

Area between Lake Nipigon and Thunder Bay-Kenora District along C.N.R. Port Arthur to Sioux Lookout Line, Ontario

THIS section is largely unexplored by prospectors, except for discoveries east of Graham. This is due to it being a somewhat difficult section of country to cover because prospectors have been following the beaten trails westward of Port Arthur along the former Canadian Northern Railway. It would be strange, however, if this section would not be as prolific of some results as other sections along the "height of land" (exposed core of the pre-Cambrian mountain range) all the way from Mesabi range in Minnesota across Northern Ontario and on past the Rouyn-Harricanaw section up to Chibougamau, where at the latter point good discoveries of copper gold ore have been made.

The accompanying maps show exactly where this divide of the waters of the North American Continent occurs and the proven mining camps throughout its length. It will be noted that the Canadian National Railways cross this mineralized belt eight times, affording a wonderful means of access to prospectors and mining men and traffic facilities for ore to reach purchasing markets.

It may be assumed that mining development will make tremendous strides in the next quarter of a century, and the evidence of this is that in 1925 Canada produced minerals worth \$224,846,227—a gain of 118% in 15 years.

Are Canada's Huge Magnetite Deposits Coming Into the Market?

THE world has used more iron ore since 1906 than in all preceding time. It is drawing on all mineral resources to the enormous extent of over two billion tons per year, and our neighbor to the south is using one-half of the total production, notwithstanding she has only five per cent. of the world's population. The iron ores of Lake Superior District furnish 86% of the output of iron of the U.S. and 40% of the iron ores of the world. As the consumption of iron and steel for motor cars, steel rails, passenger and freight cars, structural steel, etc., is increasing to such an extent that we are to-day living in a metal age, let us consider whether the enormously increased demand is heading us into the use of our lower grade magnetites.

Magnetic iron ores occur throughout the Keewatins in the pre-Cambrian formations to such an extent that it is estimated 62% of the magnetites of the North American continent are in Canada.

All magnetites require some kind of beneficiation process to raise their metallic content. The beneficiated or sintered magnetites have little or no flue dust problem in the blast furnace smelter, now so common on account of more fine ore being used than the former heavier old range ore. Fines cause an irregular working furnace which hangs and slips, producing bad pig iron. This irregular operation will be found to be largely eliminated when uniform sintered ore constitutes the charge and makes possible a column of stock in the furnace, offering a more uniform resistance to the passage of the blast and reducing gasses, than the fine lake ores.

Yearly, therefore, not so much from the depletion of the higher

grade American hematite ranges, as from the metallurgical viewpoint of the value of having a sintered ore available, the feeling is better towards the higher grade magnetites from around 37% ore, upward. Probably 25% ore, on which recent beneficiation plants in the States have been erected, may be a little low in grade as yet and probably present beneficiation equipment and methods will lead up to better methods, yet evidently high grade magnetites having a short rail haul to water borne transportation are going to come into their own, steadily year by year and be active within five years. Their acquisition and development should not be entirely lost sight of, as a most important factor is the fact that *there is no tax on indicated or proved ore reserves in Canada.*

When American operators grasp this outstanding fact, we will see an awakening of diamond drilling interest in Canada. Reasonable working option terms can be arranged with the holders of large high grade magnetic deposits on our lines throughout Canada. Both Ontario and Quebec are paying a bounty on iron ore production at the pits' mouth, and co-operation by the Dominion is warranted.

The Canadian National Railways tap the very best of both the magnetic properties and hematite prospects throughout Canada, the location of which we do not set out in detail here. These ranges exist largely on those lines of our railway which bridge the long gap between East and West. The Canadian Nationals are heavy purchasers of iron and steel rails and equipment, and it is therefore sound economics for us to be vitally interested.