining and Smelting Co Limited located at Britannia Beach, BC. Although the Britannia closed forever in 1974 the artifacts and memories live on at the BC Museum of Mining located on the old mine site. To celebrate the eightieth anniversary of the first shipment of ore from the mine and the tenth anniversary of its closure the Museum held a reunion of former employees and residents of Britannia in May 1984. Also celebrated was the award to the Museum of a $105,000 grant from the National Museums of Canada, Museum Assistance Program to facilitate a major Planning and Development study. To commemorate this anniversary and honour an important contributor to the era of WM, below is a tribute to the era of Britannia including excerpts reprinted from the original article published in 1928.

The Britannia Mine owes its heritage to two men: Dr Forbes and Oliver Furry. In 1888 Dr Forbes first discovered mineralization in the area 2.5 miles east of Britannia Beach on the east shore of Howe Sound in south western British Columbia. Although he worked his prospect intermittently for 10 years, Dr Forbes could not raise the necessary capital to develop it. The deposit was brought to the attention of a trapper and prospector, Oliver Furry, and in 1888 he staked the first five claims, including the famous Jane Basin.

In 1900 the Britannia Copper Syndicate was formed to investigate the mining potential of the property. The potential was recognized by George Robinson, a mining engineer from Montana, in 1901. Access by water, a short 30 mile distance from the growing city of Vancouver and indicated reserves of one- to 3-million tons of copper prompted the development of a mine on the property.

In 1903 Robinson, aided financially by G B Schley, secured a controlling interest in the Britannia Copper Syndicate. The importance of this development was summarized in 1928. '... it is mainly due to the confidence, enterprise and liberality at that time of the late Mr Schley that the Britannia is now so firmly established as the largest copper producing mine in the British Empire'.

In 1904, a new company, The Howe Sound Company secured control of the Britannia Copper Syndicate. The Britannia Smelting Company, formed to handle the company's smelting interests in 1905 by purchasing the Crofton Smelter on Vancouver Island, amalgamated with the Britannia Copper Syndicate under the new name of Britannia Mining and Smelting Company Limited.

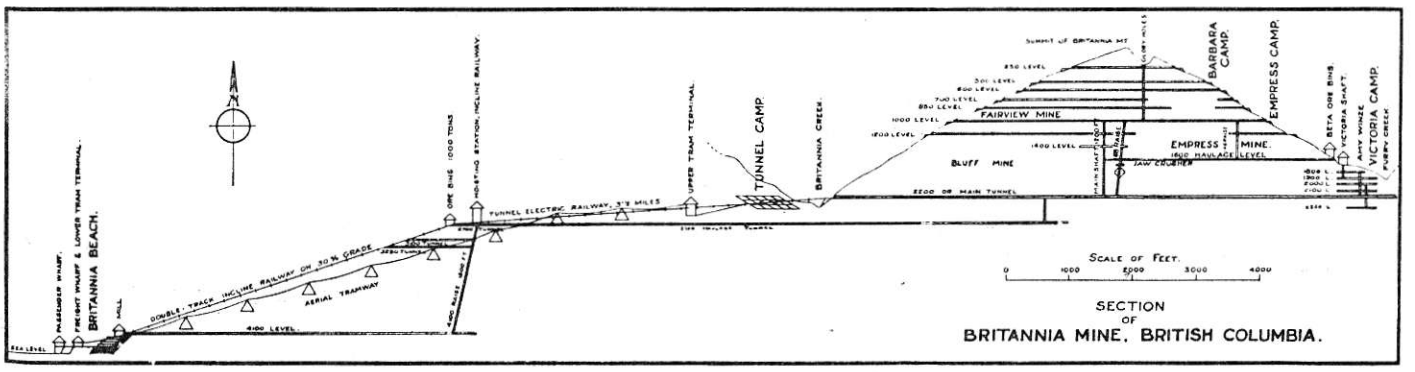
An extensive operation was developed on the site. 'The greatest elevation at the mine is 4400 feet, the lowest developed ore being little over 1500 feet above sea level. A three and a half mile electric railway connects the main mine camp with the Beach, while an aerial tramway also runs from the beach to within a thousand feet of the mine camp. The workings at the mine are divided into four separate camps as shown in the sectional illustration: The main Townsite, or Tunnel camp, 2200 feet; the Barbara camp, 500 feet; the Empress camp, 1000 feet; and the Victoria 1800 feet. The mines lie along a well defined shear zone, which is a part of a large roof pendant lying within the Coast Range granite batholith. The first mine to be worked was the Jane, so named from the mineral claim in which it lies. Extending southeasterly from the Jane Mine there were successfully opened and developed the Bluff, Fairview, Empress and Victoria Mines, separated from each other by upwards of 1000 feet of barren ground. In all, over fifty miles of underground workings have been cut during the life of the property.

'In 1915 a second mill was constructed at the Beach, but was destroyed by fire in the fall of 1921. Work on the present concentrator was commenced in 1922, and on February 4th, 1923, the first ore was milled. The construction is of concrete and steel throughout and is thus nearly fireproof. Being built on a steep rock slope, gravity is utilized for carrying the ore through the mill, and pumping is almost entirely eliminated. Originally designed to treat 2500 tons per day, the capacity has been gradually increased, by means of a few alterations in the flow sheet, to over 5000 tons daily. At the same time the milling costs have also been greatly reduced, the present figure being around 35 cents per ton.'

During 1927 a new production record was established, the approximate figures being as follows: Copper produced 33,510,000 pounds, or an increase of more than 2.5-million pounds over the previous year; gold produced 9,400 ounces; and silver, 169,000 ounces.

By 1929, the Britannia Mines were attracting world attention. The mill reached its peak production of 7000 tons/day. The stock that was $3.00 in 1921 was now $8.00. Britannia Mines were recognized as the largest copper producer in the British Commonwealth.

In spite of the Great Depression, operations at Britannia continued. In 1933 the first shipment of zinc



SECTION OF BRITANNIA MINE, BRITISH COLUMBIA.

concentrates containing gold were shipped to the smelter. In 1938 and 1939, pyrite was shipped to Japan. The mine went on to contribute much needed minerals to the war effort.

Problems continued after the war. Britannia's first organized strike occurred in 1946. Although the Korean War created a demand for zinc in the early 1950s from the No 6 Fairview Mine, by 1958 copper prices sank to an all time low and the mine closed for several months.

Operations moved to the Beach in 1958. The once proud Britannia Mining and Smelting Co Ltd had been reduced to seven employees and in 1959 it went into receivership and its assets were taken over by the Howe Sound Company. Early the next year, the metal markets strengthened. Hope for Britannia was revived when the Howe Sound Company announced that some of the high grade ore bodies would be mined.

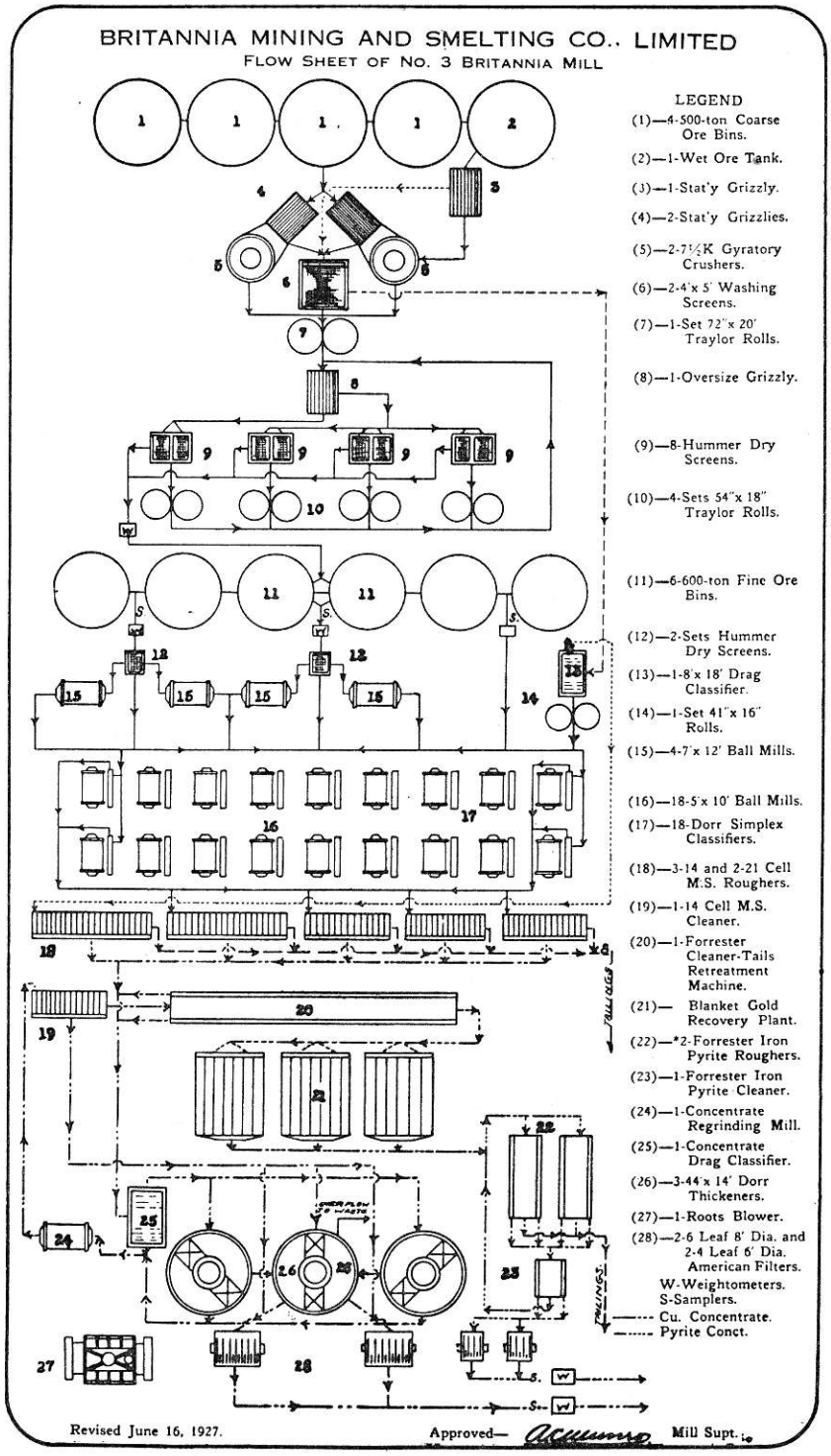
In 1963 Anaconda Mining company purchased the property from the Howe Sound Company for $5-million. The company intended to use Britannia as a base for its exploration programs in Western Canada. An aggressive search for ore was launched. A labour strike intervened just as the drills intersected a new ore zone. The new ore body enticed the company and the union to the bargaining table. The strike was settled and mining resumed 2 March 1965.

Although 300 employees continued to produce an average of 60,000 tons of concentrate annually, ore reserves were limited. Copper was on a downward spiral. Rising costs and increased taxation combined to defeat efforts to keep the mine operating. The rumours of shutdown became a reality and on 1 Nov 1974, the whistle blew a three second requiem blast for the 55 men who went underground on the last shift.

In the spring of 1975, just six months after the historic 'shut down', the BC Museum of Mining opened its doors to the public. In the words of Britannia 'old time' Olive Baxter, '... as long as the Museum remains open, the old mine will always be with us.'

Britannia continues to live through the Museum. As a 'living museum', with functioning exhibits and displays, visitors can see the past in action. The continued growth of the Museum since 1975 has been sustained by the mining industry and the public.

The role of the Museum is an important one. Not only does it preserve the memory of one of BC's most important mines, it also contributes to the public image of the mining industry. People of all ages are afforded a view of an industry which is poorly understood, or at most misunderstood, by the majority. Instilling a healthy image of the mining industry in young minds will contribute to filling its future demand for skilled professionals.



Year-round leaching

Carlin Gold Mining Company, Carlin, Nevada, a wholly owned subsidiary of Newmont Mining Corporation, can now leach gold from low grade ore during winter months with the aid of a high efficiency liquid heating system from Trane Thermal, a unit of The Trane Company.

An aqueous solution of sodium cyanide is key to the leaching process and must be kept from freezing. According to Trane Thermal, heating the solution during winter months will permit the mine to operate year-round. Significant yearly production increases are expected and the user expects the system to pay for itself within a short period of time.

Based on Trane's 'Sub-X' submerged combustion design, the heating system raises the temperature of 600 gallons of sodium cyanide solution/minute from 35°F at 98% efficiency. During leaching, the solution is distributed over a heap leach bed where it reacts with, and extracts the gold from the ore.