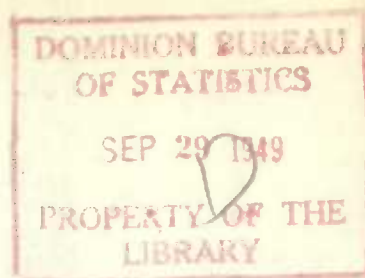


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*Government of Canada*

**THE NON-FERROUS SMELTING  
AND REFINING INDUSTRY  
IN  
CANADA  
1948**



DOMINION BUREAU OF STATISTICS  
DEPARTMENT OF TRADE AND COMMERCE

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Prepared in the Mining, Metallurgical and Chemical Section,  
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Dominion Bureau of Statistics, Ottawa

## THE NON-FERROUS SMELTING AND REFINING INDUSTRY IN CANADA - 1948

The Non-ferrous Smelting and Refining Industry, as defined for statistical purposes, includes only those firms engaged primarily in the smelting of non-ferrous ores or concentrates and the refining of metals recovered therefrom.

The net value added by the industry in the processing of crude or semi-crude material during 1948 totalled \$146,830,891 compared with \$115,798,652 in 1947. Refined products included gold, silver, nickel, copper, lead, zinc, aluminum, tin, magnesium, calcium, barium, antimony, bismuth, cobalt, cadmium, selenium, tellurium and sulphur; other end products of individual plants or companies were copper-nickel matte, cobalt salts, cobalt oxide, nickel oxide, nickel salts, bauxite concentrates, arsenious oxide, sulphuric acid, platinum metals residues, zinc oxide, zinc dust, and blister and anode copper. Statistics relating to the production of pitchblende products at Port Hope, Ontario, are not included in this report.

It should be noted, in a study of these data, that firms operating both mines and smelters may vary from year to year the nominal values of crude ores, etc., shipped from their mines to their own smelters, with the result that in some years the mining industry proper is favoured economically at the expense of the non-ferrous smelting and refining industry and vice versa. The total annual net value of commodity production for the Dominion as a whole is, however, not affected by these arbitrary internal evaluations.

Fuels and electricity used by the industry in 1948 totalled \$36,288,387 compared with \$28,967,359 in 1947. The value of chemicals and other process supplies consumed during the year amounted to \$31,037,029 as against \$25,068,884 in the preceding year.

The average number of employees during 1948 was 19,701 compared with 17,449 in 1947 and salaries and wages amounted to \$52,276,837 compared with \$40,767,871 in the previous year.

Aluminum Company of Canada Ltd. - Production of aluminum is entirely by this company, which has its alumina plant at Arvida and reduction plants at Arvida, Ile Maligne, Shawinigan Falls, La Tuque and Beauharnois, all in the province of Quebec. These reduction plants have a total rated capacity of about 550,000 tons of aluminum a year or over 20 per cent of the estimated productive capacity of the world.

Fabricating plants are located at Kingston, Toronto and Etobicoke in Ontario and at Shawinigan Falls in Quebec. These plants consume only a small part of the company's production, and Aluminum Company of Canada is primarily a producer and exporter of aluminum ingot.

Developments in 1948 consisted mainly in adjusting production to meet the increased demand. The reduction plants at La Tuque and Beauharnois were closed and operations were concentrated at Arvida, Ile Maligne, and Shawinigan Falls.

Noranda Mines Ltd. (From the company's annual report) - During the year the smelter treated 836,450 tons of ore, concentrate and secondary products such as refinery slag and scrap copper and brass, from which 102,707,500 pounds of anodes were produced. Included in the total tonnage treated were 327,049 tons of materials which were treated for other companies on a toll basis. After deducting the copper, gold and silver recovered from secondary products the estimated recovery of new metals was 97,756,497 pounds of fine copper, 186,602 ounces of gold and 1,254,365



ounces of silver. The estimated recovery from Horne Mine ores and concentrate was 43,731,979 pounds of copper, 142,273 ounces of gold and 437,493 ounces of silver. In addition 2,291 tons of blister copper received from a customs shipper were melted and processed into anodes.

Canadian Copper Refiners Limited - Copper production totalled 95,410 tons in 1948 compared with 88,930 tons in 1947. The extension program which will increase refinery capacity by approximately one-eighth, and provide for the production of special shapes is scheduled for completion in June, 1949.

International Nickel Company of Canada Ltd. (From President's address, April, 1949) - "Canada has in recent years greatly increased her position as an important copper consumer. As a result, our sales of copper for Canadian consumption in 1948 were some 115,000,000 pounds or 90 per cent greater than before the war. Our plant at Port Colborne for the recovery of cobalt is now producing about 15 tons of metal in oxide monthly and an increase in output of this important element is contemplated. A large portion of this metal produced at our Clydach plant is sold in the form of cobalt salts.

The platinum market, during the year was subject to many price changes and, at times, to unusually heavy demands from trade throughout the world. The range in quoted prices was from \$66 to \$101 per ounce.

Our Orford process served well for many years in the production of the world's nickel requirements. However, we have developed a better process. A plant has been built for the separation of copper, nickel and platinum metals in matte by subjecting the matte to controlled cooling, flotation and magnetic separation. The matte flotation operations in the new nickel oxide sinter plant commenced in September and are rapidly approaching full-scale production, practically replacing the Orford process. The transfer of sintering operations from Port Colborne to Copper Cliff will soon be completed.

Further progress has been recorded in the flash smelting of nickel and copper flotation concentrates with oxygen. As announced last May, results obtained in our pilot unit have justified the planned construction of an oxygen plant and of an initial flash smelting furnace on a commercial scale. The new process will permit a considerable saving in coal requirements, and at the same time will serve both to increase the production of sulphuric acid and to enable the production of liquid sulphur dioxide from furnace exhaust gases by Canadian Industries Limited".

Falconbridge Nickel Mines Ltd. (From the company's annual report) - In 1948 the treatment plants handled an average of 2,346 tons for 350 days, and were shut down for sixteen days in February. The mill treated 545,463 tons or 66.4 per cent of the plant feed. Ore and concentrates smelted totalled 406,352 tons or 49.4 per cent of the total ore received from the mine. During the year one blast furnace operated 5½ months and two furnaces for six months. The breakdown in August of a large converter blower resulted in six weeks' operation with inadequate smelter air.

Deloro Smelting and Refining Co. Ltd. - The cobalt refinery at Deloro, Ontario, treated ores from the cobalt district. The stockpile of cobalt ore at Deloro held by the United States Government was transferred to New Jersey. Arsenical compounds produced at Deloro are made from the crude arsenic obtained from the O'Brien mine in Northwestern Quebec and from the silver-cobalt-arsenic ores of the Cobalt area.

Dominion Magnesium Ltd. - This firm was the only Canadian producer of magnesium during the war. Production temporarily ceased when the stockpile of metal became large enough to meet the current demands of the market. Equipment previously used for magnesium recovery is now used to produce metallic calcium. Calcium is being used by the research project on nuclear fission. Some barium metal was made in 1948 and some metallic strontium was produced on an experimental scale. Extensive research has developed a process which this company proposes to use to produce metallic titanium on a large commercial scale.

Hudson Bay Mining & Smelting Co. Ltd. (From the company's annual report)- The tonnage of zinc concentrates treated during the year was greater than in 1947 while the average zinc assay per ton of concentrates treated was slightly lower. The percentage of recovery of zinc from concentrates treated to slab zinc produced was also somewhat lower than in 1947. The tonnage of high quality four-nines-plus grade zinc produced was the largest on record and considerably over the former peak established in the previous year.

The cadmium plant treated precipitates from the zinc purification plant and produced in 1948 a total of 148,864 pounds of metallic cadmium having an average purity of 99.98 per cent. Production was somewhat lower than in the preceding year.

The copper smelter operated satisfactorily during the year, and all available material was smelted. The tonnage of pay charge was somewhat lower than in the previous year and amounted to 421,745 tons, but the average gold, silver, and copper assays per ton of pay charge were higher, which resulted in higher overall production of gold, silver and copper.

Consolidated Mining & Smelting Co. of Canada Ltd. (From the company's annual report) - Studies on new process were continued, those of particular interest being concerned with the reclamation of tailings dumps and slag piles accumulated during previous operations of the company. As a result of this work, the old concentrator at Trail was reconditioned and put into operation. Important recoveries of metallic values have already been achieved. A small plant is now being built for the recovery of lead from slags by leaching methods.

Table 1 - PRINCIPAL STATISTICS OF THE NON-FERROUS METALLURGICAL INDUSTRY IN CANADA, 1946-1948

	1946	1947	1948
Number of companies .....	9	9	9
Number of plants .....	15	16	17
Number of administrative and office employees .....	2,238	2,538	2,858
Salaries .....	\$ 6,277,577	7,690,271	8,917,548
Number of workmen .....	12,308	14,911	16,843
Wages .....	\$ 24,370,784	33,077,600	43,359,289
Value of plant products (gross)(a) \$	304,718,524	453,033,942	576,383,967



Non-ferrous

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Table 1 - PRINCIPAL STATISTICS OF THE NON-FERROUS METALLURGICAL INDUSTRY IN CANADA,  
1946-1948 (Concluded)

		1 9 4 6	1 9 4 7	1 9 4 8
Estimated cost of ores, concen- trates, etc., treated .....	\$	196,864,066	283,199,047	362,227,660
Cost of fuel and purchased elec- tricity .....	\$	22,287,572	28,967,359	36,288,387
Process supplies (other than ores, fuel, etc.) .....	\$	16,000,964	25,068,884	31,037,029
Value added by smelting (net) (b).	\$	69,565,922	115,798,652	146,830,891

(a) The gross value of production should not be interpreted as the ultimate sale value of finished metal only, as it represents the combined values of all industry (smelting, refining, etc.) and products (blister, copper matte, etc.) and in this sense represents a duplication in values.

(b) See preceding text.

Note: Data in this report do not include those relating to Eldorado Mining and Refining Ltd. which mines and refines pitchblende products.

Table 2 - NUMBER OF WORKMEN, BY MONTHS, 1947 and 1948 (Administrative and Office  
Employees not Included)

Month	1 9 4 7		1 9 4 8	
	Male	Female	Male	Female
January .....	13,923	65	15,831	56
February .....	14,091	63	16,078	52
March .....	14,161	61	16,338	54
April .....	14,238	61	16,560	56
May .....	14,412	63	17,247	61
June .....	14,751	66	17,501	64
July .....	15,418	69	17,599	64
August .....	15,332	69	17,395	60
September .....	15,572	65	17,326	61
October .....	15,493	68	17,088	61
November .....	15,426	69	16,229	54
December .....	15,328	67	16,225	53
AVERAGE .....	14,845	66	16,785	58

Table 3 - FUEL AND ELECTRICITY USED IN THE NON-FERROUS SMELTING AND REFINING INDUSTRY, 1947 and 1948

Kind	Unit of measure	For Light and Power		For Metallurgical Purposes	
		Quantity	Cost	Quantity	Cost
			\$		\$
<u>1 9 4 7</u>					
Bituminous coal: Canadian ...	short ton	4,281	43,623	214,397	1,821,478
Imported ...	short ton	28,172	242,332	600,653	5,275,832
Coke .....	short ton	1,007	14,637	268,012	3,644,512
Gasoline .....	Imp.gal.	183,287	58,072	155,754	45,523
Kerosene or coal oil .....	Imp.gal.	12,116	2,435	8,274	2,119
Fuel oil and diesel oil .....	Imp.gal.	323,921	42,147	35,620,219	2,821,524
Wood (cords of 128 cubic feet)	cord	...	...	1,674	24,830
Charcoal .....	lb.	...	...	1,095,347	26,437
Gas: Manufactured .....	M cu.ft.	...	...	6,621	6,279
Natural .....	M cu.ft.	...	...	439	374
Electricity purchased .....	K.W.H.	758,408,571	1,909,021	6,744,744,405	12,986,184
TOTAL .....	...	...	2,312,267	...	26,655,092
Electricity generated -					
For own use .....	K.W.H.	1,383,075	...	538,773,525	...
For sale .....	K.W.H.	6,591,796	18,868	...	...
<u>1 9 4 8</u>					
Bituminous coal: Canadian ...	short ton	5,956	66,939	328,299	3,301,130
Imported ...	short ton	32,269	312,140	806,321	6,654,205
Coke .....	short ton	2,442	37,847	270,678	4,149,075
Gasoline .....	Imp.gal.	229,876	76,916	263,654	91,207
Kerosene or coal oil .....	Imp.gal.	11,177	2,685	9,180	2,512
Fuel oil and diesel oil .....	Imp.gal.	292,226	48,754	39,206,634	4,055,572
Wood (cords of 128 cubic feet)	cord	7	97	1,925	33,987
Charcoal .....	lb.	28,000	778	524,766	15,698
Gas: Manufactured .....	M cu.ft.	...	...	5,272	5,208
Natural .....	M cu.ft.	...	...	290	290
Electricity purchased .....	K.W.H.	882,437,104	2,387,902	7,293,705,263	15,045,445
TOTAL .....	...	...	2,934,058	...	33,354,329
Electricity generated -					
For own use .....	K.W.H.	15,790,840	...	669,100,088	...
For sale .....	K.W.H.	10,286,760	35,598	...	...

Table 4 - POWER EMPLOYED IN THE NON-FERROUS SMELTING AND REFINING INDUSTRY, 1948

	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power	Number of units	Total horse power
Steam engines .....	21	2,170	5	5,089
Steam turbines .....	9	8,170	4	8,070
Diesel engines .....	14	4,414	2	175
Gasoline, gas and oil engines, other than Diesel engines .....	20	2,525	2	200
Electric motors (except motor- generator sets) -				
(a) Operated by purchased power.	11,845	283,578	3,079	62,735
TOTAL .....	11,909	300,857	3,092	76,269
(b) Operated by power generated by above primary units ....	449	6,446	70	2,022
Stationary power boilers .....	28	22,286	8	11,720
Motor-generator sets .....	195	87,868	30	13,098

Table 5 - AVERAGE ANNUAL METAL PRICES, IN CANADIAN DOLLARS, 1939-1948

Year	Gold	Silver	Copper	Lead	Zinc
	Troy oz.	Troy oz.	Pound (Dollars)	Pound	Pound
1939 .....	36.14	0.405	0.101	0.032	0.031
1940 .....	38.50	0.382	0.101	0.034	0.034
1941 .....	38.50	0.3826	0.101	0.034	0.034
1942 .....	38.50	0.4216	0.101	0.034	0.034
1943 .....	38.50	0.4525	0.1175	0.037	0.040
1944 .....	38.50	0.430	0.120	0.045	0.043
1945 .....	38.50	0.47	0.1255	0.05	0.0644
1946 .....	36.75	0.8365	0.128	0.0675	0.0781
1947 .....	35.00	0.72	0.2039	0.1367	0.1123
1948 .....	35.00	0.75	0.2235	0.1804	0.1393

Table 6 - TOTAL PRIMARY PRODUCTION OF GOLD IN CANADA, 1944-1948 (From all types of ores)

Year	Fine ounces	\$
1944 .....	2,922,911	112,532,073
1945 .....	2,696,727	103,823,990
1946 .....	2,832,554	104,096,359
1947 .....	3,070,221	107,457,735
1948 .....	3,529,608	123,536,280



Table 7 - SOURCE OF CANADIAN GOLD PRODUCTION, 1944-1948

Year	In alluvial gold	In crude gold bullion produced at mines	In base bullion produced at lead smelters	In blister copper	In ores, matto, slags, etc. exported	Total gold produced
	%	%	%	%	%	fine oz.
1944 .....	1.14	78.98	0.12	15.41	4.35	2,922,911
1945 .....	1.55	76.77	0.09	15.30	6.29	2,696,727
1946 .....	2.15	80.91	0.16	13.48	3.30	2,832,554
1947 .....	1.74	84.41	0.15	9.40	4.30	3,070,221
1948 .....	2.23	83.19	0.22	10.01	4.35	3,529,608

Table 8 - TOTAL PRIMARY PRODUCTION OF SILVER IN CANADA, 1944-1948 (From all types of ores)

Year	Fine ounces	\$
1944 .....	13,627,109	5,859,656
1945 .....	12,942,906	6,083,166
1946 .....	12,544,100	10,493,139
1947 .....	12,504,018	9,002,893
1948 .....	16,109,982	12,082,487

Table 9 - SOURCE OF CANADIAN SILVER PRODUCTION, 1944-1948

Source	1944	1945	1946	1947	1948
	(Per cent)				
In silver-cobalt ores .....	5.05	3.68	3.05	2.41	6.08
In base bullion (x) .....	35.52	39.52	46.72	43.96	41.03
In gold bullion and placer .....	3.18	3.38	3.79	4.03	3.82
In blister and anode copper .....	39.10	36.55	31.72	31.43	27.47
In matto, copper ores and silver-lead ores, etc., exported (other than silver-cobalt ores) .....	17.15	16.87	14.72	18.17	21.60

(x) Chiefly from silver-lead ores.

Table 10 - TOTAL PRIMARY PRODUCTION (x) OF COPPER IN CANADA, 1944-1948 (From all types of ores)

Year	Tons	\$
1944 .....	273,535	65,257,172
1945 .....	237,457	59,322,261
1946 .....	183,968	46,632,093
1947 .....	225,862	91,541,888
1948 .....	240,732	107,159,756

(x) Blister copper plus recoverable copper in concentrates and matto exported.

Non-ferrous

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Table 11 - TOTAL PRODUCTION OF NEW COPPER IN CANADA, BY SOURCES, 1947 and 1948

	1 9 4 7		1 9 4 8	
	Pounds	Value \$	Pounds	Value \$
In blister and anode copper produced (x) .....	396,835,392	80,914,735	425,633,452	95,129,075
In ores, concentrates and any copper matte exported	41,800,358	8,402,305	43,096,267	9,611,174
In nickel-copper matte exported .....	13,087,343	2,224,848	12,734,247	2,419,507
TOTAL .....	451,723,093	91,541,888	481,463,966	107,159,756

(x) Contains a relatively small quantity of copper contained in gold and silver ores shipped to Canadian smelters.

Table 12 - PRODUCTION (x) OF REFINED COPPER IN CANADA, 1944-1948

Year	Tons
1944 .....	256,244
1945 .....	228,861
1946 .....	167,221
1947 .....	202,427
1948 .....	221,275

(x) From all sources.

Table 13 - TOTAL PRODUCTION (x) OF NICKEL IN CANADA, 1944-1948

Year	Tons	\$
1944 .....	137,299	69,204,152
1945 .....	122,565	61,982,133
1946 .....	96,062	45,385,155
1947 .....	118,621	70,650,764
1948 .....	131,740	86,904,235

(x) Includes nickel in matte exported, refined nickel produced in Canada, and nickel in oxides and salts sold or produced.

Table 14 - TOTAL PRIMARY PRODUCTION OF ALUMINUM IN CANADA, 1944-1948 (From imported ores)

Year	Tons
1944 .....	462,065
1945 .....	215,713
1946 .....	193,400
1947 .....	299,061
1948 .....	367,079

Non-ferrous

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Table 15 - TOTAL PRIMARY PRODUCTION (x) OF LEAD IN CANADA, 1944-1948 (From all types of Canadian ores)

Year	Tons	\$
1944 .....	152,291	13,706,199
1945 .....	173,497	17,349,723
1946 .....	176,987	23,893,230
1947 .....	161,668	44,200,124
1948 .....	167,251	60,344,146

(x) Lead content of base bullion produced from Canadian ores plus recoverable lead in ores exported.

Table 16 - REFINED LEAD PRODUCTION (x) IN CANADA, 1944-1948

Year	Total from all sources (tons)
1944 .....	143,556
1945 .....	163,142
1946 .....	165,744
1947 .....	162,000
1948 .....	160,025

(x) Includes lead refined from Foreign ores.

Table 17 - TOTAL PRIMARY PRODUCTION (x) OF ZINC IN CANADA, 1944-1948 (From all types of Canadian ores)

Year	Tons	\$
1944 .....	275,412	23,685,405
1945 .....	258,607	33,308,556
1946 .....	235,310	36,755,450
1947 .....	207,863	46,486,010
1948 .....	234,164	65,237,956

(x) Refined zinc produced in Canada plus recoverable zinc in ores exported.

Table 18 - REFINED ZINC FROM ALL SOURCES PRODUCED (x) IN CANADA, 1944-1948

Year	Short tons
1944 .....	168,518
1945 .....	182,266
1946 .....	185,683
1947 .....	177,878
1948 .....	196,575

(x) Includes zinc refined from Foreign ores.



Table 19 - PRODUCTION OF CADMIUM IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	526,970	579,667
1945 .....	646,064	639,603
1946 .....	802,648	979,230
1947 .....	718,534	1,235,879
1948 .....	766,090	1,398,114

Table 20 - PRODUCTION OF SELENIUM IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	298,592	537,466
1945 .....	379,187	728,039
1946 .....	521,867	949,798
1947 .....	518,559	969,705
1948 .....	390,894	781,788

Table 21 - PRODUCTION OF TELLURIUM IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	10,661	18,657
1945 .....	484	929
1946 .....	15,848	24,405
1947 .....	9,194	15,814
1948 .....	11,425	19,994

Table 22 - PRODUCTION OF PRIMARY TIN IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	516,626	299,643
1945 .....	849,983	492,990
1946 .....	874,186	507,028
1947 .....	714,198	517,794
1948 .....	691,332	688,567

Table 23 - PRODUCTION OF PRIMARY BISMUTH METAL IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	123,875	154,844
1945 .....	189,815	260,047
1946 .....	240,504	336,706
1947 .....	284,372	560,213
1948 .....	240,242	480,484

Table 24 - PRODUCTION OF PRIMARY MERCURY METAL IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	735,908	1,210,375
1945 .....	...	...
1946 .....	...	...
1947 .....	...	...
1948 .....	...	...

Table 25 - PRODUCTION OF PRIMARY ANTIMONY IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	1,937,933	281,000
1945 .....	1,667,951	290,557
1946 .....	642,145	96,322
1947 .....	1,150,463	384,255
1948 .....	310,062	113,173

Table 26 - PRODUCTION (x) OF COBALT FROM CANADIAN ORES, 1944-1948

Year	Pounds	\$
1944 .....	36,283	34,106
1945 .....	109,123	90,026
1946 .....	73,900	70,215
1947 .....	572,673	875,644
1948 .....	1,544,852	2,029,178

(x) In metal, salts and oxides produced in Canada and metal in crude ores exported. Exclusive of metal in ores placed on Government stock pile at Deloro, Ontario during 1943 and 1944, but includes metal content of ores shipped from stock pile.

Table 27 - PRODUCTION OF MOLYBDENITE CONCENTRATES IN CANADA, 1944-1948

Year	Tons	\$
1944 .....	1,064	1,079,698
1945 .....	489	411,663
1946 .....	318	295,640
1947 .....	380	309,048
1948 .....	152	137,143

Table 28 - PRODUCTION OF TUNGSTEN CONCENTRATES IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	886,745	245,780
1945 .....	1,153	1,045
1946 .....	...	...
1947 .....	496,023	680,792
1948 .....	1,409,297	1,046,160

Table 29 - PRODUCTION OF MAGNESIUM METAL IN CANADA, 1944-1948

Year	Pounds	\$
1944 .....	10,579,778	2,575,695
1945 .....	7,358,545	1,607,264
1946 .....	320,677	75,538
1947 ..... )	Not available for publication	
1948 ..... )		

Table 30 - PRODUCTION OF ARSENIC (x) ( $\text{As}_2\text{O}_3$ ) IN CANADA, 1944-1948

Year	Tons	\$
1944 .....	1,314	180,866
1945 .....	1,023	130,909
1946 .....	373	38,264
1947 .....	394	49,348
1948 .....	581	82,909

(x) Refined arsenic produced in Canada plus arsenic content of crude arsenic exported. Excluding arsenic in ores exported, but not paid for, from British Columbia.

Table 31 - PLATINUM METALS (x) PRODUCED IN CANADA, 1944-1948

Year	Platinum		Palladium and Other Platinum Metals	
	Ounces	\$	Ounces	\$
1944 .....	157,523	6,064,635	42,929	1,960,085
1945 .....	208,234	8,017,010	458,674	18,871,074
1946 .....	121,771	7,672,791	117,566	5,162,801
1947 .....	94,570	5,582,467	23,218	2,296,884
1948 .....	121,404	10,622,850	148,343	6,295,132

(x) From 1945 the figures represent the metal content of concentrates produced from nickel-copper ores. For earlier years the figures refer to refined metals recovered and the contents of concentrates sold. 1945 includes an accumulated revision of previous years.



Table 32 - CAPACITIES OF CANADIAN COPPER SMELTING AND REFINING WORKS, 1948

Company	Blast Furnaces		Reverberatories		Converters
	Number	Annual capacity: tons of ore and concentrates	Number	Annual capacity: tons of ore and concentrates	
Falconbridge Nickel Mines, Ltd. ....	2	500,000	...	...	3
Hudson Bay Mining & Smelting Co. Ltd. ....	...	...	1	540,000	3
Noranda Mines, Ltd. ....	...	...	2	1,300,000	5
International Nickel Co. of Canada Ltd. -					
Copper Cliff .....	2	430,000	9	3,500,000	20
Coniston .....	4	950,000	...	...	5

## Annual Capacity--short tons

1 9 4 8

Electrolytic Copper Refineries -  
 Canadian Copper Refiners, Ltd. ....  
 International Nickel Co. of Canada, Ltd. ....

112,000

168,000

Table 33 - LEAD SMELTING CAPACITY OF CANADA, 1948

Company	Number of blast furnaces	Annual capacity tons of charge
Consolidated Mining & Smelting Company of Canada, Limited, Trail, British Columbia .....	5	711,100

Table 34 - CAPACITY OF ELECTROLYTIC ZINC PLANTS IN CANADA, 1948

Company	Estimated annual capacity for cathode zinc short tons
Consolidated Mining & Smelting Company of Canada, Ltd. ...	172,875
Hudson Bay Mining & Smelting Co., Ltd. ....	58,598

## DIRECTORY OF FIRMS IN THE NON-FERROUS SMELTING AND REFINING INDUSTRY - 1948

Name of Firm	Head or Executive Office Address	Location of Plant
<u>Quebec</u> -		
Aluminum Company of Canada Ltd.	1700 Sun Life Bldg., Montreal	Arvida, La Tuque Shawinigan Falls Isle Maligne Beauharnois
Canadian Copper Refiners Ltd.	1600 Royal Bank Bldg., Toronto, Ontario	Montreal East
Noranda Mines Limited	1600 Royal Bank Bldg., Toronto, Ontario	Noranda
<u>Ontario</u> -		
Deloro Smelting & Refining Co. Limited	Deloro	Deloro
Dominion Magnesium Ltd.	67 Yonge St., Toronto	Haley
Eldorado Mining and Refining		Port Hope
Falconbridge Nickel Mines Ltd.	304 Bay St., Toronto	Falconbridge
International Nickel Co. of Canada Limited	Copper Cliff	Copper Cliff, Coniston, Port Colborne
<u>Manitoba</u> -		
Hudson Bay Mining and Smelting Co. Limited	500 Royal Bank Bldg., Winnipeg	Flin Flon
<u>British Columbia</u> -		
Consolidated Mining & Smelting Co. of Canada Limited	Trail	Trail

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