



44-214

C.3

Published by Authority of the Hon. James A. MacKINNON, M.P.,
Minister of Trade and Commerce.

CANADA

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

MINING, METALLURGICAL & CHEMICAL BRANCH



THE NON-FERROUS SMELTING

AND

REFINING INDUSTRY

IN

CANADA

1940



OTTAWA
1941

Price 25 cents

Dominion Statistician:

R. H. Coats, LL.D., F.R.S.C., F.S.S. (Hon.)

Chief - Mining, Metallurgical and Chemical Branch:

W. H. Losee, B.Sc.

Mining Statistician:

R. J. McDowall, B.Sc.

THE NON-FERROUS SMELTING AND REFINING INDUSTRY IN CANADA, 1940

The Non-Ferrous Smelting and Refining Industry, as defined by the Dominion Bureau of Statistics, Ottawa, comprises those firms engaged primarily in the smelting of non-ferrous ores or concentrates and the refining of metals recovered therefrom.

The value added by the industry in the processing of crude or semi-crude material during 1940 totalled \$98,059,287 compared with \$80,057,833 in the preceding year. Refined products included gold, silver, copper, lead, zinc, aluminium, antimony, bismuth, cobalt, cadmium, selenium, tellurium, radium salts, uranium compounds and sulphur; other end products of individual plants or companies were copper-nickel matte, cobalt salts, nickel salts, nickel and cobalt oxides, arsenious oxide, sulphuric acid, platinum metals residues, silver sulphide, zinc dust, zinc oxide, and blister and anode copper.

The cost of ores, concentrates and other material treated during 1940 was estimated at \$174,274,655 as against a corresponding value of \$154,879,498 in 1939; fuels and purchased electricity consumed totalled \$19,510,664 and the value of chemicals and various other process supplies used amounted to \$13,515,941.

Capital employed by the industry in 1940 was reported at \$234,826,742, which figure includes value of land, plant, materials on hand and in process, finished products and operating funds. Employees totalled 13,466 and salaries and wages paid aggregated \$21,766,197 compared with 12,449 and \$19,572,119, respectively, in 1939.

The scientific planning and high efficiency with which the Canadian non-ferrous smelting and refining industry was developed during recent years is now being reflected in the Dominion's great and increasing contribution of refined metals so necessary for the manufacture of war supplies and equipment.

Table 1 - PRINCIPAL STATISTICS OF THE NON-FERROUS METALLURGICAL INDUSTRY IN CANADA, 1938, 1939 and 1940

	1938	1939	1940
Number of companies	10	9	9
Number of plants	13	13	13
Capital employed	\$ 184,337,126	192,186,465	234,826,742
Number of salaried employees	1,063	1,089	1,558
Salaries	\$ 2,612,284	2,670,414	3,661,048
Number of wage-earners	11,725	11,360	11,308
Wages	\$ 16,937,679	16,701,705	18,105,149
Value of plant products (gross) (A)	\$ 287,295,733	262,602,495	305,360,547
Estimated cost of ores, concentrates, etc., treated (a)	\$ 173,070,377	154,879,498	174,274,655
Cost of fuel and purchased electricity (b)	\$ 15,233,547	15,891,301	19,510,664
Process supplies, other than items (a) and (b)	\$ 11,900,435	11,773,663	13,515,941
Value added by smelting (net)	\$ 87,091,374	80,057,833	98,059,287

(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.) end products (blister, copper matte, etc.), and in this sense is a duplication of values.

Non-Ferrous Smelting

- 2 -

Table 2 - NUMBER OF WAGE-EARNERS, BY MONTHS, 1932 and 1938-1940

MONTH	1932	1938	1939	1940
January	5,496	11,677	11,138	11,225
February	5,400	11,707	11,123	11,297
March	5,355	11,830	11,334	11,298
April	4,750	12,089	11,371	11,403
May	4,297	12,052	11,380	11,691
June	4,475	11,934	11,390	11,794
July	4,205	11,814	11,486	12,102
August	4,160	11,744	11,476	12,256
September	4,198	11,594	11,454	12,251
October	4,326	11,625	11,327	12,316
November	4,316	11,377	11,401	12,481
December	4,274	11,250	11,424	12,771
AVERAGE	4,604	11,725	11,360	11,908

Table 3 - FUEL AND ELECTRICITY USED IN THE NON-FERROUS SMELTING AND REFINING INDUSTRY, 1939 and 1940

Kind	Unit of measure	For light and power		For metallurgical purposes	
		Quantity	Cost	Quantity	Cost
			\$		\$
1939					
Bituminous coal					
Canadian	short ton	13,091	60,532	571,332	3,434,110
Imported	short ton	32,171	193,277	120,557	703,100
Anthracite coal					
United States	short ton	4	55	...	...
Other	short ton	59	948	...	...
Coke	short ton	1,247	11,858	286,958	2,688,089
Gasoline	Imp.gal.	85,026	16,577	4,332	904
Fuel oil and diesel oil	Imp.gal.	52,701	2,761	22,695,129	1,059,048
Kerosene or coal oil ..	Imp.gal.	5,973	1,143	3,387	708
Wood (cords of 128 cubic feet)	cord	...	...	8,396	41,364
Gas - Manufactured	M cu. ft.	...	...	3,770	4,840
Natural	M cu. ft.	...	...	308	302
Other fuel .....	\$	...	...	...	2,696
Electricity purchased ..	K.W.H.	1,205,819,424	3,823,625	2,032,965,845	3,845,364
TOTAL .....	\$	...	4,110,776	...	11,780,525
Electricity generated for own use	K.W.H.	8,472,956	...	245,564,364	...
Process supplies used, chemicals, etc. ....	\$	...	11,773,863	...	...

Table 3 - FUEL AND ELECTRICITY USED IN THE NON-FERROUS SMELTING AND REFINING INDUSTRY, 1939 and 1940 - (Concluded)

Kind	Unit of measure	For light and power		For metallurgical purposes	
		Quantity	Cost	Quantity	Cost
			\$		\$
<u>1940</u>					
Bituminous coal -					
Canadian	short ton	27,205	152,157	589,214	3,681,414
Imported	short ton	48,219	327,450	152,760	956,902
Anthracite coal -					
United States	short ton	11	195	41	791
Other	short ton	59	969	...	...
Coke	short ton	1,409	14,033	347,376	3,369,123
Gasoline	Imp. gal.	105,518	23,344	97,557	26,911
Fuel oil and diesel oil	Imp. gal.	391,795	29,551	25,921,433	1,362,029
Kerosene or coal oil ..	Imp. gal.	6,293	1,240	4,676	1,029
Wood (cords of 128 cubic feet)	cord	37	227	7,365	40,605
Gas - Manufactured	M cu. ft.	...	...	2,969	3,568
Natural	M cu. ft.	...	...	206	164
Other fuel .....	\$	...	...	...	8,516
Electricity purchased..	K.W.H.	1,333,232,617	4,286,239	2,435,092,225	5,224,206
TOTAL .....	\$	...	4,835,405	...	14,675,258
Electricity generated for own use	K.W.H.	9,335,499	...	251,746,999	...
Process supplies used, chemicals, etc. ....	\$	...	13,515,941	...	...

Table 4 - POWER EMPLOYED IN THE NON-FERROUS SMELTING AND REFINING INDUSTRY, 1940

Description	Ordinarily in use		In reserve or idle	
	Number of units	Total horse power	Number of units	Total horse power
1. Steam engines and steam turbines	29	14,619	3	1,134
2. Diesel engines	5	575	...	...
3. Gasoline, gas and oil engines other than Diesel engines	4	285	...	...
4. Hydraulic turbines or water wheels	11	51,125	...	...
5. Electric motors -				
(a) Operated by purchased power	7,810	355,370	828	32,675
TOTAL (1), (2), (3) and (4)	7,859	421,974	831	33,809
(b) Operated by power generated by the establishment	246	3,415	22	236
Stationary boilers	35	22,736	3	610

Table 5 - METAL PRICES, 1936 - 1940

Metal	Market	Unit of measure	1936	1937	1938	1939	1940
			\$	\$	\$	\$	\$
Antimony	New York	lb.	0.122	0.153	0.123	0.123	0.14
Arsenic							
(As ₂ O ₃)	New York	lb.	0.035	0.03	0.03	0.03	0.035
Copper..	New York	lb.	0.09474	0.13167	0.1000	0.1096	0.11296
Copper..	London	lb.	0.09477(a)	0.13078(a)	0.09972(a)	0.10092(a)	(b)
Lead ...	London	lb.	0.03913(a)	0.05110(a)	0.03344(a)	0.03169(a)	(b)
Silver..	New York	oz.	0.45126(a)	0.44881(a)	0.43477(a)	0.40488(a)	0.38249(a)
Zinc ...	London	lb.	0.03315(a)	0.04202(a)	0.03073(a)	0.03069(a)	(b)
Gold ...	World	Fine oz.	35.03(a)	34.90(a)	35.175(a)	36.141(a)	38.50(a)

(a) Canadian funds.

(b) No quotations.

The agreement made in 1939 by the large base metal producers and the Imperial Government by which the producers were to supply the Imperial Government with copper, lead and zinc at prices which prevailed shortly before the outbreak of the war was continued in 1940. Canada can now furnish large quantities of these metals in the refined form, whereas in 1914 no refined copper, nickel or zinc and only a comparatively small amount of refined lead were produced in this country.

Data relating to imports and exports of non-ferrous metals are not published for 1940; also statistics in detail as relating to Canadian output of these metals for 1940 have not been released.

Table 6 - CAPACITIES OF CANADIAN COPPER SMELTING AND REFINING WORKS, 1939(a)

Company	BLAST FURNACES		REVERBERATORIES		CONVERTERS
	Number	Annual capacity -	Number	Annual capacity -	Number
		tons of ore and concentrates		tons of ore and concentrates	
Consolidated Mining & Smelting Co. of Canada Ltd. (b) .....	...	...	..1	75,000	2
Falconbridge Nickel Mines Ltd.	1	400,000	...	...	3
Hudson Bay Mining & Smelting Co. Ltd. ....	...	...	1	420,000	2
Noranda Mines Ltd. ....	...	...	2	1,100,000	4
International Nickel Co. of Canada, Ltd.	4	800,000	7	2,800,000	24

ELECTROLYTIC COPPER REFINERIESANNUAL CAPACITY - short tons
1940 (a)

Canadian Copper Refiners Ltd.	112,000
International Nickel Co. of Canada Ltd.	150,000

(a) American Bureau of Metal Statistics.

(b) Idle.

NOTE: The above figures are subject to revision.

Table 7 - PRODUCTION(/) OF NEW COPPER IN CANADA, FROM ALL SOURCES, 1929 - 1939

Year	Pounds	\$	Year	Pounds	\$
1929	248,120,760	43,415,251	1935	418,997,700	32,311,960
1930	303,478,356	37,948,359	1936	421,027,732	39,514,101
1931	292,304,390	24,114,065	1937	530,028,615	68,917,219
1932	247,679,070	15,294,058	1938	571,249,664	56,554,034
1933	299,982,448	21,634,853	1939	608,825,570	60,934,859
1934	364,761,062	26,671,438	1940	(not published)	

(/) Including copper in ores and matte exported and in blister and anode copper made in Canada.

Table 8 - PRODUCTION IN CANADA OF COPPER, 1933 and 1939

	1933		1939	
	Pounds	Value	Pounds	Value
		\$		\$
PRODUCTION -				
By Provinces -				
Nova Scotia	11	...	1,269,179	128,086
Quebec	112,645,797	11,233,039	117,233,897	11,831,749
Ontario	309,030,106	30,405,500	328,429,665	32,637,305
Manitoba	65,582,772	6,539,914	70,458,890	7,110,711
Saskatchewan	18,156,157	1,810,532	18,133,149	1,829,997
British Columbia	65,759,265	6,557,514	73,253,408	7,392,734
Northwest Territories	75,567	7,535	42,382	4,277
TOTAL	571,249,664	56,554,034	608,825,570	60,934,859

By Sources -**In blister and anode copper**

produced

475,611,107	47,427,940	505,671,337	51,032,350
-------------	------------	-------------	------------

In ores, concentrates and copper

matte exported (a)

81,810,070	8,158,100	86,730,679	8,752,860
------------	-----------	------------	-----------

In nickel copper matte exported

13,828,487 967,994 16,423,559 1,149,649

TOTAL

571,249,664	56,554,034	608,825,570	60,934,859
-------------	------------	-------------	------------

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

Table 9 - PRODUCTION(a) OF REFINED COPPER IN CANADA FOR YEARS SPECIFIED

Year	Tons	Year	Tons
1915 .....	...	1935	173,290
1916/	483	1936	191,595
1917	3,901	1937	215,080
1918	3,809	1938	227,240
1919	3,467	1939	231,684
		1940	not published

/ First electrolytic copper produced commercially in Canada.

(a) From all sources.

Table 10 - AVAILABLE STATISTICS ON THE CONSUMPTION OF COPPER IN SPECIFIED CANADIAN INDUSTRIES, 1938 and 1939

Industry	Item (Used)	1938	1939
Brass and Copper Products (a)	(Ingots, wire bars, slabs, etc. lb.	101,588,470	119,161,178
	(Scrap lb.	3,929,241	3,770,561
	(Pipe and tubing lb.	87,904	75,177
	(Plates and sheets lb.	773,770	710,612
	(Wire lb.	237,858	310,485
	(Other lb.	34,087	112,730
White Metal Alloys	(Scrap (all kinds) lb.	2,162,197	2,411,785
	(Copper ingots and slabs lb.	51,017	115,851
	(Castings lb.	89,121	66,283
Electrical Apparatus and Supplies	(Ingots, slabs, wire bars, etc. lb.	669,615	694,178
	(Rods lb.	24,152,604	29,159,186
	(Scrap lb.	42,751	44,554
	(Tubing and pipe lb.	322,969	303,897
	(Sheets and plates lb.	353,806	446,535
	(Wire, bare lb.	4,955,851	5,216,630
	(Wire, enamelled \$	395,887	351,172
Iron and Steel and Their Products	(Wire, other insulated.. \$	821,389	939,583
	(Copper sheets, bars, etc. lb.	5,594,848	6,842,523

(a) A relatively large part of the copper included under this industry is rolled into wire rods, which are sold to manufacturers of electrical cable; duplication to this extent results from the inclusion of these rods in the electrical apparatus industry.

NOTE: Corresponding data for 1940 not yet available.

Table 11 - LEAD SMELTING CAPACITY OF CANADA (x)

Company	Situation of plant	Number of blast furnaces	Annual Capacity (tons of charge)
Consolidated Mining & Smelting Co. of Canada, Ltd.	Trail, B.C.	5	700,000

(x) American Bureau of Metal Statistics, 1940.

Table 12 - AVAILABLE STATISTICS ON THE CONSUMPTION OF LEAD IN SPECIFIED CANADIAN MANUFACTURING INDUSTRIES, 1938 and 1939

Industries	Items Used	1938	1939
		lb.	lb.
Brass and copper products	(Pig lead	712,315	750,208
	(Scrap and other lead ...	468,372	363,129
Paints and pigments	(Pig lead (x)	13,720,025	17,949,541
White metal alloys	(Pig lead	11,875,116	13,579,186
	(Scrap lead	12,230,944	11,967,402
Electrical apparatus	(Pig lead	21,467,082	23,118,853
	(Scrap lead	154,125	237,026
	(Lead sheets, etc.	874,760	2,150,836
Iron and steel	(Lead	1,306,444	1,634,429
Explosives	(Pig lead	794,098	800,831
GRAND TOTAL ...		63,603,281	72,551,443

(x) Some products, such as, lead oxides made from pig lead by the paints and pigments industry are sold to other industries for the manufacture of such products as storage batteries.

Table 13 - PRODUCTION OF REFINED LEAD IN CANADA, 1931 - 1939

Year	Pounds	Year	Pounds
1931	278,448,457	1936	363,449,490 (✓)
1932	253,136,522	1937	399,394,939 (✓)
1933	254,565,861	1938	400,763,914 (✓)
1934	314,457,735 (✓)	1939	381,137,424 (✓)
1935	327,515,277 (✓)	1940	(not published)

(✓) Primary lead only.

Table 14 - PRODUCTION IN CANADA, BY PROVINCES, OF LEAD, 1938 and 1939

	1938	1939		1938	1939
	Pounds	Value		Pounds	Value
		\$			\$
Nova Scotia .....	...	...		2,545,122	80,655
Ontario	22,363	748		39,130	1,240
British Columbia	413,706,307	13,834,339		378,440,666	11,992,784
Yukon	5,198,990	173,854		7,544,632	239,089
TOTAL	418,927,660	14,008,941		398,569,550	12,313,768

NOTE: Includes lead in ores exported. Corresponding data for 1940 not published.

Table 15 - CAPACITY AND PRODUCTION OF ELECTROLYTIC ZINC PLANTS IN CANADA, 1938-1940

Company	Maximum H. P. used	Estimated annual capacity for cathode zinc (short tons)	Actual production as ingot zinc (short tons)		
			1938	1939	1940
	(a)	(b)			
Consolidated Mining & Smelting Co. of Canada Ltd.	72,000	146,000	133,242	(c)	(c)
Hudson Bay Mining & Smelting Co. Ltd.	22,500	43,000	38,414	38,790	(c)

NOTE - This statement supplied by the American Bureau of Metal Statistics.

(a) Expressed as power in terms of direct current after transforming the alternating current in sub-station at the works. (b) Capacity for ingot zinc may be reckoned at 95% capacity for cathode deposition. (c) Not recorded.

Table 16 - PRODUCTION (A) IN CANADA OF ZINC, 1938 and 1939

	1938	Value	1939	Value
	Pounds	\$	Pounds	\$
Nova Scotia .....	...	...	9,152,856	280,901
Quebec	5,315,852	163,356	28,758,759	882,606
Ontario .....	...	...	...	...
Manitoba	46,864,575	1,440,148	40,302,747	1,236,891
Saskatchewan	29,962,597	920,751	37,278,001	1,144,062
British Columbia	299,365,564	9,199,443	279,041,497	8,563,784
TOTAL	381,506,588	11,723,698	394,533,860	12,108,244

(A) Refined zinc made in Canada plus zinc in ores exported.

Table 17 - REFINED NEW ZINC PRODUCED IN CANADA, 1931 - 1939

Year	Short tons	Year	Short tons
1931	118,622	1936	151,103
1932	86,141	1937	158,542
1933	91,946	1938	171,932
1934	134,917	1939	175,641
1935	149,523	1940	(not published)

The following was taken from the 1940 Year Book of the American Bureau of Metal Statistics: "As of the end of 1939 we estimated the effective capacity outside of the United States at about 1,212,000 metric tons whereof about 330,000 tons was in Australia, Canada, Rhodesia and Great Britain, all of the British overseas production being electrolytic. The total electrolytic zinc capacity outside of the United States and exclusive of Russia, was about 490,000 metric tons in terms of bar zinc. There were several electrolytic zinc plants in Russia as to which we did not have reliable data. As of the end of 1940 the effective capacity outside of the United States was probably somewhat higher than at the end of 1939. We estimate the aggregate spelter producing capacity of the U.S.A. at the end of 1940 as having been about 787,000 short tons, whereof 208,000 tons was for electrolytic capacity as ingot zinc, which is a little more than the 219,500 tons as reported by individual United States refineries".

Table 18 - AVAILABLE STATISTICS ON THE CONSUMPTION OF ZINC AND ZINC PRODUCTS IN SPECIFIED CANADIAN MANUFACTURING INDUSTRIES, 1938 and 1939

Industry	Items Used	1938	1939
	Metal	lb.	lb.
Brass and copper products	(Other zinc	286,395	559,567
	(Zinc ingots and slabs	4,540,598	6,375,989
	(Zinc scrap	47,632	50,637
	(Zinc spelter	2,256,403	2,464,493
White metal alloys	(Zinc scrap	627,551	771,921
	(Zinc ingots and bars	1,117,940	1,764,270
Electrical apparatus	(Zinc sheets	2,319,830	2,912,148
Acids, alkalies and salts	Zinc, metal	2,717,080	4,467,640
Iron and steel	Zinc	26,442,237	34,149,679
Miscellaneous chemicals..	Zinc sheets and spelter ..	196,543	226,965
GRAND TOTAL - METAL		40,552,209	53,750,309

Table 18 - AVAILABLE STATISTICS ON THE CONSUMPTION OF ZINC AND ZINC PRODUCTS IN SPECIFIED CANADIAN MANUFACTURING INDUSTRIES, 1938 and 1939 (Concluded)

Industry	Items Used	1938	1939
	Products	1b.	1b.
Paints and pigments	(Zinc oxide	2,616,269	3,143,377
	(Leaded zinc oxides and zinc leads	3,653,872	3,937,384
	(Lithopone (x)	14,235,127	15,842,379
	Zinc chloride	436,562	600,074
Electrical apparatus ...	(Zinc oxide	41,530	32,681
	(Zinc stearate	17,435	13,652
Toilet preparations			

(x) A mixture of zinc sulphide and barium sulphate prepared by precipitation.

Table 19 - WORLD PRODUCTION OF NICKEL ORE, 1935 - 1939 (f) (In terms of metal)

Country	1935	1936	1937	1938	1939
			(short tons)		
Canada (a)	69,253	34,370	112,453(e)	105,286	113,053
New Caledonia (b)	5,800	5,400	6,600	8,500	5,300(h)
Greece (d)	1,200	1,380	1,160	(f)	(f)
Burma (c)	1,640	1,447	1,345	1,050	860(g)
Norway	1,677	1,400	968	1,373	1,400
Russia	2,016	(f)	(f)	(f)	(f)

(a) Production in all forms from Canadian ores.

(b) Estimated content of ore and matte exported.

(c) Nickel content of speiss obtained as a by-product.

(d) Nickel and cobalt content beginning 1934.

(e) Not including production in British Columbia.

(f) Not yet reported.

(g) January-September only.

(h) January-July only.

(f) American Bureau of Metal Statistics.

NOTE: Corresponding data for 1940 not available for publication.

Table 20 - WORLD PRODUCTION OF ALUMINIUM (Supplied by the American Bureau of Metal Statistics) (in metric tons)

Country	1922	1929	1932	1937	1938	1939
United States (b) ...	33,600	102,100	47,600	132,752	150,112	143,367
Canada	10,000	42,000	18,000	42,500	66,000	75,000
Europe (a)	43,200	137,138	37,763	304,521	366,895	423,200
Japan .....	...	...	...	10,000	17,000(x)	22,000(x)
TOTAL FOR WORLD ..	91,300	281,238	153,363	490,330	583,024	674,567

NOTE: Omitted from this table is a small production in Yugoslavia.

(a) German output in 1940 (including Austria) was estimated at 200,000 metric tons.

(b) It is reported that the total annual capacity of the Aluminum Company of America is being increased to something approximating 700 million pounds; also, the Reynolds Metals Co. plans production at a new plant in Alabama at the yearly rate of 40,000,000 pounds in 1941 with an increase in 1942; also, a plant for 60,000,000 pounds per annum at Longview, Wash. is expected to begin production in 1941.

(x) Conjectural.

Data for 1940 not complete.

Canadian silver production in 1940 totalled 23,833,752 fine ounces valued at \$9,116,172. The Dominion in 1940 ranked third as a world silver producing country.

Table 21 - OTHER NON-FERROUS PRODUCTS PRODUCED IN CANADIAN SMELTERS AND REFINERIES, 1933 and 1939

	Unit	1938		1939	
		Quantity	Value	Quantity	Value
			\$		\$
Antimony	lb.	...	...	1,200,180	148,330
Arsenic (As ₂ O ₃)	lb.	2,175,646	56,538	1,741,917	52,257
Bismuth	lb.	9,516	9,754	409,449	466,362
Cadmium	lb.	699,138	561,799	939,691	662,209
Cobalt (a)	lb.	459,226	790,913	732,561	1,213,454
Palladium, rhodium, iridium, etc. (b)	oz.	130,893	3,677,342	135,402	4,199,622
Platinum (b)	oz.	161,326	5,196,794	148,877	5,221,712
Radium, uranium (products)	\$	(d)	(d)	(d)	1,121,553
Selenium	lb.	358,929	622,742	150,771	266,714
Tellurium	lb.	46,237	82,967	2,940	4,769
Sulphur (c)	ton	112,395	1,044,817	211,278	1,668,025

(a) Includes metal in ores exported, salts manufactured, and metal produced in Canada.

(b) Final refining conducted in Europe.

(c) Sulphur recovered from smelter gases as elemental sulphur and in sulphuric acid and ammonium sulphate made. Also includes sulphur in iron pyrites exported.

(d) Not published.

Corresponding data as shown in above table are not published for 1940.

In addition, there were 436 pounds of mercury metal valued at \$1,226 produced at a mine in British Columbia in 1939.

Table 22 - SOURCE OF CANADIAN FINE GOLD PRODUCTION, BY PERCENTAGES, 1932, 1933, 1937 - 1940

	1932	1933	1937	1938	1939	1940
	%	%	%	%	%	%
In alluvial gold	1.8	2.0	2.20	2.50	2.47	2.1
In crude gold bullion (A)	79.3	79.8	80.20	80.80	82.14	82.7
In base bullion (from silver-lead ores, etc.)	1.0	0.7	0.90	0.92	0.63	0.6
In blister and anode copper	15.1	14.2	11.70	11.24	10.36	10.0
In ores, matte, slags, etc., exported	2.8	3.3	5.00	4.54	4.40	4.6
	100.0	100.0	100.00	100.00	100.00	100.0

(A) Includes a relatively small quantity of gold contained in interprovincial shipments of gold ores to smelters.

Canadian gold production in 1940 totalled 5,311,145 fine ounces valued in Canadian currency at \$204,479,083. Canada in 1940, as a gold producing country, was surpassed only by the Union of South Africa and possibly Russia. The origin of Canadian production is shown in the above table.

DIRECTORY - 1940

<u>Name of Company</u>	<u>Head Office Address</u>	<u>Canadian Plant Location</u>
<u>CANADIAN COPPER SMELTING COMPANIES</u>		
Noranda Mines Ltd.	2 King St. E., Toronto, Ont.	Noranda, P.Q.
(a) International Nickel Co. of Canada, Ltd.	Copper Cliff, Ont.	Copper Cliff, Port Colborne and Coniston, Ont.
(a) Falconbridge Nickel Mines, Ltd.	25 King St. W., Toronto, Ont.	Falconbridge, Ont.
Hudson Bay Mining & Smelting	14 Finkle St., Woodstock, Ont.	Flin Flon, Man.
(a) Smelt nickel-copper ores.		

<u>CANADIAN ELECTROLYTIC COPPER REFINING COMPANIES</u>		
Canadian Copper Refiners Ltd. (c)	2 King St. E., Toronto, Ont.	Montreal East, P.Q.
International Nickel Co. of Canada, Ltd. (c)	Copper Cliff, Ont.	Copper Cliff, Ont.
(c) Produce refined copper, silver, gold, tellurium and selenium.		

<u>CANADIAN LEAD SMELTING AND REFINING COMPANIES</u>		
Consolidated Mining & Smelting Co. of Canada Ltd. (f)	215 St. James St. W., Montreal, P.Q.	Trail, B.C.
(f) Produce bismuth or bismuth-bearing bullion as by-products, also gold, silver, mercury, antimony and sulphur.		

<u>CANADIAN ELECTROLYTIC ZINC REFINING COMPANIES (x)</u>		
Consolidated Mining and Smelting Co. of Canada Limited	215 St. James St. W., Montreal, P.Q.	Trail, B.C.
Hudson Bay Mining & Smelting Co. Ltd.	Woodstock, Ont.	Flin Flon, Man.
(x) Also produce cadmium.		

<u>CANADIAN SMELTERS AND REFINERS OF COBALT-ARSENIC ORES</u>		
Deloro Smelting & Refining Co. Ltd. (xx)	Deloro, Ont.	Deloro, Ont.
(xx) Produce silver, cobalt, arsenic, bismuth, nickel oxide and cobalt oxide and salts.		

<u>CANADIAN REFINERS OF URANIUM-RADIUM ORES</u>		
Eldorado Gold Mines Ltd.	Star Building, Toronto, Ont.	Port Hope, Ont.

<u>CANADIAN PRODUCERS OF PRIMARY ALUMINIUM</u>		
Aluminum Company of Canada, Ltd.	Canada Life Building, 340 University Ave., Toronto 2, Ont.	Arvida and Shawinigan Falls, P.Q.

NOTE: In addition to the companies listed above, the Chromium Mining & Smelting Corp. Ltd., treated foreign chromite ores at Sault Ste. Marie, Ontario.

STATISTICS CANADA LIBRARY
BIBLIOTHÈQUE STATISTIQUE CANADA



1010699304