

thirty miles. This Galena contains more than 80 per cent of lead, and two specimens assayed by Dr. Harrington yielded respectively 5.104 and 12.03 ounces of silver to the ton of 3,000 lbs.

These mines may be worked with the greatest ease and were worked in 1858-59 by the Hudson's Bay Company, which extracted nine tons of ore from some shafts in the neighborhood of Whale River. The quantity of silver to be found in the ore is sufficient to pay for a great portion of the expense of working these mines, which cannot fail to attract the attention of capitalists.

Manganese, which is found in such large quantities in the spathic iron ores of Nastakopa, is a mineral of the greatest utility. It is used in the preparation of chlorine and more than 20,000 tons are imported into England every year. It is therefore an article of importance and as it passes into the slag produced by the smelting of spathic iron ore, the working of this ore would enable us to produce manganese at a lower price and in greater quantities than it can be anywhere else. For this reason, these ores might be worked under peculiarly advantageous circumstances since we would obtain at the same time iron and manganese, which are both very useful metals.

The copper mines of Lake Abatagomaw, contain vast riches which may be turned to account when this region will be crossed by a railway running from Quebec to James Bay. These superficial deposits cover an area of several square miles, and the extraction of the ore is all the more easier and inexpensive, that the coppery rock forms the upper stratum of the soil.

For some time the Canadian Pacific Railway Company has been using lignite, from the mines on the Souris river, for its locomotives. It is said that this species of coal gives more heat and less smoke than that which is generally used. This would give a value to the lignite mines discovered in the valleys of the Moose, Missinaité, and Albany Rivers. This lignite, if we may judge by professor Hoffman's reports, is of superior quality. Some seams are as much as three feet thick, and more extensive, if not more careful, researches than have been hitherto made, will show that these deposits of fossil coal cover an area of several thousand square miles. The coal derived from them may be used as fuel on the railways and especially for smelting the spathic iron ore of Nastakopa. The chief objection to the use of lignite in smelting iron ore is the sulphur contained in the ashes and which might mix with the molten metal. Now we have seen that this objection is removed when the ore contains manganese which absorbs the sulphur of the fuel used in smelting. As the spathic iron of Nastakopa contains a large proportion of manganese it can be smelted without trouble, by means of the lignite found in the region of James Bay within a comparatively short distance, at places whence it may be transported by water and consequently at a very small cost. All these circumstances combined give considerable value to these mines of iron and coal, while they render them considerably easier to work.

The other minerals found in this region and especially gypsum, asbestos and anthracite, offer a vast field of enterprise which cannot fail to be turned to account as the country is settled. We may say without fear of contradiction that the whole of this country constitutes one of the finest and richest mining regions of Canada, if not of North America.

7. The climate throughout the whole of the area which we have stated to be suited for cultivation, is as fine and even warmer in the region of James Bay than in the province of Manitoba and the prairies of the North-West. The farming season, that is the season free from frost, is longer at Moose Factory than at Winnipeg, longer than in the Muskoka district and as long as in the greater portion of the province of Quebec. The fact that the flora in the vicinity of Moose Factory is the same as that about Quebec shows clearly that the climate must be nearly the same in both places. At the Southern extremity of James Bay, the presence and the melting of the ice slightly retard vegetation in the spring, but, in return, the heat given out by the waters of the sea prolongs the mild weather in the autumn, so that, all things considered, the open season is as long as in the Red River country and longer than in the North-Western part of Ontario. The cold is rather severe in winter, as in the North-West, but the air is so clear and pure that the lowest winter temperature can be endured without discomfort. But little rain falls in summer and but little snow in winter. The rivers commence to break up about the end of April; the thaw commences in the latter half of March under a temperature which frequently reaches fifty degrees, the earth is bare at the beginning of May and may be cultivated about the middle of that month. The trees bud generally between the 12th and 15th of May and are in