

Nickel.—Although used in much smaller quantities than copper, lead, and zinc, nickel is no less important as a war metal, both because of its strictly military uses such as in armour plate, gun forgings, gun recoil springs, and bullet jackets, and for its use in industrial nickel steels applied to military needs. Canada's extensive nickel-ore deposits near Sudbury are the present source of about 85 p.c. of the world's nickel, just as they were the principal source of nickel during the War of 1914-18. Production has, however, been greatly increased by reason of the increasing industrial uses of the metal, the peak peace-time production of 112,452 tons in 1937 being nearly $2\frac{1}{2}$ times that of 1918 when Great War requirements were at their maximum. The outstanding development since 1918 has been the increased production of refined metal, the refinery at Port Colborne, Ont., which had an output of only 1,204 tons in 1918, now having an annual capacity of 75,000 tons of refined nickel. The output of refined metal in 1938 was 62,141 tons, or almost 60 p.c. of the year's total production of Canadian nickel.

The Canadian nickel producers are, therefore, in a position to provide ample supplies of nickel, both in refined and unrefined forms. Moreover, they can do so profitably at prices much below those that were paid during the War of 1914-18. This is indicated by the fact that the value of the 1939 production, estimated at 113,053 tons, largely refined metal, averaged $22\frac{1}{2}$ cents per pound, compared with the corresponding average value of $36\frac{2}{3}$ cents per pound for the entire output, almost wholly in unrefined form, for the four years from 1915 to 1918, inclusive.

Iron.—Iron-ore occurrences are numerous and widespread in the Dominion, and were the sources of the entire domestic consumption of pig-iron until 1895. However, with the availability to Ontario of the more cheaply produced and higher grade ores from the Minnesota iron ranges, and to Nova Scotia from the Wabana, Newfoundland, deposits, the production of Canadian iron ore declined until it ceased entirely in 1923.

The outstanding development in Canadian mining in 1939 was the resumption of production of iron ore in Ontario—at the New Helen mine in the Michipicoten district at the northeast corner of Lake Superior—under the encouragement of an Ontario Government iron bounty. The deposits contain an estimated 100,000,000 tons of siderite ore carrying about 36 p.c. iron. The ore is being beneficiated at the mine, the resulting sinter carrying about 53 p.c. iron. Shipments were commenced in the latter part of the year to the blast-furnace at Sault Ste. Marie, and are anticipated to be on the scale of about 300,000 tons annually.

Another significant development, in its bearing upon the reduction of the present Canadian dependence upon outside sources of iron ore, was the discovery in the winter of 1937-38 of large deposits of high-grade hematite ore, containing from 51 to 60 p.c. iron, at Steep Rock Lake, about 135 miles west of Port Arthur. Exploration and development have since been in progress. The present indications are that this is likely to prove one of Canada's most important mineral discoveries in recent years.

While of relatively small immediate importance in relation to the present war effort, these developments have a large potential significance in conserving Canada's exchange position by reducing foreign expenditures for the imported iron ores now used in Ontario's blast furnaces.

Platinum Group Metals.—The nickel-copper ores of Sudbury contain small quantities of the platinum group metals which collect in the sludge remaining from the