

tons of ore and one ton of coke made a ton of pig iron. The production of coke at Connellsville, near Pittsburg, Pa., is about 170,000 tons per week. This coke, which is free of duty, has been delivered in Lake Superior by rail and water at \$4.25 per ton, while "Pittsburg" coal (from which it is made) has been laid down there by water at \$1.85 alongside wharf, subject to duty of fifty-three cents per ton. About one and three-quarter tons of Connellsville coal are required to make a ton of coke. It may require nearly two tons of inferior coal to make one ton of coke.

Nova Scotia coal, water borne, is the only Canadian coal which might be used in Lake Superior; but as long as a supply of charcoal can be obtained it will probably yield a better quality of iron at a smaller cost per ton than any other fuel.

The iron ore deposits on the Canadian side of Lake Superior are said to be the most extensive known; it is asserted that two million tons are in sight on a single quarter section in the Atikokan belt. The quality is both hematite and magnetite, and chiefly Bessemer ore.

I am indebted to Dr. George Dawson, Director of the Geological Survey, for the following account of Canadian ore west of Lake Superior:

Iron ores are widely distributed throughout the district west of Lake Superior. They occur in rocks of Keewatin (Huronian) age as magnetites and hematites and in the Animikie as carbonates and hematites. The principal belts are one extending from the Kaministiquia River westerly up the valley of the Matawin River and continuing to beyond the Township of Moss, and another following the course of the Atikokan and Seine Rivers.

Along the first of these, outcrops of ore have been found at many points, but notably in the neighbourhood of the Matawin River, where extensive deposits of both magnetite and hematite (hard ores) have been partially exploited by open trenching and by the diamond drill. Though generally considerably banded with jasper, large deposits of clean ore occur here. On the Atikokan belt the ore is a high grade magnetite averaging over sixty per cent metallic iron. Along the Atikokan, the eastern part of the belt, the ore carries no titanium and but a trace of sulphur, and is consequently a good Bessemer ore. It occurs in long, lenticular masses which swell out to widths of upwards of fifty feet and which are vertical or nearly so in attitude. Three or more roughly parallel bands of ore are separated by belts of country rock (diorite and hornblende schist) from twenty feet to a few feet in width. The whole width is often considerably over a hundred feet and the bodies of ore which can be followed as recurring lenticles for many miles are traceable as continuous ore bodies for upwards of 500 yards. (See Annual