

On the Central and Southern iron ranges east of Lake Nipigon, also, a large amount of exploratory work, including some diamond drilling, has been done. On the Central range, banded siliceous hematite carrying in places between 40 and 50 per cent in iron has been found, and on the Southern range considerable areas of banded silica, hematite and magnetite carrying from 30 to 40 per cent, but no bodies of merchantable grade.

On the Algoma Eastern Railway claims at Groundhog river, considerable areas of banded magnetite, hematite and jasper running about 35 per cent in iron, have been explored by trenching.

A number of experimental tests have been made with this siliceous hematite-magnetite mixture of the iron formation in attempts to devise a commercial process for its concentration. None of them have been successful, however, and considering the physical characteristics of the material, the outlook for a successful solution of the problem is not bright.

In southeastern Ontario, from a number of properties, chief among which are the Wallbridge, Dalhousie, and McNal, hematite has been produced in the past to the total extent of probably 150,000 tons. The ores are said to have been of good quality, but little information about the individual mines is available.

The deposits were all small; some of them the upper oxidized portions of pyrites beds. There has been no production from any of them for some years, nor is there likely to be much in the future.

Magnetite.—Magnetite is of more frequent occurrence in the Province than any of the other classes of ore, and next to hematite, has been economically the most important. The total production of magnetite in the Province, to the end of 1916, would probably be in the neighbourhood of 1,175,000 tons.

Important occurrences found in western Ontario are those in the Atikokan "iron range," a belt of green schists with interbedded lenses of magnetite and pyrrhotite that outcrops at intervals for a distance of about 16 miles along the Atikokan river. On that part of the range west of Sabawee lake, most of the deposits contain so much sulphur in the form of pyrrhotite and pyrite that their value as iron ores is very doubtful. On the eastern end of the range, about a mile east of Sabawee lake, large bodies of magnetite have been opened up at Atikokan mine, the property of the Atikokan Iron Company of Port Arthur. Between 1907 and 1911 some 90,608 tons of magnetite averaging 60 per cent iron, 0.11 per cent phosphorus, and 2.01 per cent sulphur, were shipped to the blast furnace in Port Arthur, and after roasting to remove the sulphur, smelted for the production of foundry pig-iron. Development work at the mine was carried on until 1913, but no ore has been shipped since 1911 when the Company's blast furnace closed down.