

IRON ORES PRODUCED BY MOOSE MOUNTAIN, LTD., ONTARIO

The mines owned by Moose Mountain, Ltd., are located at Sellwood, Ontario, about twenty-five miles northwest of Sudbury, on the Canadian Northern Ontario Railway. The shipping port is Key Harbor, on Georgian Bay.

There are two different grades of ore produced at the mine; first, the cobbled ore. This ore is magnetite, and of non-Bessemer grade. Complete analysis of this ore is as follows:

	212°F.
Iron.....	54.45
Phosphorus.....	.105
Silica.....	14.55
Manganese.....	.07
Alumina.....	2.09
Lime.....	4.00
Magnesia.....	2.83
Sulphur.....	.036
Loss by Ignition.....	.75
Moisture.....	.63

The selling price for season 1915 is \$2.85 per gross ton, delivered at Lake Erie ports, with a guarantee of 54.00% iron in natural condition.

The other grade of ore produced by the Moose Mountain Limited, is briquettes. These briquettes are made from ore running about 38.00% iron as it is found in the ground; it is crushed down practically to dust, and then, together with the screened dust from the cobbled ore, is concentrated by means of the Grondal wet process, and raised from about 38.00% iron to approximately 63%, and the phosphorus is lowered from about .070% to approximately .025%. This ore in the fine state is then pressed into the form of bricks and run through gas heated kiln, from which it comes out as the finished material.

Before the briquettes have passed out of the kiln and while still in a white heat, air is admitted and the oxygen is absorbed by the briquettes, which changes them from magnetite to hematite.

A complete analysis of the finished briquettes is as follows:

	212°F.
Iron.....	63.02
Phosphorus.....	.025
Silica.....	6.66
Manganese.....	.08
Alumina.....	1.00
Lime.....	1.50
Magnesia.....	1.53
Sulphur.....	.012
Loss by Ignition.....	
Moisture.....	.50

On a guarantee of 62.84% iron natural and .025% phosphorus, the price of the Briquettes at lower Lake Erie ports for season 1915 is \$4.78 per gross ton.

Oglebay, Norton & Co. are the selling agents of only Moose Mountain cobbled ore and the Moose Mountain briquettes.

The Moose Mountain, Limited, also supplies standard crushed stone, or trap rock.

The rock is hard, dense, durable, tough, and free from sulphides. Among its qualities are the following:

Density 3.08; Hardness, above 8, or approximately 80% of diamond (very hard); Color, dark greenish blue; Fracture, sharp and crystalline; Breaks into good cubical shapes; Water absorption, practically none; Affect of acid test, practically none; Adhesion of bituminous or asphalt-cements to this stone is good.

This stone will make a good crush stone aggregate for concrete construction with Portland cement, or with bituminous or asphalt cements, for many purposes, in-

cluding road and pavement construction. The rock is offered in the following sizes:

Through 5" ring and on 2" ring; Through 2" ring and on 1½" ring; Through 1½" ring and on ¾" ring; Through ¾" ring and on ¼" ring.

A CUSTOM CONCENTRATING MILL IN SLOCAN DISTRICT, B.C.

About a year ago Mr. J. P. Keane, who had been for some time engaged in developing the Wonderful mine, near Sandon, Slocan, British Columbia, undertook what was regarded by many as a doubtful enterprise, namely the operating of concentrating plant on custom lead-zinc ores. He succeeded much better than had been thought likely by most mining men in the district, but unfortunately, just at a time when he was obtaining all the ore that could be treated at it, fire destroyed the mill and left its energetic lessee seemingly without the facilities for continuing to carry on the industry he had launched and brought to a successful stage. However, little daunted, he cast about for a way out of the difficulty he had so unexpectedly become involved in, and in the course of a few weeks he had made tentative arrangements for the use of a concentrating plant situated near Rosebery, Slocan lake, and within two months of the burning of the Ivanhoe mill he was producing zinc concentrate from ore from the Lucky Jim mine. The following description of the mill now being operated by Mr. Keane was included in a report on Slocan district made by the Provincial Mineralogist of British Columbia after his visit to that region in 1911:

"The zinc-concentrating mill at Rosebery was erected a few years ago by the owners of the Monitor and Ajax, primarily for the treatment of ores from those mines, but also with the expectation of doing business as a custom concentrating plant in handling lead-zinc ores of Slocan district. The plant was designed and erected by Mr. J. C. Fernau (general manager for the Canadian Metal Co.), who at that time was associated with an attempt to devise some method of utilizing the zinc contents of these ores. The plant was started, but did very little work, the Monitor and Ajax mines having been closed, and later having had their entire plants destroyed by fire, while the custom work expected did not materialize.

"The site of the plant is at Rosebery, near the northern end of Slocan lake, adjacent to the tracks of the Canadian Pacific Railway branch line from Nakusp to Sandon, and on the shore of the lake. The site chosen is almost level, there being only an elevation sufficient for the railway-siding going over the top of the receiving-bins, which are on the ground. The mill building is excellently built, and the machinery is good of its kind, but the design of the mill is such as to entail an undue amount of handling and elevating of material.

"The plan of handling the ore was as follows: The ore was received by train on the Canadian Pacific Railway and dropped into the receiving-bins, of which there is a row 250 ft. long, the bins and track being covered by a well-constructed building. The ore from the receiving-bins was discharged by chute-gates into 2-ton cars standing on a track outdoors; these cars were shoved by hand into the mill building, and there hoisted on a platform elevator to the upper floor of the mill and run off to the Blake jaw-crusher. The crusher discharged on to a travelling picking—or sorting—belt 20 ft. long by 2 ft. wide, which, in turn, discharged into a Gates fine crusher, the discharge from the Gates crusher passing into the boot of a bucket elevator, by which the ore was again raised to the upper story of the mill. The falling ore passed through a Snyder sampler into a bin, the sample going to a Gates sample-crusher.