

recorded in any other period shown in the table. The fact that silver is to a great extent a by-product was responsible to some extent for its low price.

Subsection 3.—Copper.

The copper-mining industry has developed at a very rapid rate. A production of 3,505,000 lb. in 1886 had doubled 6 years later. By 1913, the output had increased over twenty-one fold, amounting to 76,976,925 lb. The extraordinary demand for war requirements resulted in an average production from 1916 to 1918 of 115,048,931 lb. In the post-war depression production dropped to less than 43,000,000 lb. in 1922, but recovered rapidly and by 1930 had risen to a new peak of 303,478,356 lb. In the two following years, as a result of the world-wide depression with very low prices prevailing for copper, production declined to 247,679,070 lb. in 1932. In 1933 the output again increased to 299,982,448 lb., while for 1934 it was estimated at 364,761,062 lb. This encouraging recovery in copper production not only reflects the stability of the copper-mining industry but emphasises the firmly entrenched position established by the Canadian metal in the copper-consuming countries of the world. Some Canadian copper producers, located principally in Manitoba, Ontario and Quebec, are fortunate in possessing ores containing sufficiently high values in precious metals to permit of operation in spite of the abnormally low copper prices prevailing almost continuously since 1930. However, the unfavourable copper market existing during recent years has not encouraged production and has curtailed the search for and development of new copper properties. In June of 1932 the United States instituted a duty of 4 cents per pound on foreign copper, which adversely affected Canadian copper production, more especially that of British Columbia. On the other hand, Canadian copper enjoys a preference in the United Kingdom and a large part of Canadian production now goes there.

Quebec.—Until 1894, when Ontario took the lead, Quebec was the chief copper-producing province of Canada, the principal mines being the Eustis and Huntingdon properties in the Eastern Townships. There is still an annual production from this field. Recent developments in the Rouyn camp of northwestern Quebec have resulted in a greatly increased production of copper since 1927. These deposits are associated with an easterly extension of Precambrian formations such as those of the Kirkland Lake area in Ontario. The first discoveries were located as gold prospects; the existence of large bodies of copper and zinc ores was subsequently proved and there is now a large production of copper as well as of gold. Since 1931 the Canadian Copper Refineries, Ltd., have treated blister copper in their electrolytic refinery located at Montreal East. This material comes from the Noranda smelter in Quebec and the Flin Flon smelter in Manitoba. Gold, silver, selenium and tellurium are also products of the Montreal refinery.

Ontario.—The Sudbury deposits were first noted in 1856 but did not attract attention until 1883-84, during the construction of the C.P.R., when a railway cutting was made through the small hill on which the Murray mine was afterwards located. During the first years the deposits were developed for their copper content alone; not until 1887 was the presence of nickel determined and the true value of the ores known. These nickel-copper ores of the Sudbury area are the source of nearly all the copper produced in Ontario. Under the International Nickel Co. of Canada, an amalgamation of the former International Nickel Co. and the Mond Nickel Co., an extensive program of expansion in the mining and metallurgical facilities of the district has been carried out. A subsidiary company, the Ontario Refining Co., Ltd., operates a copper refinery at Copper Cliff where electrolytically refined copper,