

	1910. Tons.	1911. Tons.	1912. Tons.
Nickel copper ores .....	628,947	610,834	725,065
Silver-cobalt nickel-arsenic ores .....	9,466	9,330	8,136
Lead and other ores treated in lead furnaces.....	57,549	55,408	63,042
Copper-gold-silver ores .....	1,987,752	1,517,981	2,212,316
Total .....	2,683,714	2,193,553	3,008,559

The products obtained in Canada from the treatment of these ores include: refined lead produced at Trail, B.C., and fine gold, fine silver, copper sulphate, and antimony produced from the residues of the lead refinery; silver bullion, white arsenic, nickel oxide, and cobalt oxide produced in Ontario, from the Cobalt District ores. In addition to these refined products, blister copper, copper matte, nickel-copper matte, cobalt material or mixed nickel and cobalt oxides are produced

and exported for refining outside of Canada.

The aggregate results of smelting and refining operations may be summarized as shown in the next table. Unfortunately the figures cannot be taken to represent the total production from smelting ores mined in Canada, since considerable quantities of copper and silver ores are still shipped to other smelters outside of Canada for smelting.

	1911.		1912.	
	Refined products.	Metals contained in matte blister, base bullion and speiss.	Refined products.	Metals contained in matte blister, base bullion and speiss.
Gold, ozs. ....	15,270	175,189	12,118	184,815
Silver, ozs. ....	19,078,768	585,896	17,877,914	686,171
Lead, lbs. ....	23,525,050	.....	35,893,190	.....
Copper, lbs. ....	.....	29,855,868	.....	58,405,910
Copper sulphate .....	197,187	.....	87,110	.....
Nickel .....	.....	34,098,744	.....	44,841,542
*Nickel and cobalt oxides .....	1,415,006	.....	1,634,087	.....
White arsenic .....	4,194,209	.....	4,090,756	.....

Smelter products shipped outside of Canada for refining were: blister copper carrying gold and silver values 17,069 tons in 1912, as compared with 10,710 tons in 1911; copper matte carrying gold and silver values 6,727 tons in 1912, as against 11,320 tons in 1911; Bessemer nickel-copper matte carrying small gold and silver value as well as metals of the platinum group 41,925 tons in 1912, as compared with 32,607 tons in 1911.

#### Gold.

The gold production of 1912 is estimated at approximately \$12,559,443, which compared with the 1911 production \$9,871,077 shows an increase of \$2,778,366.

The Yukon placer production in 1912 is estimated at \$5,540,000, as against \$4,580,000 in 1911, the total exports on which royalty was paid during the calendar year, according to the records of the Department of Interior, being 335,015.67 ounces in 1912 and 277,430.97 ounces in 1911. The British Columbia production in 1912 was \$5,167,390, of which the placer production, as estimated by the Provincial Mineralogist, was \$500,000, smelter recoveries and bullion obtained from milling ores being valued at \$4,667,390. The main feature of the year was the large increase from Ontario due to the commencement of operations by several mills in the Porcupine district, the province producing \$1,745,292 as against \$42,625 in 1911.

In Quebec there is a small amount credited to the pyritic ores as well as a small recovery from Beauce county and the Nova Scotia estimate shows a further decrease.

The exports of gold-bearing dust, nuggets, gold in ore, etc., in 1912, were valued at \$10,014,654.

\*Nickel oxide, cobalt oxide and cobalt material, etc., not all completely refined.

Gold in bars, blocks, ingots, etc., was imported in 1912 to the value of \$1,096,546.

#### Silver.

In quantity there was a slight decrease in the silver production in 1912, returns to date showing a production of 31,931,710 fine ounces, an apparent falling off of 627,334 ounces, but due to the increased price, the value shows an increase from \$17,355,272 in 1911 to \$19,425,656 in 1912 or \$2,079,384.

Of the 1912 production 29,190,122 ounces were from Ontario, 2,651,118 from British Columbia, the increases being from British Columbia and the Yukon.

For British Columbia the figures represent the recovery as millbullion or silver contained in smelter products, while for Ontario the figures represent the total silver content of ore and concentrates shipped, less five per cent. allowed for smelter losses, together with bullion shipments.

The total shipments of ore and concentrates from the Cobalt district and adjacent mines were about 29,116 tons, containing approximately 25,684,082 ounces, in addition to which 4,773,878 ounces were shipped as bullion.

There was also a small silver recovery from the gold ores of Ontario.

In Quebec the silver was derived from the pyritic ores of the eastern townships.

The exports of silver in ore, etc., as reported by the Customs Department were 34,911,922 ounces, valued at \$19,494,416. There was also an importation of silver in bars, blocks, sheets, etc., valued at \$822,020.