

### Metal Mining in Manitoba in 1917\*

By E. L. Bruce.

During the year 1917 the province of Manitoba made its first important contribution to the Canadian metal mining industry. Two districts, both in the same belt of basic Pre-Cambrian rocks, are responsible for practically all the production. One of these, known as the Schist lake area, lies very close to the western boundary of the province, about 50 miles north of the Saskatchewan river. The other, the Herb or Wekusko lake area, is further east. The lake lies 11 miles northwest of Mile 82 north of The Pas on the Hudson's Bay railway.

At Schist lake, chalcopryrite with some gold is being mined. At Herb lake, development is on gold quartz veins.

#### The Mandy Mine.

The Schist lake sulphide deposit, now known as the Mandy, was discovered very late in the season of 1915 and immediately optioned by the Tonopah Mining Company, whose representative happened to be investigating other prospects in the district. During 1916 diamond drills were running continuously. By the end of the year those in charge had decided that the deposit was worth working. A contract was made with Mr. C. Morgan to haul ore from the Mandy to Sturgeon lake during the winter. The orebody was open cut and before the ice on the lakes broke up 3,500 tons was hauled to Sturgeon lake and two carloads were taken to The Pas.

Equipment for underground work was brought in on the ice and installed. This consists of a 125 h. p. boiler, a 7 drill compressor, a hoist and a portable sawmill to saw lumber for the mine buildings. A sixty-ton tug to handle barges during the summer, was hauled across from Sturgeon lake to Athapapuskow lake. Four 40-ton barges were built to transport the ore from Sturgeon lake down the Saskatchewan to The Pas, and four barges for the summer production on the Upper lakes, two on Athapapuskow and two on Schist lake. A small stern wheel steamer was also built for use on Schist lake. Low water for most of the season prevents barges coming from Schist lake to Athapapuskow, but it is hoped that by means of a lock in Schist creek this difficulty can be overcome. One gate of this lock is already in position. Ore can then be loaded directly into the barges at the mine and taken to the south side of Lake Athapapuskow only 17 miles from the head of Saskatchewan river navigation, whereas at present it must be hauled on sleighs double that distance.

During the spring and early part of the summer a vertical shaft was sunk, a station cut at 100 ft., and a crosscut driven 50 ft. to the ore. During the latter part of the summer, ore was hoisted from a stope at this level. The ore is hoisted directly to a tramway and dumped into a small ore pocket from which the barges are loaded. These are then towed 10 miles down the lake and the ore piled. It was estimated that 2,000 tons would be stocked there by the time that ice would prevent further transportation.

After the closing of the lake it is intended to sink the shaft another hundred feet so that ore can be broken on two levels. A contract for hauling 7,500 tons of ore this winter has been signed. This ore runs 19 per cent. copper with a trace of gold, making the

1917 production worth \$325,000 to \$350,000, depending on the price of copper.

#### Transportation Difficulties.

Under present transportation conditions only exceptionally high grade mineral can be handled at all. The ore can be brought to Sturgeon lake only during the winter, and from there to the railroad only during a short summer. Moreover, navigation on the Saskatchewan is not always certain on account of low water in Cumberland lake.

During 1914 and 1915 a government dredge worked on the bar, forming at the outlet of the lake, and excavated a channel for shallow draft boats. For the last two years, however, nothing has been done and during the last part of the past season boats, even though specially built to draw only 2½ feet of water, could not get out into the lake. As a result 200 tons of ore mined in 1917 still lies at Sturgeon lake. Summer transportation except by water is almost impossible.

The Provincial Government last winter undertook to make a road 17 miles in length from Sturgeon lake to Athapapuskow lake, but owing to lack of an adequate appropriation and lack of labor, work was slow and the road was not ready for use until navigation was practically closed. Thus all supplies brought in during the summer had to come from the head of river navigation by slow and costly canoe transportation.

It would seem that larger grants for roads in this section should be made by the province, for even though the public lands are under Federal control the development of an active mining industry would be a direct benefit to the business men of the province.

During the past year ore after reaching The Pas had to be hauled some distance by wagons, as there is as yet no spur from the railway to the waterfront. Under such handicaps it speaks well for the management of the Mandy mine that so considerable an amount of ore has been sent out in the short time since the discovery of the orebody. The difficulties of transportation prevent the mining of the lower grade chalcopryrite and the considerable amount of zinc-blende that occurs with the high grade chalcopryrite.

#### Flinflon.

During the summer diamond drills were working at Flinflon, four miles northwest of Schist lake, on the original discovery of sulphide ore in this district. This orebody is larger than that at Schist lake, but is lower grade and the minerals are not segregated as they are in the smaller body. Hence, under present conditions, production from this deposit cannot be expected. Some other smaller prospects are under development, but none of these are yet important.

#### Herb Lake.

At Herb lake\*, activity is as yet largely confined to development work on gold-bearing quartz veins. At the Rex a shaft is down 120 ft. and a mill is being installed. There are also shafts on the Kiski claim and on the claims of the Northern Mining & Development Company. Shafts are being sunk on the McCafferty vein and on the Elizabeth. From the quartz taken out of the shaft of the Northern Manitoba Mining & Development Company a shipment of 57,000 pounds worth \$2,323 was made. This is the only actual production from the district during the year. A road has been built from Mile 82, Hudson's Bay railway, to the south end of Herb lake, a distance of eleven miles.

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