

### Subsection 6.—Cobalt.

The major portion of the world supply of cobalt has for almost two decades been derived from the silver-cobalt-nickel arsenides of the Cobalt district, the cobalt produced by refineries in southern Ontario having practically controlled world production until recent years. Large deposits of cobalt-bearing ores occur in central Africa, and the introduction into the world's markets of cobalt from this source has limited the market for the Canadian product to the extent that since 1926 Canadian production has dropped to about half of the world production.

The ore bodies at Cobalt, discovered in 1903, carry silver, cobalt, nickel, bismuth and arsenic. The Deloro smelter treats ores and residues and disposes of cobalt oxide, metallic cobalt and unseparated oxides of nickel and cobalt. The cobalt residues from the cyanide process are for the most part treated in Canada, though some are shipped abroad for treatment. The smelter output of cobalt, computed as the metallic cobalt and cobalt in oxides and salts, together with the cobalt recovered in ores exported from the mines, and including cobalt in speiss residues exported, amounted in 1930 to 694,163 lb. valued at \$1,144,007, as against 1,116,492 lb. valued at \$2,328,517 in 1925. Production in 1931 is estimated at 521,051 lb.

### Subsection 7.—Zinc.

The zinc-mining industry of Canada has recently made rapid strides, largely on account of the application of improved metallurgical methods in the treatment of the lead-zinc ores of British Columbia. The metallic recoveries from Canadian ores were 267,643,505 lb. in 1930, as compared with 5,600,000 lb. in 1913. From an insignificant position in 1913 the country advanced to the fourth rank among the world's producers in 1930 with an output of about 8.0 p.c. of the world total. Production in 1931 is estimated at 237,245,451 lb.

**British Columbia.**—The principal zinc-mining regions are situated in the Kootenay district of British Columbia, where there are large deposits of silver-lead-zinc ore. The chief producing mine is the Sullivan near Kimberley, where the ore worked is a replacement deposit of considerable size. Other active mines are located in the Ainsworth and Slocan divisions of the West Kootenay district.

**Other Provinces.**—There has been considerable exploration and development of zinc-bearing deposits in Eastern Canada during recent years. The majority of these ores are of the replacement type and are often characterized by a close association of copper, zinc and gold. In northwestern Manitoba the Flin Flon and Sherritt-Gordon mines are operating on ores of this nature and refined zinc has been made at the Flin Flon smelter since the autumn of 1930. Some small shipments of zinc concentrates were made from the Errington mine of the Sudbury district and important deposits of zinciferous ore have been developed in the Rouyn district of Quebec.

The urgent demand for zinc during the Great War was largely responsible for energetic and aggressive action on the part of the Consolidated Mining and Smelting Co., owners of the Trail plant, in producing this metal; with this object in view, the erection of an electrolytic zinc refinery was commenced in 1915, rushed to completion and put into operation early in 1916. The company had then to turn its attention to solving the problem of recovering the values in the complex lead-zinc ores of the famous Sullivan mine. This was largely a problem of concentration