

## CHAPTER XII.—MINES AND MINERALS.\*

NOTE.—An article on the geology of Canada will be found at pp. 14-25 of the present edition of the Year Book.

**Historical Sketch.**—The early settlements in the lower St. Lawrence valley were hemmed in by the non-agricultural rock formations of the Canadian Shield which approached closely to the first points of colonization. An important epoch of Canadian expansion, about the middle of the 19th century, coincided with the surmounting of the transportation difficulties presented by the arm of the Canadian Shield which crosses the St. Lawrence river above Montreal and is responsible for the series of rapids between that city and lake Ontario. A second and greater period of expansion followed again when railways bridged the barriers of rocky country separating lake Superior in the east and the Pacific coast in the west from the extensive agricultural plains of the Prairie Provinces. These forbidding areas, with their exposed ancient rocks, their forests, and their lakes, which impeded Canadian growth and agricultural settlement until nearly the end of the 19th century, have now become the chief source of the expansion of wealth and productive activity because of their resources of pulpwood, water power, and mineral deposits.

The discovery of minerals in Canada was closely associated with the early exploration of the country. Iron and silver, and later coal, were reported in Nova Scotia by some of the first French adventurers. Bellin's maps published in 1744 indicated the existence of silver-lead not ten miles distant from the now famous Cobalt Silver Camp. However, in the early period of Eastern Canada's history such development of mineral resources as occurred was almost entirely incidental to the agricultural colonization of the country and consisted principally of the smelting of bog iron ores and of the production of such necessities as salt and building materials.

Though coal was discovered on Vancouver island in 1835, it was the alluvial deposits of the Fraser river and the gold rush to the Cariboo in 1859 that really opened up the interior of the mainland, so that, on the western coast, mineral exploitation preceded agricultural settlement.

These early isolated discoveries were followed by others, notably the gold ores of Nova Scotia, the copper-nickel of Sudbury, the silver of Silver islet on lake Superior, copper-gold at Rossland, and silver-lead in the Kootenays. A foundation for the mining industry was laid with the setting up of the Geological Survey of Canada under Sir William Logan and the publication in 1863 of the *Geology of Canada*. However, it was not until the mining development in British Columbia in the 1890's and the discovery of rich deposits of silver and gold in northern Ontario in the first decade of this century that the mining industry began to give promise of its tremendous possibilities. The effects of successive steps in the development of the mineral resources may be traced in the per capita figures of mineral production in Table 1, p. 317. The first period of rapid increase from 1895 to 1900 resulted from

\* The sections of this chapter, with the exception of Section 1, have been revised, as regards production figures, by W. H. Loese, B.Sc., Chief of the Mining, Metallurgical and Chemical Branch, Dominion Bureau of Statistics. A complete list of the publications of this Branch appears in Chapter XXIX, Section 1. Subsection 1 of Section 1 has been compiled from material supplied by the Lands, Parks and Forests Branch of the Department of Mines and Resources, Ottawa, and Subsection 2 of Section 1 from material furnished by the Provincial Governments.