

in order to separate the finely divided lead and zinc ores. From the opening of the zinc refinery in 1916 regular shipments of zinc ore were made from the Sullivan and other mines, but it was not until four years later that the problem of concentration was satisfactorily solved by the application of oil flotation methods. Since that time the production of lead, zinc and silver has rapidly increased. Recent enlargements to the plant at Trail have enabled further increases in production to be made.

#### 17.—Production of Zinc in Canada, calendar years, 1911-31.

Year.	Quantity. <sup>1</sup>	Value.	Average Price per Pound.	Year.	Quantity. <sup>1</sup>	Value.	Average Price per Pound.
	lb.	\$	cts.		lb.	\$	cts.
1911.....	1,877,479	108,105	5.758	1921.....	53,089,356	2,471,310	4.655
1912.....	4,283,760	297,421	6.943	1922.....	56,290,000	3,217,536	5.716
1913.....	5,640,195	318,558	5.648	1923.....	60,416,240	3,991,701	6.607
1914.....	7,246,063	377,737	5.213	1924.....	98,909,077	6,274,791	6.344
1915.....	9,771,651	1,292,789	13.230	1925.....	109,268,511	8,328,446	7.622
1916.....	23,364,760	2,991,623	12.804	1926.....	149,938,105	11,110,413	7.410
1917.....	29,668,764	2,640,817	8.901	1927.....	165,495,525	10,250,793	6.194
1918.....	35,033,175	2,862,436	8.159	1928.....	184,647,374	10,143,050	5.493
1919.....	32,194,707	2,362,448	7.338	1929.....	197,267,087	10,626,778	5.387
1920.....	39,863,912	3,057,961	7.671	1930.....	267,643,505	9,635,166	3.609
				1931 <sup>2</sup> .....	237,245,451	6,059,249	2.554

<sup>1</sup> Estimated foreign smelter recoveries and refined zinc made in Canada.

<sup>2</sup> Preliminary figures.

#### Subsection 8.—Iron.<sup>1</sup>

The fact that iron ore is widely distributed in Canada has long been known and extensive deposits have been discovered from time to time. In Quebec there is a small annual production of titaniferous iron ore from a deposit near Baie St. Paul, but this material which is principally exported is used for its titanium content and not as a source of iron. There are millions of tons of iron magnetite sands, containing a high percentage of iron, along the north shore of the St. Lawrence in Saguenay county but these sands also contain a high percentage of titanium, rendering the briquetted ore unfavourable for blast-furnace treatment, so that efforts to utilize them have not proved successful. There are a number of deposits of bog iron ore in the St. Lawrence valley remarkably free from sulphur and phosphorus. These bog iron ores were successfully used in charcoal blast furnaces at Radnor Forges and Drummondville for many years. The known deposits of non-Bessemer iron ore in northern Ontario are very extensive. Millions of tons of red hæmatite were taken from the Helen mine in the Michipicoten district, while the Magpie mine in the same district produced siderite which was roasted before being shipped to the blast furnaces at Sault Ste. Marie owned by the Algoma Steel Co. In British Columbia, some development work has been done on iron deposits on Kamloops lake and on Texada island, but no iron-mining nor iron-smelting industry has become established in that province. Extensive deposits of hæmatite are known to exist on the Belcher islands in Hudson bay, but the ore is rather low in grade and its inaccessibility at the present time renders its development impracticable. Immense deposits of iron ores, large masses being high-grade, have been reported along the course of the Koksoak river, in northern Quebec, but these are so inaccessible that up to the present they have not even been systematically explored.

<sup>1</sup> A sketch of the iron and steel industry of Canada was given on pp. 452-456 of the 1922-1923 Year Book.