

Mr. Boholm, of Trondhjem, Norway, writes me that he is desirous of erecting iron and steel works in Norway, and asks my Department to furnish him with an electro-metallurgist to take charge of the plant.

Canada has done all the pioneer work in connection with the process of electric smelting of iron ores, only, however, to benefit other countries, who have not been slow to perceive the advantages of this process. Italy, Hungary, Russia, Brazil, India, South Africa, Mexico and California—conditioned similarly to Ontario and Quebec as regards the iron industry—are becoming increasingly interested in the subject of electric smelting, judging from the persistent applications made to my Branch for reports and information.

Before leaving this subject, I would like to call your attention to a special method capable of wide application in the delimitation of magnetic ore bodies, which constitute our most abundant iron ore deposits. This method is described and explained in my report upon the location and examination of magnetic ore bodies by magnetometric measurements, published in 1904. By means of this system we are enabled to locate magnetic ore bodies buried out of sight by soil and to determine their general extent and inclination to the horizon. This latter information is especially valuable, since it enables the mining engineers to locate accurately their bore holes for the purpose of proving the deposit. Under favorable circumstances, if the ore body consists of compact magnetite and the surface is fairly level, it is also possible by this method to determine the extent of the ore body beneath the surface and the depth to which it descends into the earth.

This method has been applied by members of my staff for the past seven years, and has been of great service in determining the extent and probable value of the magnetite deposits examined. In one instance a deposit which had been condemned as of no value, proved, on examination by the magnetometric method, to be of considerable extent. Bore holes were located by our engineer, and it was found that the deposits, on the most conservative estimate, contained some eight million tons of ore.

The publication of our magnetometric survey maps has attracted the attention of iron ore experts in other countries, notably Dr. Leith, of the United States Geological Survey, and Dr. Phillips, of the Bureau of Mines of the University of Texas. Both these gentlemen have made application to the Department for the services of one of our experts to instruct members of their staff in the application of the magnetometric method. As this system becomes more generally known and practised, valuable magnetite deposits, which now lie hidden beneath