

MINERAL RESOURCES.

Small quantities of native copper have been found on the shores of lake Superior, but as yet not in economic quantities. Between the Sudbury district and Sault Ste. Marie, along the north shore of lake Huron and extending northward for forty miles, is a district in which many discoveries of low-grade copper ores have been made. It is believed that there are large quantities of copper ore, but no economic method of concentration has been introduced, and all the mines that were opened have suspended operations. The Bruce and Walker mines in this district were at one time much talked about. Large quantities of ore were taken out. Practically all the copper produced in Ontario comes from the nickel ores of the Sudbury mines and the Alexo mine. Many small deposits of copper have been found in different parts of New Brunswick, but most of them have not been considered sufficiently large to be worth working. A considerable amount of capital has been invested in the Intercolonial Copper Company's mine near Dorchester, N.B. The ore of this mine contains an excessive quantity of lime, silica and iron, but it is claimed that an economical process of concentration has been adopted. A copper vein at Annidale, King's county, is also being worked. Copper sulphides have been discovered at a number of points in Nova Scotia, but no important producing mines have been developed. In the Eastern Townships of Quebec province many small deposits of copper sulphides have been discovered, and at some points they are found in considerable quantities. Mining operations have been conducted for many years. In the vicinity of Sherbrooke there are three active mines. The sulphur content of the ore, which runs over 40 p.c., is utilized for the manufacture of sulphuric acid, and the copper is then recovered from the residues by smelting. Small quantities of gold and silver are also recovered from these ores.

Copper-bearing minerals have been found in a great many localities in British Columbia, both in the interior and on the coast and the islands along the coast. New discoveries may be expected from time to time. Dr. Eugene Haanel states that the copper-bearing minerals are usually chalcopyrite or bornite, or both. These may occur alone, but usually they are found in association with other minerals, the commonest of which are pyrrhotite, magnetite, pyrite, mispickel and occasionally blende and galena. The principal districts in which important discoveries have been made are in southern British Columbia, in the West Kootenay and Kamloops districts, in the Coast district at a number of points along the mainland, on Vancouver island and on some of the coastal islands. The most important active producing mines are at Rossland, at Phoenix, and at Motherlode in the interior, and at Britannia or Howe sound, Texada island, and Granby bay on the coast. In the Rossland ores gold is the most valuable constituent, the gold content varying from 0.4 oz. to about 1.5 oz. per ton, the silver from 0.3 oz. to 2.5 oz. per ton, while the copper content runs from 0.7 p.c. to about 3.5 p.c. The deposits of copper-bearing ores in the Boundary district range in size from small lenses less than 20 feet in thickness and 100 feet in length to huge ore bodies, one mine at Phoenix having a thickness of 125 feet, a known width of 900 feet and a length of about 2,500 feet. The average ore contains from 1.2 to 1.6 p.c. of copper with about one