

052213

GRANISLE 93LGRANBY MINING COMPANY LTD.

Babine Lake in north-central British Columbia is the location of the 13,000 ton/day open-pit mine of Granisle Copper Limited.

Granisle is located thirty miles north of Topley. 175 miles west of Prince George on Highway 16. From the village nestled on the western shore of Babine Lake, it is an eight-minute barge crossing to the minesite on McDonald Island. During the months from December to May, the ferry channel is kept ice-free with an underwater bubbler system pioneered and perfected by Granisle Copper. Several bubbler systems, based on this design, are now operating in Western Canada.

The climate of the Babine Lake area is typical of the interior of British Columbia. Although the lake exerts a moderating influence, winter temperatures can drop to well below zero, but prolonged periods of low temperatures are rare. The annual precipitation averages 20 inches and the normal snow depth is three feet.

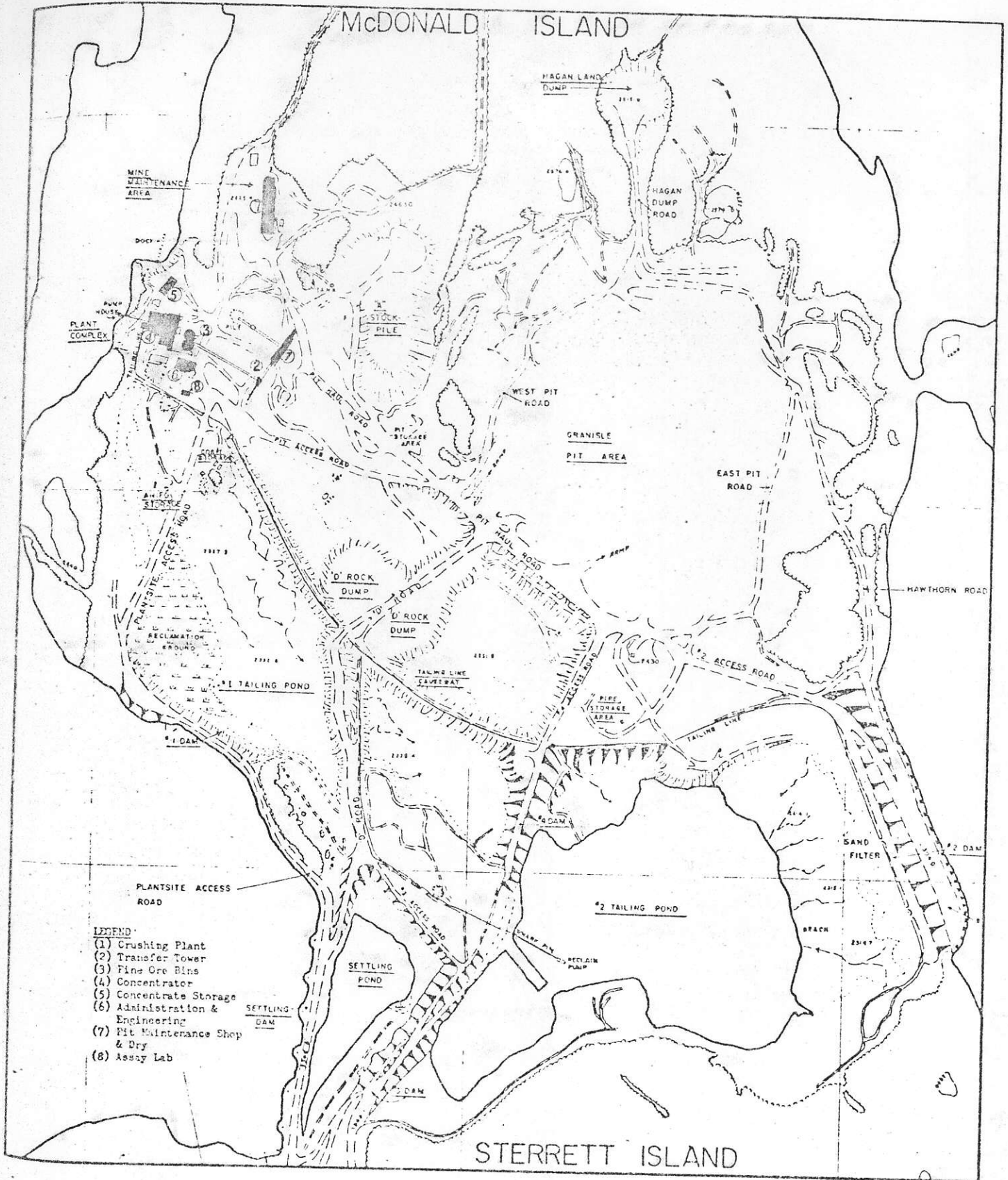
MINERAL DEPOSIT

The 1913 annual report to the British Columbia Minister of Mines recorded the first work on the mineralization of McDonald Island. Charles Newman and H. J. McDonald were the discoverers. Scant information followed, but in 1927 Douglas Lay persuaded Cominco Limited to bond the property. Under the guidance of Hank Giegerich, Cominco drilled several long holes, but due to the recession of 1929, work was discontinued and the property returned to McDonald and Newman.

Through the thirties the property lay dormant. Then, in 1943 Dr. Victor Dolmage reported that, in spite of the low tenor of the ore, there was hope for high grade mineralization. A small company was formed and 1700 feet of core were logged. The average grade came to only 0.60% Cu so work was once again stopped.

Finally, in August of 1955 the property was examined by Granby. Before freeze-up, additional claims had been staked and eight drill holes sunk. The following summer 49 more holes were drilled and a remarkable continuity of copper values was demonstrated. Subsequent findings, like the favourable results from thirty additional holes in 1959, enhanced the property so that by 1963 work included preliminary flotation testing. After this the pace quickened. A feasibility report was completed in April 1964, and in mid-November 1966 production started at 5000 tons/day.

RD
 26734m
 1974
 MINERAL INDUSTRIES IN WESTERN CANADA
 10th Commonwealth Mining & Metallurgical Congress 1974
 Sept 2-28, 1974



Mining brought added geological information. A deeper drill programme and a lower cut-off grade indicated increased reserves, and in 1971 it was decided to expand. By the summer of 1973 a production rate of 13,000 tons/day was achieved.

During the summer of 1965, N. C. Carter, of the Provincial Government Mines Branch, studied the mineralization of McDonald Island. His report gives an excellent picture of the local geology.

The Granisle mineral deposit comprises a system of veinlets and disseminations of copper sulphide minerals localized in a vertical cylindrical mass by fracturing and porphyry intrusive bodies. The mineralized mass exhibits lateral zoning from a higher grade core to gradational boundaries with surrounding waste rock. Vertical continuity is pronounced, and the planned mining limit with depth is based upon the economics of mining and safe mining practice rather than lack of mineralization.

The mineral deposit is centrally located on Copper Island. The outline of the ore zone is about 1000 by 1500 ft. in dimension with a north-east elongation. The ultimate mining floor planned is at elevation 1500 ft. about 800 ft. below lake level. To attain this depth the pit opening would be about 2500 ft. across.

The principal mineral is chalcopyrite, but appreciable bornite also occurs, especially in higher grade areas. Small but significant quantities of gold and silver occur. Traces of molybdenite, zinc sulphide, and lead sulphide have been noted but no recovery is attempted. Ore reserve calculation at 1 October, 1973 showed 78,168,000 tons of a grade of 0.433% copper to be in place.

Late in 1972 a mill expansion to a nominal 14,000 tons/day was completed at Granisle. During 1973 average rate of production was 11,475 tons/day. The projection is for 13,000 tons/day but it is realized that various in hardness in various parts of the pit can change milling rate from a low of 11,000 to a high of 17,000 tons/day.

The general arrangement of the Granisle minesite is shown in the accompanying diagram.

Management at the mine is provided by a resident manager who oversees the work of four functional divisions: Mining, Milling, Plant, and Accounting. Contained within these are the associated services such as: Engineering, Maintenance, Safety, Training, Warehousing, and Purchasing.