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SYMBOLS

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- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.

GENERAL REVIEW OF THE MINING INDUSTRY

1959

The Canadian mineral production during 1959 was valued at \$2,409,020,511 an increase of 14.7 per cent over the valuation of \$2,100,739,038 recorded in the preceding year. All four major groups of minerals showed increases. Metals were up 21.3 per cent, non-metallic 18.5 per cent, fuels 4.8 per cent and structural materials 10.5 per cent.

The index of physical volume was 251.6 in 1959 compared with 226.8 in 1958. The index base year was 1949 = 100. Mining activities such as drilling, blasting, hauling, hoisting, processing, etc. were indicated by the tonnage of ore mined or rock quarried. During 1959 this tonnage amounted to 189,796,763, compared with 157,069,182 in 1958. Sand, gravel, sodium sulphate and similar materials which were not actually mined or blasted were not included in the total. Excluded also were the tonnages of coal mined.

Metals were valued at \$1,370,648,535 in 1959 compared with \$1,130,160,395 in 1958. Shipments of uranium as U_3O_8 were valued at \$331 million and were up \$51.6 million. Nickel increased by \$63 to reach \$257 million which was less than the nickel output in 1957. As nickel increased so did its companion metal copper which was \$58.7 million higher in total value. More platinum palladium, rhodium and other metals of this group were recovered in the refining of nickel. About the same amount of lead was produced at in the preceding year but the lower price reduced the total value by nearly \$3 million. The quantity of zinc declined but an improvement in price brought the value up \$4.4 million. The buying price of gold at the Royal Canadian Mint averaged \$33.57 per troy ounce during 1959. The base price quoted in United States currency is \$35.00 but the Canadian dollar was above par throughout the year thus the value of gold in Canadian funds was less than \$35.00. Not since the boom years of 1910-1913 at the Cobalt camp has Canada produced so much silver. It was nearly 32 million ounces worth over \$28 million. Iron ore shipments increased by 8.7 million tons to surpass the previous peak established in 1956. There were no mines producing tungsten concentrates during 1959.

After suffering a set back in 1958, the non-metallics group rebounded to a new high value of \$178,216,641 in 1959. Asbestos lead the class with 1,050,429 tons of shipments valued at \$107,433,344. Salt, including salt in brine amounted to nearly 3.3 million tons valued at over \$18 million. Gypsum shipped from the mines and quarries was nearly 5.9 million tons compared with about 4 million ton in 1958. An oversupplied market caused

a drop in the shipments of lithia or lithium oxide concentrates. More nepheline syenite was shipped to the ceramics and glass industries. During the first year of shipments the value of potash was \$1,408,462. Although the natural gas processing plants produced elemental sulphur in excess of the demand there was a market for about 145,000 tons.

The fossil fuels were valued at \$535,577,823 in 1959, an increase of \$25 million from the preceding year but \$29 million below the peak of 1957. The decline in the coal industry continued. The coal mines shipped 10,626,722 tons compared with 11,687,110 tons in 1958. The volume of natural gas rose from 337.8 billion cubic feet to 417.3 billion cubic feet, as the pipeline supplied new markets. Crude petroleum increased by 19.3 million barrels to reach 184.8 million barrels of crude oil shipped.

The value of structural materials was increased by \$15 million to \$324.6 million. Most of this increase was due to greater amounts of stone, sand and gravel used in road construction. The consumption of brick, tile, cement, and lime appeared to levelling off. As a large portion of the lime is consumed by chemical and industrial plants the effect of changes in the construction industry are not as direct on the lime industry as on the brick or cement industries.

The value of minerals in the Atlantic provinces increased in 1959. In Newfoundland the St. Lawrence Corporation of Newfoundland Limited resumed operations of the fluorspar mines after several years of suspension. A large portion of the iron ore mined at Bell Island was shipped to European markets. Shipments of pyrophyllite were almost doubled. Data on the stone quarries and the sand and gravel pits in Prince Edward Island were recorded. There was no reported production of metals in Nova Scotia or New Brunswick. Barite production in Nova Scotia amounted to 215,825 tons. The gypsum shipments exceeded 5 million tons. Coal output slipped down to 4.4 million tons. The coal operators in New Brunswick found markets for 1 million tons.

In Quebec the tonnage of iron ore rose from 6.1 million to 11.5 million which was valued at \$92.5 million. Copper was mined in areas as widely separated as Gaspé, Chibougamau, Noranda and the Eastern townships. Gold production was slightly less than a million troy ounces. The Aluminum Company of Canada Limited ceased production of magnesium metal. Asbestos tonnage increased but failed to reach its previous peak. More remelt iron, or Soreliron, titanium dioxide, Soreflux, etc. were produced than in 1958.

The uranium industry in Ontario continued its' upward movement to reach a valuation of \$268,529,993 in shipments of uranium oxide. As the labor strike in the Sudbury area was settled late in 1958, the output of nickel and copper bounced upwards past the former levels. A large portion of the cobalt produced in Ontario was recovered from the nickel-copper ores of the Sudbury area. Thorium oxide was recovered from the waste liquors of the uranium plants in the Elliot Lake area. Ontario now has two mines producing rock salt, one at Ojibway and the other at Goderich. A large tonnage of brine was exported by pipeline across the Detroit river. The output of natural gas and crude petroleum showed an increase.

In Manitoba the quantities of the base metals increased but the amount of gold decreased. The non-metallics had a slightly higher value in 1959. The crude oil wells did not produce as much as in the preceding year. Structural materials were in lessened demand.

Saskatchewan's metals were valued at \$91.4 million compared with \$94.2 million in 1958. The non-metallics were up by \$1.3 million due largely to the new potash producer in the Saskatoon area. The amount of natural gas utilized was nearly double. Crude petroleum amounted to 47.4 million barrels valued at \$97.7 million.

Alberta, the oil province, shipped nearly 130 million barrels of crude petroleum during the year under review. Natural gas output, less reproduced, flared or waste, amounted to 297.6 billion cubic feet. Cement shipments increased while lime, sand and gravel were about the same as in the previous years.

Copper in British Columbia increased in quantity and value. Although the quantity of lead was slightly more, the decline in the price more than nullified the gain. Nickel concentrates were shipped to Fort Saskatchewan Alberta, for refining. The tungsten mine of Canadian Explorations Limited did not operate. The zinc producers curtailed their output. Asbestos shipments from the Cassiar area were maintained at a slightly higher level. Barite was shipped from three properties to mills in Alberta. Both natural gas and crude petroleum increased in volume.

In the Northwest Territories the gold mines at Yellowknife increased the output of the yellow metal. Nickel and copper concentrates were shipped from Rankin Inlet via Churchill to the refinery at Fort Saskatchewan, Alberta. The uranium mine at Rayrock ceased operations. Yukon's minerals were derived from the silver-lead-zinc mines at Keno Hill, and from the placer gold creeks in the Dawson area. Some coal was mined at Cormacks.

In the compilation of the mineral statistics a change has been made in the presentation of the principal statistics as shown in Table 22 and subsequent tables. Five industries, Smelting and refining, salt, clay products, cement and lime which were formerly included in the mineral industry as well as in the manufacturing industry, have been removed to manufacturing industry. Data on these industries are shown as the manufacturing group and are not included in the sub-totals of the other four mineral classes.

The ten leading mineral commodities in order of total value were in 1959; petroleum, uranium, nickel, copper, iron ore, gold, asbestos, sand and gravel, zinc and cement.

TABLE 1. Mineral Production, by Kinds, 1958 and 1959

		1958		1959	
		Quantity	Value	Quantity	Value
			\$		\$
Metallics:					
Antimony	lb.	858,633	284,208	1,657,797	540,278
Bismuth	"	412,792	771,267	334,736	590,212
Cadmium	"	1,756,050	2,669,195	2,160,363	2,765,265
Calcium	"	25,227	31,256	67,429	76,409
Cobalt	"	2,710,429	5,308,298	3,150,027	5,954,916
Copper	"	690,227,408	174,430,930	790,538,660	233,102,813
Gold	troy oz.	4,571,347	155,334,370	4,483,416	150,508,275
Indium .....		...	...	...	...
Iron ore	ton	15,726,323	126,131,181	24,488,325	192,666,101
Iron (remelt) .....		...	5,120,620	...	7,187,434
Lead	lb.	373,360,966	42,413,805	373,391,461	39,616,835
Magnesium	"	13,591,705	4,064,825	12,204,448	3,179,515
Molybdenum	"	886,264	1,152,838	748,566	940,596
Nickel	"	279,117,422	194,142,019	373,110,226	257,008,801
Palladium, rhodium, iridium, etc.	troy oz.	154,366	4,840,072	177,713	5,916,989
Platinum	"	146,092	9,481,371	150,382	11,015,449
Selenium	lb.	306,990	2,302,426	368,107	2,576,749
Silver	troy oz.	31,163,470	27,053,007	31,923,969	28,022,860
Tellurium	lb.	38,250	65,025	13,023	27,999
Thorium	"	—	—	47,447	105,676
Tin	"	795,496	625,260	747,443	630,094
Titanium ore	ton	—	—	26,777	129,565
Tungsten (W_3)	lb.	690,976	1,898,455	—	—
Uranium (U_3O_8)	"	28,805,232	279,538,471	31,784,189	331,143,043
Zinc	"	850,197,572	92,501,496	792,015,223	96,942,663
Totals .....		...	1,130,160,395	...	1,370,648,535
Non-metallics:					
Arsenious oxide	lb.	2,323,320	94,542	1,578,307	63,786
Asbestos	ton	925,331	92,276,748	1,050,429	107,433,344
Barite	"	195,719	2,196,384	238,967	2,254,582
Diatomite	"	27	540	5	100
Feldspar	"	20,387	359,966	17,953	301,372
Fluorspar .....		...	1,542,589	...	1,850,497
Grindstone	ton	—	—	60	9,000
Gypsum	"	3,964,129	5,189,159	5,878,630	8,393,703
Iron oxides	"	1,632	113,390	1,235	108,286
Lithia	"	3,853,322	2,047,880	2,756,280	1,422,153
Magnesian dolomite and brucite .....		...	2,529,161	...	3,050,779
Mica	lb.	1,504,933	89,651	813,834	63,004
Mineral waters	gal.	316,727	172,568	369,113	202,969
Nepheline syenite	ton	201,306	2,613,446	228,722	2,930,932
Peat moss	"	149,401	4,778,860	184,049	6,226,688
Potash (K_2O)		—	—	...	1,406,462
Pyrite, pyrrhotite	ton	1,191,731	4,248,668	1,099,564	3,433,095
Quartz	"	1,453,656	2,538,150	2,163,546	3,436,730
Salt	"	2,375,192	14,989,542	3,289,976	18,034,522
Silica brick	M	2,815	472,346	1,926	354,295
Soapstone and talc	ton	35,405	429,136	39,176	512,129
Sodium sulphate	"	173,217	2,862,915	179,535	2,881,861
Sulphur in smelter gas	"	241,055	2,361,252	277,030	2,716,416
Sulphur elemental	"	94,377	1,872,832	145,656	2,620,787
Titanium dioxide, etc. ....		...	6,575,077	...	8,507,149
Totals .....		...	150,354,802	...	178,216,641
Fuels:					
Coal	ton	11,687,110	79,963,327	10,626,722	73,875,895
Natural gas	Mcf.	337,803,726	32,057,536	417,334,527	39,609,393
Petroleum	bbl.	165,496,196	398,747,818	184,778,497	422,092,535
Totals .....		...	510,768,681	...	535,517,823
Structural materials:					
Clay products (brick, tile, etc.)	bbl.	...	41,709,903	...	42,515,448
Cement	ton	6,153,421	96,414,142	6,284,486	95,147,798
Lime	"	1,596,422	19,465,823	1,685,725	21,304,021
Sand and gravel	"	160,210,945	96,282,363	185,123,748	104,651,461
Stone	"	38,156,647	55,582,929	46,439,535	60,958,784
Totals .....		...	309,455,160	...	324,577,512
Grand total .....		...	2,100,739,038	...	2,409,020,511

TABLE 2. Mineral Production of Canada, by Provinces, 1959

No.			Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Metals:							
1	Antimony	lb. \$	— —	— —	— —	— —	— —
2	Bismuth	lb. \$	— —	— —	— —	— —	151,576 264,228
3	Cadmium	lb. \$	— —	— —	— —	— —	— —
4	Calcium	lb. \$	— —	— —	— —	— —	— —
5	Cobalt	lb. \$	— —	— —	— —	— —	— —
6	Copper	lb. \$	29,978,282 8,876,570	— —	— —	— —	269,823,777 79,894,620
7	Gold	oz. \$	13,411 450,207	— —	— —	— —	999,388 33,549,455
8	Indium	lb. \$	— —	— —	— —	— —	— —
9	Iron ore	ton \$	6,105,819 42,974,837	— —	— —	— —	11,515,169 92,497,012
10	Iron (remelt)	lb. \$	— —	— —	— —	— —	— —
11	Lead	lb. \$	44,913,551 4,765,328	— —	— —	— —	5,819,148 617,412
12	Magnesium	lb. \$	— —	— —	— —	— —	4,059,508 977,123
13	Molybdenum	lb. \$	— —	— —	— —	— —	748,566 940,596
14	Nickel	lb. \$	— —	— —	— —	— —	— —
15	Palladium, iridium, etc.	oz. \$	— —	— —	— —	— —	— —
16	Platinum	oz. \$	— —	— —	— —	— —	— —
17	Selenium	lb. \$	— —	— —	— —	— —	— —
18	Silver	oz. \$	1,125,110 987,622	— —	— —	— —	4,108,241 3,606,214
19	Tellurium	lb. \$	— —	— —	— —	— —	— —
20	Thorium	lb. \$	— —	— —	— —	— —	7,187,434 —
21	Tin	lb. \$	— —	— —	— —	— —	— —
22	Titanium ore	ton \$	— —	— —	— —	— —	— —
23	Uranium (U_3O_8)	lb. \$	— —	— —	— —	— —	— —
24	Zinc	lb. \$	63,348,346 7,753,836	— —	— —	— —	94,115,963 11,519,794
25	Totals	\$	65,808,402	—	—	—	232,546,857
Non-metallics:							
50	Arsenious oxide	lb. \$	— —	— —	— —	— —	— —
51	Asbestos	ton \$	— —	— —	— —	— —	— —
52	Barite	ton \$	— —	— —	— —	— —	992,188 26,276,740
53	Diatomite	ton \$	— —	— —	— —	— —	— —
54	—	—	—	—	215,825	—	—
55	—	—	—	—	2,067,214	—	—
56	—	—	—	—	—	—	—
57	—	—	—	—	—	—	—

TABLE 2. Mineral Production of Canada, by Provinces, 1959

Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon	Canada	No.
—	—	—	—	1,657,797 540,276	—	—	1,657,797 540,276	1 2
31,457	—	—	—	151,703	—	—	334,736	3
37,748	—	—	—	288,236	—	—	590,212	4
—	69,095	253,697	—	1,695,821	—	141,750	2,160,363	5
—	88,442	324,732	—	2,170,651	—	181,440	2,765,265	6
67,429	—	—	—	—	—	—	67,429	7
76,409	—	—	—	—	—	—	76,409	8
2,835,684	314,343	—	—	—	—	—	3,150,027	9
5,414,246	540,670	—	—	—	—	—	5,954,916	10
376,544,371	25,890,399	71,072,523	—	16,242,626	986,682	—	790,538,660	11
110,547,037	7,666,147	21,044,574	—	4,781,508	292,157	—	233,102,813	12
2,683,449	51,186	78,588	200	184,312	405,922	66,960	4,483,416	13
90,083,383	1,718,314	2,638,199	6,714	6,187,354	13,626,802	2,247,847	150,508,275	14
—	—	—	—	...	—	—	...	15
—	—	—	—	—	—	—	—	16
6,018,089	—	—	—	849,248	—	—	24,488,325	17
50,830,404	—	—	—	6,363,848	—	—	192,666,101	18
—	—	—	—	—	—	—	—	19
—	—	—	—	—	—	—	7,187,434	20
3,222,447	—	—	—	297,843,859	—	21,592,456	373,391,461	21
341,902	—	—	—	31,601,233	—	2,290,960	39,616,835	22
8,144,940	—	—	—	—	—	—	12,204,448	23
2,202,392	—	—	—	—	—	—	3,179,515	24
—	—	—	—	—	—	—	748,566	25
—	—	—	—	—	—	—	940,596	26
347,929,183	20,277,741	—	—	1,061,532	3,841,770	—	373,110,226	27
240,053,265	13,523,225	—	—	743,072	2,689,239	—	257,008,801	28
177,713	—	—	—	—	—	—	177,713	29
5,916,989	—	—	—	—	—	—	5,916,989	30
150,378	—	—	—	4	—	—	150,382	31
11,015,189	—	—	—	260	—	—	11,015,449	32
101,400	14,797	57,677	—	—	—	—	368,107	33
709,800	103,579	403,739	—	—	—	—	2,576,749	34
10,540,856	373,827	1,187,439	19	7,463,285	70,560	7,054,632	31,923,969	35
9,252,763	328,145	1,042,334	17	6,551,272	61,937	6,192,556	26,022,860	36
6,900	909	3,552	—	—	—	—	13,023	37
14,835	1,954	7,637	—	—	—	—	27,999	38
47,447	—	—	—	—	—	—	47,447	39
105,676	—	—	—	—	—	—	105,676	40
—	—	—	—	747,443	—	—	747,443	41
—	—	—	—	630,094	—	—	630,094	42
—	—	—	—	—	—	—	26,777	43
—	—	—	—	—	—	—	129,565	44
25,492,171	—	5,372,685	—	—	919,333	—	31,784,169	45
268,529,993	—	54,457,321	—	—	8,155,729	—	331,143,043	46
89,963,215	31,405,044	93,753,079	—	406,183,044	—	13,246,532	792,015,223	47
11,011,498	3,843,977	11,475,377	—	49,716,804	—	1,621,375	96,942,663	48
806,143,529	27,814,453	91,393,913	6,731	109,574,608	24,825,864	12,534,178	1,370,648,535	49
1,578,307	—	—	—	—	—	—	1,578,307	50
63,786	—	—	—	—	—	—	63,786	51
24,350	—	—	—	33,883	—	—	1,050,429	52
4,327,628	—	—	—	7,678,947	—	—	107,433,344	53
—	—	—	—	23,142	—	—	238,967	54
—	—	—	—	187,368	—	—	2,254,582	55
—	—	—	—	5	—	—	5	56
—	—	—	—	100	—	—	100	57

TABLE 2. Mineral Production of Canada, by Provinces, 1959 — Concluded

No.		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Non-metallics — Concluded:						
1	Feldspar	ton \$	—	—	—	17,953
2			—	—	—	301,372
3	Fluorspar	\$	1,749,903	—	—	—
4			—	—	—	—
5	Grindstone	ton \$	—	—	60	—
6			—	—	9,000	—
7	Gypsum	ton \$	37,720 148,617	— 5,036,411 6,462,658	98,250 132,735	—
8			—	—	—	—
9	Iron oxides	ton \$	—	—	—	1,235
10			—	—	—	108,286
11	Lithia	lb. \$	—	—	—	2,756,280
12			—	—	—	1,422,153
13	Magnesitic dolomite and brucite	\$	—	—	—	—
14			—	—	—	3,050,779
15	Mica	lb. \$	—	—	—	778,076
16			—	—	—	62,045
17	Mineral water	gal. \$	—	—	—	366,088
18			—	—	—	201,033
19	Nepheline syenite	ton \$	—	—	—	—
20			—	—	—	—
21	Peat moss	ton \$	—	2,207 81,460	25,285 808,595	50,578 1,282,081
22			—	—	—	—
23	Potash (K_2O)	\$	—	—	—	—
24			—	—	—	—
25	Pyrite, pyrrhotite	ton \$	—	—	—	—
26			—	—	—	1,850,523
27	Quartz	ton \$	—	1,151 6,338	—	301,706 1,533,206
28			—	—	—	—
29	Salt	ton \$	—	120,225 1,897,708	—	—
30			—	—	—	—
31	Silica brick	M \$	—	803 239,611	—	—
32			—	—	—	—
33	Soapstone, talc ¹	ton \$	14,443 200,275	—	—	15,951 185,351
34			—	—	—	—
35	Sodium sulphate	ton \$	—	—	—	—
38			—	—	—	—
37	Sulphur in smelter gas	ton \$	—	—	—	—
38			—	—	—	76,586
39	Sulphur, elemental	ton \$	—	—	—	—
40			—	—	—	—
41	Titanium dioxide, etc.	\$	—	—	—	—
42			—	—	—	8,507,149
43	Totals	\$	2,098,795	—	10,754,989	950,330
	Fuels:					
44	Coal	ton \$	—	4,391,829 43,730,600	1,003,387 8,347,215	—
45			—	—	—	—
46	Natural gas	Mcf. \$	—	—	117,502 188,394	—
47			—	—	—	—
48	Petroleum, crude	bbl. \$	—	—	14,479 20,271	—
49			—	—	—	—
50	Totals	\$	—	—	43,730,600	8,555,880
	Structural materials:					
51	Clay products	\$	68,000	—	1,638,789	743,966
52	Cement	ton \$	71,253	—	—	170,793
53			—	—	—	2,606,301
53			1,291,516	—	—	29,520,710
54	Lime	ton \$	—	—	—	18,231
55			—	—	—	416,815
56	Sand and gravel	ton \$	4,825,724 2,306,864	5,244,968 2,859,171	8,032,122 5,022,575	5,093,496 2,895,642
57			—	—	—	—
58	Stone	ton \$	352,231	1,700,000	1,393,668	2,119,136
59			—	1,700,000	1,732,694	1,964,356
60	Totals	\$	4,249,799	4,559,171	8,394,058	8,627,080
61	Grand totals, 1959	\$	72,156,986	4,559,171	62,879,647	18,133,290
62	Grand totals, 1958	\$	64,994,754	...	62,706,891	16,275,971
	¹ Includes pyrophyllite.					

TABLE 2. Mineral Production of Canada, by Provinces, 1959 — Concluded

Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon	Canada	No.
—	—	—	—	—	—	—	17,953	1
—	—	—	—	—	—	—	301,372	2
100,594	—	—	—	—	—	—	1,850,497	4
—	—	—	—	—	—	—	60	5
—	—	—	—	—	—	—	9,000	6
412,100	200,139	—	—	94,010	—	—	5,878,630	7
1,017,340	350,323	—	—	282,030	—	—	8,393,703	8
—	—	—	—	—	—	—	1,235	9
—	—	—	—	—	—	—	108,286	10
—	—	—	—	—	—	—	2,756,280	11
—	—	—	—	—	—	—	1,422,153	12
—	—	—	—	—	—	—	—	13
—	—	—	—	—	—	—	3,050,779	14
35,758	—	—	—	—	—	—	813,834	15
959	—	—	—	—	—	—	63,004	16
3,025	—	—	—	—	—	—	369,113	17
1,936	—	—	—	—	—	—	202,969	18
228,722	—	—	—	—	—	—	228,722	19
2,930,932	—	—	—	—	—	—	2,930,932	20
10,925	16,239	—	—	78,815	—	—	184,049	21
295,390	649,539	—	—	3,109,823	—	—	6,226,688	22
—	—	—	—	—	—	—	—	23
—	—	1,408,462	—	—	—	—	1,408,462	24
632,140	—	—	—	950,432	—	—	1,099,564	25
1,600,352	6,504	188,515	—	65,318	—	—	2,163,546	27
1,363,541	38,761	114,994	—	379,890	—	—	3,436,730	28
3,036,230	23,547	48,776	61,198	—	—	—	3,289,976	29
13,228,977	625,831	1,189,675	1,092,331	—	—	—	18,034,522	30
1,123	—	—	—	—	—	—	1,926	31
114,684	—	—	—	—	—	—	354,295	32
8,796	—	—	—	—	—	—	39,176	33
125,903	—	—	—	—	—	—	512,129	34
—	—	179,535	—	—	—	—	179,535	35
—	—	2,881,861	—	—	—	—	2,881,861	36
964,700	—	—	—	1,675,130	—	—	277,030	37
—	—	—	—	—	—	—	2,716,416	38
77,157	—	14,815	1,841,478	687,337	—	—	145,656	39
—	—	—	—	—	—	—	2,620,787	40
—	—	—	—	—	—	—	—	41
25,245,667	1,664,454	5,609,807	2,933,809	15,150,857	—	—	178,216,641	43
—	—	1,947,380	2,528,755	751,492	—	3,879	10,626,722	44
—	—	3,746,044	12,756,112	5,237,724	—	58,200	73,875,895	45
16,839,236	—	33,612,966	297,568,926	69,128,708	67,189	—	417,334,527	46
6,516,784	—	3,327,684	24,995,790	4,558,023	22,718	—	39,608,393	47
1,001,580	5,056,075	47,442,498	129,967,312	866,234	430,319	—	184,778,497	48
3,194,000	11,619,872	97,731,546	306,917,803	1,583,129	1,025,914	—	422,092,535	49
9,710,784	11,619,872	104,805,274	344,669,705	11,378,876	1,048,632	58,200	535,577,823	50
22,174,895	618,550	1,374,834	3,572,920	1,949,332	—	—	42,515,448	51
2,386,334	402,562	161,057	889,854	427,181	—	—	6,284,486	52
31,731,767	7,314,552	3,954,737	11,678,577	7,049,838	—	—	95,147,798	53
1,130,055	60,503	—	43,709	29,167	—	—	1,685,725	54
14,006,532	1,022,953	—	741,837	547,190	—	—	21,304,021	55
73,981,703	9,261,553	5,898,136	13,271,695	17,064,615	—	—	185,123,748	56
39,695,602	4,686,315	2,903,486	11,949,099	11,063,459	—	—	104,651,461	57
17,288,796	526,696	—	528,961	2,092,804	—	—	46,439,535	58
22,053,425	771,261	—	662,915	2,681,132	—	—	60,958,784	59
129,662,221	14,413,631	8,233,057	28,605,348	23,290,751	—	—	324,577,512	60
970,762,201	55,512,410	210,042,051	376,215,593	159,395,092	25,874,496	12,592,378	2,409,020,511	61
789,601,868	57,217,569	209,940,966	345,939,248	151,149,136	24,895,390	12,310,756	2,100,739,038	62

TABLE 4. Physical Volume of Mineral Production, since 1924
(1949 = 100)

Year	Index	Year	Index	Year	Index
1924.....	32.2	1936.....	68.3	1948.....	90.0
1925.....	35.2	1937.....	79.4	1949.....	100.0
1926.....	40.7	1938.....	83.7	1950.....	109.5
1927.....	43.5	1939.....	90.3	1951.....	123.4
1928.....	48.0	1940.....	96.2	1952.....	131.0
1929.....	50.1	1941.....	101.0	1953.....	142.1
1930.....	47.4	1942.....	99.1	1954.....	158.7
1931.....	43.9	1943.....	88.8	1955.....	185.2
1932.....	44.0	1944.....	79.7	1956.....	212.3
1933.....	45.0	1945.....	77.2	1957.....	227.8
1934.....	54.6	1946.....	74.3	1958.....	226.8
1935.....	60.8	1947.....	78.5	1959.....	251.6

TABLE 5. Value of Mineral Production, by Provinces, since 1940

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
dollars						
1940.....	...	..	33,318,587	3,435,916	86,313,491	261,483,349
1941.....	...	..	32,569,867	3,690,375	99,651,044	267,435,727
1942.....	...	..	32,783,165	3,609,158	104,300,010	259,114,946
1943.....	...	..	29,979,837	3,676,834	101,610,678	232,948,959
1944.....	...	..	33,981,977	4,133,902	90,182,553	210,706,307
1945.....	...	..	32,220,659	4,182,100	91,518,120	216,541,856
1946.....	...	..	35,350,271	4,813,166	92,785,148	191,544,429
1947.....	...	..	34,255,560	5,812,943	115,151,635	249,797,671
1948.....	...	..	56,400,245	7,003,285	152,038,867	294,239,673
1949.....	27,583,615	..	56,092,830	7,134,009	165,021,513	323,368,644
1950.....	25,824,047	..	59,482,173	12,756,975	220,176,517	366,801,525
1951.....	32,410,443	..	59,727,256	9,564,617	255,530,071	444,667,203
1952.....	32,512,313	..	64,552,383	11,298,960	270,483,962	444,669,412
1953.....	33,780,622	..	67,364,408	11,663,616	251,881,781	465,877,093
1954.....	42,898,033	..	73,450,898	12,468,322	278,818,070	496,747,571
1955.....	68,462,956	..	67,133,539	15,759,744	357,010,045	583,954,662
1956.....	84,349,006	..	66,092,274	18,258,302	422,464,410	650,823,362
1957.....	82,682,263	..	68,058,743	23,120,689	406,055,757	748,824,322
1958.....	64,994,754	..	62,706,891	16,275,971	365,706,489	789,601,868
1959.....	72,156,996	4,559,171	62,879,647	18,133,290	440,897,186	970,762,201
Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories ¹	Yukon	
dollars						
1940.....	17,828,522	11,505,858	35,092,337	74,134,485	2,594,157	4,118,333
1941.....	16,689,867	15,020,555	41,364,385	76,841,180	3,860,298	3,117,992
1942.....	14,345,046	20,578,749	47,359,831	77,247,932	3,976,267	3,453,568
1943.....	13,412,266	26,735,984	48,941,210	68,442,386	2,679,993	1,625,819
1944.....	13,830,406	22,291,848	51,066,662	57,246,071	1,440,069	939,319
1945.....	14,429,423	22,336,074	51,753,237	64,063,842	470,812	1,239,058
1946.....	16,403,549	24,480,900	60,082,513	74,622,846	1,039,525	1,693,904
1947.....	18,236,763	32,594,016	67,432,270	116,772,621	2,720,988	2,095,508
1948.....	26,081,349	34,517,208	93,211,229	148,223,614	4,267,485	4,265,910
1949.....	23,839,638	36,054,536	113,728,425	136,385,911	6,801,729	5,099,176
1950.....	32,691,173	35,963,923	135,756,940	138,888,205	8,050,899	9,035,696
1951.....	30,045,992	51,032,953	168,144,211	176,278,932	8,288,747	9,795,170
1952.....	25,105,045	49,506,094	196,811,654	170,071,244	8,944,835	11,386,451
1953.....	25,264,112	48,081,970	248,863,295	158,487,812	10,300,230	14,738,562
1954.....	35,106,922	68,216,009	279,042,735	158,630,867	26,414,000	16,588,664
1955.....	62,018,231	85,150,128	325,974,326	189,524,574	25,597,821	14,724,750
1956.....	67,909,407	122,744,698	411,171,898	203,277,828	22,157,935	15,656,434
1957.....	63,464,285	173,461,037	410,211,763	178,931,120	21,400,615	14,111,798
1958.....	57,217,569	209,940,966	345,939,248	151,149,136	24,895,390	12,310,756
1959.....	55,512,410	210,042,051	376,215,593	159,395,092	25,874,496	12,592,378

¹ Values of pitchblende products not included from 1941 to 1953

TABLE 6. Mineral Production of Newfoundland, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Copper	lb. 9,070,766	2,625,986	29,501,858	7,499,372	29,978,282	8,876,570
Gold	troy oz. 9,755	327,280	13,381	454,686	13,411	450,207
Iron ore	short ton 8,174,779	57,898,102	5,390,775	38,226,828	6,105,819	42,974,837
Lead	lb. 49,023,389	6,843,665	47,960,729	5,448,339	44,913,551	4,765,328
Silver	troy oz. 1,196,414	1,045,307	1,267,078	1,099,950	1,125,110	987,622
Zinc	lb. 71,396,581	8,631,847	67,739,904	7,370,102	63,346,346	7,753,838
Non-metallics:						
Fluorspar	ton ...	1,662,602	...	1,483,368	...	1,749,903
Gypsum	ton 29,465	121,800	36,307	144,510	37,720	148,617
Talc (pyrophyllite)	" 5,686	47,328	7,454	109,551	14,443	200,275
Structural materials:						
Cement	ton 58,277	1,185,078	50,992	1,079,071	71,253	1,291,516
Clay products	ton ...	29,500	...	58,282	...	68,000
Sand and gravel	ton 2,796,273	1,681,394	4,062,985	1,484,160	4,825,724	2,306,864
Stone	" 348,373	582,374	282,439	536,535	352,231	583,419
Totals .....	...	82,682,263	...	64,994,754	...	72,156,996

TABLE 7. Mineral Production of Prince Edward Island, 1959

Product	1959	
	Quantity	Value
Structural materials:		\$
Sand and gravel	ton 5,244,968	2,859,171
Stone	" 1,700,000	1,700,000
Total .....	...	4,559,171

TABLE 8. Mineral Production of Nova Scotia, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Gold	troy oz. 45	1,510	131	4,451	—	—
Silver	" 1	1	4	3	—	—
Non-metallics:						
Barite	ton 210,784	2,559,713	178,616	1,861,959	215,825	2,067,214
Gypsum	" 3,842,027	6,005,640	3,149,719	3,259,423	5,036,411	6,462,658
Peat moss	" 1,113	36,434	2,355	26,017	2,207	81,460
Quartz .....	" ...	...	...	...	1,151	6,338
Salt	" 122,763	1,900,538	125,872	2,026,551	120,225	1,897,708
Silica brick	M 1,406	364,491	1,075	285,285	803	239,611
Fuels:						
Coal	ton 5,685,770	52,877,614	5,269,879	50,347,951	4,391,829	43,730,600
Structural materials:						
Clay products	ton 1,933,070	1,345,361	2,333,792	1,509,536	8,032,122	1,638,789
Sand and gravel	" 434,726	1,880,344	435,047	2,377,246	1,393,668	5,022,575
Stone	" 1,087,097	1,087,097	1,008,469	—	1,732,694	—
Totals .....	...	68,058,743	...	62,706,891	...	62,879,647

TABLE 9. Mineral Production of New Brunswick, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Copper	lb. 11,476,340	3,322,400	655,717	166,683	—	—
Gold	troy oz. 240	8,052	52	1,767	—	—
Lead	lb. 2,339,993	326,663	188,179	21,377	—	—
Silver	troy oz. 379,173	331,283	51,139	44,394	—	—
Zinc	lb. 6,627,458	801,260	6,323,431	687,989	—	—
Non-metallics:						
Grindstone	ton —	—	—	—	60	9,000
Gypsum	" 93,249	163,146	105,749	170,876	98,250	132,785
Peat moss	" 18,731	779,675	21,080	701,195	25,285	808,355
Sulphur, in sulphides	" ...	8,357	...	23,419	—	—
Fuels:						
Coal	ton 976,597	8,189,859	790,719	6,621,369	1,003,387	8,347,255
Natural gas	McF. 176,417	156,641	123,957	197,199	117,502	188,294
Petroleum	bbl. 19,401	27,161	15,189	21,265	14,479	20,271

TABLE 9. Mineral Production of New Brunswick, 1957-59 - Concluded

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Structural materials:		\$		\$		\$
Cement	ton	163,640	2,646,293	180,166	2,934,058	170,793
Clay products		803,169	..	629,921	..	743,966
Lime	ton	14,895	342,054	17,614	394,239	18,231
Sand and gravel	"	7,342,928	3,676,512	4,015,976	1,750,657	5,093,496
Stone	"	1,285,811	1,538,164	2,100,687	1,909,563	2,119,136
Totals		23,120,689	..	16,275,971	..	18,133,290

TABLE 10. Mineral Production of Quebec,¹ 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Bismuth	lb.	160,093	267,908	240,177	436,420	151,576
Copper	ton	224,818,449	65,084,941	262,890,590	66,826,788	269,823,777
Gold	troy oz.	1,006,895	33,781,327	1,044,846	35,503,867	999,388
Iron (ore)	ton	187,529	10,083,434	..	5,120,620	..
Iron ore	"	8,872,948	65,805,057	6,060,325	46,859,490	11,515,169
Lead	lb.	5,417,795	756,324	6,299,475	715,620	5,819,148
Magnesium	"	1,585,998	487,853	4,504,343	1,317,070	4,059,508
Molybdenum	"	783,739	1,166,557	888,264	1,152,838	748,566
Selenium	"	168,290	1,851,190	178,397	1,345,478	194,233
Silver	troy oz.	3,645,856	3,185,384	3,908,361	3,392,848	4,108,241
Tellurium	lb.	22,928	40,124	29,457	50,077	1,662
Titanium ore	ton	10,770	97,075	..	..	26,777
Zinc	lb.	148,589,484	17,964,469	113,845,036	12,386,340	94,115,963
Non-metallics:						
Asbestos	ton	993,425	93,616,875	873,603	82,028,699	992,196
Feldspar	"	20,450	393,284	20,387	359,966	17,953
Iron oxides (ochre)	"	7,518	187,211	1,632	113,390	1,235
Lithia	lb.	5,140,257	2,827,143	3,853,322	2,047,880	2,756,280
Magnesitic dolomite and brucite	"	..	3,046,298	..	2,529,161	..
Mica	ton	596	105,310	522	85,045	389
Natural mineral waters	Imp. gal.	346,210	183,155	314,294	170,622	366,088
Peat moss	ton	48,704	1,140,476	43,669	1,056,811	50,578
Pyrite	"	..	2,731,632	..	2,678,310	..
Quartz	ton	284,403	1,321,830	268,676	1,412,802	301,706
Soapstone and talc	"	17,803	220,330	19,226	194,074	15,937
Sulphur in smelter gases	"	..	83,134	..	101,913	..
Titanium dioxide, etc.	ton	166,422	9,740,570	..	6,575,077	..
Structural materials:						
Cement	"	2,051,201	30,267,092	1,903,635	28,686,095	1,975,452
Clay products .....		..	8,898,855	..	10,675,463	..
Lime	ton	443,964	4,295,102	421,652	3,985,234	404,060
Sand and gravel	"	40,913,961	20,584,404	40,507,787	20,570,574	42,449,734
Stone	"	16,053,665	25,841,413	16,963,511	27,327,917	20,437,243
Totals .....		..	406,053,757	..	365,706,489	..
					..	440,897,186

¹ There is also in this province an important production of aluminum from imported ores.

TABLE 11. Mineral Production of Ontario, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Bismuth	lb.	14,214	21,372	18,581	26,779	31,457
Calcium	ton	221,225	282,378	25,227	31,256	67,429
Cobalt	"	3,750,596	7,541,258	2,436,064	4,866,767	2,835,684
Copper	"	343,406,269	98,488,877	284,069,476	71,267,895	376,544,371
Gold	troy oz.	2,578,206	86,498,811	2,716,514	92,307,146	2,683,449
Iron ore	short ton	4,867,105	41,317,629	3,644,952	36,851,421	6,018,089
Lead	lb.	1,012,565	141,354	2,513,224	285,502	3,222,447
Magnesium	"	15,184,373	4,767,043	9,087,362	2,747,755	6,144,940
Nickel	"	354,792,843	243,518,138	254,286,784	177,168,918	347,929,183
Palladium, rhodium, etc.	troy oz.	216,582	7,896,209	154,366	4,840,072	177,713
Platinum	"	199,565	17,835,124	146,092	9,481,371	150,378
Selenium	lb.	86,459	951,049	90,295	677,213	101,400
Silver	troy oz.	6,910,130	6,037,381	9,815,257	8,520,624	10,540,856
Tellurium	lb.	6,915	12,101	6,692	11,376	6,900
Thorium .....	"	..	..	..	..	47,447
Uranium (U_3O_8)	"	7,970,598	82,940,763	19,970,136	210,149,700	25,492,171
Zinc	"	22,591,677	2,731,334	92,478,339	10,061,643	69,963,215

MINERAL STATISTICS

TABLE 11. Mineral Production of Ontario, 1957-59 - Concluded

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Non-metallics:						
Arsenite (As_2O_3) ¹	lb.	3,697,317	137,112	2,323,320	94,542	1,578,307
Asbestos	ton	20,947	3,529,570	21,650	3,849,370	24,350
Fluorspar .....		...	94,239	...	57,834	...
Gypsum	ton	379,621	853,199	425,733	1,059,590	412,100
Mica	"	45	6,273	12	2,106	18
Natural mineral waters	Imp. gal.	2,500	2,012	2,433	1,946	3,025
Nepheline syenite	ton	200,016	2,754,060	201,306	2,613,446	228,722
Peat moss	"	4,720	220,232	6,123	216,055	10,925
Pyrte, pyrrhotite .....		...	685,335	...	655,569	...
Quartz ²	ton	1,591,091	1,428,400	922,599	666,275	1,600,352
Salt	"	1,538,805	9,478,587	2,126,483	10,204,472	3,036,230
Silica brick	M	2,902	291,412	1,740	187,061	1,123
Sulphur, in smelter gas .....		...	542,846	...	585,700	...
Sulphur, elemental .....		...	...	...	36,919	...
Talc	ton	11,236	160,015	8,725	125,511	8,796
Fuels:						
Natural gas	Mcf.	14,400,913	5,328,338	16,147,986	5,974,755	16,839,236
Petroleum	bbl.	623,666	2,160,000	778,341	2,623,000	1,001,580
Structural materials:						
Cement	ton	2,211,887	33,505,994	2,400,158	35,195,552	2,386,334
Clay products .....		...	18,353,299	...	22,786,291	...
Lime	ton	766,143	9,416,868	1,009,916	12,644,925	1,130,055
Sand and gravel	"	66,129,158	36,699,895	67,469,064	40,055,031	73,981,703
Stone	"	17,390,438	22,195,815	15,756,560	20,670,480	17,288,796
Totals .....		...	748,824,322	...	789,601,868	...

¹ Includes some arsenic recovered from foreign ore.² Includes low-grade silica sand for fluxing purposes.

TABLE 12. Mineral Production of Manitoba, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:						
Cadmium	lb.	38,909	66,145	39,994	60,791	89,095
Cobalt	"	172,053	243,165	274,365	441,531	314,343
Copper	"	37,101,564	10,686,798	25,201,421	6,383,403	25,890,399
Gold	troy oz.	120,008	4,026,268	87,356	2,968,357	51,186
Nickel	lb.	20,067,367	14,725,014	19,555,669	13,328,056	20,277,741
Selenium	"	26,491	291,401	7,064	52,980	14,797
Silver	troy oz.	407,834	356,325	320,759	278,451	373,827
Tellurium	lb.	575	1,006	394	670	909
Zinc	"	27,458,711	3,319,758	23,024,389	2,505,054	31,405,044
Non-metallics:						
Gypsum	ton	183,708	458,368	176,123	343,266	200,139
Peat moss	"	5,700	213,855	8,347	344,096	16,239
Quartz	"	-	-	7,875	37,736	6,504
Salt	"	19,372	503,031	20,580	617,150	23,547
Fuels:						
Petroleum, crude	bbl.	6,089,743	15,467,947	5,829,226	14,415,676	5,056,075
Structural materials:						
Cement	ton	412,998	6,820,383	378,823	6,580,276	402,562
Clay products .....		...	827,697	...	682,943	...
Lime	ton	64,922	1,089,728	72,561	1,168,514	60,503
Sand and gravel	"	6,647,280	3,450,100	9,997,546	6,025,156	9,261,553
Stone	"	454,972	917,296	540,703	983,463	526,696
Totals .....		...	63,464,285	...	57,217,569	...

TABLE 13. Mineral Production of Saskatchewan, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$		\$		\$
Metallics:						
Cadmium	lb.	187,439	318,646	302,593	459,941	253,697
Copper	"	61,193,681	17,715,571	75,020,217	19,070,139	71,072,523
Gold	troy oz.	75,236	2,524,168	86,590	2,942,328	78,588
Selenium	lb.	40,152	441,672	30,234	226,755	57,677
Silver	troy oz.	1,145,571	1,000,885	1,299,077	1,127,729	1,187,439
Tellurium	lb.	1,106	1,936	1,707	2,902	3,552
Uranium (U_3O_8)	"	4,462,552	44,561,832	5,924,253	59,815,924	5,372,685
Zinc	"	90,140,339	10,897,967	96,655,609	10,516,130	93,753,079
Non-metallics:						
Potash (K_2O)		-	-	-	-	1,408,462
Pyrite		191,368		165,400	-	-
Quartz ¹	lb.	168,051	84,026	187,360	134,899	188,515
Salt	"	43,684	1,069,201	46,511	1,157,729	48,776
Sodium sulphate	ton	157,800	2,568,728	173,217	2,862,915	179,535
Sulphur, elemental		-	-	-	-	14,815
Fuels:						
Coal	ton	2,248,812	4,398,031	2,253,176	4,379,481	1,947,380
Natural gas	Mcf.	13,994,347	1,368,647	18,819,795	1,881,980	33,612,966
Petroleum, crude	bbl.	36,861,089	79,325,064	44,626,148	96,704,863	47,442,498
Structural materials:						
Cement	ton	150,664	2,861,615	194,734	4,506,803	161,057
Clay products .....		...	1,015,389	...	1,158,803	...
Sand and gravel	ton	6,565,563	3,116,291	5,380,151	2,826,245	5,898,136
Totals .....		...	173,461,037	...	209,940,966	...
						210,042,051

¹ Low-grade silica sand for fluxing purposes.

TABLE 14. Mineral Production of Alberta, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$		\$		\$
Metallics:						
Gold	troy oz.	416	13,957	282	9,582	200
Silver	"	39	34	28	24	19
Non-metallics:						
Salt	ton	46,935	1,038,346	55,766	983,640	61,198
Sulphur .....		...	...	...	1,815,100	...
Fuels:						
Coal	ton	3,156,546	17,383,547	2,519,901	12,807,276	2,528,755
Natural gas	Mcf.	183,140,820	13,735,562	239,049,591	20,080,166	297,568,926
Petroleum	bbl.	137,492,316	355,555,140	113,277,847	283,262,592	129,967,312
Structural materials:						
Cement	ton	556,962	8,802,914	635,516	10,676,668	689,854
Clay products .....		...	2,628,187	...	2,589,170	...
Lime	ton	42,223	678,237	47,112	767,612	43,709
Sand and gravel	"	11,801,422	9,981,716	13,226,668	12,717,750	13,271,695
Stone	"	80,565	394,123	91,882	249,668	528,961
Totals .....		...	410,211,763	...	345,939,248	...
						376,215,583

TABLE 15. Mineral Production of British Columbia, 1957-59

Product		1957		1958		1959	
		Quantity	Value	Quantity	Value	Quantity	Value
			\$		\$		\$
Metallics:							
Antimony	Ib.	1,360,731	370,442	858,633	284,208	1,657,797	540,276
Bismuth	"	145,634	295,637	154,034	308,068	151,703	288,236
Cadmium	"	1,956,028	3,325,248	1,252,724	1,904,140	1,695,821	2,170,651
Copper	"	30,820,994	8,877,743	12,019,726	2,995,902	16,242,626	4,781,508
Gold	troy oz.	229,113	7,686,741	210,612	7,156,596	184,312	6,187,354
Indium	"	384,360	693,770	...	...	...	...
Iron ore	ton	357,342	2,200,637	630,271	4,193,442	849,248	6,363,848
Lead	lb.	280,188,948	39,114,378	294,833,165	33,493,047	297,843,859	31,601,233
Nickel	"	-	-	1,408,490	996,507	1,061,532	743,072
Platinum	troy oz.	-	-	-	-	4	260
Silver	"	8,584,991	7,500,707	8,013,428	6,956,457	7,463,285	6,551,272
Tin ¹	lb.	709,102	580,342	795,496	625,260	747,443	630,094
Tungsten (WO ₃)	"	1,921,483	5,279,275	690,976	1,898,455	-	-
Zinc	"	443,557,961	53,626,157	434,608,705	47,285,427	406,183,044	49,716,804
Non-metallics:							
Asbestos	ton	31,714	7,342,986	30,078	6,398,679	33,883	7,878,947
Arsenic (As ₂ O ₃)		3	2	3	2	3	2
Barite	ton	17,264	433,200	17,103	334,425	23,142	187,368
Diatomite	"	120	2,400	27	540	5	100
Fluorspar		-	-	...	1,387	-	-
Gypsum	ton	49,422	142,952	70,498	211,494	94,010	282,030
Mica (schist)	"	-	-	218	2,500	-	-
Peat moss	"	58,779	2,343,832	67,827	2,434,686	78,815	3,109,623
Pyrrite .....		...	1,199,893	...	749,389	...	950,432
Quartz	ton	95,701	350,930	67,146	286,438	65,318	379,890
Sulphur, in smelter gas .....		...	1,687,730	...	1,650,220	...	1,675,130
Sulphur, elemental .....		...	...	...	20,813	...	687,337
Fuels:							
Coal	ton	1,113,699	7,280,024	849,091	5,750,871	751,492	5,237,724
Natural gas	Mcf.	8,274,942	366,867	63,638,297	3,915,239	69,128,708	4,558,023
Petroleum, crude	bbl.	340,945	763,717	512,359	1,022,156	866,234	1,583,129
Structural materials:							
Cement	ton	443,469	7,078,108	409,397	6,755,619	427,181	7,049,638
Clay products .....		...	2,020,701	...	1,639,494	...	1,949,332
Lime	ton	46,470	856,625	27,567	505,299	29,167	547,190
Sand and gravel	"	15,699,857	10,868,698	13,216,976	8,475,544	17,064,615	11,063,459
Stone	"	4,233,531	6,641,380	1,985,818	2,896,834	2,092,804	2,681,132
Total .....		...	178,931,120	...	151,149,136	...	159,395,092

¹ Tin content of concentrates and lead-tin alloy.

Considerable arsenic is contained in auriferous quartz ores exported. However this is not paid for and data relating to its possible recovery are unobtainable.

TABLE 16. Mineral Production of the Northwest Territories, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Copper	lb.	330,472	95,672	868,403	220,748	986,682
Gold	troy oz.	340,018	11,407,604	343,838	11,683,615	405,922
Nickel	lb.	1,056,341	734,157	3,866,479	2,648,538	3,841,770
Silver	troy oz.	69,104	60,376	72,779	63,179	70,560
Uranium (U_3O_8)	lb.	838,264	8,801,769	910,843	9,572,847	919,333
Fuels:						
Natural gas	Mcf.	19,243	6,446	24,100	8,197	67,189
Petroleum, crude	bbl.	420,844	294,591	457,086	698,266	430,319
Totals .....		...	21,400,615	...	24,895,390	...
						25,874,496

TABLE 17. Mineral Production of Yukon, 1957-59

Product	1957		1958		1959	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Cadmium	lb.	185,754	315,782	160,739	244,323	141,750
Gold	troy oz.	73,962	2,481,425	67,745	2,301,975	66,960
Lead	lb.	24,985,839	3,488,023	21,566,194	2,449,920	21,592,456
Silver	troy oz.	6,484,185	5,665,232	6,415,560	5,569,348	7,054,632
Zinc	lb.	17,119,445	2,069,741	15,522,159	1,688,811	13,248,532
Fuels:						
Coal	ton	7,731	91,595	4,344	56,379	3,879
Totals .....		...	14,111,798	...	12,310,756	...
						12,592,378

TABLE 18. Tonnage of Ore Mined and Rock Quarried in the Canadian Mining Industry, 1955-59

	1955	1956	1957	1958	1959
Gold-quartz ores	16,404,660	14,589,230	14,472,724	14,766,582	14,246,860
Copper-gold-silver ores	9,911,751	10,422,648	10,570,801	11,484,960	12,436,105
Silver-cobalt ores	302,821	205,013	186,294	223,609	197,449
Silver-lead-zinc ores	7,526,352	7,651,006	6,714,538	5,899,872	5,708,625
Nickel-copper ores	17,022,067	18,453,360	19,289,516	12,681,918	18,964,386

TABLE 18. Tonnage of Ore Mined and Rock Quarried in the Canadian Mining Industry, 1955-59 — Concluded

	1955	1956	1957	1958	1959
Iron ores	17,220,376	23,950,943	26,417,572	20,357,239	32,398,057
Miscellaneous metals ¹	800,764	2,119,476	6,689,383	13,171,208	15,129,295
Asbestos	17,696,357	21,922,874	22,610,743	22,443,060	23,105,241
Feldspar and nepheline syenite	215,660	286,022	306,337	332,265	413,808
Quartz, exclusive of sand (shipments)	945,398	1,296,431	1,313,490	737,088	1,039,021
Gypsum and anhydrite	4,539,660	4,900,265	4,706,524	3,976,714	5,983,345
Talc and soapstone	29,273	28,500	40,083	37,314	43,762
Iron oxides	11,789	11,152	12,560	2,822	2,633
Rock salt	275,104	638,651	790,986	780,094	1,244,906
Other non-metals	1,032,913	1,235,686	746,925	803,635	1,418,454
Stone, all kinds, quarries (exclusive of stone used for cement and lime)	30,512,920	33,257,318	40,282,081	38,156,647	46,439,535
Stone used for the manufacture of cement	5,964,433	7,152,693	8,741,863	8,473,596	7,963,129
Estimated rock for the manufacture of lime	2,274,211	2,276,836	2,562,740	2,831,886	3,062,152
Totals (other than coal)	132,686,509	150,398,104	166,455,160	157,069,182	189,796,763

¹ Uranium ore is not included prior to 1956.

Data for the years 1922-46 are shown in Mineral Production of Canada, 1946.

Data for the years 1947-51 are shown in General Review of the Mining Industry, 1951.

Data for the years 1952-56 are shown in General Review of the Mining Industry, 1956.

TABLE 19. Tonnage of Ore Mined¹ and Rock Quarried,² by Provinces, 1955-59

Province	1955	1956	1957	1958	1959
Newfoundland	7,940,676	9,593,643	10,541,432	7,378,993	7,484,035
Prince Edward Island .....	...	...	...	...	1,700,000
Nova Scotia	4,636,728	4,906,251	4,651,545	3,813,655	6,716,003
New Brunswick	1,484,410	2,475,039	1,963,614	2,541,459	2,445,856
Quebec	50,624,193	57,611,096	63,806,273	63,308,929	76,233,819
Ontario	49,206,738	56,233,453	64,686,691	62,871,982	76,170,363
Manitoba	2,921,792	3,181,811	3,417,325	2,905,751	2,878,546
Saskatchewan	1,228,285	1,514,292	2,524,231	2,895,002	3,175,234
Alberta	792,055	1,013,726	1,087,703	940,827	1,448,604
British Columbia	13,090,597	13,009,058	12,840,216	9,473,193	10,548,299
Northwest Territories	597,270	675,083	748,205	762,169	819,923
Yukon	163,765	184,652	187,925	177,222	176,081
Canada (excluding coal)	132,686,509	150,398,104	166,455,160	157,069,182	189,796,763

¹ Excluding uranium ore prior to 1956.² Sand and gravel, sodium sulphate, etc., which are not actually mined or blasted are not included.

TABLE 20. Yearly Average Prices of Copper, Lead, Zinc and Silver, 1940-59
(Copper, lead and zinc in U.S. cents per pound; silver, U.S. cents per ounce)

Year	Copper New York	Lead New York	Zinc St. Louis	Silver New York	Year	Copper New York	Lead New York	Zinc St. Louis	Silver New York
	Yearly average	Yearly average	Yearly average ¹	Yearly average ²		Yearly average	Yearly average	Yearly average ¹	Yearly average ²
1940.....	11,296	5,179	6,335	34,773	1950.....	21,235	13,296	13,866	74,169
1941.....	11,797	5,793	7,474	34,783	1951.....	24,200	17,500	18,000	89,368
1942.....	11,775	6,481	8,250	38,333	1952.....	24,200	16,467	16,215	84,941
1943.....	11,775	6,500	8,250	44,750	1953.....	28,798	13,489	10,855	85,188
1944.....	11,775	6,500	8,250	44,750	1954.....	29,694	14,054	10,681	85,250
1945.....	11,775	6,500	8,250	51,928	1955.....	37,491	15,138	12,299	89,099
1946.....	13,820	8,109	8,726	80,151	1956.....	41,818	16,013	13,494	90,826
1947.....	20,958	14,673	10,500	71,820	1957.....	29,576	14,658	11,399	90,820
1948.....	22,038	18,043	13,588	74,361	1958.....	25,764	12,109	10,309	89,044
1949.....	19,202	15,364	12,144	71,930	1959.....	31,182	12,211	11,448	91,202

¹ Prime western grade.² 1937-59 for other than newly-mined domestic.

Source: "American Bureau of Metal Statistics".

TABLE 21. Average Annual Metal Prices, in Canadian Dollars, 1940-59

Year	Gold	Silver	Copper	Lead	Zinc	Year	Gold	Silver	Copper	Lead	Zinc
	Troy oz.	Troy oz.	Pound	Pound ¹	Pound ¹		Troy oz.	Troy oz.	Pound	Pound ²	Pound ²
dollars						dollars					
1940.....	38.50	0.382	0.101	0.034	0.034	1950.....	38.05	0.8082	0.2342	0.1445	0.1565
1941.....	38.50	0.3826	0.101	0.034	0.034	1951.....	36.85	0.9455	0.277	0.184	0.199
1942.....	38.50	0.4216	0.101	0.034	0.034	1952.....	34.27	0.8352	0.2854	0.1619	0.1746
1943.....	38.50	0.4525	0.1175	0.0375	0.040	1953.....	34.42	0.8401	0.2994	0.1293	0.1196
1944.....	38.50	0.430	0.120	0.045	0.043	1954.....	34.07	0.8326	0.2916	0.1333	0.1198
1945.....	38.50	0.470	0.1255	0.050	0.0644	1955.....	34.52	0.8818	0.3687	0.1438	0.1365
1946.....	36.75	0.8365	0.128	0.0675	0.0781	1956.....	34.45	0.8968	0.4141	0.1551	0.1484
1947.....	35.00	0.72	0.2039	0.1367	0.1123	1957.....	33.55	0.8737	0.2895	0.1396	0.1209
1948.....	35.00	0.75	0.2235	0.1804	0.1393	1958.....	33.98	0.8681	0.2542	0.1136	0.1088
1949.....	36.00	0.7425	0.1997	0.158	0.1325	1959.....	33.57	0.8778	0.2961	0.1061	0.1224

¹ Based on New York; 1933-42 based on London.² Based on London; prices controlled by Government 1939-47. Based on New York 1947-50. Montreal prices in 1951-59.

TABLE 22. Production of Leading Mineral Products, by Months, 1957-59

No.		Asbestos	Cement	Clay products	Coal	Copper	Gold	Gypsum
		tons	tons	\$	tons	pounds	ounces	tons
1957								
1	January	59,694	189,694	1,532,825	1,410,225	52,804,296	358,638	306,350
2	February	77,249	210,959	1,682,891	1,301,241	59,494,732	342,826	193,284
3	March	69,689	315,616	2,400,046	1,072,839	62,685,269	375,702	195,694
4	April	107,066	379,383	2,420,503	987,048	56,829,666	370,251	395,792
5	May	100,362	622,961	3,718,883	927,261	53,986,461	375,907	395,079
6	June	83,946	650,867	3,514,299	793,112	54,560,249	359,721	519,800
7	July	83,089	878,529	3,976,068	709,127	53,572,465	365,905	501,831
8	August	95,949	746,973	3,909,687	767,328	60,952,655	363,801	586,469
9	September	135,692	669,256	3,585,460	1,076,152	62,751,293	276,042	479,372
10	October	88,991	682,343	3,801,984	1,498,906	63,511,520	399,693	481,201
11	November	93,770	469,842	3,162,924	1,354,912	68,481,129	378,293	301,452
12	December	50,589	226,675	2,165,588	1,291,004	68,587,790	367,115	221,167
13	Totals	1,046,086	6,049,098	35,922,158	13,189,155	718,218,535	4,433,894	4,577,492
1958								
14	January	57,450	213,199	1,933,788	1,296,690	65,736,378	378,414	260,158
15	February	53,949	183,123	1,292,901	1,172,251	61,336,142	360,385	209,564
16	March	55,178	312,048	2,873,329	940,121	68,477,172	394,247	249,554
17	April	83,477	422,752	3,185,496	850,434	65,284,103	385,183	251,180
18	May	70,883	665,429	4,160,858	823,114	64,742,399	384,649	321,326
19	June	73,995	719,926	4,140,795	684,469	64,336,378	385,810	318,361
20	July	87,377	752,762	4,730,946	697,365	61,762,123	382,250	382,253
21	August	85,785	721,140	4,185,781	409,707	61,234,633	369,723	365,503
22	September	88,992	737,622	4,514,831	937,015	54,891,449	378,022	423,659
23	October	98,392	696,722	4,511,151	1,259,348	44,615,189	404,328	427,060
24	November	107,072	493,674	3,802,063	1,239,146	40,161,993	371,146	371,343
25	December	62,781	230,024	2,277,964	1,377,450	37,649,449	377,125	384,218
26	Totals	925,331	6,153,421	41,709,903	11,687,110	690,227,408	4,571,347	3,964,129
1959								
27	January	54,523	187,853	1,792,293	1,279,791	48,642,147	376,086	313,040
28	February	60,084	209,242	1,899,452	920,531	55,337,583	358,052	235,991
29	March	69,902	292,162	3,158,914	704,061	64,158,223	378,398	388,869
30	April	98,139	445,685	3,465,510	780,061	63,564,242	376,795	488,529
31	May	91,257	651,778	4,127,966	570,332	64,548,851	380,019	562,120
32	June	98,012	781,363	4,646,838	609,637	73,263,256	359,004	694,142
33	July	94,898	829,108	4,890,632	719,652	71,439,415	379,010	617,683
34	August	91,929	725,836	4,447,390	482,537	69,386,141	349,470	630,100
35	September	98,363	746,530	4,211,673	956,274	70,775,680	363,982	654,242
36	October	96,529	678,135	4,080,156	1,232,921	71,264,100	396,725	544,727
37	November	124,839	452,977	3,394,934	1,222,462	69,813,746	388,812	400,506
38	December	71,954	283,817	2,399,690	1,148,463	68,345,276	377,057	348,601
39	Totals	1,050,429	6,284,486	42,515,448	10,626,722	790,538,660	4,483,416	5,878,630

Notes: Data for the years 1929-49 are shown in General Review of the Mining Industry, 1949.
 Data for the years 1950-52 are shown in General Review of the Mining Industry, 1952.

TABLE 22. Production of Leading Mineral Products, by Months, 1956-59

Iron ore	Lead	Lime	Natural gas	Nickel	Petroleum	Salt	Silver	Zinc	No.
tons	pounds	tons	Mcf.	pounds	barrels	tons	ounces	pounds	
272,674	29,163,717	98,169	22,623,311	32,217,824	16,897,009	165,579	2,203,631	64,940,318	1
88,408	30,440,047	96,752	19,504,456	30,054,066	14,217,248	138,871	2,076,679	61,992,749	2
56,465	34,256,632	110,639	18,277,833	33,465,519	15,999,906	101,832	2,391,316	70,561,764	3
302,070	29,650,140	115,694	18,524,237	30,694,880	15,294,701	113,747	2,270,638	66,913,079	4
2,463,099	29,281,292	119,640	13,896,935	32,449,219	16,393,594	125,176	2,156,185	68,392,389	5
3,524,433	32,962,871	109,464	12,587,158	30,954,476	15,896,053	131,762	2,253,584	66,197,625	6
3,642,008	28,854,544	121,649	12,415,299	31,746,703	16,799,283	142,118	2,417,347	66,379,153	7
4,018,331	29,458,562	114,273	13,192,605	33,410,822	15,790,987	144,197	2,667,468	70,338,009	8
3,261,054	29,698,449	113,036	14,628,574	30,708,294	14,403,816	168,263	2,354,397	68,307,614	9
2,782,107	28,587,487	133,105	20,635,490	30,664,762	13,892,163	174,535	2,853,815	73,564,762	10
1,520,505	31,857,426	121,496	24,226,618	28,673,391	12,288,327	182,247	2,600,254	72,825,444	11
334,970	30,757,362	115,700	29,464,166	29,876,595	13,374,917	183,182	2,577,984	77,068,750	12
22,272,174	362,968,529	1,378,617	220,006,682	375,916,551	181,848,004	1,771,559	28,823,298	827,481,656	13
181,203	34,134,753	120,954	30,937,476	33,309,588	15,317,635	162,627	2,530,583	75,790,860	14
79,005	29,815,854	118,918	29,196,932	31,681,113	14,463,517	154,303	2,305,655	68,259,259	15
94,186	30,741,918	132,331	31,528,723	31,595,453	14,458,269	139,360	2,459,693	75,507,526	16
232,613	31,708,743	125,492	27,103,366	30,115,976	12,041,659	120,322	2,574,958	69,667,129	17
1,468,395	30,693,692	140,165	22,845,606	30,352,950	12,560,841	195,234	2,656,665	69,983,441	18
2,258,660	31,690,563	122,993	19,833,422	29,096,809	12,452,465	182,473	2,536,018	68,975,483	19
2,494,919	28,551,140	133,974	20,341,023	25,592,033	14,682,674	192,977	2,390,687	70,478,151	20
2,477,418	24,919,231	127,014	21,753,125	25,034,292	13,818,523	195,853	2,889,154	70,899,396	21
2,337,390	21,302,473	131,848	24,917,691	23,512,369	13,152,510	226,010	2,841,304	70,426,675	22
2,361,979	29,528,644	152,450	30,162,501	6,739,472	13,415,155	274,735	2,375,158	70,215,356	23
1,238,254	33,841,886	151,052	36,816,586	5,778,365	13,525,248	244,529	2,649,515	70,404,431	24
512,301	36,432,069	139,231	42,367,275	6,308,502	15,607,700	285,769	2,954,077	69,589,865	25
15,726,323	373,360,966	1,596,422	337,803,726	279,117,422	165,496,196	2,375,192	31,163,470	850,197,572	26
381,456	35,161,473	130,613	43,671,883	16,143,671	16,913,268	305,030	3,094,440	70,626,336	27
237,904	32,772,058	126,170	36,891,926	25,281,073	15,775,074	297,970	2,264,903	59,559,393	28
190,601	35,703,185	134,082	36,802,903	29,893,110	15,866,089	228,131	2,782,307	68,165,472	29
790,732	23,400,819	136,421	32,714,238	31,036,580	13,391,619	200,961	2,691,503	66,153,874	30
2,252,136	34,551,579	141,467	30,963,341	33,294,227	13,765,094	225,516	2,499,149	67,184,455	31
2,537,649	30,862,266	137,855	27,033,535	33,248,177	14,935,902	217,561	2,676,937	65,941,889	32
2,595,378	31,148,739	139,334	26,184,271	32,437,693	15,233,140	264,581	2,867,957	69,240,343	33
3,240,846	39,133,508	129,847	28,359,136	33,607,103	15,875,560	266,872	2,519,033	67,369,063	34
4,139,555	25,766,722	150,140	29,907,261	32,450,942	16,461,754	276,110	2,446,846	64,179,386	35
3,754,282	28,842,228	163,943	36,127,423	34,464,418	15,123,550	366,281	3,072,219	66,646,859	36
2,696,274	26,989,253	153,381	41,877,469	33,831,177	14,324,835	343,662	2,334,137	61,329,498	37
671,512	29,059,631	143,472	46,801,144	37,422,055	17,112,612	297,301	2,674,538	65,618,655	38
34,488,325	373,391,461	1,685,725	417,334,527	373,110,226	184,778,497	3,269,976	31,923,969	792,015,223	39

Notes: Data for the years 1953-55 are shown in General Review of the Mining Industry, 1955.
Data for the years 1955-57 are shown in General Review of the Mining Industry, 1957.

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1953-59

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies and containers	Gross value of production ¹	Net value added by processing ²
		number			dollars		
Metal mining industries							
Placer gold mines							
1955	64	345	1,480,868	122,882	98,278	2,728,106	2,443,595
1956	64	250	1,378,166	81,639	451,933	2,594,312	2,026,790
1957	57	243	1,180,225	55,472	353,186	2,573,853	2,116,716
1958	112	236	1,253,362	63,007	461,375	3,049,743	2,484,524
1959	112	239	1,194,713	74,536	355,837	2,462,727	1,989,431
Gold quartz mines							
1955	136	18,032	63,961,744	7,080,925	24,496,662	134,476,377	101,382,077
1956	133	17,031	62,701,494	6,830,676	22,725,750	127,983,495	97,011,062
1957	147	16,911	63,708,680	6,771,888	22,705,425	127,055,902	95,991,241
1958	127	16,811	64,208,042	7,134,399	18,013,121	133,998,004	107,140,993
1959	139	16,777	65,519,112	7,161,054	20,901,136	130,097,538	100,519,397
Copper-gold-silver mines							
1955	186	9,025	36,391,480	4,090,507	12,548,088	145,269,622	99,540,486
1956	314	10,533	43,929,096	4,620,541	15,594,327	147,187,431	96,941,696
1957	261	10,359	46,694,352	4,942,600	15,297,346	119,013,141	68,694,057
1958	244	8,875	39,745,243	4,428,653	15,968,361	133,778,148	77,993,264
1959	310	9,682	43,460,641	4,948,483	12,948,618	147,752,990	90,660,009
Silver-cobalt mines							
1955	14	762	2,598,437	164,015	470,270	5,534,895	4,350,174
1956	15	694	2,415,545	252,055	339,787	4,563,402	3,502,093
1957	12	598	2,209,805	256,694	353,026	4,314,088	3,105,562
1958	12	570	2,115,670	241,027	320,403	4,792,545	3,633,492
1959	11	486	1,647,687	185,883	320,554	3,006,541	4,112,373
Silver-lead-zinc mines							
1955	103	6,529	26,741,770	3,465,589	9,740,623	140,186,577	82,662,039
1956	96	6,338	27,253,247	3,452,621	8,215,578	142,920,691	86,604,018
1957	83	5,844	26,256,837	2,992,834	11,360,204	115,961,445	59,485,349
1958	62	4,485	20,763,855	2,208,845	9,092,759	98,152,340	46,166,133
1959	52	4,241	19,843,990	1,992,494	6,244,399	101,873,270	53,554,292
Nickel-copper mines							
1955	38	10,953	48,670,802	2,962,741	14,338,539	96,027,045	75,454,036
1956	55	11,872	55,486,888	3,030,633	14,931,835	103,616,192	82,735,929
1957	85	12,124	59,807,695	3,810,592	18,049,861	110,427,956	84,148,711
1958	47	9,243	47,190,007	2,990,800	11,190,722	79,814,539	61,164,999
1959	55	11,025	57,210,303	3,456,926	15,234,554	110,332,077	84,745,910
Iron mines							
1955	30	4,892	18,740,274	2,694,357	6,466,556	110,435,850	71,788,935
1956	40	6,469	29,249,650	5,950,687	8,412,065	160,362,118	99,606,720
1957	60	7,770	36,288,939	6,218,370	10,312,348	167,221,425	102,701,537
1958	59	7,404	36,032,817	6,750,140	8,477,634	126,131,181	79,175,569
1959	59	7,776	41,450,834	7,708,322	10,043,867	192,666,101	125,208,070
Miscellaneous metal mines							
1955 ³	223	2,826	12,663,195	1,844,436	4,364,426	35,103,488	28,305,111
1956 ³	169	4,377	20,532,485	4,191,314	8,638,200	54,494,426	40,781,886
1957 ³	139	8,705	42,386,402	6,539,935	20,949,018	144,689,661	115,788,076
1958 ³	91	14,375	78,320,507	9,293,152	50,827,573	284,367,777	223,484,942
1959 ³	84	13,645	76,604,136	9,023,750	57,982,723	333,770,291	265,835,151
Totals, metal mining industries							
1955	794	53,364	211,248,550	22,525,452	72,523,442	669,762,060	485,927,453
1956	886	57,364	242,946,571	28,410,168	79,309,475	743,722,067	509,210,175
1957	844	62,554	278,532,935	31,588,383	99,380,414	791,237,471	532,031,375
1958	754	61,999	289,629,503	32,110,023	114,351,948	804,084,277	601,243,814
1959	822	63,871	306,931,416	34,551,448	123,940,688	1,023,961,535	726,631,232

See footnotes at end of table.

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1955-59 - Continued

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies and containers	Gross value of production ¹	Net value added by processing ²
		number			dollars		
Non-metal mining industries							
Asbestos							
1955	30	6,729	28,116,049	5,117,137	11,180,264	99,675,651	83,378,250
1956	23	7,065	30,411,878	5,541,309	12,335,772	105,304,309	85,427,228
1957	22	7,357	32,283,287	6,008,420	14,558,214	108,014,041	87,447,407
1958	22	6,997	32,025,137	5,740,515	12,798,276	95,271,323	76,732,532
1959	23	6,653	31,448,638	5,951,664	13,729,736	110,996,692	91,315,292
Feldspar, quartz and nepheline syenite							
1955	33	414	1,359,695	236,024	262,907	4,510,375	3,734,690
1956	30	502	1,792,484	352,067	309,799	6,017,744	5,258,255
1957	28	450	1,737,907	373,304	556,356	6,495,258	5,310,235
1958	35	450	1,804,827	389,008	617,720	5,555,582	4,382,352
1959	37	509	2,079,284	421,623	753,378	6,798,366	5,397,136
Gypsum							
1955	14	944	2,874,198	414,297	1,776,138	8,037,153	5,846,718
1956	15	1,030	3,317,673	454,428	1,903,098	7,260,236	4,902,710
1957	13	816	2,653,320	468,366	1,440,177	7,745,105	5,836,562
1958	13	627	2,300,288	424,164	841,785	5,169,159	3,923,210
1959	15	874	3,228,713	488,175	710,686	8,393,703	7,194,842
Iron oxides (ochres)							
1955	4	33	71,781	21,931	3,931	165,928	121,772
1956	3	29	49,669	6,055	5,465	191,145	152,400
1957	3	26	64,011	22,402	5,627	192,388	141,288
1958	3	17	31,916	14,718	3,228	116,343	98,397
1959	1	16	45,275	18,400	3,527	111,388	89,461
Mica							
1955	33	31	42,495	6,491	5,157	78,375	66,727
1956	23	23	37,673	4,796	4,045	97,049	88,208
1957	25	45	66,263	5,585	7,411	113,458	100,462
1958	25	28	44,848	5,039	4,483	90,643	81,121
1959	14	16	37,106	3,810	4,090	64,029	56,129
Peat							
1955	39	1,180	2,109,186	165,496	1,184,589	4,651,411	3,301,326
1956	38	1,274	2,538,885	175,351	1,251,702	5,451,305	4,024,252
1957	35	1,168	2,542,210	182,987	1,283,093	5,898,696	4,432,816
1958	38	1,447	2,484,732	180,976	1,445,196	6,185,375	4,559,203
1959	38	1,333	2,659,836	238,878	1,732,682	7,908,662	5,937,102
Talc and soapstone							
1955	4	50	130,221	38,689	63,122	392,687	290,831
1956	4	67	169,120	30,490	83,043	429,335	315,802
1957	4	77	222,287	35,427	107,298	512,724	369,999
1958	4	76	213,576	36,033	105,097	519,781	378,651
1959	4	65	184,656	39,022	79,062	577,488	459,404
Miscellaneous non-metal mines							
1955	73	1,650	5,340,186	1,597,371	1,665,679	10,967,755	7,561,714
1956	60	1,773	6,069,934	2,078,573	1,936,327	15,813,812	11,692,288
1957	50	1,571	5,673,243	1,909,893	1,597,660	14,278,289	10,723,739
1958	40	1,223	4,806,084	1,681,441	1,087,514	11,942,125	9,110,412
1959	38	1,409	5,711,543	1,858,404	1,560,540	13,854,287	10,367,213
Totals, non-metal mining industries (excluding salt)							
1955	230	11,031	40,043,791	7,597,436	16,141,787	128,499,315	104,302,028
1956	196	11,763	44,387,316	8,643,069	17,829,251	138,564,935	111,861,143
1957	180	11,510	45,242,548	9,006,384	19,555,836	143,249,959	114,362,308
1958	180	10,865	43,711,408	8,471,894	16,903,299	124,870,331	99,265,878
1959	171	10,875	45,395,051	9,019,976	18,573,701	148,704,615	120,816,579

See footnotes at end of table.

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1955-59 - Continued

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies and containers	Gross value of production ¹	Net value added in processing ²
		number				dollars	
Fuels industries							
Coal							
1955 203 16,590 50,325,387 5,014,951 10,353,242 93,579,471 78,211,278 1956 185 16,095 49,468,237 5,141,388 11,175,928 95,349,763 79,032,447 1957 170 14,569 47,222,273 4,862,774 11,449,260 90,220,670 73,908,636 1958 158 13,162 42,250,458 4,967,177 10,786,747 79,963,327 64,209,403 1959 133 11,485 37,122,895 4,281,690 10,705,703 73,875,895 58,888,502							
Petroleum and natural gas							
1955 14,126 6,868 26,018,298 3,568,700 5,984,143 319,860,795 310,307,952 1956 16,626 8,092 36,352,689 4,806,832 9,087,274 417,565,776 403,671,670 1957 18,885 7,821 36,302,114 5,970,451 10,691,980 465,324,929 448,662,498 1958 19,854 7,064 33,316,006 6,403,564 10,266,907 423,776,203 407,105,732 1959 21,557 6,721 33,701,648 7,420,485 9,661,761 435,516,896 438,434,650							
Totals, fuels industries							
1955 14,329 23,458 78,343,685 8,583,651 16,337,385 413,440,266 388,519,230 1956 16,811 24,187 85,820,926 9,948,220 20,263,202 512,915,539 482,704,117 1957 19,055 22,390 83,524,387 10,833,225 22,141,240 555,545,599 522,571,134 1958 20,012 20,226 75,366,464 11,370,741 21,053,654 503,739,530 471,315,135 1959 21,690 18,206 70,824,543 11,702,175 20,367,464 529,392,791 497,323,152							
Structural materials							
Sand and gravel							
1955 7,999 4,360 14,442,413 2,635,407 723,540 67,775,053 64,416,176 1956 8,311 4,627 14,994,414 3,095,393 936,646 81,957,352 77,925,313 1957 8,589 5,987 18,162,499 3,498,423 934,067 91,939,354 87,506,864 1958 7,832 5,957 18,225,999 3,832,843 530,034 96,282,363 91,919,486 1959 8,101 6,316 19,522,393 4,229,401 827,962 104,651,461 99,594,098							
Stone							
1955 557 4,108 12,390,943 2,334,445 3,137,050 43,736,687 38,265,192 1956 523 4,142 13,513,965 2,463,126 3,945,537 48,809,918 42,401,255 1957 583 4,331 14,552,950 2,949,437 4,201,890 59,197,662 52,046,335 1958 583 4,067 14,014,488 2,945,744 5,164,672 55,582,929 47,472,513 1959 613 3,873 13,936,905 3,090,530 5,129,431 60,958,784 52,738,823							
Totals, structural materials							
1955 8,556 8,468 26,833,356 4,969,852 3,860,590 111,511,740 102,681,298 1956 8,834 8,769 28,508,379 5,558,519 4,882,183 130,767,270 120,326,568 1957 9,175 10,318 32,715,449 6,447,860 5,135,957 151,137,016 139,553,199 1958 8,415 10,024 32,240,487 6,778,587 5,694,706 151,865,292 139,391,999 1959 8,714 10,189 33,459,298 7,319,931 5,957,393 165,610,245 152,332,921							
Totals, mining industries							
1955 23,909 96,321 354,469,382 43,676,391 108,863,204 1,323,213,381 1,061,430,009 1956 26,727 102,283 401,663,192 52,559,974 122,284,111 1,525,969,811 1,224,102,003 1957 29,251 106,772 440,015,319 57,875,852 146,213,447 1,641,190,045 1,308,518,016 1958 29,361 103,114 441,147,862 59,731,245 158,003,607 1,644,559,430 1,311,216,826 1959 31,397 103,141 456,610,308 82,593,530 168,839,246 1,867,669,186 1,497,103,884							

See footnotes at end of table.

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1955-59 - Concluded

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies and containers	Gross value of production ¹	Net value added by processing ²
		number			dollars		
Industries classified as manufacturing							
Smelting and refining							
1955.....	24	28,606	118,189,378	57,148,510	710,762,890	1,211,716,481	443,805,081
1956.....	23	30,788	130,199,944	64,942,503	820,604,322	1,396,565,178	511,018,353
1957.....	23	29,613	134,775,206	59,474,791	770,004,696	1,280,145,652	450,666,165
1958.....	25	26,959	131,081,250	63,522,398	693,796,744	1,135,770,506	378,451,364
1959.....	24	27,746	137,227,215	62,320,376	815,787,698	1,307,996,841	429,888,766
Salt							
1955.....	13	691	2,347,080	1,019,017	2,280,268	11,869,077	8,569,792
1956.....	13	785	2,740,685	988,301	2,465,982	14,007,188	10,552,905
1957.....	12	800	3,118,482	1,141,665	2,501,549	15,842,049	12,198,835
1958.....	13	795	3,183,245	1,069,615	2,748,081	16,957,157	13,139,461
1959.....	15	844	3,484,430	1,193,656	3,419,626	20,224,407	15,843,873
Clay products							
1955.....	118	4,118	12,850,485	5,287,490	886,736	36,353,183	30,178,957
1956.....	119	4,418	14,793,971	6,212,519	1,123,043	37,784,980	30,449,418
1957.....	111	4,067	13,963,399	6,020,971	958,936	35,922,158	28,942,251
1958.....	113	4,075	14,847,054	6,457,139	1,065,692	41,709,903	34,187,072
1959.....	116	4,250	15,972,945	6,446,705	1,371,977	42,515,448	35,582,292
Cement							
1955.....	12	2,801	10,962,895	12,970,470	11,505,305	68,812,666	44,336,891
1956.....	17	3,186	12,856,855	15,763,605	12,784,027	78,605,846	50,058,214
1957.....	17	3,465	15,317,388	19,692,658	16,193,942	97,079,041	61,192,441
1958.....	19	3,428	15,891,560	19,009,008	14,758,308	99,943,850	66,176,534
1959.....	19	3,421	16,435,823	17,309,329	13,269,944	98,777,937	67,612,521
Lime							
1955.....	39	1,099	3,776,481	3,474,710	1,308,751	16,576,891	11,793,430
1956.....	38	1,100	3,853,007	3,670,384	1,235,969	16,462,331	11,555,978
1957.....	39	1,152	3,982,533	4,154,766	1,277,317	17,528,782	12,096,699
1958.....	40	1,169	4,348,674	4,865,236	1,367,999	20,261,610	14,028,375
1959.....	40	1,245	4,779,369	5,056,570	1,455,072	22,130,956	15,602,172
Totals, industries classified as manufacturing							
1955.....	206	37,315	148,126,319	79,900,197	726,743,950	1,345,328,298	538,684,151
1956.....	210	40,277	164,384,462	91,577,312	838,213,343	1,343,425,523	613,634,868
1957.....	202	39,097	171,157,008	90,484,851	790,936,440	1,446,517,682	565,096,391
1958.....	210	36,426	169,351,783	94,923,396	713,736,824	1,314,643,026	503,982,806
1959.....	214	37,506	177,899,782	92,326,636	835,304,318	1,491,645,589	564,539,624
GRAND TOTALS, ALL INDUSTRIES							
Recorded for references purposes							
1955.....	24,115	133,636	502,595,701	123,376,588	835,607,154		1,600,114,160
1956.....	26,937	142,360	566,047,654	144,137,286	960,497,454		1,837,736,871
1957.....	29,453	145,869	611,172,327	148,360,703	937,149,887		1,837,614,407
1958.....	29,571	139,540	610,499,645	154,654,641	871,740,431		1,817,199,632
1959.....	31,611	140,647	634,510,090	154,920,166	1,004,143,564		2,061,643,508

¹ In this table the compilations are on an industry basis, and the gross value of production, except for non-ferrous smelting and refining, is computed on the basis of values f.o.b. mines or shipping points. For non-metals, fuels and structural materials there are only small differences between the totals made up on the industry basis and the totals prepared on a commodity basis as recorded in Tables 1 to 15 of this report; the cost of containers is included in the industry figures and there are some minor discrepancies because of methods of compilations. For the metals the difference between the two sets of figures is much greater, principally because in the commodity compilations (Tables 1 to 15) the output is measured at the smelter stage.

Because of the inclusion of figures for the non-ferrous smelting and refining industry, there would be considerable duplication in the overall gross value of production. Excluding smelters and refineries, the gross value of production for the mineral industries was as follows: in 1955: \$1,476,225,198; in 1956: \$1,672,830,156; in 1957: \$1,807,562,075; in 1958: \$1,823,431,950; in 1959: \$2,051,317,934.

² Gross value, less the cost of fuel, electricity, process supplies, containers, freight and treatment charges.

* Includes data of uranium mines. Data not available for 1941-53.

** Cost of ores and concentrates are included in smelting and refining data.

Note: The number of producing metal mines was as follows: in 1955: 263; in 1956: 252; in 1957: 265; in 1958: 314; in 1959: 292.

MINERAL STATISTICS

TABLE 24. Principal Statistics of the Mineral Industry, by Provinces, 1955-59
 Excluding the manufacturing group

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Net value added by processing ¹
		number			dollars	
Newfoundland						
1955	961	4,116	14,243,693	1,202,633	3,452,162	42,624,872
1956	970	4,859	18,534,748	1,755,663	4,039,747	51,332,044
1957	859	4,550	17,971,391	1,621,664	4,053,422	45,561,774
1958	374	4,379	17,899,856	1,935,732	4,465,906	36,854,535
1959	387	3,864	15,371,776	1,857,201	3,254,879	46,184,723
Prince Edward Island						
1959	67	72	155,525	36,363	6,587	4,516,221
Nova Scotia						
1955	427	11,534	34,215,191	3,239,934	8,846,581	50,849,901
1956	637	11,500	33,694,303	3,326,229	9,596,263	50,119,211
1957	629	10,491	33,905,324	3,116,370	9,667,766	52,232,770
1958	643	9,911	32,363,649	3,400,343	9,048,246	46,815,932
1959	652	8,805	28,026,813	2,822,549	8,410,011	48,191,861
New Brunswick						
1955	504	1,933	5,657,466	850,750	1,148,430	10,405,033
1956	558	2,156	6,217,413	926,262	1,456,911	12,027,844
1957	544	1,925	6,161,829	1,153,280	2,930,783	12,856,220
1958	252	1,392	4,163,399	924,142	1,694,308	9,168,038
1959	238	1,421	4,083,577	788,235	2,206,380	11,621,998
Quebec						
1955	4,325	22,209	79,690,780	12,517,058	27,988,185	233,119,729
1956	4,258	22,813	86,786,675	13,371,063	31,373,145	243,073,543
1957	4,609	25,010	97,077,826	15,392,704	32,094,727	238,224,980
1958	4,389	23,377	93,701,498	14,637,565	31,614,693	220,238,245
1959	4,653	24,284	100,616,564	16,115,346	34,536,422	269,392,232
Ontario						
1955	6,450	31,172	119,610,437	12,791,552	36,233,171	221,263,331
1956	6,217	34,545	141,024,895	17,318,522	41,327,712	246,454,304
1957	6,810	38,773	168,582,624	19,679,637	58,179,099	309,475,208
1958	6,561	40,672	185,724,478	22,434,952	72,268,630	401,231,226
1959	6,427	41,869	199,517,818	23,156,209	87,732,123	484,406,765
Manitoba						
1955	859	2,756	11,604,188	993,581	3,083,238	22,544,660
1956	1,071	2,347	10,193,987	1,171,639	2,754,042	27,486,523
1957	1,202	2,325	10,330,546	1,146,229	3,938,823	27,679,493
1958	1,278	2,311	10,996,943	1,031,633	2,579,427	28,896,094
1959	1,236	2,091	9,508,356	891,298	2,338,729	25,667,334

See footnote at end of table.

TABLE 24. Principal Statistics of the Mineral Industry, by Provinces, 1955-59 — Concluded
Excluding the manufacturing group

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity ¹	Cost of process supplies, ores and containers	Net value added by processing ¹
		number		dollars		
Saskatchewan						
1955	2,117	3,356	15,264,079	2,646,644	5,009,913	45,357,269
1956	3,046	4,123	19,812,637	3,975,726	6,414,715	76,450,102
1957	3,766	4,946	24,818,720	4,472,529	8,946,254	130,287,664
1958	4,066	4,991	26,129,549	4,478,118	13,175,392	158,991,484
1959	4,663	5,149	27,128,295	4,913,844	10,746,509	160,706,694
Alberta						
1955	7,215	8,089	28,988,266	3,730,805	6,669,612	303,752,258
1956	8,792	8,403	35,444,371	4,484,123	7,130,692	380,800,191
1957	9,630	7,522	31,639,473	5,295,981	6,205,870	378,208,768
1958	10,501	6,879	29,283,263	5,542,261	8,343,284	309,218,132
1959	11,677	6,438	29,931,706	6,267,811	8,392,216	336,649,186
British Columbia						
1955	963	9,306	35,745,045	3,921,511	14,102,030	100,414,650
1956	1,062	9,645	39,673,941	4,057,489	14,748,464	109,815,701
1957	1,089	9,180	37,868,327	3,711,555	16,354,939	88,977,610
1958	1,162	7,276	29,925,829	3,032,643	10,717,728	73,639,787
1959	1,253	7,204	31,917,610	3,339,369	7,560,556	81,787,238
Northwest Territories						
1955	49	1,028	5,133,979	1,018,343	1,757,266	21,943,403
1956	81	1,111	5,679,522	1,386,024	2,346,839	18,244,965
1957	80	1,255	7,239,682	1,536,319	1,709,536	18,311,041
1958	80	1,203	6,862,291	1,688,916	2,337,278	19,490,095
1959	86	1,180	6,717,354	1,732,576	2,513,256	20,493,199
Yukon						
1955	39	822	4,316,258	763,580	572,620	9,154,913
1956	35	781	4,600,700	787,234	1,095,581	8,297,575
1957	33	795	4,419,577	749,584	2,132,228	6,702,488
1958	55	723	4,097,107	624,940	1,756,715	6,673,258
1959	58	764	3,634,914	672,729	1,141,578	7,486,433
Canada						
1955	23,909	96,321	354,469,382	43,676,391	108,863,204	1,061,430,009
1956	26,727	102,283	401,663,192	52,559,974	122,284,111	1,224,102,003
1957	29,251	106,772	440,015,319	57,875,852	146,213,447	1,308,518,016
1958	29,361	103,114	441,147,862	59,731,245	158,003,607	1,311,216,826
1959	31,397	103,141	456,610,308	62,593,530	168,839,246	1,497,103,884

¹ Gross value less cost of fuel, electricity, process supplies, containers, ores, freight and treatment charges.

² Includes fuel and electricity used for metallurgical purposes.

Note: Plants in the provinces do not add to Canada total, as a plant which is located on the Manitoba-Saskatchewan boundary is counted but once.

TABLE 25. Principal Statistics of the Mineral Industry, by Provinces, 1955-59
Including the manufacturing group

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Net value added by processing ¹
	number		dollars			
Newfoundland						
1955	963	4,273	14,768,356	1,526,686	3,636,792	43,810,350
1956	972	5,032	19,058,143	2,087,184	4,237,315	52,661,275
1957	861	4,694	18,474,608	1,885,222	4,189,974	46,471,402
1958	376	4,509	18,312,005	2,186,071	4,577,741	37,713,764
1959	389	4,001	15,847,209	2,161,384	3,430,038	47,284,499
Prince Edward Island						
1959	67	72	155,525	36,363	6,587	4,516,221
Nova Scotia						
1955	435	11,895	35,221,162	3,755,791	9,355,570	53,220,581
1956	645	11,897	34,753,648	3,896,193	10,082,506	52,334,682
1957	637	10,827	34,924,921	3,677,795	10,226,192	54,799,518
1958	652	10,223	33,326,405	3,925,702	9,597,098	49,729,597
1959	661	9,129	28,979,644	3,368,161	9,010,574	51,132,974
New Brunswick						
1955	510	2,221	6,491,864	1,723,548	1,526,965	12,742,216
1956	565	2,456	7,166,887	1,917,575	1,809,042	14,638,734
1957	551	2,222	7,136,701	2,108,384	2,319,156	15,501,549
1958	259	1,683	5,177,279	1,812,887	1,953,614	12,014,056
1959	245	1,733	5,164,218	1,593,151	2,585,649	14,309,750
Quebec						
1955	4,366	36,068	135,625,841	52,093,927	376,642,782	411,667,591
1956	4,296	36,976	143,450,586	55,640,510	427,318,028	456,301,953
1957	4,646	37,540	150,599,715	52,969,621	323,464,111	412,047,336
1958	4,429	37,017	158,048,309	58,011,234	373,866,652	396,436,065
1959	4,694	36,954	162,161,262	54,289,916	407,402,542	437,407,511
Ontario						
1955	6,545	45,253	175,160,318	39,599,001	297,860,906	480,392,319
1956	6,314	49,308	202,904,431	47,167,413	347,302,902	523,509,563
1957	6,904	54,252	237,322,355	53,616,842	420,083,408	597,907,855
1958	6,658	53,581	244,564,865	52,089,970	327,034,294	627,266,446
1959	6,524	57,253	270,896,058	57,783,985	438,601,174	762,156,665
Manitoba						
1955	872	3,517	14,259,341	3,187,058	10,312,891	37,044,979
1956	1,086	3,220	13,170,338	4,141,848	9,201,163	44,835,075
1957	1,217	3,143	13,320,716	3,690,537	10,080,614	38,484,038
1958	1,291	3,012	14,242,266	3,158,803	6,988,805	37,969,546
1959	1,248	2,794	12,440,297	3,229,254	8,095,941	36,284,375

See footnote at end of table.

TABLE 25. Principal Statistics of the Mineral Industry, by Provinces, 1955-59 — Concluded
Including the manufacturing group

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity ²	Cost of process supplies, ores and containers	Net value added by processing ¹					
						number					
dollars											
Saskatchewan											
1955	2,123	3,990	17,766,069	4,808,109	21,444,211	69,199,727					
1956	3,053	4,826	22,670,036	6,286,590	20,558,091	102,038,999					
1957	3,774	5,765	28,233,058	7,254,715	23,517,258	144,563,138					
1958	4,074	5,826	29,698,589	7,527,886	27,761,280	177,046,776					
1959	4,671	6,022	30,964,910	8,092,572	26,182,281	180,303,184					
Alberta											
1955	7,235	9,540	34,371,452	5,148,897	13,759,562	320,395,543					
1956	8,813	10,089	42,098,665	6,417,660	15,689,102	400,305,131					
1957	9,648	9,124	38,552,275	7,349,488	15,154,884	397,962,407					
1958	10,516	8,380	36,098,821	7,476,452	21,422,083	330,629,051					
1959	11,698	8,030	37,369,887	8,432,350	22,524,536	358,778,799					
British Columbia											
1955	979	15,029	59,481,061	9,751,648	98,737,589	140,742,540					
1956	1,078	16,864	70,494,703	14,409,055	120,856,885	164,568,929					
1957	1,103	16,252	70,948,719	13,522,196	122,272,526	140,863,635					
1958	1,179	13,383	60,071,708	16,151,780	94,442,871	122,230,976					
1959	1,271	12,715	60,178,812	13,527,725	82,649,408	141,189,898					
Northwest Territories											
1955	49	1,028	5,133,979	1,018,343	1,757,266	21,943,403					
1956	81	1,111	5,879,522	1,386,024	2,346,839	18,244,965					
1957	80	1,255	7,239,682	1,536,319	1,709,536	18,311,041					
1958	80	1,203	8,862,291	1,688,916	2,337,278	19,490,095					
1959	86	1,180	6,717,354	1,732,576	2,513,256	20,493,199					
Yukon											
1955	39	822	4,316,258	763,580	572,620	9,154,913					
1956	35	781	4,600,700	787,234	1,095,581	8,297,575					
1957	33	795	4,419,577	749,584	2,132,228	6,702,488					
1958	55	723	4,097,107	624,940	1,758,715	6,673,258					
1959	58	764	3,634,914	672,729	1,141,578	7,486,433					
Canada											
1955	24,115	133,636	502,595,701	123,376,588	835,607,154	1,600,314,160					
1956	26,937	142,560	566,047,654	144,137,286	960,497,454	1,837,736,871					
1957	29,453	145,869	611,172,327	148,360,703	937,149,887	1,873,614,407					
1958	29,571	139,540	610,499,645	154,654,641	871,740,431	1,817,199,632					
1959	31,611	140,647	634,510,090	154,920,166	1,004,143,564	2,061,643,508					

¹ Gross value less cost of fuel, electricity, process supplies, containers, ores, freight and treatment charges.² Includes fuel and electricity used for metallurgical purposes.

Note: Plants in the provinces do not add to Canada total, as a plant which is located on the Manitoba-Saskatchewan boundary is counted but once.

TABLE 30. Mining Industry, Administration and Office Employees at Places in Canada, Except at Mine or Plant, 1959

Plant location	Average number of employees			Salaries and wages
	Male	Female	Total	
				\$
Newfoundland	15	6	21	75,158
Prince Edward Island	5	1	6	4,052
Nova Scotia	1,412	74	1,486	5,520,616
New Brunswick	19	9	28	155,581
Quebec	863	222	1,085	5,861,345
Ontario	434	174	608	3,295,799
Manitoba	22	8	30	212,012
Saskatchewan	880	164	1,044	5,956,198
Alberta	4,466	1,448	5,914	37,598,035
British Columbia	95	29	124	722,233
Northwest Territories	4	3	7	33,390
Yukon	93	7	100	624,420
Canada	8,308	2,145	10,453	60,059,739

Note: Data in Tables 30, 31 and 32 are not included elsewhere in this report.

TABLE 31. Manufacturing Group, Administration and Office Employees at Places in Canada, Except at Mine or Plant, 1959

Plant location	Average number of employees			Salaries and wages
	Male	Female	Total	
				\$
Newfoundland	2	—	2	24,000
Nova Scotia	6	—	6	27,000
New Brunswick	2	1	3	12,000
Quebec	57	15	72	292,977
Ontario	164	59	223	1,385,813
Manitoba	32	18	48	192,667
Saskatchewan	3	—	3	13,470
Alberta	27	9	36	185,454
British Columbia	25	13	38	337,867
Northwest Territories	—	—	—	—
Yukon	—	—	—	—
Canada	318	113	431	2,471,248

Note: Data in Tables 30, 31 and 32 are not included elsewhere in this report.

TABLE 32. Administration and Office Employees at Places in Canada, Except at Mine or Plant, 1959

Industry	Average number of employees			Salaries and wages
	Male	Female	Total	
				\$
Metal mining	1,153	268	1,421	8,174,455
Non-metallic mining	93	48	141	878,700
Fuels	6,871	1,771	8,642	49,935,990
Stone, sand and gravel	191	58	249	1,070,594
Totals	8,308	2,145	10,453	60,059,739
Manufacturing groups	318	113	431	2,471,248
Grand total	8,626	2,258	10,884	62,530,987

Note: Data in Tables 30, 31 and 32 are not included elsewhere in this report.

TABLE 33. Cost of Prospecting Conducted by Metal Mining Companies, 1956-59

Province in which prospecting was conducted	By placer gold mines ¹	By gold quartz mines ¹	By copper-gold-silver mines ¹	By silver-cobalt mines ¹	By silver-lead-zinc mines ¹	By nickel-copper mines ¹	By miscellaneous metal and mines ^{1,2}	Total metal mining
dollars								
1956								
Newfoundland	—	353,675	283,067	—	268,064	960	1,056,064	1,961,830
Nova Scotia	—	1,020	54,908	—	180,029	—	77,450	313,407
New Brunswick	—	282,993	2,762,998	—	157,218	396	563,375	3,766,980
Quebec	—	1,612,798	5,506,738	3,157	1,317,349	1,206,200	3,705,926	13,352,168
Ontario	—	1,213,821	3,981,727	107,238	418,406	3,916,585	2,056,823	11,694,600
Manitoba	—	91,399	2,229,693	707	15,853	6,788,586	242,837	9,369,075
Saskatchewan	—	51,837	420,280	—	30,269	260,156	390,270	1,152,812
Alberta	—	—	2,310	—	—	—	—	2,310
British Columbia	3,422	256,791	2,041,393	—	884,980	154,803	314,692	3,656,081
Northwest Territories	—	366,339	202,753	—	51,750	464,586	309,960	1,395,388
Yukon	28,198	34,282	830,018	—	247,283	518,065	77,762	1,735,608
Canada	31,620	4,264,955	18,315,885	111,102	3,571,201	13,310,337	8,795,159	48,400,259
1957								
Newfoundland	2,717	120,575	100,497	—	444,576	3,183	1,608,984	2,280,532
Nova Scotia	—	20,024	17,671	—	15,020	—	102,999	155,714
New Brunswick	22,486	359,139	2,021,332	—	121,289	35,697	130,440	2,690,383
Quebec	20,485	887,087	3,061,593	—	522,831	2,029,306	10,505,068	17,026,370
Ontario	—	1,480,662	3,356,861	8,565	213,072	2,686,144	4,971,325	12,716,629
Manitoba	—	175,818	3,978,139	—	62,475	6,162,399	155,095	10,533,926
Saskatchewan	—	89,523	1,251,540	—	114,857	332,742	309,663	2,098,325
Alberta	—	—	—	—	175	—	350	525
British Columbia	1,430	98,858	1,913,743	—	1,040,941	9,410	255,788	3,320,170
Northwest Territories	—	106,912	1,300,856	500	110,954	920,113	378,672	2,818,007
Yukon	28,350	31,654	543,359	—	135,727	41,666	3,082	783,838
Canada	75,468	3,370,252	17,545,591	9,065	2,781,917	12,220,660	18,421,466	54,424,419
1958								
Newfoundland	—	51,330	19,786	—	321,269	—	380,039	772,424
Nova Scotia	—	24,065	33,563	—	50,430	—	3,860	111,918
New Brunswick	—	175,810	299,803	—	44,806	13,971	26,526	560,916
Quebec	—	671,523	2,140,416	—	203,955	114,873	2,957,702	6,088,469
Ontario	—	850,371	1,616,780	10,396	50,323	3,628,819	984,136	7,140,825
Manitoba	—	110,550	3,009,460	—	11,421	9,051,804	102,957	12,286,192
Saskatchewan	—	30,416	454,615	—	52,125	400,558	57,710	995,424
Alberta	—	—	52	—	30,287	—	—	30,339
British Columbia	9,004	221,837	1,965,080	—	384,890	2,060	44,433	2,627,304
Northwest Territories	—	83,929	488,649	—	65,932	673,862	116,247	1,428,619
Yukon	82,457	26,529	211,291	—	135,627	8,752	—	464,656
Canada	91,461	2,246,360	10,239,495	10,396	1,351,065	13,894,699	4,673,610	32,507,086
1959								
Newfoundland	—	49,646	33,117	—	251,038	—	568,805	902,606
Nova Scotia	468	54,283	90,232	—	2,007	—	8,680	155,670
New Brunswick	17,577	275,593	310,385	—	73,112	—	9,513	686,180
Quebec	—	1,707,344	13,966,818	42,202	205,736	626,542	4,077,469	20,626,111
Ontario	—	1,203,466	3,184,028	45,281	75,738	2,146,916	1,096,012	7,751,441
Manitoba	—	126,883	2,395,300	400	8,442	5,264,027	31,445	7,826,497
Saskatchewan	—	28,211	468,794	—	17,724	188,509	143,202	846,440
Alberta	32,500	—	2,605	—	44,348	—	—	79,453
British Columbia	3,413	76,945	1,436,069	—	737,916	1,043	280,293	2,535,679
Northwest Territories	—	112,491	172,440	—	66,458	285,227	698,730	1,335,346
Yukon	11,181	14,424	167,145	—	77,094	—	2,368	272,212
Canada	65,139	3,649,286	22,226,933	87,883	1,559,613	8,512,264	6,916,517	43,017,635

¹ Industry in which the companies' principal operations are conducted, but prospecting may be conducted for any mineral, i.e., a gold quartz company may prospect for silver-lead-zinc.

² Includes iron, uranium, molybdenum, etc.

TABLE 36. Fuel and Electricity Used in the Mineral Industry, in Canada, by Kinds and by Provinces, 1958
Excluding the manufacturing group

No.	Provinces	Bituminous coal		Sub-bituminous coal	Anthracite coal	Lignite coal	Coke	Gasoline	Kerosene	Fuel oil
		Canadian	Imported							
tons										
1	Newfoundland	2,553	2,821	—	—	—	—	299,911	1,724	4,842,425
2		\$ 44,988	70,647	—	—	—	—	145,031	518	886,623
3	Nova Scotia	64,673	—	—	—	—	186	309,553	5,171	632,243
4		\$ 997,241	—	—	—	—	3,873	111,762	1,161	110,545
5	New Brunswick	4,295	—	—	—	—	—	365,530	687	839,280
6		\$ 37,954	—	—	—	—	—	115,769	178	166,961
7	Quebec	15,132	14,246	—	20,573	—	684	3,089,403	36,495	27,342,943
8		\$ 232,371	214,432	—	340,079	—	11,102	1,228,971	12,396	4,196,537
9	Ontario	41,665	135,989	—	6,959	32	3,538	6,946,065	440,703	16,112,966
10		\$ 653,540	2,157,487	—	100,915	1,090	32,257	2,573,451	64,551	2,866,561
11	Manitoba	139	348	2,307	—	—	—	509,146	1,853	1,632,680
12		\$ 2,003	6,194	52,090	—	—	—	189,327	559	227,969
13	Saskatchewan	815	—	56	—	59,112	65	1,434,084	7,335	10,474,219
14		\$ 12,225	—	1,521	—	218,238	1,471	567,731	1,989	2,231,320
15	Alberta	32,758	—	1,952	20	—	—	4,034,085	151,258	4,594,127
16		\$ 138,277	—	5,404	280	—	—	1,520,911	56,132	935,610
17	British Columbia	29,070	7	10	32	472	16	1,160,275	14,420	4,337,854
18		\$ 251,564	328	200	633	8,213	834	412,504	5,670	1,046,040
19	Northwest Territories	—	—	13	1	—	—	52,280	58,612	3,862,318
20		\$ —	—	374	44	—	—	28,218	47,441	747,164
21	Yukon	3,915	—	—	—	—	—	46,909	10	101,765
22		\$ 91,255	—	—	—	—	—	20,340	5	31,859
23	Canada, 1958	195,015	153,411	4,338	27,585	59,616	4,489	18,247,241	718,268	74,772,820
24		\$ 2,166,701	2,449,088	59,589	441,951	227,541	49,537	6,914,015	190,600	13,447,189

TABLE 37. Fuel and Electricity Used in the Mineral Industry, in Canada, by Kinds and by Provinces, 1958
Including the manufacturing group

No.	Provinces	Bituminous coal		Sub-bituminous coal	Anthracite coal	Lignite coal	Coke	Gasoline	Kerosene	Fuel oil
		Canadian	Imported							
tons										
1	Newfoundland	2,553	2,821	—	—	—	55	306,842	1,724	7,699,211
2		\$ 44,988	70,647	—	—	—	2,161	148,221	518	1,075,259
3	Nova Scotia	89,678	—	—	—	—	186	317,993	5,171	2,243,605
4		\$ 997,241	—	—	—	—	3,873	114,872	1,161	295,634
5	New Brunswick	37,125	—	—	—	—	—	385,663	1,338	1,879,163
6		\$ 432,704	—	—	—	—	—	123,268	351	278,405
7	Quebec	613,449	58,577	—	80,672	—	1,719	3,738,891	45,068	89,237,400
8		\$ 7,425,411	895,254	—	1,201,747	—	32,905	1,458,530	14,623	9,776,912
9	Ontario	74,641	1,242,268	—	7,017	32	197,267	9,464,655	478,327	47,254,674
10		\$ 1,050,510	14,879,820	—	102,619	1,090	4,161,648	3,519,633	75,389	6,563,552
11	Manitoba	28,278	9,264	2,388	—	6,833	1,984	570,992	3,705	3,492,668
12		\$ 413,786	162,552	52,516	—	39,341	44,640	211,733	1,087	385,760
13	Saskatchewan	116,602	—	479	—	59,750	65	1,457,398	7,407	12,147,937
14		\$ 1,637,502	—	5,372	—	221,806	1,471	575,045	2,010	2,387,385
15	Alberta	32,758	—	5,851	20	—	—	4,155,182	154,203	4,671,487
16		\$ 138,277	—	37,579	280	—	—	1,553,063	56,838	949,147
17	British Columbia	195,190	7	10	32	472	60,590	1,515,688	15,091	10,946,820
18		\$ 2,333,854	328	200	633	8,213	1,515,187	535,120	5,878	1,860,560
19	Northwest Territories	—	—	13	1	—	—	52,280	58,612	3,862,318
20		\$ —	—	374	44	—	—	28,218	47,441	747,164
21	Yukon	3,915	—	—	—	—	—	46,909	10	101,765
22		\$ 91,255	—	—	—	—	—	20,340	5	31,859
23	Canada, 1958	1,194,189	1,312,937	8,741	87,742	67,067	261,866	22,012,493	770,656	183,537,048
24		\$ 14,565,528	16,008,601	96,041	1,303,323	270,450	5,761,885	8,288,043	205,301	24,351,637

APPENDIX

MINERAL STATISTICS

The publication of statistics on the mineral production of Canada was instituted by the Geological Survey of Canada as early as 1886. The Department of Mines carried on this compilation through the early part of the twentieth century. Subsequent to the transfer of this work, the Dominion Bureau of Statistics published the data for the year 1921 and the succeeding issues.

The construction of new metallurgical plants and the development of new types of ore have resulted in changes in methods of compilation over the period but in general the following principles have been followed.

For the non-metallic minerals such as asbestos, talc, barite, etc. and for the structural materials such as stone, portland cement, etc., the mine or quarry shipments are taken to represent production. Usually there is little difference between actual output and mine shipments and it is more convenient and more practical to measure the product at the latter point. Values are computed on the f.o.b. shipping point basis and they represent, therefore, the amounts actually received by the producers.

Production data for certain simple metallic ores such as chromite, iron ore, etc. are compiled in the same way, that is, mine shipments at f.o.b. values, but for some metals this is not practical and an attempt is made to measure output in terms of recoverable metals which are then valued at current market prices. The principal metal mining companies in Canada also operate smelters at or close to the mine site and they do not usually value the ores at the mine head or at the concentrator; if they do it is only at nominal values for accounting purposes and not representative of actual market values. For these operations, which account for a very large percentage of the total production of the country, the smelter is the first

point at which it is practical to assign a value to production. Furthermore it is the more accurate point at which to measure actual recoveries according to province or origin. The operators which ship customs ores to smelters do not always know what the recoveries will be as this depends on smelter practice. The amount paid for customs ore is the result of bargaining between the smelter and the mine operator and the smelter may in fact, by means of blending certain ores or by more efficient methods recover more metal than it actually paid for, or by treating large tonnages of ores it may recover minor metals which were not paid for at all. Most of Canada's metallic ores are quite complex, usually containing several metals.

Of course, not all Canadian ores and concentrates are treated in home smelters. At present there is no zinc smelter in eastern Canada nor is there a copper smelter on the western coast so large quantities of zinc and copper concentrates are exported to foreign smelters. The recoverable metals in such concentrates are estimated by making certain deductions (as determined by usual smelter practice) from the assayed contents to allow for losses in smelting. Similarly certain adjustments are made in arriving at quantities and values of unfinished smelter products. Metals recovered in Canadian smelters from the treatment of foreign ores are not included in the production figures.

The value for metals production calculated in this manner does not coincide with the amounts actually received by the producers. An entirely separate compilation is made on an industry basis which represents very closely the actual return to the metal mining industry.

Note: Monthly production figures (quantities only) are available for all metals and for most of the non-metals.

DETAILS OF THE METHODS USED IN COMPUTING THE MINERAL PRODUCTION OF CANADA

METALLIC MINERAL PRODUCTION

Aluminum — Canada does not produce aluminum ores but smelters are operated at Arvida, Isle Maligne, Shawinigan, and Beauharnois in Quebec and Kitimat, British Columbia by the Aluminum Company of Canada. The Canadian British Aluminum Co. Ltd., operates a smelter at Baie Comeau, Quebec. Bauxite or alumina for these smelters is imported from South America and Jamaica. Smelter operations are included in statistics for the Smelting and Refining Industry, that is, the figures are included in the industry statistics. However, data on aluminum production are not included in the commodity compilation on the Mineral Production of Canada.

Antimony — At the Trail smelter of the Consolidated Mining and Smelting Co. of Canada, antimony is recovered in the form antimonial lead and in flue dust, and slags. The antimony content of these products is considered as the production of antimony. Antimony in antimonial lead is valued at the average New York price for antimony metal. Antimony in flue dust and slags is valued at an arbitrary price.

Bismuth — No Canadian ores are mined for bismuth only. Bismuth occurs in the silver-lead-zinc ore at Kimberly, British Columbia; in the silver-cobalt ores which are shipped to Deloro Smelting and Refining Co., in molybdenite ores of the Molybdenite Corporation at Lacorne, Quebec, and in the copper-gold-silver ores at Gaspe, Quebec.

Production is calculated as follows:

(a) Bismuth metal produced at Canadian smelters, valued as reported by producer.

(b) Bismuth content of silver-lead-bismuth bullion shipped to smelters, Canadian or foreign, value as reported by firm.

(c) Bismuth content of impure metal shipped, value as reported by firm.

Cadmium — Cadmium is associated with zinc. It is recovered in the refining of zinc by the Consolidated Mining and Smelting Co. of Canada at Trail, British Columbia and by the Hudson Bay Mining and Smelting Co. Limited at Flin Flon, Manitoba.

Production consists of cadmium metal recovered at these smelters and the recoverable content of cadmium in the zinc-lead concentrates exported, valued at the average New York price for the year.

Calcium — The only producer is the Dominion Magnesium Limited at Halcyn, Ontario. Output figures represent calcium metal, plus calcium content of alloys, value is that reported by the firm.

Chromite — Production in Canada has been small, consisting usually of a few hundred tons in the Province of Quebec.

METALLIC MINERAL PRODUCTION -- Continued

Output figures represent the quantity and value of ores shipped as reported by producers.

Ferro-chrome is produced in Canada in substantial quantities, but since it is made from imported ores it is not counted as part of the mineral production of the country.

Cobalt -- Production includes:

(a) Cobalt metal produced at Canadian smelters, plus the cobalt content of salts and oxides made at these smelters. Recoveries from imported concentrates are excluded. The value is the total sales value of these products as reported by the smelters.

(b) Cobalt content of ores and concentrates shipped for export at the gross value received by shippers. For exported concentrates the producer is paid for the cobalt content only.

Copper -- Production includes:

(a) Recoverable copper in ores and concentrates shipped for export valued at the average Montreal price for the year. Recoverable copper is computed as total copper content, less ten pounds of copper per ton of concentrates as an allowance for smelter losses.

(b) Copper content of blister copper made at Canadian smelters, valued at the average Montreal price for the year.

(c) Copper content of nickel-copper matte shipped for export by Canadian smelters, valued at an arbitrary price agreed upon by the Ontario Department of Mines and the Dominion Bureau of Statistics. This price is usually about five cents under the Canadian price for the metal and represents as close an approximation as possible to a fair value for the copper in the matte after allowing a margin for treatment of this matte in refineries outside Canada. No allowance is made in this instance for losses in treatment of the matte, as practically all of the copper is recovered.

Since all of the blister copper is now treated in Canadian refineries, it might be considered more convenient to use the figures on production of refined metal rather than the content of blister copper. However, the inclusion of secondary copper (made from scrap) in the refinery figures complicates the situation, and, at any rate, it is more satisfactory to use the smelter figures in making the allocation of production on a provincial basis.

Gold -- Production includes:

(a) Gold in crude bullion obtained direct from placer workings.

(b) Gold in crude bullion obtained direct from lode gold mines.

(c) Gold in blister copper made at copper smelters.

(d) Gold in base bullion made by Consolidated Mining and Smelting Company, Limited, at Trail, British Columbia.

(e) Gold in all types of ores shipped for export.

(f) Gold in nickel-copper matte shipped for export.

(g) Gold in platinum-palladium concentrates shipped for export.

Gold production is valued at the average price set by the United States Treasury, transposed to Canadian funds.

Indium -- Small quantities are recovered by the Consolidated Mining and Smelting Company of Canada, Limited, Trail, British Columbia, in the smelting of lead-zinc-silver ores. The output is valued by the shipper. No data on indium are published and the figures are excluded from the Mineral Production of Canada.

Iron ore -- Production figures represent mine shipments at the values shown by the shippers.

Iron (Remelt) -- This is sometimes called pig iron or Boral iron. It is a co-product in the smelting of ilmenite ores by the Quebec Iron and Titanium Corporation at Sorel, Quebec.

Quantity and value figures are those reported by the producer.

Lead -- Production includes:

(a) Recoverable lead in ores and concentrates shipped for export. Recoverable lead is computed as total lead content, less five percent of content as an allowance for smelter losses.

(b) Lead in base bullion made by the Consolidated Mining and Smelting Company, Limited, at Trail, British Columbia.

Refined lead is produced at Trail, but, from time to time, imported ores and concentrates are treated at this smelter, and it has been found advantageous to calculate the lead at the base bullion stage, since it is easier at this stage to estimate the amount that should be credited to imported ores.

The value is computed at the average Montreal price for the year.

Magnesium -- The Dominion Magnesium Company, Limited, Haley, Ontario, is the only Canadian producer. Output figures represent magnesium metal, plus magnesium content of alloys, values are those shown by the shipper.

Manganese -- Production in Canada has been small and spasmodic because of the limited number of known deposits. Output figures represent the tonnage of ore shipped at the value received by the shippers.

Large tonnages of ferro-manganese alloys are made in Canada, but since imported ores are used, this output is not included in the mineral production of the country.

Molybdenum -- Production figures are molybdenum content of the oxides and sulphides shipped, value is that shown by the shipper.

Mercury -- There has been little production in Canada since 1944. Production figures for past years represent actual output valued at the prevailing market price, that is, at the average New York price for the year, in Canadian funds.

Nickel -- Production includes:

(a) Refined and electrolytic nickel produced at Canadian refineries, valued at the average price obtained for such products sold during the year.

(b) Nickel in nickel oxides and in nickel salts sold from Canadian smelters and refineries during the year at the total selling value of these products.

(c) Nickel in matte shipped for export from Canada valued at an arbitrary figure agreed upon by the Ontario Department of Mines and the Dominion Bureau of Statistics. This price is a few cents under the Canadian price for the metal and represents as close an approximation as possible to a fair value of nickel in the matte form after allowing a margin for treatment of this matte in refineries outside Canada.

(d) Recoverable nickel in concentrates shipped from other provinces to smelters in Ontario or refinery in Saskatchewan valued at an arbitrary price.

Platinum group metals -- Production includes:

(a) Recoverable metals in smelter and refinery products shipped for export.

(b) Platinum recovered from placer workings.

Beginning with 1946, the platinum metals production is the assay content of concentrates and refinery residues shipped for export, plus the platinum group metal content of the matte shipped for export. Quantities as reported are valued at average New York price.

METALLIC MINERAL PRODUCTION — Concluded

Selenium and tellurium — Selenium and tellurium are produced as by-products at the Canadian Copper Refiners, Montreal East, Quebec, and by the International Nickel Company of Canada, Ltd., at Copper Cliff, Ontario. The quantities as reported by the refining companies are valued at the average New York price for the year.

Silver — Production includes:

(a) Silver bullion produced from treatment of cobalt-silver ores by the Deloro Smelting and Refining Company, Ltd.

(b) Silver in base bullion made by Consolidated Mining and Smelting Company of Canada, Limited, Trail, British Columbia.

(c) Recoverable silver in ores and concentrates shipped for export.

(d) Silver in crude gold bullion produced.

(e) Silver in blister copper made at Canadian smelters.

Total silver, as computed from above, is valued at the average of Montreal quotations for the year.

Thorium — At Elliot Lake, Ontario, the by-products of the uranium plant are treated to produce thorium salts. Production is considered as the thorium content of the salts shipped at a value reported by the producer.

Tin — Canada has no commercial tin deposits. A small tonnage is recovered as a by-product by the Consolidated

Mining and Smelting Company of Canada, Limited, at Kimberley, British Columbia, from the treatment of the Sullivan lead-zinc silver ore.

Titanium ore — Included in this item are the titanium ores exported for processing elsewhere. The value is that reported by the shipper. Ilmenite ore treated at the Sorel smelter is excluded as the measurement is made of the smelter products, i.e., titanium dioxide, iron (remelt) and Sorelflux.

Tungsten ore — Production in Canada is very small. Output is computed in terms of Wo₃ content of tungsten concentrates shipped, valued by the shipper.

Uranium — Producers of uranium precipitates or concentrates report the U₃O₈ content of the shipments and the value received by the shipper.

Zinc — Production includes:

(a) Recoverable zinc in ores shipped for export from Canada. Recoverable zinc is computed as the total zinc content, less 160 pounds of zinc per ton of concentrates as an allowance for smelter losses.

(b) Refined zinc made by the Consolidated Mining and Smelting Company Ltd., Trail, British Columbia, and by the Hudson Bay Mining and Smelting Company, Ltd., at Flin Flon, Manitoba.

The total zinc, computed as above, is valued at the average Montreal price for the year.

NON-METALLIC MINERAL PRODUCTION

Owing to the fact that it is difficult to obtain figures of actual production of non-metallic minerals in Canada, and since the first actual measurement is when the product is sold, the plant shipments have been taken to represent production in all cases.

Abrasives, natural — Includes corundum, garnets, grinding pebbles, grindstones, pulpstones and sharpening stone, diatomite and volcanic dust. Corundum, garnets and grinding pebbles have been produced in Canada in small quantities. Shipments of these materials represent the production, and the value is the amount received by the shippers, f.o.b. shipping points.

Arsenic — No Canadian ores are mined for arsenic only. White arsenic (As₂O₃) is recovered as a by-product in the treatment of silver-cobalt-nickel ores of the Cobalt district in Ontario at the smelter of Deloro Smelting and Refining Company, Ltd.

Production is computed as shipments of refined arsenic, plus any crude arsenic shipped for export at the f.o.b. plant values reported by the shippers.

Asbestos — Production figures represent shipments of the various grades at the total selling value, f.o.b. shipping points.

Barite — Production is the shipments at the selling value f.o.b. shipping point.

Bituminous sands — Production is on an experimental scale only. Figures not included in production records.

Feldspar — Part of the crude feldspar is shipped for export, and part is shipped to Canadian grinding plants. Production includes the quantity shipped from the mine for export at its sales value, plus the quantity of ground feldspar shipped from the domestic grinding plants at its sales value, f.o.b. the mill.

Fluorspar — Production represents the quantity shipped from the quarries at its selling value, f.o.b. works.

Graphite — Production is usually shipped from the mill at its selling value, f.o.b. the mill.

Gypsum — Production is taken as the tonnage of crude gypsum shipped from quarries or mines in the lump, crushed, or fine ground forms. The value is that reported by the operators.

Nepheline syenite — Production of crude and ground nepheline syenite is the amount of the various grades shipped at the total selling value, f.o.b. works.

Peat moss — Production is taken as the shipments at the sales value, f.o.b. works, less the value of containers.

Salt — Production is taken as the tonnage of various grades of dry salt shipped by primary producers, plus salt content of brine used by producers for industrial (chemical) purposes. The value is that reported by producers.

Iron oxides (ochre) — Production is the tonnage of crude and treated (dried or calcined) ochres shipped by primary producers at the total selling value, f.o.b. works.

Lithia — Spodumine concentrates are produced in north-western Quebec by the Quebec Lithium Corporation. Production represents the lithium or lithium oxide content of the concentrates shipped and the value is that reported by the producer.

Magnesite-dolomite (magnesite) — Production is the tonnage of crude material sold by primary producers, plus the tonnage of calcined or dead-burned material sold or consumed by primary producer. The value is that reported by the producers.

Magnesium sulphate — Production is the tonnage of crude or refined natural magnesium sulphate shipped at its selling value, f.o.b. shipping points.

NON-METALLIC MINERAL PRODUCTION — Concluded

Mica — Mine production in this industry comes largely from small operators (farmers) whose mining activities are only of a casual nature. Practically all of these operators sell their crude mica to domestic dressing works, and to prevent duplication, production is recorded as shipments from plants dressing new mica, plus any shipments for export direct from the mines. The value of shipments is taken as reported by operator.

Natural mineral waters — Production represents shipments of natural mineral waters as reported by owner or lessor of well or spring at the total selling value, f.o.b. shipping points.

Phosphate — Production represents shipments for sale of crude phosphate rock by mine operators, plus the tonnage of phosphate rock consumed by producer of the crude mineral in the manufacture of chemicals. The value is that reported by producers.

Potash — Near Saskatoon, Saskatchewan, the Potash Company of America is mining potassium chloride. The quantity of potash is measured as the K₂O equivalent. Quantity data are not published. Value of shipments f.o.b. plant are reported by the producer.

Pyrite, pyrrhotite — In the milling of sulphide ores by some base metal mines pyrite and pyrrhotite is produced as a by-product. Shipments and values of pyrite are reported by the producers. Pyrrhotite is valued by applying the average price of the sulphur content of pyrite in Eastern Canada.

Pyrophyllite — Statistics for pyrophyllite are included with soapstone and talc. Quantity and value of crude or ground are reported f.o.b. shipping point by the producer.

Quartz — Production represents the tonnage of crude or pulverized quartz, quartzite, pure silica sand, or other natural silica material shipped for sale, plus the tonnage of any of these materials consumed by the producers. The value is taken as reported by producers.

Silica brick — Production represents the number of bricks (9" equivalent) shipped at the total value reported by the producers.

Sodium sulphate — Production is the tonnage of crude or refined natural sodium sulphate shipped at its selling value, f.o.b. shipping points.

Soapstone — Production represents the tonnage of crude, ground or sawn soapstone shipped at the total selling value, f.o.b. shipping points.

Sodium carbonate — Production represents the tonnage of crude or purified natural sodium carbonate shipped at its total selling value, f.o.b. shipping points.

Sulphur, in smelter gas — In Ontario and British Columbia sulphur dioxide is recovered from the smelting of sulphide ores. The larger portion of the gas is used in making sulphuric acid. Production is the sulphur content of sulphuric acid made and sulphur dioxide marketed. Value is arbitrary.

Included in this item is the sulphur in the sulphuric acid made by roasting zinc sulphide concentrates at the acid plant of the Aluminum Company of Canada, Ltd., Arvida, Quebec. This sulphur is valued at the average price for the sulphur contained in pyrite concentrates.

Sulphur, elemental — In the western provinces sour natural gas is processed to remove the hydrogen sulphide which is further reduced to yellow elemental sulphur. Elemental sulphur is produced in the refining of nickel. Shipments and values are reported by the producers. Elemental sulphur made from imported crude petroleum is not included in the Mineral Production of Canada.

Talc — Production represents the tonnage of any crude talc shipped, plus any milled or refined talc shipped from mills operated in conjunction with the mines. The value is taken as reported by the mine and mill operators.

Titanium dioxide, etc. — Ilmenite ore is smelted at Sorel, Quebec, to produce a slag containing titanium dioxide. Production is the titanium dioxide content valued by the producer. Included in this item are other titanium products such as Soreflux. Quantities are not published and the values are for the combined commodities.

FUELS

Coal — Production represents the output tonnage, valued at the average realization from sales.

Natural gas — Production is taken as the natural gas output less the gas which is wasted or flared. Deductions are made for gas withdrawn from storage. Data for the Western provinces are supplied by the Oil and Gas Conservation Boards. Alberta natural gas is valued by calculating the average price from the data shown on the producers' reports. Ontario natural gas is valued at an arbitrary wholesale price. Reports of the

provincial governments of British Columbia and Saskatchewan show the price of natural gas. Firms in New Brunswick and the Northwest Territories report the value of natural gas.

Crude petroleum — The output is measured on a provincial basis and the average price received for the oil sold is applied to the production. In the Northwest Territories, the production is valued by the gross realization of sales. New Brunswick firms report the quantity and value.

STRUCTURAL MATERIALS

Canadian mining statistics include the production of structural materials, such as cement, stone, sand and gravel and bricks made from clay. There is practically no production in Canada of clay for sale to brick works, or stone to cement works, and since the raw material has no value until turned into a saleable product, it has been the practice, since mineral production statistics have been compiled to Canada, to count the production of structural materials as part of the mineral production of the country.

Portland cement — Production represents quantities shipped, plus amounts used by producers. Value is computed on basis of selling values, f.o.b. works.

Clay products — Production represents shipments of brick and other clay products made from domestic clays and the shipments of unmanufactured clays at the total selling value, f.o.b. works as reported by the operators. Data relating to clay products manufactured from imported clays are not included.

STRUCTURAL MATERIALS — Concluded

Lime — Production represents the tonnage of hydrated and quicklime shipped (sold by the producer) together with the tonnage of these limes produced and consumed by the producers of chemicals and allied products. The values taken are as reported by the producer. If waste or "spent" lime is "recalcined" or utilized again in the manufacture of such products as calcium carbide, the necessary deductions are made to prevent duplication.

Sand and gravel — Production represents shipments at the values reported by operators of sand and gravel pits or dredges. Special forms are utilized in the collection of data for sands produced by provincial, municipal and other governments employed on highway, construction or other public works.

Stone — Production represents quarry shipments of crushed or undressed stone, crushed stone, and dressed stone, if the latter is prepared by the quarry operators at values as reported by the operators. The figures include data for both private and public or municipally-owned properties and special questionnaires are sometimes prepared for the collection of statistics from municipalities. Production figures do not include dressed stone prepared from imported stone or prepared from domestic stone in works not at the quarries.

To avoid duplication in computing a total value for Canadian mineral production, the quantity and value of stone consumed in the manufacture of lime and cement are not included in the totals for stone production. These particular data are recorded separately and are published in conjunction with data for the lime and cement industries.

A BRIEF OUTLINE OF THE SYSTEM NOW IN USE IN COLLECTING AND COMPILED
MINING STATISTICS BY INDUSTRIES

Forms are sent to all mines and smelters, the mining industry being classified into groups which are designated according to the principal product or products obtained.

For example, there is the Auriferous Quartz Mining Industry, the Copper-Gold-Silver Mining Industry, the Coal Mining Industry, the Asbestos Mining Industry, etc.

Each questionnaire varies according to the type of ore but in general the metal mining forms carry the following questions:

- Ore raised
- Ore treated
- Concentrates produced
- Concentrates shipped
- Metal content of concentrates shipped
- Value of concentrates shipped

In addition to collecting information on mineral production, certain other data are obtained which conform to all other industrial data collected by the Bureau. These include such items as salaried employees, salaries paid, wage-earners by months, wages paid, fuel and electricity used, process supplies, power equipment.

Each group is treated as a separate industry. Taking the industrial compilation of the Copper-Gold-Silver Mining Industry as an example, the typical properties falling under this heading include the Howe Sound Company, Britannia Beach, British Columbia, where a copper ore is mined, concentrated and exported for treatment, and the Noranda Mines Ltd., Quebec, which mines, concentrates, and smelts at the mine, the product being a blister copper cast in anode form for direct treatment by the refinery situated some 500 miles away at tide water.

Concentrates from the Britannia mine contain gold, silver, copper and zinc. The company is paid a certain amount, less cost of freight and treatment for the concentrates shipped, and that amount is credited to the Copper-Gold-Silver Mining Industry.

In the case of the Noranda, a nominal sum is placed on the concentrates transferred to the smelter, the smelting and refining industry being a separate industry.

When the compilation for the smelting and refining industry is made the amount of ore treated by the smelter is valued and deducted from the value of production of the smelter, the only amount being credited to the smelting and refining industry is the value added by smelting. Thus, we have the following production values by industries:

Copper-Gold-Silver Mining	Value of ores and concentrates sold	\$
Silver-Lead-Zinc Mining	Value of ores and concentrates sold	\$
Gold Mining, etc.	Value of bullion sold	\$
	Value of concentrates shipped	\$
Silver-Cobalt Mining	Value of ores and concentrates sold	\$
Nickel-Copper Mining	Value of ores and concentrates sold	\$
Others	Value of ores and concentrates sold	\$
Smelting and Refining Industry	Value added by smelting and refining	\$
Total return to the metal mining industries		\$

Note: The smelting and refining of foreign ores is included in the Non-ferrous Smelting and Refining Industry.

ERRATA

Some revisions have been made in the 1959 statistics on the mineral industries since the publication of the separate industry reports in this series. These are as follows:

Smelting and refining industry:

Page G-3, line 10 of Text should read "1959" instead of "1958".

Page G-7, Table 10, column 2, last line should read "395,269" tons instead of "345,269".

Cement manufacturing industry:

Page Q-3, paragraph 6, line 2 instead of "6,039,872" tons read "6,010,616" tons.

Page Q-4, Table 3. Imports of portland cement during 1959 should read "29,256" tons instead of "58,512". Apparent consumption should read "6,010,616" instead of "6,039,872" tons.

Page Q-4, Table 4, last column, last figure should read "6,010,616" tons instead of "6,039,872" tons.

Petroleum, natural gas industry:

Tables 23, 24 and 25. Data for the year 1957, regarding employees, salaries and wages have been revised upward in the edition. Thus they will not agree with figures appearing in earlier publications.

Nickel-Copper mining, smelting and refining industry:

Page D-4, Table 3. Nickel production in 1959 should read "186,555" tons instead of "186,550" tons.

Page D-5, Table 6. Nickel production in 1958 should read "139,559" tons instead of "139,554" tons.





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