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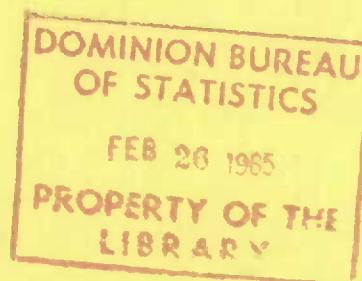
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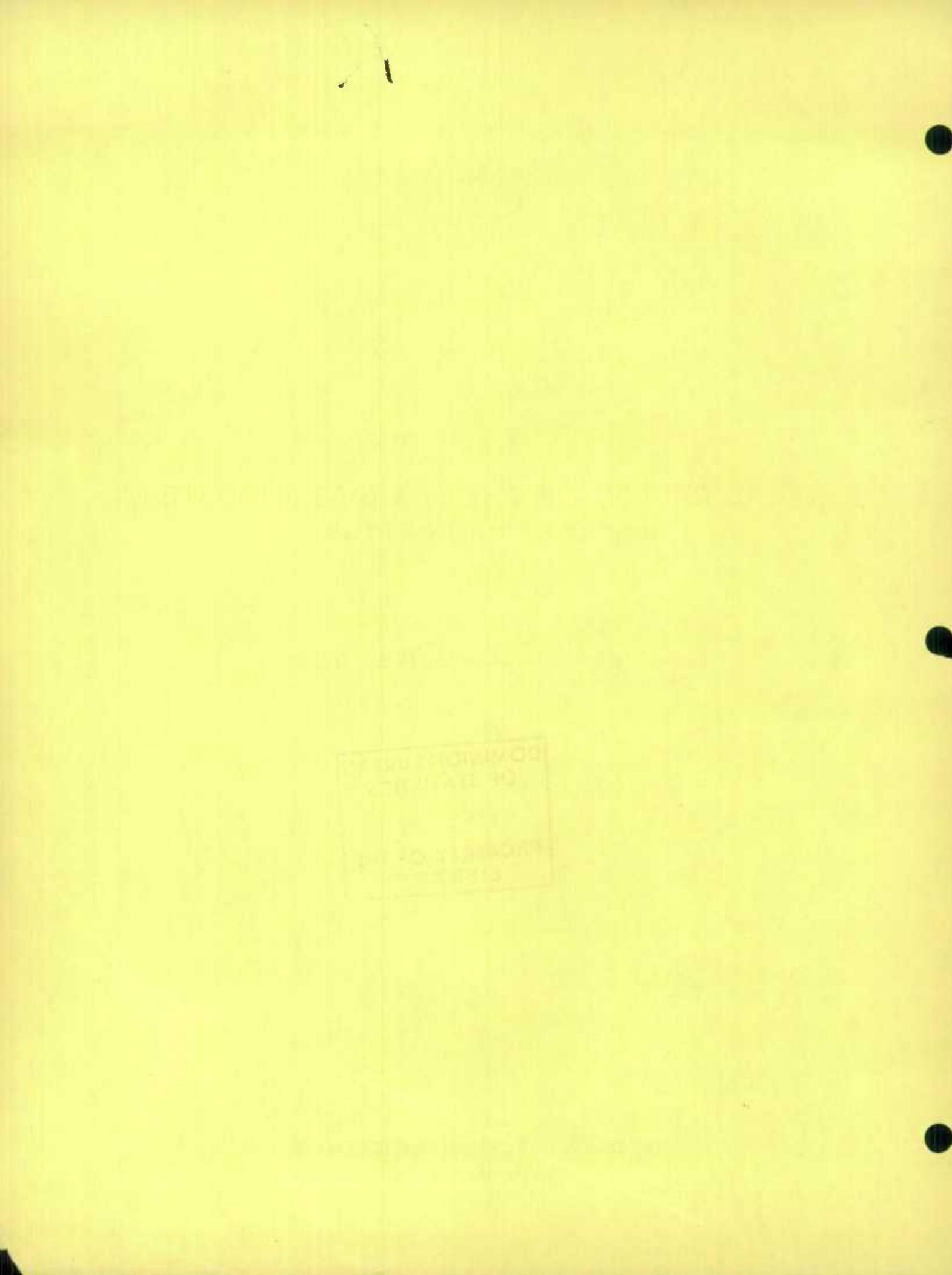
GENERAL REVIEW OF THE MINERAL INDUSTRIES (MINES, QUARRIES AND OIL WELLS)

1961

Formerly General Review of The Mining Industry



DOMINION BUREAU OF STATISTICS
Industry Division



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EXPLANATORY NOTES

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. Beginning with the 1961 Census, the establishment is defined as follows:

The smallest unit which is a separate operating entity capable of reporting all the following:

Materials and supplies used,
Goods purchased for resale as such,
Fuel and power consumed,
Number of employees and their pay,
Inventories,
Shipments or sales.

The establishment is to be distinguished from smaller subdivisions or departments which do not have records which permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in operations which were classifiable to different industries. Beginning with 1961, separate reports for such operations will be required only in cases where accounting records can provide all the elements of principal statistics enumerated above. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously affected the statistics for particular

industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing operations. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were principally engaged in manufacturing operations. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in manufacturing are no longer included as manufacturing establishments in the basic industry statistics. Again adjustments to the industry statistics were made to reflect the removal of such reporting units for the period 1957-1960. These reporting units are now listed as establishments in other Bureau industry surveys, such as Wholesale Trade, Construction, etc. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- p preliminary figures.
- r revised figures.

INTRODUCTION

The Canadian mineral production was valued at \$2,582,300,387 in 1961 compared with \$2,492,509,981 in the preceding year. Thus the value of the mineral commodities increased by 3.6 per cent. The value of metals declined to \$1,387,159,036 from \$1,406,558,061. Non-metallics moved upward to \$210,467,786 from \$197,505,783 in 1960. The greatest gain was in the mineral or fossil fuels, which were valued at \$653,327,802 in 1961 compared to \$565,851,829 in 1960. Structural materials increased to \$331,345,763 from \$322,594,308.

The index of physical volume was 266.9 in 1961 an increase from the index of 253.3 in 1960. The index base year was 1949 = 100. The tonnage of ore or rock mined or quarried in 1961 amounted to 206,148,807 tons compared with 199,377,746 tons in 1960. Excluded from these figures were the tonnages of coal mined and the tonnages of sand, gravel, sodium sulphate and similar materials not actually mined or blasted.

The reduced metal output had been anticipated as there had been an announcement regarding the extension of the uranium deliveries. The uranium oxide (U_3O_8) decreased from \$270 million to about \$196 million. A new nickel mine in Manitoba helped to increase the tonnage of nickel to 233,000 tons. The price of copper, lead and zinc was lower in 1961 than in 1960. The quantity of lead and zinc increased while copper remained at the same level. Gold prices increased at mid-year when the exchange rate on the Canadian dollar changed from a premium to a discount. The production of columbium pentoxide began on a regular commercial basis.

Leading the non-metallic group was asbestos with a value of about \$129 million. The gypsum mines shipped about 5 million tons. Dry salt and salt in brine amounted to 3.2 million tons. A large portion of the salt was used to make chemicals. Titanium dioxide and other titanium products were valued at \$16.7 million. Although the natural gas processing plants produced more sulphur than the immediate markets demand there was an increase in sales.

Although the brightest spot in the mineral industry was in the fuels group, the coal industry declined again after a pause in 1960. Crude petroleum output was over 220 million barrels which were valued at more than \$487.5 million. Natural gas utilized amounted to over 655,000 million cubic feet. Natural gas by-products which include, condensate, natural gasoline, propane, butane, etc. were obtained by processing natural gas in the vicinity of the gas fields.

In the structural materials group, cement showed the greatest increase, when the value of this commodity exceeded \$100 million for the first time. There was a small decrease in the value of brick, tile, pottery, etc. The demand for lime was less in the uranium industry. Stone output increased while sand and gravel decreased.

The ten leading mineral commodities in order of total value were in 1961; petroleum, nickel, copper, uranium, iron ore, gold, asbestos, zinc, sand and gravel, and cement. Each of these commodities exceeded \$100 million in value.

The following paragraphs were extracted from the Canadian Mineral Industry in 1961—a Summary, published by the Department of Mines and Technical Surveys, Ottawa:

"Canada has a very favourable trade balance in raw and semiprocessed minerals and their products. During 1961, raw-material exports exceeded imports by almost 60 per cent and semiprocessed exports were almost 11 times imports. Exports of unprocessed non-metallic minerals, including fuels, increased greatly and constituted one third of the exports of raw materials. The same group made up more than three quarters of the raw materials imported but declined relatively. This decline, together with the improvement in exports, pointed to greater self-sufficiency. The gain was due largely to an increase in crude-oil and natural-gas exports and a weakening of reliance on crude-oil imports. Slight increases took place in all types of semiprocessed mineral exports, and nonferrous metals accounted for more than three quarters of the group's total. Imports of semiprocessed minerals were small, less than one tenth of their exports. In all, there was a favorable trade balance of about \$1,150 million in raw and semiprocessed minerals and their products.

"The mineral industry's generally unfavorable trade position is due to the large imports of fully manufactured products. In 1961, minerals of this group constituted 81 per cent of all mineral imports and were 5.5 times greater than the exports in this class. With a value of \$2.6 billion, fully manufactured mineral imports were 17 per cent greater than the exports of all minerals and their products. In spite of the favorable export balance at the raw and semiprocessed levels, the imports of the raw, semiprocessed and fully manufactured minerals combined exceeded the corresponding exports by almost \$1,000 million. The great trade deficit in fully manufactured products arises from the large imports of iron and its products. Fully manufactured

iron products make up three quarters of the imports of minerals in the manufactured class. Consequently, as Canada's manufactures of iron and steel increase, the attainment of a better general trade balance becomes more likely. Good progress has already been made in steel, and Canada now produces more than four fifths of its own steel requirements.

"Since 1957, exports of minerals at the raw and semiprocessed stages have accounted for almost one third of all industrial-product exports while mineral imports of the same type have been about one tenth of industrial-product imports. With fully manufactured exported products included, the proportion contributed to exports in 1961 was close to two fifths. With fully manufactured imported products included, the 1961 mineral contribution to imports was well over half, although proportionally a little smaller than in the previous year. The high proportion of minerals and mineral-based materials in commodity imports is further evidence of the

extent of Canada's reliance on fully manufactured iron and steel products from other countries.

"In 1961, the United States took more than half of Canada's exports of minerals and mineral products and was the source of more than two thirds of its mineral imports. The slight increase in the export total was due largely to an increase in shipments to the United States. A slight increase in the exports of raw and semiprocessed minerals to the United States reversed a trend prevalent in recent years toward less reliance on this market. During the period 1950-60, Canada's export to that market declined in relative importance from 64.6 to 52.3 per cent, but in 1961 the proportion rose to 53.8 per cent. Exports to countries of the European Economic Community, declined, mainly owing to a slackening in the exports of aluminum and nickel and despite a sizeable increase in those of asbestos. The Japanese market grew significantly with rises in the exports of iron ore, aluminum, nickel, asbestos and coal. An increase in shipments to Japan offsets the European declines."

TABLE I. Mineral Production, by Kinds, 1960 and 1961

		1960		1961	
		Quantity	Value	Quantity	Value
Metallics:			\$		\$
- Antimony	lb.	1,651,786	538,482	1,331,297	469,948
↳ Bismuth	"	423,827	762,048	478,118	957,825
- Cadmium	"	2,357,497	3,347,646	1,357,874	2,172,598
Calcium	"	134,801	159,241	99,355	100,881
- Cobalt	"	3,568,811	6,763,016	3,182,897	4,751,543
↳ Columbium (Cb_2O_5)	"	-	-	62,229	65,619
★ Copper	"	878,524,096	264,846,637	878,175,084	255,157,626
Gold	troy oz.	4,628,911	157,151,527	4,473,699	158,637,366
Indium	ton	21,550,830	175,082,523	20,359,003	187,950,047
Iron ore	ton	10,972,979	10,972,979	14,720,064	
Iron, remelt	lb.	411,300,451	43,926,888	460,869,392	47,054,765
★ Lead	"	14,577,138	4,313,987	15,270,618	4,307,570
- Magnesium	"	767,621	1,015,380	771,358	1,092,201
↳ Molybdenum	"	429,012,707	295,640,279	465,982,868	351,261,720
★ Nickel	"	483,604	28,873,508	418,278	24,534,349
✓ Palladium, iridium, rhodium, etc.	troy oz.	521,638	3,651,468	430,612	2,798,978
Platinum	lb.	34,016,829	30,244,363	31,381,977	29,580,651
Selenium	troy oz.	813,745,341	108,635,003	832,008,584	104,749,879
★ Silver	"	44,682	156,388	77,609	376,404
Tellurium	lb.	621,718	522,243	1,119,350	727,578
Thorium	ton	2,947	18,265	-	-
Tin	lb.	25,495,369	269,938,192	19,281,465	195,691,624
Titanium ore	ton	813,745,341	108,635,003	832,008,584	104,749,879
★ Zinc	"	...	1,406,558,061	...	1,387,159,036
Total metallics .....		...	1,406,558,061	...	1,387,159,036
Non-metallics:					
Arsenious oxide	lb.	1,724,326	70,400	419,300	16,772
Asbestos	ton	1,118,456	121,400,015	1,173,695	128,955,900
Barite	"	154,292	1,462,212	191,404	1,799,119
Diatomite	"	44	1,430	214	8,817
Feldspar	"	13,862	239,273	10,507	229,626
Fluorspar	ton	..	1,921,820	..	1,990,200
Garnet	ton	32	4,480	80	3,200
Graphite	"	-	-	1	146
Grindstone	"	10	2,000	10	2,000
Gypsum	"	5,205,731	9,498,711	4,940,037	7,750,748
Iron oxides	"	909	76,780	808	68,199
Lithia	lb.	204,666	84,135	536,190	392,871
Magnesitic-dolomite and brucite	ton	..	3,279,021	..	3,064,403
Mica	lb.	1,702,605	94,203	1,816,160	125,377
Mineral waters	gal.	375,425	201,764	364,933	208,709
Nepheline syenite	ton	240,636	2,891,095	240,320	2,572,169
Peat moss	"	185,784	6,088,138	224,031	7,295,087
Potash, (K_2O)	ton	..	178,700	-	-
Pozzolan	ton	1,032,288	3,316,378	517,258	1,830,566
Pyrite, pyrrhotite	"	2,260,768	3,286,705	2,194,054	3,152,882
Quartz .....	"	..	..	..	..
Salt	"	3,314,920	19,355,658	3,246,527	19,552,006
Soapstone and talc	ton	41,636	523,181	48,116	690,630
Sodium sulphate	"	214,208	3,449,155	250,998	4,036,625
Sulphur in smelter gas	"	289,620	2,854,623	277,056	2,708,110
Sulphur, elemental	"	274,359	4,298,906	394,762	7,287,881
Titanium dioxide, etc.	"	..	12,947,000	..	16,723,743
Total non-metallics .....		...	187,505,783	...	210,467,786
Fuels:					
Coal	ton	11,011,138	74,676,240	10,397,704	70,052,683
Natural gas	M. cu. ft.	522,972,327	52,196,882	655,737,844	68,421,918
Natural gas by-products			16,052,210		27,292,959
Petroleum, crude	bbl.	189,534,221	422,926,497	220,848,080	487,560,242
Total fuels .....		...	565,851,829	...	653,327,802
Structural materials:					
Clay products (brick, tile, etc.)	ton	5,787,225	38,226,538	6,205,948	36,982,948
Cement	"	1,529,568	93,261,473	1,415,290	103,923,644
Lime	"	192,074,498	19,301,790	170,750,947	19,217,371
Sand and gravel	"	45,359,449	111,163,886	48,938,804	104,654,132
Stone	"	..	60,640,621	..	68,567,668
Total structural materials .....		...	322,594,308	...	331,345,763
Grand totals .....		...	2,492,509,981	...	2,582,300,387

TABLE 2. Mineral Production of Canada, by Provinces, 1961

No.		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Metals:						
1	Antimony.....	lb. \$	— —	— —	— —	— —
2	Bismuth.....	lb. \$	— —	— —	— —	174,832 297,670
5	Cadmium	lb. \$	— —	— —	— —	— —
7	Calcium.....	lb. \$	— —	— —	— —	— —
9	Cobalt	lb. \$	— —	— —	— —	— —
11	Columbium (Cb_2O_5)	lb. \$	— —	— —	— —	62,229 65,619
13	Copper.....	lb. \$	31,503,313 9,195,817	— —	— —	298,013,711 86,990,202
15	Gold.....	oz. \$	14,429 511,652	— —	— —	1,054,029 37,375,868
17	Indium	—	—	—	—	—
19	Iron ore	ton \$	7,611,340 59,889,125	— —	— —	5,639,931 53,627,608
21	Iron, remelt.....	— \$	— —	— —	— —	14,720,064
23	Lead	lb. \$	43,936,710 4,485,938	— —	— —	6,784,464 692,694
25	Magnesium	lb. \$	— —	— —	— —	— —
27	Molybdenum	lb. \$	— —	— —	— —	771,358 1,092,201
29	Nickel	lb. \$	— —	— —	— —	— —
31	Platinum group.....	oz. \$	— —	— —	— —	— —
33	Selenium	lb. \$	— —	— —	— —	214,994 1,397,487
35	Silver.....	oz. \$	1,145,105 1,079,376	— —	— —	4,315,844 4,068,115
37	Tantalum (Ta_2O_5)	—	—	—	—	—
39	Tellurium	lb. \$	— —	— —	— —	63,904 309,934
41	Thorium.....	— —	— —	— —	— —	— —
43	Tin.....	lb. \$	— —	— —	— —	— —
45	Titanium ore.....	— —	— —	— —	— —	— —
47	Tungsten (WO_3)	— —	— —	— —	— —	— —
49	Uranium (U_3O_8).....	lb. \$	— —	— —	— —	— —
51	Zinc.....	lb. \$	69,277,362 8,722,020	— —	— —	108,010,062 13,598,467
53	Total metals.....	\$	83,883,928	— —	— —	214,235,929
Non-metallics:						
54	Arsenious oxide.....	lb. \$	— —	— —	— —	— —
56	Asbestos.....	ton \$	— —	— —	— —	1,103,545 115,944,729
58	Barite.....	ton \$	— —	175,926 1,647,731	— —	— —
60	Diatomite	ton \$	— —	— —	— —	— —
62	Feldspar	ton \$	— —	— —	— —	10,507 229,626
64	Fluorspar	— \$	1,951,800	— —	— —	— —
66	Garnet	ton \$	— —	— —	— —	— —
67						

TABLE 2. Mineral Production of Canada, by Provinces, 1961

Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon	Canada	No.
—	—	—	—	1,331,297 469,948	—	—	1,331,297 469,948	1
—	—	—	—	283,363	—	—	478,118	3
18,923 22,388	—	—	—	637,567	—	—	957,625	4
—	182,622	125,135	—	907,432	—	142,685	1,357,874	5
—	292,195	200,216	—	1,451,891	—	228,296	2,172,598	6
99,355	—	—	—	—	—	—	99,355	7
100,881	—	—	—	—	—	—	100,881	8
2,884,420	298,477	—	—	—	—	—	3,182,897	9
4,309,912	441,631	—	—	—	—	—	4,751,543	10
—	—	—	—	—	—	—	62,229	11
—	—	—	—	—	—	—	65,619	12
423,293,547	24,908,723	66,957,929	—	31,690,608	926,480	880,773	878,175,084	13
122,421,860	7,271,252	19,545,019	—	9,205,938	270,440	257,098	255,157,626	14
2,637,720	57,747	70,784	171	164,467	407,474	66,878	4,473,699	15
93,533,551	2,047,709	2,510,000	6,064	5,832,000	14,449,028	2,371,494	158,637,366	16
—	—	—	—	—	—	—	... ... ...	17 18 19
5,772,664	—	—	—	1,335,068	—	—	20,359,003	20
62,350,773	—	—	—	12,082,541	—	—	187,950,047	21
—	—	—	—	—	—	—	14,720,064	22
1,670,535	6,107,331	—	—	385,600,537	—	16,769,815	460,869,392	23
170,562	623,558	—	—	39,369,815	—	1,712,198	47,054,765	24
15,270,618	—	—	—	—	—	—	15,270,618	25
4,307,570	—	—	—	—	—	—	4,307,570	26
—	—	—	—	—	—	—	771,358	27
—	—	—	—	—	—	—	1,092,201	28
322,435,773	65,957,008	—	—	4,180,677	3,409,410	—	465,982,868	29
225,423,149	50,039,745	—	—	3,194,037	2,604,789	—	351,261,720	30
418,278	—	—	—	—	—	—	418,278	31
24,534,349	—	—	—	—	—	—	24,534,349	32
164,800	9,544	41,270	—	—	—	—	430,612	33
1,071,200	62,036	268,255	—	—	—	—	2,798,978	34
8,870,402	767,543	876,450	17	8,391,640	77,890	6,937,086	31,381,977	35
8,361,240	723,486	826,142	16	7,909,960	73,419	6,538,897	29,580,651	36
—	—	—	—	—	—	—	—	37
—	—	—	—	—	—	—	—	38
8,050	1,059	4,596	—	—	—	—	77,609	39
39,043	5,136	22,291	—	—	—	—	376,404	40
... ...	—	—	—	—	—	—	... ...	41 42
—	—	—	—	1,119,350	—	—	1,119,350	43
—	—	—	—	727,578	—	—	727,578	44
—	—	—	—	—	—	—	—	45
—	—	—	—	—	—	—	—	46
—	—	—	—	—	—	—	—	47
—	—	—	—	—	—	—	—	48
14,970,594	—	4,310,871	—	—	—	—	19,281,465	49
151,060,610	—	44,631,014	—	—	—	—	195,691,624	50
103,874,146	93,017,677	56,719,653	—	388,972,266	—	12,137,418	832,008,585	51
13,077,755	11,710,925	7,141,004	—	48,971,608	—	1,528,100	104,749,879	52
780,784,843	73,217,673	75,143,941	6,080	129,852,883	17,397,676	12,636,063	1,387,159,036	53
419,300	—	—	—	—	—	—	419,300	54
16,772	—	—	—	—	—	—	16,772	55
25,047	—	—	—	45,103	—	—	1,173,695	56
4,362,668	—	—	—	8,648,503	—	—	128,955,900	57
—	—	—	—	15,478	—	—	191,404	58
—	—	—	—	151,388	—	—	1,799,119	59
—	—	—	—	214	—	—	214	60
—	—	—	—	8,817	—	—	8,817	61
—	—	—	—	—	—	—	10,507	62
—	—	—	—	—	—	—	229,626	63
... 18,400	—	—	—	—	—	—	... 1,990,200	64 65
80	—	—	—	—	—	—	80	66
3,200	—	—	—	—	—	—	3,200	67

TABLE 2. Mineral Production of Canada, by Provinces, 1961 – Concluded

No.		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Non-metallics — Concluded:						
1	Graphite	ton \$	—	—	—	146
2	Grindstone	ton \$	—	—	10	—
3	Gypsum	ton \$	40,699 101,696	4,113,188 5,693,653	85,330 136,856	2,000
4	Iron Oxide	ton \$	—	—	—	—
5	Lithia	lb. \$	—	—	—	68,199
6	Magnesitic dolomite and brucite	— \$	—	—	—	536,190
7	Mica	lb. \$	—	—	—	392,871
8	Mineral water	gal. \$	—	—	—	—
9	Nepheline syenite	ton \$	—	—	—	3,064,403
10	Peat moss	ton \$	—	4,954 217,319	32,688 1,240,479	75,741 1,788,349
11	Potash (K_2O)	—	—	—	—	—
12	Pozzolan	— \$	—	—	—	—
13	Pyrite, pyrrhotite	ton \$	—	—	—	—
14	Quartz	ton \$	—	1,044 5,772	—	1,729,140 302,433
15	Salt	ton \$	—	225,875 2,659,119	—	— 1,717,502
16	Soapstone, talc, pyrophyllite	ton \$	24,425 404,059	—	—	16,274 178,911
17	Sodium sulphate	ton \$	—	—	—	—
18	Sulphur, in smelter gas	ton \$	—	—	—	—
19	Sulphur, elemental	ton \$	—	—	—	—
20	Titanium dioxide, etc.	— \$	—	—	—	—
21	Total non-metallics	\$	2,457,555	10,223,594	1,379,335	142,713,110
Fuels:						
22	Coal	ton \$	—	4,300,758 41,716,107	887,903 7,526,647	—
23	Natural gas	Mcf. \$	—	—	96,318 143,215	—
24	Natural gas, by-products	— \$	—	—	—	—
25	Petroleum, crude	bbl. \$	—	—	12,024 16,833	—
26	Total fuels	\$	—	41,716,107	7,686,695	—
Structural materials:						
27	Clay products	\$	75,890	1,582,153	744,293	8,195,790
28	Cement	ton \$	86,549	—	170,953	2,029,159
29	Lime	ton \$	1,789,980	—	2,754,052	31,412,617
30	Sand and gravel	ton \$	3,383,724 2,777,393	544,497 381,644	13,820 308,027	407,427 5,086,976
31	Stone	ton \$	322,820 633,963	225,000 225,000	1,021,880 1,657,690	2,957,886 3,155,844
32	Total structural materials	\$	5,277,226	606,644	9,753,455	9,738,355
33	Grand totals, 1961	\$	91,618,709	606,644	61,693,156	18,804,385
34	Grand totals, 1960	\$	86,637,123	1,172,587	65,453,531	17,072,739
35						446,202,726

TABLE 2. Mineral Production of Canada, by Provinces, 1961 — Concluded

Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon	Canada	No.
—	—	—	—	—	—	—	1	1
—	—	—	—	—	—	—	146	2
—	—	—	—	—	—	—	10	3
—	—	—	—	—	—	—	2,000	4
425,287	122,233	—	—	153,300	—	—	4,940,037	5
991,944	366,699	—	—	459,900	—	—	7,750,748	6
—	—	—	—	—	—	—	808	7
—	—	—	—	—	—	—	68,199	8
—	—	—	—	—	—	—	536,190	9
—	—	—	—	—	—	—	392,871	10
—	—	—	—	—	—	—	3,064,403	11
192,960	—	—	—	250,000	—	—	1,816,160	13
14,962	—	—	—	8,025	—	—	125,377	14
6,985	—	—	—	—	—	—	364,933	15
2,786	—	—	—	—	—	—	208,709	16
240,320	—	—	—	—	—	—	240,320	17
2,572,169	—	—	—	—	—	—	2,572,169	18
15,113	18,370	—	—	77,165	—	—	224,031	19
251,352	731,896	—	—	3,065,692	—	—	7,295,087	20
—	—	—	—	—	—	—	—	21
—	—	—	—	—	—	—	—	22
—	—	—	—	—	—	—	—	23
—	—	—	—	2,000	—	—	2,000	24
—	—	—	—	—	—	—	517,258	25
—	—	—	—	101,426	—	—	1,830,566	26
1,540,016	165,247	144,348	—	40,967	—	—	2,194,054	27
827,061	339,730	90,940	—	171,877	—	—	3,152,882	28
2,861,705	23,103	51,964	83,880	—	—	—	3,246,527	29
13,586,373	629,129	1,322,311	1,355,074	—	—	—	19,552,006	30
7,417	—	—	—	—	—	—	48,116	31
107,660	—	—	—	—	—	—	690,630	32
—	—	250,996	—	—	—	—	250,996	33
—	—	4,036,625	—	—	—	—	4,036,625	34
823,682	—	—	—	1,757,250	—	—	277,056	35
31,376	—	31,244	6,133,261	1,092,000	—	—	2,708,110	36
—	—	—	—	—	—	—	394,762	37
—	—	—	—	—	—	—	7,287,881	38
—	—	—	—	—	—	—	—	39
—	—	—	—	—	—	—	16,723,743	40
23,630,405	2,067,454	5,481,120	7,488,335	15,466,878	—	—	210,467,786	41
—	—	—	—	—	—	—	—	—
—	—	2,208,851	2,027,826	964,663	—	7,703	10,397,704	42
—	—	3,769,357	10,472,978	6,453,973	—	114,221	70,052,683	43
14,544,165	—	37,192,595	500,843,900	103,018,988	41,678	—	655,737,844	44
5,614,048	—	4,050,274	48,882,365	9,714,690	17,326	—	68,421,918	45
—	—	—	—	—	—	—	—	46
—	—	1,476,478	23,059,867	2,756,614	—	—	27,292,959	47
1,149,087	4,480,348	55,860,104	157,811,712	1,017,826	516,979	—	220,848,080	48
3,546,740	10,156,000	115,719,791	355,530,845	1,859,873	730,160	—	487,560,242	49
9,160,788	10,156,000	125,015,900	437,946,055	20,784,550	747,486	114,221	653,327,802	50
—	—	—	—	—	—	—	—	—
19,036,556	623,966	1,115,474	3,517,473	2,091,353	—	—	36,982,948	51
2,226,923	395,134	201,950	677,914	417,366	—	—	6,205,948	52
35,671,569	7,768,334	4,985,021	12,420,025	7,122,046	—	—	103,923,644	53
865,130	48,791	—	47,506	32,616	—	—	1,415,290	54
11,548,132	833,238	—	838,365	602,633	—	—	19,217,371	55
70,208,199	7,402,385	7,626,197	12,591,944	14,279,191	—	—	170,750,947	56
40,344,071	5,817,415	4,235,777	10,927,057	9,087,792	—	—	104,654,132	57
18,361,843	594,921	—	96,753	2,709,691	—	—	48,938,804	58
23,493,092	1,005,707	—	337,150	3,533,943	—	—	66,567,668	59
130,093,420	16,048,660	10,336,272	28,040,070	22,437,767	—	—	331,345,763	60
943,669,456	101,489,787	215,977,233	473,480,540	188,542,078	18,145,162	12,750,304	2,582,300,387	61
983,104,412	58,702,697	212,093,225	395,344,010	186,261,646	27,135,087	13,330,198	2,492,509,981	62

TABLE 3. Annual Values of the Mineral Production of Canada since 1891

Year	Metallics	Non-metallics	Fuels	Structural materials	Total	Value per capita
dollars						
1891	5,421,659	2,025,195	8,205,228	3,074,534	18,976,616	3.92
1892	3,698,697	1,417,821	7,658,444	3,603,455	16,628,417	3.41
1893	4,630,495	1,249,283	8,771,358	5,133,946	20,035,082	4.06
1894	4,685,852	1,263,803	8,727,095	5,004,408	19,931,158	4.00
1895	6,087,114	1,193,512	8,248,923	4,726,368	20,505,917	4.08
1896	8,030,633	1,207,671	8,658,410	4,327,542	22,474,256	4.43
1897	13,780,314	1,425,093	8,641,016	4,388,550	28,485,023	5.56
1898	21,741,865	1,492,262	9,608,158	5,270,146	38,412,341	7.42
1899	29,282,823	1,610,111	11,872,788	6,168,283	49,234,005	9.40
1900	40,521,807	1,914,690	15,311,479	6,372,901	64,420,877	112.15
1901	41,939,500	2,713,621	14,047,654	6,803,836	65,804,611	12.25
1902	35,924,651	2,730,425	16,359,722	7,896,838	63,211,634	11.51
1903	33,210,147	2,589,302	17,197,317	8,443,747	61,740,513	10.93
1904	30,924,897	2,807,995	17,858,902	8,182,103	60,073,897	10.31
1905	36,946,212	3,468,408	18,756,112	9,608,267	69,078,999	11.51
1906	41,949,563	4,424,882	21,081,724	11,530,528	79,286,697	12.79
1907	42,426,607	5,021,384	26,254,182	12,863,049	86,865,202	13.55
1908	41,774,362	5,188,269	26,954,515	11,339,955	85,557,101	12.91
1909	44,156,841	4,593,142	26,548,109	16,533,349	91,831,441	13.50
1910	49,438,873	5,109,754	32,647,404	19,627,592	106,823,623	15.29
1911	46,105,423	5,659,746	28,746,214	22,709,611	103,220,994	14.32
1912	61,172,753	6,570,980	38,729,694	28,794,869	135,048,296	18.28
1913	66,361,351	7,402,849	41,060,860	30,809,752	145,634,812	19.08
1914	59,386,619	6,165,107	37,302,122	26,009,227	128,863,075	16.36
1915	75,814,841	7,254,732	36,118,839	17,920,759	137,109,171	17.18
1916	106,319,365	10,245,689	43,169,294	17,467,185	177,201,534	22.15
1917	106,455,147	14,566,995	48,787,368	19,837,311	189,646,821	23.53
1918	114,549,152	17,192,967	60,428,979	19,130,799	211,301,897	25.93
1919	73,262,793	16,676,377	59,325,710	27,421,510	176,686,390	21.26
1920	77,939,630	22,260,697	83,767,250	41,892,088	227,859,665	26.63
1921	49,343,232	10,148,665	77,694,017	34,737,428	171,923,342	19.56
1922	61,785,707	10,986,120	71,990,674	39,534,741	184,297,242	20.66
1923	83,764,403	14,097,925	78,465,622	37,751,381	214,079,331	23.76
1924	102,058,235	12,374,278	59,770,024	35,380,869	209,583,406	22.90
1925	116,951,996	14,628,048	57,354,055	37,649,234	226,583,333	24.38
1926	115,090,770	16,643,022	68,743,933	39,959,398	240,437,123	25.44
1927	113,349,051	17,771,709	71,426,516	44,809,419	247,356,695	25.67
1928	131,819,402	19,019,744	74,413,160	49,737,181	274,989,487	27.96
1929	154,282,736	21,245,279	76,787,397	58,534,834	310,850,246	31.00
1930	142,614,237	15,347,391	68,184,485	53,727,465	279,873,578	27.42
1931	120,794,977	11,028,311	54,453,143	44,158,295	230,434,726	22.21
1932	111,943,049	7,839,551	49,047,342	22,398,283	191,228,225	18.20
1933	147,206,959	10,061,071	47,778,436	16,696,687	221,743,153	20.85
1934	194,213,956	10,558,174	54,262,099	19,286,761	278,320,990	25.91
1935	222,139,223	12,579,334	54,824,200	23,215,400	312,758,157	28.84
1936	259,988,203	16,782,608	59,983,320	25,770,741	382,524,872	33.11
1937	335,000,751	22,536,303	65,828,879	34,869,699	458,235,632	41.48
1938	324,064,074	20,122,661	64,803,294	33,878,666	442,868,695	39.71
1939	343,453,866	25,114,106	70,671,328	35,362,759	474,602,059	42.12
1940	382,440,214	26,074,296	78,837,874	42,472,651	529,825,035	46.55
1941	395,193,388	34,532,635	85,141,997	45,373,272	560,241,290	48.69
1942	391,540,411	37,329,163	92,169,291	45,729,807	566,768,672	48.63
1943	356,558,751	38,970,577	92,514,384	42,010,254	530,053,966	44.94
1944	308,111,295	37,431,875	97,291,007	42,984,937	485,819,114	40.67
1945	316,962,810	39,841,422	93,531,276	48,419,673	498,755,181	41.31
1946	290,386,425	43,792,717	102,516,888	66,120,221	502,816,251	40.91
1947	395,140,994	54,670,989	110,481,207	84,578,785	644,869,975	51.38
1948	488,287,835	67,097,524	159,736,260	105,127,246	820,248,865	63.97
1949	538,967,258	64,585,218	183,654,473	113,903,079	901,110,026	67.01
1950	617,238,340	94,721,564	201,193,957	132,296,212	1,045,450,073	76.24
1951	745,877,561	115,418,150	232,854,093	151,333,791	1,245,483,595	88.90
1952	728,458,160	124,493,256	263,582,319	168,808,618	1,285,342,353	88.90
1953	709,920,510	124,999,607	314,181,168	187,202,218	1,336,303,503	90.02
1954	802,401,423	128,038,507	352,959,465	204,982,696	1,488,382,091	97.36
1955	1,007,839,501	144,920,841	414,318,015	228,232,439	1,795,310,796	114.37
1956	1,146,349,595	180,341,599	518,761,191	259,453,169	2,084,905,554	129.65
1957	1,159,579,226	169,061,110	564,776,791	296,905,265	2,190,322,382	131.87
1958	1,130,160,395	150,354,802	510,768,681	309,455,160	2,100,739,038	122.99
1959	1,370,648,535	178,216,641	535,577,823	324,577,512	2,409,020,511	137.79
1960	1,406,558,061	197,505,783	569,851,829	322,594,308	2,492,509,981	139.48
1961	1,387,159,036	210,467,786	653,327,802	331,345,763	2,582,300,387	141.59

Notes: In representing a total valuation of the mineral production as is here given, it should be explained that the production of the metals, copper, gold, lead, nickel, silver, zinc, etc., is given as far as possible on the basis of the quantities of metals recovered in smelters, and the total quantities in each case are valued chiefly at the average market price of there refined metal in a recognized market. There are thus included in some cases the values that have accrued in the smelting or refining of metals outside of Canada.

1886-97 total includes \$250,000 estimated value of unreported products.

1898-1908 total includes \$300,000 estimated value of unreported products, mostly structural materials.

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

Year	Index	Year	Index	Year	Index
1924.....	32.2	1937.....	79.4	1950.....	109.5
1925.....	35.2	1938.....	83.7	1951.....	123.4
1926.....	40.7	1939.....	90.3	1952.....	131.0
1927.....	43.5	1940.....	96.2	1953.....	142.1
1928.....	48.0	1941.....	101.0	1954.....	158.7
1929.....	50.1	1942.....	99.1	1955.....	185.2
1930.....	47.4	1943.....	88.8	1956.....	212.3
1931.....	43.9	1944.....	79.7	1957.....	227.8
1932.....	44.0	1945.....	77.2	1958.....	227.0
1933.....	45.0	1946.....	74.3	1959.....	251.1
1934.....	54.6	1947.....	78.5	1960.....	253.3
1935.....	60.8	1948.....	90.0	1961.....	266.9
1936.....	68.3	1949.....	100.0		

TABLE 5. Value of Mineral Production, by Provinces, since 1942

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	
dollars							
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	11,663,618	251,881,781	465,877,093	
1954.....	42,898,033	..	73,450,898	12,468,322	278,818,070	496,747,571	
1955.....	88,462,956	..	67,133,539	15,759,744	357,010,045	583,954,682	
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	
1960.....	86,637,123	1,172,587	65,453,531	17,072,739	446,202,726	983,104,412	
1961.....	91,618,709	606,644	61,693,156	18,804,385	455,522,933	943,669,456	
dollars							
Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories ¹	Yukon		
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	24,460,900	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	93,211,299	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	35,983,923	135,758,940	138,888,205	8,050,899	9,035,698	
1951.....	30,045,992	51,032,953	168,144,211	176,278,932	8,288,747	9,793,170	
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	14,738,582	
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	294,239,673	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.....	63,464,286	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	
1960.....	58,702,697	212,093,225	395,344,010	186,261,646	27,135,087	13,330,195	
1961.....	101,489,787	215,977,233	473,480,540	188,542,078	18,145,162	12,750,304	

¹ Values of pitchblend products not included from 1941 to 1953.

TABLE 6. Mineral Production of Newfoundland, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
	\$	\$	\$	\$	\$	\$
Metallics:						
Copper	lb.	29,978,282	8,876,570	27,726,518	8,398,362	31,503,313
Cold	troy oz.	13,411	450,207	13,515	458,834	14,429
Iron ore	short ton	6,105,819	42,974,837	7,611,365	54,673,717	7,611,340
Lead	lb.	44,913,551	4,765,328	48,043,926	5,131,091	43,936,710
Silver	troy oz.	1,125,110	987,622	1,271,126	1,130,158	1,145,105
Zinc	lb.	63,348,346	7,753,838	68,415,856	9,133,517	69,277,362
Non-metallics:						
Fluorspar .....		..	1,749,903		1,820,769	..
Gypsum	ton	37,720	148,617	34,346	141,668	40,699
Pyrophyllite (talc)	"	14,443	200,275	20,225	262,925	24,425
Structural materials:						
Cement	"	71,253	1,291,516	93,160	1,688,664	86,549
Clay products .....		..	68,000	..	83,435	75,890
Sand and gravel	ton	4,825,724	2,306,864	3,912,533	3,069,395	3,383,724
Stone	"	352,231	583,419	380,843	644,588	322,820
Totals .....		...	72,156,996	...	86,637,123	...
						91,618,709

TABLE 7. Mineral Production of Prince Edward Island, 1960 and 1961

Product	1960		1961	
	Quantity	Value	Quantity	Value
Structural materials:		\$		\$
Sand and gravel	ton	474,184	422,587	544,497
Stone	"	750,000	750,000	225,000
Totals			1,172,587	606,644

TABLE 8. Mineral Production of Nova Scotia, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$		\$		\$
Metallics:						
Gold	troy oz.	—	—	3	102	—
Silver		—	—	—	—	—
Non-metallics:						
Barite	ton	215,825	2,067,214	130,719	1,241,624	175,926
Gypsum	"	5,036,411	6,462,658	4,490,427	7,515,244	4,113,188
Peat moss	"	2,207	81,460	1,657	68,784	4,954
Quartz	"	1,151	6,338	9,281	52,813	1,044
Salt	"	120,225	1,897,708	163,901	2,256,423	225,875
Silica brick	M	803	239,611	...	...	...
Fuels:						
Coal	ton	4,391,829	43,730,600	4,570,240	44,981,257	4,300,758
Structural materials:						
Clay products			1,638,789		1,673,618	
Sand and gravel	ton	8,032,122	5,022,575	8,717,693	6,020,239	5,574,277
Stone	"	1,393,668	1,732,694	914,937	1,643,427	1,021,880
Totals .....		...	62,879,647	...	65,453,331	...
						61,693,156

TABLE 9. Mineral Production of New Brunswick, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Copper	—	—	—	—	—	—
Gold	—	—	—	—	—	—
Lead	—	—	—	—	—	—
Silver	—	—	—	—	—	—
Zinc	—	—	—	—	—	—
Non-metallics:						
Grindstone.....	ton	60	9,000	10	2,000	10
Gypsum	"	98,250	132,735	90,892	267,002	85,330
Peat moss	"	25,285	808,595	21,062	832,720	32,688
Sulphur, in sulphides.....		—	—	—	—	—
Fuels:						
Coal	ton	1,003,387	8,347,215	1,028,064	8,663,339	887,903
Natural gas	Mcf.	117,502	188,394	98,701	151,603	96,318
Petroleum, crude	bbl.	14,479	20,271	14,148	19,807	12,024

TABLE 9. Mineral Production of New Brunswick, 1959-61 - Concluded

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
Structural materials:		\$		\$		\$
Cement	ton	170,793	2,606,301	163,245	2,546,622	170,953
Clay products	"	...	743,966	...	705,366	744,293
Lime	ton	18,231	416,815	16,727	379,258	13,820
Sand and gravel	"	5,093,496	2,895,642	6,184,924	2,091,227	5,014,234
Stone	"	2,119,136	1,964,356	1,883,867	1,413,795	2,957,886
Totals		...	18,133,290	...	17,072,739	...
						18,804,385

TABLE 10. Mineral Production of Quebec,¹ 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Bismuth	lb.	151,576	264,228	172,983	297,018	174,832
Cadmium	"	-	-	66,499	94,429	-
Columbium (Cb_2O_5)	"	-	-	-	-	62,229
Copper	"	269,823,777	79,894,820	314,939,446	95,395,158	298,013,711
Gold	troy oz.	999,388	33,549,455	1,035,914	35,169,280	1,054,029
Iron (remelt)	"	-	7,187,434	-	10,972,979	...
Iron ore	ton	11,515,189	92,497,012	7,457,971	61,752,485	5,639,931
Lead	lb.	5,819,198	617,412	5,338,901	570,195	6,784,464
Magnesium	"	4,059,508	977,123	-	-	-
Molybdenum	"	748,566	940,596	762,207	1,005,880	771,358
Selenium	"	194,233	1,359,631	279,759	1,958,313	214,998
Silver	troy oz.	4,108,241	3,606,214	4,115,105	3,658,740	4,315,844
Tellurium	lb.	1,662	3,573	29,925	104,738	63,904
Titanium ore	ton	26,777	129,565	2,947	16,265	-
Zinc	lb.	94,115,963	11,519,794	99,614,995	13,298,602	108,010,062
Non-metallics:						
Asbestos	ton	992,196	95,226,769	1,054,424	107,788,172	1,103,545
Feldspar	"	17,953	301,372	13,862	239,273	10,507
Graphite	"	-	-	-	-	1
Iron oxides (ochre)	"	1,235	106,286	909	76,780	808
Lithia	lb.	2,756,280	1,422,153	204,666	84,135	536,190
Magnesitic dolomite and brucite	"	-	3,050,779	...	3,279,021	3,064,403
Mica	ton	389	62,045	617	85,272	687
Natural mineral waters	Imp. gal.	366,088	201,033	372,799	199,674	357,948
Peat moss	ton	50,578	1,282,081	56,731	1,342,338	75,741
Pyrite	"	-	1,850,523	...	1,854,366	...
Quartz	ton	301,706	1,533,206	357,165	1,835,960	302,432
Soapstone and talc	"	15,937	185,951	14,222	157,611	16,274
Sulphur in smelter gases	"	-	76,586	...	83,273	...
Titanium dioxide, etc.	"	-	8,507,149	...	12,947,000	...
Structural materials:						
Cement	ton	1,975,452	29,520,710	1,875,997	28,315,159	2,029,159
Clay products	"	...	10,374,162	...	8,093,038	...
Lime	ton	404,060	4,568,694	399,874	4,449,164	407,427
Sand and gravel	"	42,449,734	21,269,248	46,255,963	22,620,093	44,126,199
Stone	"	20,437,243	28,809,582	20,394,509	28,458,115	22,648,010
Total		...	440,897,186	...	446,202,726	...
						455,522,933

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

TABLE 11. Mineral Production of Ontario, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Bismuth	lb.	31,457	37,748	37,835	45,402	19,923
Calcium	"	67,429	76,409	134,801	159,241	99,355
Cobalt	"	2,835,684	5,414,246	3,258,401	6,312,921	2,884,420
Copper	"	376,544,371	110,547,037	412,544,528	123,750,235	423,293,547
Gold	troy oz.	2,683,449	90,083,383	2,732,673	92,774,248	2,637,720
Iron ore	short ton	6,018,089	50,830,404	5,325,197	48,399,442	5,772,664
Lead	lb.	3,222,447	341,902	1,661,896	177,490	1,670,535
Magnesium	"	8,144,940	2,202,392	14,577,138	4,315,987	15,270,618
Nickel	"	347,929,183	240,053,265	403,300,283	277,924,234	392,435,773
Palladium, rhodium, etc.	troy oz.	177,713	5,916,989	483,585	28,871,955	418,278
Platinum	"	150,378	11,015,189	...	...	24,534,349
Selenium	lb.	101,400	709,800	144,500	1,011,500	164,800
Silver	troy oz.	10,540,856	9,252,763	11,220,823	9,976,434	8,870,402
Tellurium	lb.	6,900	14,835	7,450	26,075	8,050
Thorium	"	47,447	105,676	...	...	39,043
Uranium (U_3O_8)	"	25,492,171	268,529,993	19,793,727	211,983,533	14,970,594
Zinc	"	89,963,215	11,011,498	90,459,368	12,076,326	103,874,146

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TABLE 11. Mineral Production of Ontario, 1959-61 -- Concluded

Product		1959		1960		1961	
		Quantity	Value	Quantity	Value	Quantity	Value
Non-metallics:			\$		\$		\$
Arsenic (A_sO_3)	lb.	1,578,307	63,786	1,724,326	70,400	419,300	16,772
Asbestos	ton	24,350	4,327,628	23,284	4,128,920	25,047	4,362,668
Fluorspar	"	...	100,594	...	100,811	...	38,400
Garnet	ton	—	—	32	4,480	80	3,200
Gypsum	"	412,100	1,017,340	355,603	871,408	425,287	991,944
Mica	"	18	959	173	5,745	192,960	14,962
Natural mineral waters	Imp. gal.	3,025	1,936	2,626	1,890	6,985	2,786
Nepheline syenite	ton	228,722	2,930,932	240,636	2,891,095	240,320	2,572,169
Peat moss	"	10,925	295,390	13,566	338,614	15,113	251,352
Pyrite pyrrhotite	"	632,140	—	762,661	—	—	—
Quartz ¹	ton	1,600,352	1,363,541	1,659,410	998,281	1,540,016	827,061
Salt	"	3,036,230	13,228,977	3,007,599	13,994,545	2,861,705	13,586,373
Silica brick	M	1,123	114,684	...	957,660	...	823,682
Sulphur, in smelter gas	"	...	964,700	...	28,057	...	31,376
Sulphur, elemental	"	...	77,157	...	—	—	—
Talc	ton	8,796	125,903	7,189	102,645	7,417	107,660
Fuels:							
Natural gas	McF.	16,839,236	6,516,784	16,987,056	6,573,990	14,544,165	5,614,048
Petroleum crude	bbl.	1,001,580	3,194,000	1,005,030	3,150,065	1,149,087	3,546,740
Structural materials:							
Cement	ton	2,386,334	31,731,767	2,007,044	30,699,800	2,226,923	35,671,569
Clay products	"	—	22,174,895	—	20,191,325	—	19,036,556
Lime	ton	1,130,055	14,006,532	990,088	12,278,630	865,130	11,548,132
Sand and gravel	"	73,981,703	39,695,602	77,660,833	43,929,708	70,208,199	40,344,071
Stone	"	17,288,796	22,053,425	17,938,583	23,220,659	18,361,843	23,493,092
Totals		...	970,762,201	...	983,104,412	...	943,669,456

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

TABLE 12. Mineral Production of Manitoba, 1959-61

Product		1959		1960		1961	
		Quantity	Value	Quantity	Value	Quantity	Value
Metallics:			\$		\$		\$
Cadmium	lb.	69,095	88,442	110,138	156,396	182,622	292,195
Cobalt	"	314,343	540,670	301,410	450,095	298,477	441,631
Copper	"	25,890,399	7,666,147	25,585,597	7,749,877	24,908,723	7,271,252
Gold	troy oz.	51,186	1,718,314	52,762	1,791,270	57,747	2,047,709
Lead	lb.	—	—	2,074,660	221,574	6,107,331	623,558
Nickel	"	20,277,741	13,523,225	18,118,768	12,400,485	65,957,008	50,039,745
Selenium	"	14,797	103,579	24,358	170,506	9,544	62,036
Silver	troy oz.	373,827	328,145	501,637	446,005	767,543	723,486
Tellurium	lb.	909	1,945	1,825	6,388	1,059	5,136
Zinc	"	31,405,044	3,843,977	48,780,938	6,512,255	93,017,677	11,710,925
Non-metallics:							
Gypsum	ton	200,139	350,323	122,063	366,189	122,233	366,699
Peat moss	"	16,239	649,539	12,496	468,167	18,370	731,896
Quartz	"	6,504	38,761	120	179	165,247	339,730
Salt	"	23,547	625,831	21,925	561,161	23,103	629,129
Fuels:							
Petroleum, crude	bbl.	5,056,075	11,619,872	4,764,045	10,690,384	4,480,348	10,156,000
Structural materials:							
Cement	ton	402,562	7,314,552	429,788	8,105,802	395,134	7,768,334
Clay products	"	—	618,550	—	813,135	—	623,468
Lime	ton	60,503	1,022,953	48,383	834,698	48,791	833,124
Sand and gravel	"	9,261,553	4,686,315	10,860,566	5,907,596	7,402,385	5,817,115
Stone	"	526,696	771,261	673,598	1,050,535	594,921	1,005,704
Totals		...	55,512,410	...	58,702,697	...	101,489,787

TABLE 13. Mineral Production of Saskatchewan, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
	\$		\$		\$	
Metallics:						
Cadmium.....	lb.	253,697	324,732	256,498	364,227	125,135
Copper	"	71,072,523	21,044,574	63,570,278	19,255,437	66,957,929
Gold	troy oz.	78,588	2,638,199	84,775	2,878,111	70,784
Selenium.....	lb.	57,677	403,739	73,021	511,147	41,270
Silver	troy oz.	1,187,439	1,042,334	1,163,845	1,034,775	876,450
Tellurium	lb.	3,552	7,637	5,482	19,187	4,596
Uranium (U_3O_8)	"	5,372,685	54,457,321	4,624,431	48,722,961	4,310,871
Zinc	"	93,753,079	11,475,377	85,405,095	11,401,580	56,719,653
Non-metallics:						
Potash (K_2O}) .....		...	1,408,462	...	178,700	—
Pyrite		—	—	—	—	—
Quartz ¹	lb.	188,515	114,994	169,903	107,039	144,348
Salt	"	48,776	1,189,675	49,064	1,337,096	51,964
Sodium sulphate	ton	179,535	2,881,861	214,208	3,449,155	250,996
Sulphur, elemental .....		...	14,815	...	38,204	...
Fuels:						
Coal	ton	1,947,380	3,746,044	2,170,797	3,833,629	2,208,851
Natural gas	Mcf.	33,612,966	3,327,684	36,571,633	3,722,992	37,192,595
Natural gas by-products .....		...	...	...	1,436,564	...
Petroleum, crude	bbl.	47,442,498	97,731,546	51,908,428	103,957,009	55,860,104
Structural materials:						
Cement	ton	161,057	3,954,737	169,282	3,997,809	201,950
Clay products .....		...	1,374,834	...	1,130,332	...
Sand and gravel	ton	5,898,136	2,903,486	8,952,539	4,717,271	7,626,197
Totals .....		...	210,042,051	...	212,093,225	...
						215,977,233

¹ Low-grade silica sand for fluxing purposes.

TABLE 14. Mineral Production of Alberta, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
	\$		\$		\$	
Metallics:						
Gold	troy oz.	200	6,714	191	6,484	171
Silver.....	"	19	17	19	17	17
Non-metallics:						
Salt	ton	61,198	1,092,331	72,431	1,206,433	83,880
Sulphur .....		...	1,841,478	...	3,650,145	...
Fuels:						
Coal	ton	2,528,755	12,756,112	2,391,699	11,516,842	2,027,826
Natural gas	Mcf.	297,568,926	24,995,790	383,682,986	34,148,675	500,843,900
Natural gas by-products .....		...	...	...	14,021,998	...
Petroleum, crude	bbl.	129,967,312	306,917,803	130,506,968	302,841,423	157,811,712
Structural materials:						
Cement	ton	689,854	11,678,577	663,856	11,474,865	677,914
Clay products .....		...	3,572,920	...	3,551,682	...
Lime	ton	43,709	741,837	43,731	756,499	47,506
Sand and gravel	"	13,271,695	11,949,099	13,385,970	11,858,520	12,591,944
Stone	"	528,961	662,915	167,201	310,427	96,753
Totals .....		...	376,215,593	...	395,344,010	...
						473,480,540

TABLE 15. Mineral Production of British Columbia, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$		\$		\$
Metallics:						
Antimony	lb.	1,657,797	540,276	1,651,786	538,482	1,331,297
Bismuth	"	151,703	288,236	213,009	419,628	283,363
Cadmium	"	1,695,821	2,170,651	1,778,866	2,525,990	907,432
Copper	"	16,242,626	4,781,508	33,117,729	9,982,552	31,690,608
Gold	troy oz.	184,312	6,187,354	212,859	7,226,563	164,467
Indium .....		...	...	...	...	-
Iron ore	ton	849,248	6,363,848	1,156,297	10,256,879	1,335,068
Lead	lb.	297,843,859	31,601,233	333,894,197	35,659,900	385,600,537
Molybdenum	"	-	-	5,414	9,500	-
Nickel	"	1,061,532	743,072	3,779,878	2,645,915	4,180,677
Platinum	troy oz.	4	260	-	-	-
Silver	"	7,463,285	6,551,272	8,447,440	7,510,619	8,391,640
Tin ¹	lb.	747,443	630,094	621,718	522,243	1,119,350
Tungsten (WO ₃)		-	-	-	-	-
Zinc	lb.	406,183,044	49,716,804	407,666,190	54,423,436	388,972,266
Non-metallics:						
Asbestos	ton	33,883	7,878,947	40,748	9,482,923	45,103
Arsenic (As ₂ O ₃)	"	2	2	2	2	-
Barite	ton	23,142	187,368	23,573	220,588	15,478
Diatomite	"	5	100	44	1,430	214
Fluorspar		-	-	...	240	-
Gypsum	ton	94,010	282,030	112,400	337,200	153,300
Mica (schist)	"	-	-	61	3,186	250,000
Peat moss	"	78,815	3,109,623	80,272	3,037,515	77,165
Pozzolan		-	-	-	-	2,000
Pyrite	"	950,432	...	699,351	...	101,426
Quartz	ton	65,318	379,890	64,887	272,433	40,967
Sulphur, in smelter gas .....		...	1,675,130	...	1,813,690	...
Sulphur, elemental .....		...	687,337	...	582,500	...
Fuels:						
Coal	ton	751,492	5,237,724	843,868	5,584,017	964,663
Natural gas	Mcf.	69,128,708	4,558,023	85,592,166	7,587,403	103,018,988
Natural gas by-products .....		...	...	...	593,648	...
Petroleum, crude	bbl.	866,234	1,583,129	867,057	1,626,590	1,017,826
Structural materials:						
Cement	ton	427,181	7,049,638	384,853	6,432,752	417,366
Clay products .....		...	1,949,332	...	1,984,607	...
Lime	ton	29,167	547,190	30,765	603,541	32,616
Sand and gravel	"	17,064,615	11,063,459	15,669,293	10,527,250	14,279,191
Stone	"	2,092,804	2,681,132	2,255,911	3,149,075	2,709,691
Totals .....		...	159,395,092	...	186,261,646	...
						188,542,078

¹ Tin content of concentrates and lead-tin alloy.² 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, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Copper	lb.	986,682	292,157	1,040,000	315,016	926,480
Gold	troy oz.	405,922	13,626,802	418,104	14,194,631	407,474
Nickel	lb.	3,841,770	2,689,239	3,813,778	2,669,645	3,409,410
Silver	troy oz.	70,560	61,937	79,473	70,659	77,890
Uranium (U_3O_8)	lb.	919,333	8,155,729	1,077,211	9,231,698	—
Fuels:						
Natural gas	Mcf.	67,189	22,718	39,785	12,219	41,678
Petroleum, crude	bbl.	430,319	1,025,914	468,545	641,219	516,979
Totals .....		...	25,874,496	...	27,135,087	...
						18,145,162

TABLE 17. Mineral Production of Yukon, 1959-61

Product	1959		1960		1961	
	Quantity	Value	Quantity	Value	Quantity	Value
Metallics:		\$		\$		\$
Cadmium	lb.	141,750	181,440	145,496	206,604	142,685
Copper	"	—	—	—	—	880,773
Gold	troy oz.	66,960	2,247,847	78,115	2,652,004	66,878
Lead	lb.	21,592,456	2,290,960	20,286,871	2,166,638	16,769,815
Platinum group	troy oz.	—	—	19	1,553	—
Silver	"	7,054,632	6,192,556	7,217,361	6,416,956	6,937,086
Zinc	lb.	13,248,532	1,621,375	13,402,899	1,789,287	12,137,418
Fuels:						
Coal	ton	3,879	58,200	6,470	97,156	7,703
Totals .....		...	12,592,378	...	13,330,198	...
						12,750,304

TABLE 18. Tonnage of Ore Mined and Rock Quarried in the Canadian Mining Industry, 1957-61

	1957	1958	1959	1960	1961
Gold-quartz ores	14,472,724	14,766,582	14,246,860	14,725,586	14,353,022
Copper-gold-silver ores	10,570,801	11,484,960	12,436,105	13,973,786	15,008,993
Silver-cobalt ores	186,294	223,609	197,449	220,753	233,781
Silver-lead-zinc ores	8,714,538	5,889,872	5,708,625	5,831,613	5,672,303
Nickel-copper ores	19,289,516	12,861,918	18,964,386	20,835,188	21,639,948

TABLE 18. Tonnage of Ore Mined and Rock Quarried in the Canadian Mining Industry, 1957-61 — Concluded

	1957	1958	1959	1960	1961
Iron ores	26,417,572	20,357,239	32,398,057	32,957,009	32,712,955
Miscellaneous metals ¹	6,689,383	13,171,208	15,129,295	13,036,867	9,602,346
Asbestos	22,610,743	22,443,060	23,105,241	33,228,170	38,444,213
Feldspar and nepheline syenite	306,337	332,265	413,808	331,136	337,641
Quartz, exclusive of sand (shipments)	1,313,490	737,088	1,039,021	1,279,762	946,430
Gypsum and anhydrite	4,706,524	3,976,714	5,983,345	5,093,162	5,059,758
Talc and soapstone	40,083	37,314	43,762	51,487	68,229
Iron oxides	12,560	2,822	2,633	—	—
Rock salt	790,986	780,094	1,244,906	1,320,718	1,348,728
Other non-metals	746,925	803,635	1,418,454	695,367	843,449
Stone, all kinds, quarried ²	40,282,081	38,156,647	46,439,535	45,359,449	48,938,804
Stone used for the manufacture of cement	8,741,863	8,473,596	7,963,129	7,768,119	8,145,376
Estimated rock for the manufacture of lime	2,562,740	2,831,886	3,062,152	2,669,574	2,592,831
Totals (other than coal)	166,455,160	157,069,182	189,796,763	199,377,746	206,148,807

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.

² Included in "Other non-metals".³ Excludes stone used to manufacture cement and lime.TABLE 19. Tonnage of Ore Mined¹ and Rock Quarried,² by Provinces, 1957-61

Province	1957	1958	1959	1960	1961
Newfoundland	10,541,432	7,378,993	7,484,035	9,813,738	10,798,351
Prince Edward Island .....	...	...	1,700,000	750,000	225,000
Nova Scotia	4,651,545	3,813,655	6,716,003	5,501,198	5,640,601
New Brunswick	1,963,614	2,541,459	2,445,856	2,218,264	3,318,923
Quebec	63,806,273	63,308,929	76,233,819	84,103,471	92,136,307
Ontario	64,686,691	62,871,982	76,170,363	77,205,171	72,098,791
Manitoba	3,417,325	2,905,751	2,878,546	3,072,092	5,006,332
Saskatchewan	2,524,231	2,895,002	3,175,234	2,640,733	2,448,097
Alberta	1,087,703	940,827	1,448,604	1,016,705	1,040,269
British Columbia	12,840,216	9,473,193	10,548,299	12,045,516	12,425,387
Northwest Territories	748,205	762,169	819,923	834,751	821,565
Yukon	187,925	177,222	176,081	176,107	189,181
Canada (excluding coal)	166,455,160	157,069,182	189,796,763	199,377,746	206,148,807

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, 1942-61
 (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 ¹		Yearly average	Yearly average	Yearly average	Yearly average ¹
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	13.589	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
1950	21.235	13.296	13.866	74.169	1960	32.053	11.948	12.946	91.375
1951	24.200	17.500	18.000	89.368	1961	29.921	10.871	11.542	92.449

¹ Prime western grade.² 1937-39 for other than newly-mined domestic.

Source: "American Bureau of Metal Statistics".

TABLE 21. Average Annual Metal Prices, in Canadian Dollars, 1942-61

Year	Gold	Silver	Copper	Lead	Zinc	Year	Gold	Silver	Copper	Lead	Zinc
	Troy oz.	Troy oz.	Pound	Pound ¹	Pound ²		Troy oz.	Troy oz.	Pound	Pound ²	Pound ²
dollars											
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	0.1138	0.1088
1949	36.00	0.7425	0.1997	0.158	0.1325	1959	33.57	0.8778	0.2961	0.1061	0.1224
1950	38.05	0.8082	0.2342	0.1445	0.1565	1960	33.95	0.8891	0.3029	0.1068	0.1335
1951	36.85	0.9455	0.277	0.184	0.199	1961	35.46	0.9428	0.2919	0.1021	0.1259

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 1951-61.

TABLE 22. Production of Leading Mineral Products, by Months, 1959-61

No.		Asbestos	Cement	Clay products	Coal	Copper	Gold	Gypsum
		tons	tons	\$	tons	pounds	ounces	tons
1959								
1	January	54,523	187,853	1,792,293	1,279,791	48,642,147	376,086	313,040
2	February	60,084	209,242	1,899,452	920,531	55,337,583	358,052	235,991
3	March	69,902	292,162	3,158,914	704,061	64,158,223	378,398	388,869
4	April	98,139	445,685	3,465,510	780,061	63,564,242	376,795	488,529
5	May	91,257	651,778	4,127,966	570,332	64,548,851	380,019	562,120
6	June	98,012	781,363	4,646,838	609,637	73,263,256	359,004	694,142
7	July	94,898	829,108	4,890,632	719,652	71,439,415	379,010	617,683
8	August	91,929	725,836	4,447,390	482,537	69,386,141	349,470	630,100
9	September	98,363	746,530	4,211,673	956,274	70,775,680	363,988	654,242
10	October	96,529	678,135	4,080,156	1,232,921	71,264,100	396,725	544,727
11	November	124,839	452,977	3,394,934	1,222,462	69,813,746	388,812	400,586
12	December	71,954	283,817	2,399,690	1,148,463	68,345,276	377,057	348,601
13	Totals	1,050,429	6,284,486	42,515,448	10,626,722	790,538,660	4,483,416	5,878,630
1960								
14	January	65,585	176,374	1,630,084	1,125,102	72,208,908	378,073	322,122
15	February	67,630	208,914	1,854,392	1,034,364	71,048,400	372,664	328,035
16	March	71,579	282,165	2,489,367	1,054,242	77,208,871	390,031	295,715
17	April	96,053	324,123	2,585,679	690,798	69,333,484	367,830	310,234
18	May	106,214	569,709	3,552,065	676,236	74,521,806	380,128	468,700
19	June	100,561	709,585	4,137,178	690,690	74,690,955	389,082	520,839
20	July	92,529	697,071	4,147,865	719,684	74,304,756	397,487	586,124
21	August	103,286	750,473	4,156,256	593,387	75,411,127	383,933	571,451
22	September	105,689	709,506	4,049,706	1,038,760	68,538,742	371,717	447,240
23	October	100,242	638,671	3,873,165	1,140,899	71,524,652	405,479	549,929
24	November	147,729	482,430	3,753,126	1,260,875	75,041,474	395,215	473,502
25	December	61,359	238,204	1,997,655	986,101	74,690,921	397,272	332,230
26	Totals	1,118,456	5,787,225	38,226,538	11,011,138	878,524,096	4,628,911	5,205,731
1961								
27	January	60,505	191,375	1,573,507	1,021,777	71,992,150	382,665	286,484
28	February	60,839	202,144	1,933,447	904,918	64,841,677	365,034	146,543
29	March	70,688	291,953	2,360,586	759,976	69,589,549	398,139	266,809
30	April	96,254	369,489	2,480,355	743,738	68,526,997	380,088	372,180
31	May	114,305	635,762	3,689,959	842,766	71,671,294	389,978	460,206
32	June	104,330	747,350	3,682,011	746,551	75,383,945	371,340	525,118
33	July	102,128	720,295	3,964,459	654,888	74,715,359	361,847	569,618
34	August	119,034	801,085	4,760,257	460,309	74,372,521	362,015	511,966
35	September	102,003	713,742	3,733,471	919,688	74,633,960	349,322	500,019
36	October	120,981	706,922	3,629,747	1,130,756	80,663,622	366,589	535,848
37	November	147,428	527,435	3,253,581	1,126,525	79,162,102	373,523	392,276
38	December	75,200	298,396	1,921,568	1,085,812	72,621,908	373,159	372,970
39	Totals	1,173,695	6,205,948	36,982,948	10,397,704	878,175,084	4,473,699	4,940,037

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, 1959-61

Iron ore	Lead	Lime	Natural gas	Nickel	Petroleum	Salt	Silver	Zinc	No.
tons	pounds	tons	Mcf.	pounds	barrels	tons	ounces	pounds	
381,456	35,161,473	130,613	43,671,883	16,143,671	16,913,268	305,030	3,094,440	70,626,336	1
237,904	32,772,058	126,170	36,891,926	25,281,073	15,775,074	297,970	2,264,903	59,559,393	2
190,601	35,703,185	134,082	36,802,903	29,893,110	15,866,089	228,131	2,782,307	68,165,472	3
790,732	33,400,819	136,421	32,714,238	31,036,580	13,391,619	200,961	2,691,503	66,153,874	4
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	5
3,537,649	30,862,266	137,855	27,033,535	33,248,177	14,935,902	217,561	2,676,937	65,941,889	6
2,595,378	31,148,739	138,334	26,184,271	32,437,693	15,233,140	264,581	2,867,957	69,240,343	7
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	8
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	9
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	10
2,696,274	28,989,253	153,381	41,877,469	33,831,177	14,324,835	343,662	2,334,137	61,329,498	11
671,512	29,059,631	143,472	46,801,144	37,422,055	17,112,612	297,301	2,674,538	65,618,655	12
24,488,325	373,391,461	1,685,725	417,334,527	373,110,226	184,778,497	3,289,976	31,923,969	792,015,223	13
509,762	32,568,482	131,122	50,535,935	34,797,564	18,182,262	329,734	2,800,069	69,959,942	14
299,023	32,793,483	129,967	46,141,890	32,870,647	15,740,455	291,254	2,878,074	64,619,056	15
219,619	33,774,201	141,438	49,469,928	35,561,076	17,165,544	285,312	2,754,583	72,798,095	16
352,924	32,538,044	126,463	41,296,338	35,048,813	14,490,211	197,347	2,603,829	70,581,996	17
3,706,842	33,116,345	128,499	39,443,048	34,413,239	16,541,558	241,374	2,369,657	66,723,556	18
3,394,329	35,067,377	124,851	35,680,979	36,763,682	15,729,200	243,040	2,993,473	67,349,040	19
3,389,827	36,078,462	122,179	34,057,816	34,997,568	16,025,491	246,461	2,944,664	63,421,597	20
3,671,885	33,600,855	126,214	34,457,225	38,284,934	15,082,841	264,054	2,675,109	66,251,360	21
2,764,404	33,818,181	129,880	36,448,582	36,477,877	15,396,659	280,286	2,494,268	70,193,257	22
2,435,336	32,494,531	131,195	44,186,193	36,010,839	14,273,656	322,421	2,904,221	71,014,047	23
966,019	34,664,772	127,962	50,934,633	35,357,748	14,754,804	343,262	3,082,228	66,219,053	24
540,860	40,785,718	109,798	60,319,760	38,428,720	16,151,540	290,375	3,512,854	64,614,342	25
21,550,830	411,300,451	1,529,568	522,972,327	429,012,707	189,534,221	3,314,920	34,016,829	813,745,341	26
475,094	45,290,717	104,466	61,608,928	36,428,081	17,819,010	274,240	2,597,485	71,103,300	27
289,969	41,478,310	100,629	55,918,811	33,736,670	16,495,653	242,793	2,605,595	60,398,844	28
268,762	41,864,266	117,197	59,174,030	34,194,477	16,352,133	240,714	2,972,546	66,403,815	29
352,531	36,338,952	118,259	53,517,011	33,202,355	16,854,799	200,578	2,516,521	62,192,696	30
1,535,469	33,510,507	128,075	49,619,491	38,915,446	18,852,293	226,225	2,570,788	68,873,338	31
2,716,698	39,838,232	119,577	44,012,421	38,584,055	17,943,874	214,095	2,893,800	65,806,369	32
3,000,335	36,811,028	109,600	43,160,296	40,379,500	18,979,577	240,509	2,410,226	67,362,012	33
3,419,335	38,667,912	116,532	45,616,930	39,742,813	19,680,640	263,580	2,240,105	71,463,034	34
3,031,926	37,876,137	115,647	47,781,138	41,843,636	19,646,535	268,227	2,389,225	77,451,278	35
3,162,549	39,051,487	137,646	54,927,952	43,815,082	18,204,436	351,224	3,070,234	75,827,543	36
1,147,361	34,682,103	126,774	62,320,289	44,611,798	19,701,517	396,057	2,659,863	72,931,992	37
953,974	35,461,741	120,888	78,080,347	40,528,953	20,517,613	328,285	2,455,589	72,194,363	38
20,359,003	460,869,392	1,415,290	655,737,644	465,982,868	220,848,080	3,246,527	31,381,977	832,008,584	39

Notes: Data for the years 1953-55 are shown in General Review of the Mining Industry, 1955.
Data for the years 1956-58 are shown in General Review of the Mining Industry, 1958.

MINERAL STATISTICS

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1957-61

Basis: Revised Standard Industrial Classification and New Establishment Concept.

Year	Establishments ¹	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Gross value of products ²	Net value added by processing ³							
Metal mining industries														
Placer gold mines														
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							
1960	32	213	1,224,907	77,498	344,379	2,758,284	2,285,126							
1961	47	243	1,326,147	108,452	47,822	2,465,811	2,254,746							
Gold quartz mines														
1957	147	16,911	63,708,680	6,771,886	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							
1960	146	16,542	66,552,906	7,216,027	22,686,326	135,349,183	103,748,507							
1961	140	15,876	65,465,515	7,360,085	19,396,214	135,033,500	106,879,129							
Copper-gold-silver mines														
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							
1960	277	10,549	48,950,982	6,546,557	17,989,123	172,254,034	103,754,616							
1961	276	10,901	51,459,158	5,932,106	14,709,403	175,463,232	109,047,866							
Silver-cobalt mines														
1957	12	598	2,209,805	256,694	353,026	4,314,088	3,105,688							
1958	12	570	2,115,670	241,027	320,403	4,792,545	3,633,390							
1959	11	486	1,647,687	185,883	229,554	5,006,541	4,118,972							
1960	7	520	2,077,281	253,243	297,067	5,643,143	4,526,714							
1961	20	560	2,216,805	295,788	375,166	4,515,717	3,424,158							
Silver-lead-zinc mines														
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							
1960	47	4,215	21,304,035	2,245,901	8,517,725	111,986,516	61,377,333							
1961	73	4,352	22,098,610	2,446,827	6,628,804	111,172,237	61,422,497							
Nickel-copper mines														
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							
1960	39	12,709	67,504,099	6,334,692	18,746,564	127,212,418	99,161,815							
1961	50	13,697	74,754,694	4,636,241	17,876,804	134,732,176	109,350,212							
Iron mines														
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							
1960	62	7,754	45,985,190	7,916,476	20,812,978	175,082,523	106,722,156							
1961	55	8,049	47,107,661	8,331,530	21,643,625	186,332,963	124,588,726							
Miscellaneous metal mines ⁴														
1957	139	8,705	42,386,402	6,539,935	20,949,018	144,689,661	115,788,076							
1958	91	14,375	78,320,507	9,293,152	50,627,573	284,367,777	223,484,942							
1959	84	13,645	76,604,136	9,023,750	57,982,723	333,770,291	265,835,151							
1960	68	9,380	54,453,208	7,570,803	40,059,514	273,409,628	224,482,268							
1961	43	5,919	34,332,063	5,856,827	22,992,059	201,214,250	170,664,295							
Totals, metal mining industries														
1957	844	62,554	278,532,935	31,588,383	99,380,414	791,257,471	532,031,375							
1958	754	61,999	289,629,503	33,110,023	114,351,948	864,084,277	601,243,814							
1959	822	63,871	306,931,416	34,551,446	123,940,688	1,023,961,535	726,631,232							
1960	678	61,882	308,042,608	38,161,397	129,453,676	1,003,695,731	706,058,533							
1961	704	59,597	298,760,653	34,967,856	103,669,917	950,929,886	687,631,629							

See footnotes at end of table.

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1957-61 - Continued

Year	Establishments ¹	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Gross value of product ²	Net value added by processing ³						
							number						
Non-metal mining industries													
Asbestos													
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						
1960	24	6,688	33,057,847	6,133,788	14,887,770	125,236,902	104,215,344						
1961	23	6,875	35,093,133	6,666,383	14,645,395	133,407,157	112,095,379						
Feldspar, quartz and nepheline syenite													
1957	24	411	1,552,680	350,604	507,680	5,685,182	4,571,535						
1958	28	414	1,646,943	376,011	587,369	4,858,399	3,728,517						
1959	30	429	1,685,867	386,190	583,378	5,773,221	4,577,424						
1960	23	364	1,400,559	292,827	450,055	5,205,978	4,378,979						
1961	23	339	1,312,770	224,025	397,379	4,795,170	3,820,235						
Gypsum													
1957	9	712	2,226,875	327,962	1,308,512	6,716,371	5,079,897						
1958	8	501	1,790,669	246,758	664,022	3,939,241	3,028,461						
1959	11	755	2,691,420	313,342	529,297	7,245,486	6,402,847						
1960	9	685	2,431,729	300,623	446,594	8,340,568	7,593,351						
1961	9	613	2,272,477	312,798	1,450,653	6,597,398	4,833,947						
Iron oxides (ochres)													
1957-61 included in miscellaneous non-metal mines													
Mica													
1957	25	45	66,283	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						
1960	29	21	38,022	3,303	4,457	95,997	88,237						
1961	30	34	58,258	9,623	7,694	128,296	110,979						
Peat													
1957	35	1,168	2,542,210	182,987	1,283,093	5,898,696	4,432,618						
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						
1960	40	1,172	3,060,511	279,827	1,863,202	7,937,055	5,794,026						
1961	42	1,332	3,528,474	303,976	2,246,064	9,551,831	7,001,791						
Salt													
1957	9	791	3,077,935	1,119,844	2,342,888	14,755,435	11,292,703						
1958	10	789	3,153,407	1,048,037	2,576,101	15,687,157	12,063,019						
1959	12	838	3,452,829	1,168,186	3,114,737	19,081,974	14,799,051						
1960	11	886	3,836,864	1,069,847	2,875,704	19,649,719	15,684,168						
1961	9	912	3,950,358	1,153,724	3,023,969	19,567,945	15,390,252						
Talc and soapstone													
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						
1960	4	70	235,373	35,985	63,274	565,519	466,260						
1961	4	79	264,622	40,993	83,147	736,340	612,200						
Miscellaneous non-metal mines													
1957	53	1,597	5,737,254	1,932,295	1,598,110	14,227,781	10,865,027						
1958	43	1,240	4,838,000	1,696,159	1,087,789	12,058,468	9,208,809						
1959	39	1,425	5,756,818	1,876,804	1,564,067	13,965,675	10,456,674						
1960	46	1,122	4,548,789	1,859,585	1,004,699	10,773,462	7,600,509						
1961	35	1,098	4,682,743	1,768,707	1,525,703	11,457,737	7,863,064						
Totals, non-metal mining industries													
1957	181	12,158	47,708,811	9,963,124	21,718,383	156,166,584	124,159,646						
1958	178	11,492	46,197,312	9,329,528	19,271,286	138,610,387	109,780,313						
1959	171	11,514	47,917,170	9,977,896	21,337,049	165,613,227	134,003,923						
1960	186	11,008	48,609,694	9,995,785	21,595,755	177,805,200	145,820,874						
1961	175	11,282	51,162,835	10,480,229	23,380,004	186,241,874	151,727,847						

See footnotes at end of table.

MINERAL STATISTICS

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1957-61 - Continued

Year	Establishments ¹	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Gross value of products ²	Net value added by processing ³
	number				dollars		
Fuels industries							
Coal							
1957.....	138	14,569	47,222,273	4,862,774	11,449,260	90,220,670	73,908,636
1958.....	139	13,162	42,250,458	4,967,177	10,786,747	79,963,327	64,209,403
1959.....	121	11,485	37,122,895	4,281,690	10,705,703	73,875,895	58,888,502
1960.....	120	11,587	38,734,884	4,313,868	11,720,197	74,676,240	58,642,175
1961.....	113	10,461	35,607,905	4,062,543	10,079,645	72,209,962	58,067,774
Petroleum and natural gas							
1957.....	519	5,594	27,378,701	5,399,338	10,106,789	461,502,460	445,996,333
1958.....	615	4,910	24,231,610	5,157,655	8,245,684	418,921,389	405,518,080
1959.....	618	4,765	25,506,916	6,260,848	8,710,879	451,197,257	436,225,530
1960.....	612	4,349	23,576,753	6,122,389	10,780,762	467,616,813	450,713,662
1961.....	581	4,157	23,647,883	6,160,125	8,343,324	569,567,414	555,063,965
Natural gas processing							
1957.....	10	270	1,408,882	424,412	5,246,689	11,344,465	5,673,364
1958.....	14	411	2,093,033	734,331	9,501,032	17,509,526	7,274,163
1959.....	14	461	2,525,833	918,608	7,169,778	17,363,197	9,274,811
1960.....	30	669	3,790,433	1,288,028	25,624,323	45,762,880	18,850,529
1961.....	49	744	4,477,319	1,869,994	39,501,327	78,020,013	36,648,692
Totals, fuels industries							
1957.....	667	20,433	76,009,856	10,686,524	26,802,738	563,067,595	525,578,333
1958.....	768	18,483	68,575,101	10,859,163	28,533,433	516,394,242	477,001,640
1959.....	753	16,711	65,155,644	11,461,146	26,586,360	542,436,349	504,388,843
1960.....	762	16,605	66,102,070	11,724,285	48,125,282	588,055,933	528,206,366
1961.....	743	15,362	63,733,107	12,092,662	57,924,296	719,797,389	649,780,431
Structural materials							
Sand and gravel							
1957.....	438	2,527	9,339,304	2,449,039	668,420	36,150,498	33,033,039
1958.....	452	2,508	9,365,391	2,759,529	429,094	41,123,495	37,934,872
1959.....	482	2,738	10,229,651	2,899,356	525,298	42,542,701	39,118,047
1960.....	486	2,704	10,374,485	2,912,450	552,711	43,470,043	40,004,882
1961.....	493	2,513	9,898,545	3,110,456	607,022	39,437,982	35,720,504
Stone							
1957.....	192	3,460	10,946,513	2,265,378	3,372,396	36,617,554	30,979,780
1958.....	200	3,300	11,263,223	2,595,298	4,404,531	36,492,135	29,492,306
1959.....	202	3,184	11,364,441	2,562,709	4,372,398	40,722,771	33,787,664
1960.....	207	3,105	10,986,822	2,680,275	3,954,352	39,443,050	32,986,408
1961.....	228	3,395	12,623,473	3,028,969	4,550,911	44,708,945	37,129,065
Totals, structural materials							
1957.....	630	5,987	20,285,817	4,714,417	4,040,816	72,768,052	64,012,819
1958.....	652	5,808	20,628,614	5,354,827	4,833,625	77,615,630	67,427,178
1959.....	684	5,922	21,594,092	5,462,065	4,897,696	83,265,472	72,905,711
1960.....	693	5,809	21,361,307	5,410,740	4,511,063	82,913,093	72,991,290
1961.....	721	5,908	22,522,018	6,139,425	5,157,933	84,146,927	72,849,569
Totals, mining industries							
1957.....	2,322	101,132	422,537,419	56,952,448	151,942,351	1,583,259,702	1,245,782,173
1958.....	2,352	97,782	425,030,530	58,653,541	166,990,292	1,596,704,536	1,255,452,951
1959.....	2,430	98,018	441,598,322	61,452,555	176,761,793	1,815,276,583	1,437,929,709
1960.....	2,319	95,304	444,115,679	65,292,207	203,685,776	1,852,469,957	1,453,077,065
1961.....	2,343	92,149	436,178,613	63,680,172	190,132,150	1,941,116,076	1,561,989,476

See footnotes at end of table.

TABLE 23. Principal Statistics of the Mineral Industry, by Industries, 1957-61 - Concluded

Year	Establishments ¹	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Gross value of products ²	Net value added by processing ³							
Industries classified as manufacturing														
Smelting and refining														
1957	22	30,088	137,058,403	42,734,783	749,037,795 ⁵	1,265,324,737	473,552,159							
1958	24	27,361	133,065,591	43,867,569	666,720,963 ⁵	1,132,701,559	422,113,027							
1959	23	28,172	139,319,623	47,340,635	788,217,652 ⁵	1,283,937,955	448,379,668							
1960	22	30,024	155,415,083	50,788,918	896,613,061 ⁵	1,506,008,207	558,608,228							
1961	24	29,527	157,474,973	49,000,322	891,950,994 ⁵	1,471,048,021	530,096,705							
Clay products														
1957	107	4,188	14,552,110	5,979,030	955,098	36,001,720	29,067,592							
1958	109	4,210	15,580,699	6,419,616	1,062,174	41,265,330	33,783,540							
1959	112	4,410	16,894,581	6,380,927	1,368,431	42,152,618	34,403,260							
1960	111	3,979	15,172,005	5,652,962	1,284,138	38,013,902	31,076,802							
1961	99	3,547	13,537,964	5,610,938	4,733,718	34,526,747	24,182,091							
Cement														
1957	17	3,516	15,669,235	19,692,658	16,193,942	98,043,920	62,157,320							
1958	19	3,485	16,359,760	19,009,008	14,758,308	100,161,250	66,413,934							
1959	19	3,516	17,174,256	17,309,329	13,269,944	96,645,859	66,066,386							
1960	20	3,398	17,122,742	15,965,171	11,294,254	95,510,331	68,250,906							
1961	20	3,123	16,697,185	16,262,241	14,358,880	107,044,107	76,422,986							
Lime														
1957	22	961	3,234,208	2,383,094	936,269	11,155,894	7,836,531							
1958	22	957	3,475,463	2,789,727	1,027,687	13,090,923	9,273,509							
1959	23	1,016	3,801,286	2,763,691	1,149,217	13,306,267	9,393,359							
1960	23	875	3,600,300	2,308,640	882,397	11,488,449	8,277,412							
1961	21	825	3,569,549	2,238,931	1,784,960	12,978,722	8,954,831							
Totals, industries classified as manufacturing														
1957	168	38,753	170,513,956	70,789,563	787,123,104	1,410,326,271	572,613,602							
1958	174	36,013	168,481,513	72,085,920	683,569,132	1,287,239,062	531,584,010							
1959	177	37,114	177,189,746	73,794,582	804,005,244	1,436,042,499	558,242,873							
1960	176	36,276	191,310,130	74,713,691	910,073,850	1,651,000,889	666,213,348							
1961	164	37,022	191,279,671	73,112,432	912,828,532	1,625,597,587	639,656,613							

¹ In the publications issued prior to 1960 the figures in this column included the number of mines, quarries, pits and wells. There is a noticeable reduction in the figures which may be explained by an example: an oil firm which operates several hundred wells is now recorded as only 1 unit. Reclassification has removed some of the operators to other industries. Example: former sand and gravel operators to the construction industry.

² In this table the compilations are on an industry basis, therefore will not necessarily agree with the commodity series shown in Tables 1 to 17. Comparisons should not be made. Because of the inclusion of figures for the non-ferrous smelting and refining industry, there would be considerable duplication of the overall gross value of production.

³ Gross value, less the cost of fuel, electricity, process supplies, containers, freight and treatment charges.

⁴ Includes data of uranium mines. Data not available for 1941-53.

⁵ Cost of ores and concentrates are included in smelting and refining data.

Note: The number of producing metal mines was as follows: in 1957: 265; in 1958: 314; in 1959: 292; in 1960: 244; in 1961: 266.

TABLE 24. Principal Statistics of the Mineral Industry, by Provinces, 1957-61

Excluding the manufacturing group

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Gross value of products	Net value added by processing ¹
	number		dollars				
Newfoundland							
1957	14	4,316	17,143,748	1,611,984	4,052,810	74,985,498	44,335,072
1958	14	4,024	16,848,281	1,916,109	4,460,687	57,733,377	35,241,070
1959	21	3,566	14,307,275	1,851,721	3,253,993	66,316,497	44,481,687
1960	19	4,001	19,023,157	2,489,728	7,178,381	78,400,300	49,053,221
1961	22	4,293	20,967,991	2,661,119	7,410,901	84,413,353	53,752,858
Prince Edward Island							
1959	5	10	32,181	8,327	2,937	94,642	83,378
1960	5	7	10,921	6,344	878	78,814	71,592
1961	4	2	1,972	1,849	500	126,912	124,563
Nova Scotia							
1957	50	10,482	33,858,637	3,309,635	10,180,869	65,580,354	52,089,845
1958	46	9,876	32,412,790	3,574,659	9,587,513	59,511,056	48,348,884
1959	45	8,742	27,957,768	2,997,538	8,998,936	56,120,291	44,123,817
1960	49	8,982	29,278,841	3,064,614	9,880,469	58,213,993	45,288,910
1961	54	8,322	27,298,520	3,105,054	9,702,664	58,297,039	45,189,321
New Brunswick							
1957	32	1,662	5,310,428	1,135,856	2,949,643	14,400,824	8,268,101
1958	37	1,277	3,792,821	899,474	1,700,718	9,607,148	6,387,683
1959	43	1,347	3,863,287	774,104	2,275,920	11,148,849	8,098,825
1960	58	1,299	4,013,831	771,876	2,575,473	11,281,884	7,934,535
1961	57	1,460	4,730,053	882,962	2,261,440	10,869,031	7,724,629
Quebec							
1957	680	22,638	91,337,768	15,136,481	31,834,344	317,606,866	215,608,530
1958	600	21,000	88,080,507	14,315,523	31,380,337	286,204,222	194,773,823
1959	687	21,845	94,935,063	15,819,111	34,024,250	358,747,211	247,543,928
1960	646	21,765	97,760,714	17,036,640	44,618,573	358,199,423	242,852,975
1961	665	22,795	104,389,513	17,657,085	40,845,420	361,759,540	256,962,472
Ontario							
1957	732	37,594	164,429,764	19,035,165	58,679,347	379,673,044	289,907,874
1958	741	39,779	182,847,416	21,840,537	73,098,949	498,275,197	382,277,729
1959	737	40,999	196,505,860	22,230,941	88,951,307	607,697,777	468,052,907
1960	694	38,517	189,213,218	21,645,108	76,922,208	565,895,811	443,551,662
1961	667	35,125	172,860,677	20,482,960	60,681,579	520,427,508	414,012,771
Manitoba							
1957	72	2,298	10,345,247	1,197,063	3,977,465	32,577,573	25,713,636
1958	78	2,241	10,685,882	1,017,940	2,622,286	33,205,843	27,708,498
1959	80	1,999	9,248,947	930,291	2,412,752	30,408,008	25,243,626
1960	97	2,645	12,745,429	3,440,524	2,904,905	32,694,778	24,745,780
1961	75	3,306	16,866,255	1,639,657	4,432,817	41,705,846	34,060,210

See footnote at end of table.

TABLE 24. Principal Statistics of the Mineral Industry, by Provinces, 1957-61 — Concluded
Excluding the manufacturing group

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, ores and containers	Gross value of products	Net value added by processing ¹
	number		dollars				
Saskatchewan							
1957	173	4,718	23,754,733	4,171,783	8,554,875	142,155,968	129,305,029
1958	185	4,891	25,667,084	4,439,586	13,086,030	175,652,917	157,939,092
1959	185	5,094	26,864,252	4,897,820	10,966,910	178,495,577	160,500,790
1960	172	4,048	21,888,109	4,281,358	11,132,512	180,002,916 ²	164,587,213
1961	183	3,667	20,311,916	4,249,740	7,686,973	182,144,592 ²	170,207,879
Alberta							
1957	302	6,470	27,768,969	5,506,718	11,652,961	393,063,844	375,904,165
1958	345	5,650	24,123,862	5,282,808	12,328,742	326,690,443	309,078,893
1959	319	5,482	26,331,372	6,331,899	14,576,967	358,106,408	337,197,528
1960	320	5,492	26,806,837	6,674,111	26,062,861	381,851,534 ²	349,114,562
1961	332	4,985	26,070,299	7,082,834	36,967,702	504,249,875 ²	460,199,339
British Columbia							
1957	217	8,904	36,928,866	3,561,860	16,218,273	129,419,984	79,636,400
1958	234	7,118	29,612,489	3,053,049	14,629,037	114,701,524	69,533,926
1959	233	6,990	31,200,049	3,205,498	7,642,987	112,570,861	74,623,591
1960	215	6,756	32,704,248	3,669,373	18,704,863	148,606,605 ²	96,566,335
1961	243	6,500	32,716,341	3,828,078	18,492,463	147,676,612 ²	95,501,720
Northwest Territories							
1957	17	1,255	7,239,682	1,536,319	1,709,536	21,806,759	18,311,041
1958	17	1,203	6,862,291	1,688,916	2,337,278	24,057,682	19,490,095
1959	17	1,180	6,717,354	1,732,576	2,513,256	26,401,829	20,493,199
1960	16	1,056	6,344,215	1,479,700	1,953,648	25,979,876	22,445,908
1961	14	975	5,708,328	1,363,110	1,241,586	17,820,144	14,828,083
Yukon							
1957	33	795	4,419,577	749,584	2,132,228	11,982,988	6,702,488
1958	55	723	4,097,107	624,940	1,758,715	11,065,127	6,673,258
1959	58	764	3,634,914	672,729	1,141,578	11,168,633	7,486,433
1960	28	736	4,326,159	732,831	1,771,005	11,264,023	6,864,372
1961	27	719	4,256,748	725,724	408,105	11,625,624	9,125,571
Canada							
1957	2,322	101,132	422,537,419	56,952,448	151,942,351	1,583,259,702	1,245,782,173
1958	2,352	97,782	425,030,530	58,653,541	166,990,292	1,596,704,536	1,255,452,951
1959	2,430	98,018	441,598,322	61,452,555	176,761,793	1,815,276,583	1,437,929,709
1960	2,319	95,304	444,115,679	65,292,207	203,685,776	1,852,469,957 ²	1,453,077,065
1961	2,343	92,149	436,178,613	63,680,172	190,132,150	1,941,116,076 ²	1,561,989,476

¹ Gross value less cost of fuel, electricity, process supplies, containers, ores, freight and treatment charges.² Figures have limited use, as they include duplication of natural gas at the well head and the products of natural gas processing plants. Data entered for arithmetical checking purposes.

MINERAL STATISTICS

TABLE 25. Employees and their Earnings in the Mineral Industry, by Industries, 1960

Excluding the manufacturing group

Basis: Revised Standard Industrial Classification and New Establishment Concept

Industry	Employees						Man-hours worked (all employees)	Earnings							
	Office and administrative		Workmen		Total ¹	Office and administrative		Workmen	Total						
	Male	Female	Male	Female											
number															
dollars															
Metal mining:															
Placer gold	9	5	196	3	213	567,383	93,773	1,131,134	1,224,907						
Gold quartz	1,653	153	14,677	59	16,542	36,157,872	9,929,000	56,623,906	66,552,906						
Copper-gold-silver	1,313	219	8,969	48	10,549	22,541,084	8,512,429	40,428,553	48,940,982						
Silver-cobalt	62	5	447	6	520	1,186,773	336,534	1,740,747	2,077,281						
Silver-lead-zinc	635	52	3,478	50	4,215	8,984,756	4,198,509	17,105,526	21,304,035						
Nickel-copper	1,315	77	11,300	17	12,709	24,796,901	9,821,519	57,682,580	67,504,099						
Iron	1,441	229	6,010	74	7,754	17,799,204	10,985,357	34,999,833	45,985,190						
Miscellaneous metals	1,568	171	7,616	25	9,380	19,037,034	9,795,299	44,657,909	54,453,208						
Totals	7,996	911	52,693	282	61,882	131,071,007	53,672,420	254,370,188	308,042,608						
Non-metallics:															
Asbestos	946	151	5,557	34	6,688	14,045,314	6,370,096	26,687,751	33,057,847						
Feldspar and quartz	78	8	275	3	364	810,227	400,175	1,000,384	1,400,559						
Gypsum	99	10	574	2	685	1,375,529	519,377	1,912,352	2,431,729						
Mica	1	1	19	—	21	34,904	4,836	33,186	38,022						
Peat	47	23	1,073	29	1,172	2,417,903	300,699	2,759,812	3,060,511						
Salt	140	31	668	47	886	1,812,675	934,402	2,902,462	3,836,864						
Talc and soapstone	15	4	51	—	70	164,519	86,302	149,071	235,373						
Miscellaneous	194	22	905	1	1,122	2,283,721	1,144,583	3,404,206	4,548,789						
Totals	1,520	250	9,122	116	11,008	22,944,792	9,760,470	38,849,224	48,609,694						
Fuels:															
Coal	961	26	10,600	—	11,587	20,417,016	3,352,152	35,382,732	38,734,884						
Petroleum, natural gas	1,059	187	3,068	35	4,349	9,306,232	7,899,741	15,677,012	23,576,753						
Natural gas processing	152	20	496	1	669	1,404,606	1,010,143	2,780,290	3,790,433						
Totals	2,172	233	14,164	36	16,605	31,127,854	12,262,036	53,840,034	66,102,070						
Structural materials:															
Sand and gravel	353	63	2,278	10	2,704	6,433,614	1,664,283	8,710,202	10,374,433						
Stone	352	43	2,709	1	3,105	7,169,089	1,825,891	9,160,931	10,986,333						
Totals	705	106	4,987	11	5,809	13,602,703	3,490,174	17,871,133	21,361,307						
Totals, mineral industry	12,393	1,500	80,906	445	95,304	198,746,356	79,185,100	364,930,579	444,115,679						

¹ Data are not inclusive of all individuals or syndicates engaged in prospecting or general exploration.

TABLE 26. Employees and their Earnings in the Mineral Industry, by Provinces, 1960

Excluding the manufacturing group

Basis: Revised Standard Industrial Classification and New Establishment Concept

Province	Employees						Man-hours worked (all employees)	Earnings							
	Office and administrative		Workmen		Total	Office and administrative		Workmen	Total						
	Male	Female	Male	Female											
number															
dollars															
Newfoundland	633	65	3,260	43	4,001	9,500,346	4,034,718	14,988,439	19,023,157						
Prince Edward Island	—	—	7	—	7	11,629	—	10,921	10,921						
Nova Scotia	778	26	8,160	18	8,982	16,006,370	2,736,869	26,541,972	29,278,841						
New Brunswick	70	9	1,220	—	1,299	2,757,319	377,027	3,636,804	4,013,831						
Quebec	2,830	466	18,400	69	21,765	46,863,765	18,439,817	79,320,897	97,760,714						
Ontario	4,464	435	33,478	140	38,517	80,179,427	29,481,191	159,732,027	189,213,218						
Manitoba	446	76	2,089	34	2,645	5,728,690	2,847,961	9,897,468	12,745,429						
Saskatchewan	855	137	3,035	21	4,048	8,614,185	5,855,593	16,032,516	21,888,109						
Alberta	963	133	4,357	39	5,492	11,092,406	6,341,478	20,465,359	26,806,837						
British Columbia	1,040	107	5,537	72	6,756	13,561,237	6,818,346	25,885,902	32,704,248						
Northwest Territories	241	30	779	6	1,056	2,642,554	1,614,968	4,729,247	6,344,215						
Yukon	73	16	644	3	736	1,788,428	637,132	3,689,027	4,326,159						
Canada	12,393	1,500	80,966	445	95,304	198,746,356	79,185,100	364,930,579	444,115,679						

TABLE 27. Employees and their Earnings in the Mineral Industry, by Industries, 1961
Excluding the manufacturing group

Industry	Employees						Man-hours worked (all employees)	Earnings			
	Office and administrative		Workmen		Total ¹			Office and administrative	Workmen	Total	
	Male	Female	Male	Female				Male	Female		
number										dollars	
Metal mining:											
Placer gold	18	6	214	5	243	646,618	156,352	1,169,795	1,326,147		
Gold quartz	1,702	141	13,966	67	15,876	34,342,805	10,548,850	54,916,665	65,465,515		
Copper-gold-silver	1,482	209	9,180	50	10,901	22,564,843	9,143,395	42,315,763	51,459,158		
Silver-cobalt	76	3	475	6	560	1,147,662	407,185	1,809,620	2,216,805		
Silver-lead-zinc	681	53	3,570	48	4,352	9,234,040	4,393,382	11,705,248	22,098,610		
Nickel-copper	1,407	67	12,206	17	13,697	27,166,660	10,785,429	63,969,265	74,754,694		
Iron	1,637	299	6,077	36	8,049	18,454,397	13,045,272	34,062,389	47,107,661		
Miscellaneous metals	877	102	4,925	15	5,919	12,019,515	5,967,071	28,364,992	34,332,063		
Totals	7,880	880	50,593	244	59,597	125,576,540	54,446,916	244,313,737	298,760,653		
Non-metallics:											
Asbestos	948	150	5,742	35	6,875	14,557,092	6,690,597	28,402,536	35,093,133		
Feldspar and quartz	54	9	275	1	339	737,192	344,994	967,776	1,312,770		
Gypsum	94	8	510	1	613	1,173,122	500,161	1,772,318	2,272,477		
Mica	2	—	29	3	34	50,996	3,899	54,359	58,258		
Peat	46	22	1,222	40	1,332	2,571,403	334,310	3,194,164	3,528,474		
Salt	152	27	694	39	912	1,867,280	888,252	3,062,106	3,950,358		
Talc and soapstone	15	4	60	—	79	183,433	63,155	181,467	264,622		
Miscellaneous	199	27	871	1	1,098	2,322,097	1,219,901	3,462,842	4,682,743		
Totals	1,512	247	9,403	120	11,282	23,462,615	10,065,269	41,097,566	51,162,835		
Fuels:											
Coal	866	23	9,572	—	10,461	18,335,464	3,472,749	32,135,156	35,607,905		
Petroleum, natural gas	886	175	3,082	14	4,157	9,008,189	7,017,130	16,630,753	23,647,883		
Natural gas processing	171	16	557	—	744	1,539,033	1,228,857	3,248,482	4,477,319		
Totals	1,923	214	13,211	14	15,362	28,882,686	11,718,736	52,014,371	63,733,107		
Structural materials:											
Sand and gravel	328	75	2,100	10	2,513	6,003,188	1,772,735	8,125,810	9,898,545		
Stone	402	53	2,938	2	3,395	7,902,770	2,101,990	10,521,483	12,623,473		
Totals	730	128	5,038	12	5,908	13,905,958	3,874,725	18,647,293	22,522,018		
Totals, mineral industry	12,045	1,469	78,245	390	92,149	191,827,799	80,105,646	356,072,967	436,178,613		

¹ Data are not inclusive of all individuals or syndicates engaged in prospecting or general exploration.

TABLE 28. Employees and their Earnings in the Mineral Industry, by Provinces, 1961
Excluding the manufacturing group

Province	Employees						Man-hours worked (all employees)	Earnings			
	Office and administrative		Workmen		Total			Office and administrative	Workmen	Total	
	Male	Female	Male	Female				Male	Female		
number										dollars	
Newfoundland	736	82	3,429	46	4,293	9,991,287	4,722,226	16,245,765	20,967,991		
Prince Edward Island	—	—	2	—	2	1,702	—	1,972	1,972		
Nova Scotia	727	23	7,559	13	8,322	14,599,478	2,897,087	24,401,433	27,298,520		
New Brunswick	90	7	1,362	1	1,460	3,044,869	448,713	4,281,340	4,730,053		
Quebec	3,058	490	19,171	76	22,795	49,413,057	19,925,990	84,463,523	104,389,513		
Ontario	3,982	409	30,628	106	35,125	71,889,578	28,093,541	144,767,136	172,860,677		
Manitoba	491	66	2,714	35	3,306	7,421,843	3,426,378	13,439,877	16,866,255		
Saskatchewan	835	139	2,675	18	3,667	7,692,184	5,946,356	14,365,560	20,311,916		
Alberta	812	134	4,023	16	4,985	10,227,128	5,891,271	20,179,028	26,070,299		
British Columbia	1,045	87	5,299	69	6,500	13,438,411	6,779,884	25,936,457	32,716,341		
Northwest Territories	189	17	763	6	975	2,388,182	1,336,680	4,371,648	5,708,328		
Yukon	80	15	820	4	719	1,720,080	637,520	3,619,228	4,256,748		
Canada	12,045	1,469	78,245	390	92,149	191,827,799	80,105,646	356,072,967	436,178,613		

TABLE 29. Employees and their Earnings, by Provinces and by Mineral Classes, 1960 and 1961

Province	Metals		Non-metals		Fuels		Stone, sand and gravel	
	Employees	Earnings	Employees	Earnings	Employees	Earnings	Employees	Earnings
	No.	\$	No.	\$	No.	\$	No.	\$
1960 ^r								
Newfoundland	3,564	17,475,559	330	1,208,793	—	—	107	338,805
Prince Edward Island	—	—	—	—	—	—	7	10,921
Nova Scotia	—	—	948	3,367,793	7,864	25,306,551	170	604,497
New Brunswick	45	201,788	243	475,413	871	2,987,715	140	348,915
Quebec	12,720	58,723,541	6,988	32,334,770	—	—	2,057	6,702,403
Ontario	35,002	174,618,518	1,048	4,913,746	219	650,578	2,248	9,030,376
Manitoba	2,100	10,878,796	164	516,153	96	476,657	285	873,823
Saskatchewan	2,480	14,183,402	272	1,209,573	1,191	6,041,373	105	453,761
Alberta	—	—	62	232,841	5,132	25,364,106	298	1,209,890
British Columbia	4,196	21,399,377	953	4,350,612	1,215	5,166,343	392	1,787,916
Northwest Territories	1,045	6,275,875	—	—	11	68,340	—	—
Yukon	730	4,285,752	—	—	6	40,407	—	—
Canada	61,882	308,042,608	11,008	48,609,694	16,605	66,102,070	5,809	21,361,307
1961								
Newfoundland	3,847	19,302,756	347	1,334,588	—	—	99	330,647
Prince Edward Island	—	—	—	—	—	—	2	1,972
Nova Scotia	7	21,825	900	3,346,599	7,203	23,150,604	212	779,492
New Brunswick	138	611,161	293	645,093	676	3,007,805	153	465,774
Quebec	13,257	61,998,301	7,213	34,243,430	—	—	2,325	8,147,782
Ontario	31,612	158,109,933	1,069	5,158,403	210	577,604	2,234	9,014,727
Manitoba	2,792	14,922,806	191	624,615	94	470,018	229	848,816
Saskatchewan	2,270	13,051,482	245	1,124,226	1,089	5,850,649	63	285,669
Alberta	—	—	61	193,903	4,652	24,755,937	272	1,120,459
British Columbia	4,009	21,008,324	963	4,491,978	1,209	5,689,459	319	1,526,580
Northwest Territories	953	5,517,241	—	—	22	191,087	—	—
Yukon	712	4,216,804	—	—	7	39,944	—	—
Canada	59,597	298,260,653	11,282	51,162,835	15,362	63,733,107	5,908	22,522,018

TABLE 30. Wage-earners on the Surface, Underground and in the Mill, 1961

Province	Metal mines			Non-metals			Fuels		Stone, sand and gravel	
	Surface	Under- ground	Mill	Surface	Under- ground	Mill	Surface	Under- ground	Surface	Mill
number										
Newfoundland	1,499	1,419	171	176	113	12	—	—	85	—
Prince Edward Island	—	—	—	—	—	—	—	—	2	—
Nova Scotia	—	1	4	472	93	181	818	5,822	125	56
New Brunswick	61	53	—	212	—	74	509	307	106	41
Quebec	4,232	5,233	1,635	2,765	544	2,803	—	—	1,552	483
Ontario	7,016	17,897	2,941	235	239	389	179	—	1,765	73
Manitoba	774	1,310	216	91	2	73	74	—	164	45
Saskatchewan	627	828	299	20	—	147	725	—	47	—
Alberta	—	—	—	—	—	49	3,094	660	236	—
British Columbia	1,047	1,594	614	477	4	352	365	645	267	3
Northwest Territories	287	345	116	—	—	—	21	—	—	—
Yukon	272	295	51	—	—	—	1	5	—	—
Canada	15,815	28,975	6,047	4,448	995	4,080	5,786	7,439	4,349	710

**TABLE 31. Mining Industry,¹ Administration and Office Employees at Places in Canada, Except at Mine or Plant
1960-61**

Plant location	1960			1961			\$	
	Average number of employees			Salaries and wages	Average number of employees			
	Male	Female	Total		Male	Female	Total	
Newfoundland	20	13	33	\$ 190,470	35	20	55	313,414
Prince Edward Island	2	—	2	782	—	—	—	—
Nova Scotia	1,374	77	1,451	5,506,981	1,166	61	1,227	4,787,113
New Brunswick	56	14	70	400,894	52	17	69	434,244
Quebec	421	138	559	3,204,733	599	162	761	4,920,541
Ontario	342	121	463	2,862,247	264	91	355	2,730,249
Manitoba	23	18	41	278,077	74	23	97	733,038
Saskatchewan	849	214	1,063	7,156,735	494	133	627	4,293,553
Alberta	4,301	1,527	5,828	39,360,325	4,635	1,517	6,152	42,330,768
British Columbia	165	55	220	2,537,496	354	113	467	3,445,047
Northwest Territories	7	2	9	62,015	6	3	9	63,042
Yukon	105	8	113	787,097	93	12	105	312,581
Canada	7,665	2,187	9,852	\$ 62,347,852	7,772	2,152	9,924	64,363,590

¹ Including the salt industry.

Note: Data in Tables 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, 1960-61

Industry	1960			1961			\$	
	Average number of employees			Salaries and wages	Average number of employees			
	Male	Female	Total		Male	Female	Total	
Metal mining	743	210	953	\$ 7,378,251	1,007	290	1,297	8,855,655
Non-metallic mining ¹	159	75	234	1,537,577	71	26	97	632,630
Fuels	6,579	1,848	8,427	52,461,021	8,514	1,789	8,303	53,776,243
Stone, sand and gravel	184	54	238	971,003	180	47	227	1,099,062
Totals	7,665	2,187	9,852	\$ 62,347,852	7,772	2,152	9,924	64,363,590

¹ Includes the salt industry.

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

TABLE 33. Manufacturing Group,¹ Administration and Office Employees at Places in Canada, Except at Mine or Plant, 1960-61

Plant location	1960			1961			\$	
	Average number of employees			Salaries and wages	Average number of employees			
	Male	Female	Total		Male	Female	Total	
Newfoundland	—	—	—	\$ —	—	—	—	
Nova Scotia	6	—	6	\$ 28,000	—	—	—	
New Brunswick	3	—	3	12,000	—	—	—	
Quebec	55	18	73	314,764	—	—	—	
Ontario	130	40	170	\$ 1,076,282	61	15	76	
Manitoba	8	1	9	53,025	6	1	7	
Saskatchewan	2	—	2	6,400	—	—	—	
Alberta	9	3	12	55,975	22	12	34	
British Columbia	22	11	33	211,399	145	71	216	
Northwest Territories	—	—	—	—	—	—	—	
Yukon	—	—	—	—	—	—	—	
Canada	235	73	308	\$ 1,757,845	234	99	333	2,247,572

¹ Excluding the salt industry.

Note: Data in Table 33 are included in the Principal statistics and other tables which have employment figures of the Manufacturing group.

MINERAL STATISTICS

TABLE 34. Fuel and Electricity Used in the Mineral Industry in Canada, by Kinds and Industries, 1961

No.	Industry	Bituminous coal		Sub-bituminous coal	Anthracite coal	Lignite coal	Coke	Gasoline	Kerosene	Fuel oil								
		Canadian	Imported															
tons																		
Imp. gal.																		
Metal mining:																		
1	Placer gold	48	—	—	—	—	—	48,742	310	182,866								
2		\$ 763	—	—	—	—	—	21,857	282	58,158								
3	Gold quartz	1,078	11,197	39	828	—	5	371,121	11,438	3,426,542								
4		\$ 18,200	181,982	1,139	11,159	—	157	152,190	3,507	712,286								
5	Copper-gold-silver	1,439	1,271	41	19	—	37	490,519	5,176	6,110,955								
6		\$ 18,348	22,922	587	756	—	887	182,828	1,750	1,069,335								
7	Silver-cobalt	—	1,053	—	19	—	—	43,790	1,081	180,490								
8		—	22,191	—	607	—	—	17,921	249	36,153								
9	Silver-lead-zinc	7,891	5,478	13,339	9	381	—	206,581	1,962	3,154,247								
10		\$ 191,485	113,512	125,191	354	6,177	—	84,031	595	602,402								
11	Nickel-copper	13	7,657	542	677	—	—	185,515	14,854	6,913,192								
12		\$ 507	103,674	4,715	11,927	—	—	69,659	3,422	959,929								
13	Iron	836	—	—	—	—	6,519	1,289,707	50,036	24,448,817								
14		\$ 14,289	—	—	—	—	71,986	416,984	21,440	3,566,422								
15	Miscellaneous metals	19	82,263	—	13	—	—	322,587	35,719	8,176,255								
16		\$ 290	1,169,203	—	630	—	—	123,210	6,714	1,507,362								
17	Totals	11,324	108,919	13,961	1,365	381	6,561	2,958,562	120,576	52,593,364								
18		\$ 243,882	1,613,484	131,632	25,433	6,177	73,030	1,068,680	37,959	8,512,547								
Non-metal mining:																		
19	Asbestos	4,485	353	—	14,687	—	—	534,398	4,239	18,316,351								
20		\$ 66,675	4,768	—	243,493	—	—	198,985	1,047	2,682,876								
21	Feldspar, quartz, nepheline	—	—	—	1	—	—	88,700	399	639,920								
22		\$ —	—	—	27	—	—	33,747	80	96,708								
23	Gypsum	—	—	—	—	—	—	49,760	—	887,748								
24		\$ —	—	—	—	—	—	19,034	—	140,812								
25	Mica	94	—	—	—	—	—	13,429	5	—								
26		\$ 1,599	—	—	—	—	—	5,785	2	—								
27	Peat	—	—	—	—	—	—	266,094	50	162,339								
28		\$ —	—	—	—	—	—	85,816	18	22,600								
29	Salt	15,656	21,884	—	—	—	—	43,227	121	4,528,810								
30		\$ 158,893	201,367	—	—	—	—	12,676	31	381,924								
31	Talc, soapstone	—	—	—	—	—	—	13,403	—	17,864								
32		\$ —	—	—	—	—	—	4,547	—	3,326								
33	Miscellaneous	14,880	403	—	—	646	—	199,259	38,661	6,578,025								
34		\$ 62,562	7,294	—	—	3,339	—	71,475	7,415	633,353								
35	Totals	35,115	22,640	—	14,688	646	—	1,208,270	43,475	31,131,054								
36		\$ 289,729	213,429	—	243,490	3,339	—	432,065	8,593	3,961,599								
Mineral fuels:																		
37	Coal	36,101	—	1,485	—	12,123	117	713,923	15,849	1,806,367								
38		\$ 331,709	—	5,780	—	15,215	2,563	224,453	4,997	339,750								
39	Petroleum, natural gas	1	—	—	7	1	1	5,962,733	2,528	1,206,198								
40		\$ 25	—	—	269	9	28	2,378,205	711	252,324								
41	Natural gas processing	—	—	—	—	—	—	174,792	1,170	6,734								
42		\$ —	—	—	—	—	—	53,904	322	1,284								
43	Totals	36,102	—	1,485	7	12,124	118	6,851,448	19,547	3,019,299								
44		\$ 331,734	—	5,780	269	15,224	2,591	2,656,562	6,030	593,358								
Structural materials:																		
45	Sand and gravel	652	—	—	10	—	—	4,696,412	600	4,503,386								
46		\$ 10,125	—	—	293	—	—	1,591,384	158	898,039								
47	Stone	1,109	25,128	256	12	—	2	1,737,785	729	3,798,593								
48		\$ 18,215	280,996	2,943	385	—	54	621,288	219	731,852								
49	Totals	1,761	25,128	256	22	—	2	6,434,197	1,329	8,301,979								
50		\$ 28,340	280,996	2,943	678	—	54	2,212,672	377	1,629,891								
51	Totals, mineral industries	84,302	156,687	15,702	16,082	13,151	6,681	17,452,477	184,927	95,045,696								
52		\$ 893,685	2,107,909	140,355	269,870	24,740	75,675	6,369,879	52,959	14,697,395								
Manufacturing group:																		
53	Smelting and refining	511,014	327,849	1,933	152,744	—	281,444	834,980	31,907	61,277,202								
54		\$ 6,418,164	4,036,924	16,817	1,918,245	—	6,021,222	234,964	9,353	5,264,939								
55	Clay products	9,889	72,516	—	1,574	—	925	825,221	1,215	14,267,767								
56		\$ 150,215	1,125,831	—	30,794	—	18,308	283,702	388	1,274,035								
57	Cement	306,296	288,542	—	—	—	—	284,375	14,423	14,858,904								
58		\$ 2,923,320	3,011,847	—	—	—	—	75,760	3,450	1,199,730								
59	Lime	2,995	92,844	3,155	—	7,388	589	234,018	—	5,265,768								
60		\$ 42,288	1,178,572	27,600	—	45,846	8,789	65,132	—	406,038								
61	Totals, manufacturing group	830,194	781,751	5,088	154,318	7,388	282,958	2,178,594	47,545	95,669,636								
62		\$ 9,533,987	9,353,174	44,417	1,949,039	45,846	6,048,319	659,558	13,191	8,144,759								

TABLE 34. Fuel and Electricity Used in the Mineral Industry in Canada, by Kinds and Industries, 1961

Wood	Gas			Other fuel	Electricity purchased		Steam purchased	Total	Electricity generated		Nº
	Liquefied petroleum	Manu- factured	Natural		For power and light	For other purposes			For own use	For sale	
	cords	Imp. gal.	Mcf.		\$	kwh.			\$	kwh.	
558	1,700	—	—	..	815,049	—	—	—	14,237,470	7,618,520	1
13,921	1,672	—	—	84	11,715	—	—	108,452	—	113,790	2
5,066	5,158	—	1,029,269	..	907,097,248	10,723,386	—	—	35,370,373	1,359,220	3
66,894	3,561	—	124,744	91,808	5,957,395	35,063	—	7,360,085	—	41,797	4
6	77,340	—	88,640	..	665,530,402	—	55,029,150	—	57,656,748	819,000	5
45	24,940	—	3,645	48,171	4,513,871	—	44,021	5,932,106	—	65,038	6
9	9,524	—	—	—	21,039,161	—	—	—	236,380	—	7
142	977	—	—	49,554	167,994	—	—	295,788	—	—	8
13	22,928	—	—	—	127,676,651	18,330,086	—	—	164,822,936	81,500	9
85	7,499	—	—	—	1,260,190	55,306	—	2,446,827	—	625	10
4	3,675	—	375,975	—	601,929,889	—	—	—	60,107,900	2,636,000	11
21	1,500	—	174,386	—	3,306,501	—	—	4,636,241	—	58,563	12
5,084	70,009	—	—	—	530,756,666	—	—	—	92,411,120	13,838,827	13
11,241	22,080	—	—	—	4,207,088	—	—	8,331,530	—	193,373	14
4	92,178	—	—	—	386,169,109	—	317,462,700	—	90,071,375	2,600,000	15
27	13,755	—	—	—	2,633,312	—	401,624	5,856,827	—	56,761	16
10,744	282,512	—	1,493,884	..	3,241,014,175	29,053,472	372,491,850	—	514,914,302	28,853,067	17
92,376	75,984	—	302,775	189,617	22,058,066	90,369	445,845	34,967,856	—	529,947	18
4,377	30,023	—	275,154	..	432,291,260	—	—	—	11,478,500	—	19
64,561	15,134	—	151,536	194	3,237,144	—	—	6,668,383	—	—	20
10	1,990	—	—	—	6,801,514	—	—	—	—	—	21
85	548	—	—	—	92,830	—	—	224,025	—	—	22
—	—	—	—	—	8,204,440	—	—	—	—	—	23
—	—	—	—	—	152,952	—	—	312,798	—	—	24
—	—	—	—	—	129,515	—	—	—	—	—	25
—	—	—	—	—	2,237	—	—	8,623	—	—	26
15	25,628	—	143,804	—	5,579,385	—	—	—	—	—	27
150	4,905	—	95,919	—	94,568	—	—	303,976	—	—	28
—	2,780	—	737,482	—	26,028,920	—	—	—	7,992,547	—	29
—	1,112	—	147,983	—	249,738	—	—	1,153,724	—	—	30
50	100	—	—	—	1,374,160	—	—	40,993	—	—	31
200	66	—	—	—	32,854	—	—	—	—	—	32
4	2,062	—	1,303,659	—	53,866,746	—	—	—	5,801,634	62,325	33
50	848	—	362,778	—	619,593	—	—	1,768,707	—	1,376	34
4,456	62,583	—	2,460,099	..	536,275,940	—	—	—	25,272,681	62,325	35
65,046	22,613	—	758,216	194	4,481,916	—	—	10,480,229	—	1,376	36
2,599	19,102	—	6,279	—	188,556,900	14,033,217	—	—	1,443,142	—	37
20,741	7,768	—	548	—	2,890,585	218,434	—	4,062,543	—	—	38
—	473,850	—	1,207,132	—	123,368,150	—	—	—	1,317,436	—	39
—	80,123	—	129,423	—	3,319,008	—	—	6,160,125	—	—	40
—	1,078,962	—	10,630,991	—	31,415,116	—	496,269,477	—	34,384,209	—	41
—	43,266	—	1,159,913	—	534,434	—	76,871	1,869,994	—	—	42
2,599	1,571,914	—	11,844,402	—	343,340,166	14,033,217	496,269,477	—	—	—	43
20,741	131,157	—	1,289,884	—	6,744,027	218,434	76,871	12,092,682	37,144,787	—	44
52	102,166	—	3,550	—	25,928,971	—	—	—	534,360	—	45
300	18,934	—	355	—	590,868	—	—	3,110,456	—	—	46
310	6,523	—	1,726	—	90,046,852	—	—	—	2,090,050	—	47
2,477	1,303	—	854	—	1,368,383	—	—	3,028,969	—	—	48
362	108,689	—	5,276	—	115,975,823	—	—	—	2,624,710	—	49
2,777	20,237	—	1,209	—	1,959,251	—	—	6,139,425	—	—	50
18,161	2,025,698	—	15,803,661	..	4,236,606,104	43,086,689	868,761,327	522,716	579,956,480	29,015,392	51
180,940	249,991	—	2,352,084	189,811	35,243,260	308,803	—	63,680,172	—	531,323	52
1,127	185,030	—	10,455,801	..	2,224,154,681	3,164,908,924	—	—	12,850,676,903	35,672,500	53
45,364	43,696	—	3,171,362	20,572	10,654,718	11,143,982	—	49,000,322	—	237,734	54
13,515	22,131	9,000	5,104,670	..	69,032,467	—	—	—	46,740	—	55
115,128	8,030	8,292	1,664,120	8,236	923,859	—	—	5,610,938	—	—	56
—	24,405	—	15,288,784	—	706,801,918	—	—	—	1,430,600	—	57
—	6,663	—	4,299,138	—	4,742,313	—	—	16,262,241	—	—	58
9,786	16,766	—	297,696	..	28,104,964	—	—	—	—	—	59
66,151	2,882	—	108,443	8,170	279,023	—	—	2,238,931	—	—	60
24,428	248,332	9,000	31,146,951	..	3,028,094,030	3,164,908,924	—	—	12,852,154,243	35,672,500	61
226,643	61,271	8,292	9,243,063	36,978	16,599,913	11,143,982	—	73,112,432	—	237,734	62

MINERAL STATISTICS

TABLE 35. Fuel and Electricity Used in the Mineral Industry, in Canada, by Kinds and by Provinces, 1961
Excluding the manufacturing group

No.	Provinces	Bituminous coal		Sub-bituminous coal	Anthracite coal	Lignite coal	Coke	Gasoline	Kerosene	Fuel oil
		Canadian	Imported							
				tons	Imp. gal.					
1	Newfoundland	814	2,465	—	—	—	—	528,876	2,383	5,481,259
2		\$ 13,576	62,008	—	—	—	—	209,871	782	1,091,691
3	Prince Edward Island	—	—	—	—	—	—	2,195	—	4,185
4		\$ —	—	—	—	—	—	828	—	1,021
5	Nova Scotia	40,193	—	—	—	—	117	304,203	1,500	1,495,523
6		\$ 415,984	—	—	—	—	2,563	104,650	376	261,180
7	New Brunswick	2,603	—	—	—	—	—	342,695	20,100	1,070,185
8		\$ 20,638	—	—	—	—	—	117,487	5,671	203,829
9	Quebec	7,407	9,627	20	14,717	—	2	3,114,364	54,737	43,308,440
10		\$ 108,407	168,472	533	244,397	—	55	1,104,114	22,479	5,789,199
11	Ontario	1,109	144,595	19	1,358	—	6,524	4,469,730	42,663	19,661,657
12		\$ 19,192	1,877,429	606	24,833	—	72,141	1,517,074	9,431	2,851,712
13	Manitoba	91	—	828	—	1	37	640,651	2,200	4,308,059
14		\$ 1,567	—	8,088	—	9	886	248,732	730	498,461
15	Saskatchewan	14,350	—	11	—	12,769	—	1,545,487	37,406	7,111,569
16		\$ 54,031	—	157	—	18,554	—	598,452	7,145	1,270,805
17	Alberta	9,866	—	1,485	—	—	—	5,224,893	2,797	1,723,124
18		\$ 69,190	—	5,780	—	—	—	1,992,384	1,039	339,800
19	British Columbia	370	—	13,339	7	381	1	1,095,830	20,171	7,854,697
20		\$ 4,062	—	125,191	640	6,177	30	394,791	4,737	1,647,648
21	Northwest Territories	—	—	—	—	—	—	143,610	660	2,805,529
22		\$ —	—	—	—	—	—	63,336	287	674,775
23	Yukon	7,499	—	—	—	—	—	39,943	310	221,469
24		\$ 187,038	—	—	—	—	—	18,260	282	67,274
25	Canada	84,302	156,687	15,702	16,082	13,151	6,681	17,452,477	184,927	95,045,696
26		\$ 893,685	2,107,909	140,355	269,870	24,740	75,675	6,369,979	52,959	14,697,395

TABLE 35. Fuel and Electricity Used in the Mineral (Manufacturing Group Only) Industry, by Kinds and by Provinces, 1961

No.	Provinces	Bituminous coal		Sub-bituminous coal	Anthracite coal	Lignite coal	Coke	Gasoline	Kerosene	Fuel oil
		Canadian	Imported							
				tons	Imp. gal.					
1	Newfoundland	—	—	—	—	—	—	5,916	—	3,177,658
2		\$ —	—	—	—	—	—	2,755	—	213,588
3	Prince Edward Island	—	—	—	—	—	—	—	—	—
4		\$ —	—	—	—	—	—	—	—	—
5	Nova Scotia	7,922	—	—	—	—	—	6,100	—	1,750,020
6		\$ 115,503	—	—	—	—	—	2,135	—	136,992
7	New Brunswick	31,725	—	—	—	—	—	16,139	1,305	1,339,676
8		\$ 368,352	—	—	—	—	—	6,101	348	114,828
9	Quebec	264,399	59,326	—	152,120	—	1,319	500,927	3,806	58,466,830
10		\$ 3,087,794	822,269	—	1,907,270	—	27,611	153,395	989	4,385,909
11	Ontario	274,471	718,280	—	2,198	—	218,435	938,931	34,211	17,578,253
12		\$ 2,964,012	8,460,614	—	41,769	—	4,842,899	304,659	9,552	1,853,002
13	Manitoba	28,351	4,145	1,933	—	7,368	589	88,048	2,052	5,332,213
14		\$ 409,446	70,291	16,817	—	45,846	8,789	31,676	619	634,382
15	Saskatchewan	109,047	—	—	—	—	—	11,264	814	383,466
16		\$ 1,548,471	—	—	—	—	—	3,624	246	43,068
17	Alberta	—	—	3,155	—	—	—	118,865	3,807	191,019
18		\$ —	—	27,600	—	—	—	30,310	849	38,425
19	British Columbia	114,279	—	—	—	—	62,615	492,404	1,550	7,450,501
20		\$ 1,040,409	—	—	—	—	1,169,020	124,903	586	724,565
21	Northwest Territories	—	—	—	—	—	—	—	—	—
22		\$ —	—	—	—	—	—	—	—	—
23	Yukon	—	—	—	—	—	—	—	—	—
24		\$ —	—	—	—	—	—	—	—	—
25	Canada	830,194	781,751	5,088	154,318	7,388	282,958	2,178,594	47,545	95,669,636
26		\$ 9,533,987	9,353,174	44,417	1,949,039	45,846	6,048,319	659,558	13,191	8,144,759

TABLE 35. Fuel and Electricity Used in the Mineral Industry, In Canada, by Kinds and By Provinces, 1961
Excluding the manufacturing group

Wood	Gas			Other fuel	Electricity purchased		Steam purchased	Total	Electricity generated		No.
	Liquefied petroleum	Manufactured	Natural		For power and light	For other purposes			For own use	For sale	
	Imp. gal.	Mcf.	\$		kwh.	pounds			\$	kwh.	
cords											
—	20,242	—	—	—	93,468,778	—	55,029,150	—	39,941,022	62,325	1
—	10,792	—	—	2,002	1,226,376	—	44,021	2,661,119	—	1,376	2
—	—	—	—	—	—	—	—	—	—	—	3
—	—	—	—	—	—	—	—	1,849	—	—	4
2,385	270	—	—	—	148,454,167	294,595	—	—	4,981,200	—	5
19,005	176	—	—	—	2,296,478	4,642	—	3,105,054	—	—	6
—	19,840	—	3,073	—	24,535,260	—	—	—	1,200	—	7
—	8,863	—	2,799	—	523,675	—	—	882,962	—	—	8
447	75,792	—	—	—	1,317,820,186	—	—	—	92,256,247	13,838,827	9
3,438	23,277	—	—	80,469	10,112,245	—	—	17,657,085	—	193,373	10
8,458	196,503	—	1,727,682	—	2,041,153,230	11,558,512	2,207,700	—	11,052,305	—	11
52,999	48,475	—	491,250	107,256	13,377,326	30,448	2,788	20,462,960	—	—	12
1,017	79,934	—	1,726	—	174,868,642	3,015,530	—	—	51,103,000	2,636,000	13
11,727	16,053	—	854	—	848,027	4,523	—	1,639,657	—	58,563	14
—	376,288	—	2,473,917	—	115,229,224	4,073,800	315,255,000	—	88,105,976	2,600,000	15
—	61,689	—	480,959	—	1,281,211	77,701	399,036	4,249,740	—	56,761	16
215	1,183,138	—	11,242,183	—	139,765,105	400,217	496,269,477	—	8,514,239	—	17
1,631	57,431	—	1,264,295	—	3,260,422	13,991	76,871	7,082,834	—	—	18
4,514	73,605	—	355,080	—	120,929,120	9,668,436	—	—	239,920,915	1,395,485	19
66,334	23,183	—	111,927	—	1,318,433	124,925	—	—	—	90,412	20
567	—	—	—	—	44,859,396	1,986,000	—	—	29,607,843	864,235	21
11,885	—	—	—	—	603,892	8,935	—	1,363,110	—	17,048	22
558	86	—	—	—	15,522,996	12,089,599	—	—	14,472,533	7,618,520	23
13,921	52	—	—	84	395,175	43,638	—	725,724	—	113,790	24
18,161	2,025,698	—	15,803,661	—	4,236,606,104	43,086,689	868,761,327	—	579,956,480	29,015,392	25
180,940	249,991	—	2,352,084	189,811	35,243,260	308,803	522,716	63,680,172	—	531,323	26

TABLE 36. Fuel and Electricity Used in the Mineral (Manufacturing Group Only) Industry, by Kinds and by Provinces, 1961

Wood	Gas			Other fuel	Electricity purchased		Steam purchased	Total	Electricity generated		No.
	Liquefied petroleum	Manufactured	Natural		For power and light	For other purposes			For own use	For sale	
	Imp. gal.	Mcf.	\$		kwh.	pounds			\$	kwh.	
cords											
—	—	—	—	—	13,612,811	—	—	299,716	—	—	1
—	—	—	—	—	83,373	—	—	—	—	—	2
—	—	—	—	—	—	—	—	—	—	—	3
—	—	—	—	—	—	—	—	—	—	—	4
—	—	—	—	—	3,312,120	—	—	—	—	—	5
—	—	—	—	—	42,828	—	—	297,458	—	—	6
3,263	800	—	—	—	21,268,243	—	—	761,945	—	—	7
24,630	240	—	—	—	247,446	—	—	—	—	—	8
5,132	54,671	9,000	5,983,299	—	566,941,049	3,004,398,993	—	—	8,936,933,421	35,672,500	9
76,081	14,140	8,292	1,834,388	13,436	2,984,326	10,267,089	—	25,582,989	—	237,734	10
13,109	43,583	—	9,481,459	—	1,338,077,655	160,509,931	—	—	7,586,600	—	11
100,529	16,654	—	3,996,164	15,372	7,482,501	876,893	—	30,964,620	—	—	12
1,902	216	—	2,725,524	—	739,525,656	—	—	—	430,600	—	13
13,994	42	—	959,233	—	3,917,929	—	—	6,109,064	—	—	14
191	—	—	1,328,446	—	176,562,763	—	—	2,570,281	—	—	15
2,149	—	—	363,333	—	609,388	—	—	—	—	—	16
—	19,583	—	8,268,805	—	117,789,229	—	—	2,029,958	48,411,000	—	17
—	2,830	—	1,170,128	—	759,816	—	—	—	—	—	18
831	129,479	—	3,361,418	8,170	51,004,504	—	—	—	3,858,792,622	—	19
9,260	27,365	—	919,817	—	472,306	—	—	4,496,401	—	—	20
—	—	—	—	—	—	—	—	—	—	—	21
—	—	—	—	—	—	—	—	—	—	—	22
—	—	—	—	—	—	—	—	—	—	—	23
—	—	—	—	—	—	—	—	—	—	—	24
34,428	248,332	9,000	31,146,951	36,978	3,028,094,030	3,164,908,924	—	73,112,432	12,852,154,243	35,672,510	25
226,643	61,271	8,292	9,243,063	—	16,599,913	11,143,982	—	—	—	237,734	26

TABLE 37. Cost of Prospecting Conducted by Metal Mining Companies, 1958-61

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 mines ^{1,2}	Total metal mining
dollars								
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	28,526	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	400,556	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	673,882	116,247	1,428,619
Yukon	82,457	26,529	211,291	—	135,627	8,752	—	464,658
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	—	1,203,486	3,184,028	45,281	75,738	2,146,916	1,096,012	7,751,441
Manitoba	—	128,883	2,395,300	400	8,442	5,264,027	31,445	7,826,497
Saskatchewan	—	26,211	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	272,213
Canada	65,139	3,849,286	22,226,933	87,883	1,559,613	8,512,264	6,916,517	43,017,643
1960								
Newfoundland	—	28,092	385,623	—	354,094	—	686,499	1,454,308
Nova Scotia	16,686	91,703	186,350	—	17,057	—	2,587	314,383
New Brunswick	—	286,612	809,925	—	669,595	—	9,327	1,775,459
Quebec	—	1,525,247	7,696,488	—	3,068,141	590,134	2,103,458	14,963,448
Ontario	42,440	914,549	3,763,158	26,808	99,036	2,832,077	1,705,984	9,384,052
Manitoba	—	248,231	2,649,070	—	11,691	5,171,145	27,655	8,107,792
Saskatchewan	—	2,364	575,099	—	20,323	462,622	18,061	1,078,469
Alberta	31,865	—	904	—	64,643	—	630	98,042
British Columbia	5,319	228,824	2,508,003	—	845,280	2,465	230,601	3,820,692
Northwest Territories	—	481,939	228,046	—	371,537	352,938	657,680	2,090,140
Yukon	22,495	6,980	304,812	—	81,150	—	31,588	446,825
Canada	118,805	3,814,541	19,105,258	26,808	5,602,547	9,411,381	5,474,270	43,553,810
1961								
Newfoundland	—	7,794	588,297	—	476,305	—	484,443	1,556,839
Nova Scotia	—	12,997	184,268	—	48,404	—	28,119	273,788
New Brunswick	—	55,595	490,739	1,307	125,817	—	261,738	935,196
Quebec	52,134	1,300,112	7,450,734	12,016	5,101,504	1,771,332	3,135,387	18,823,219
Ontario	—	1,184,454	3,002,677	77,743	107,419	2,544,031	800,749	7,697,073
Manitoba	—	615,129	2,611,871	4,886	20,000	3,812,959	44,254	7,109,099
Saskatchewan	—	71,754	859,520	—	8,920	329,047	44,150	1,313,391
Alberta	3,209	—	892	—	10,855	—	10,000	24,756
British Columbia	11,771	263,003	2,666,130	8	696,468	4,650	352,319	3,994,347
Northwest Territories	—	162,483	248,158	—	294,337	365,527	213,601	1,284,106
Yukon	32,370	10,099	263,862	—	161,926	—	5,000	473,337
Canada	99,484	3,663,420	18,367,148	95,958	7,051,755	8,827,546	5,379,760	43,485,071

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

² Includes iron, uranium, molybdenum, etc.

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 oper-

ations, 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. Large quantities of 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 Lacoré, 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 Haley, 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. Output figures represent the quantity and value of ores shipped as reported by producers.

METALLIC MINERAL PRODUCTION — Continued

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.

Columbium — Production is the columbium pentoxide (Cb_2O_5) contained in the concentrates shipped by the producers. The value is reported by the shipper.

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 three 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 Sorel 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 per cent 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. No data on thorium are published and the figures are excluded from the Mineral Production of Canada.

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 quantity 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.

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 lithia or lithium oxide content of the concentrates shipped and the value is that reported by the producer.

Magnestic-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.

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 lesor of well or spring at the total selling value, f.o.b. shipping points.

NON-METALLIC MINERAL PRODUCTION — Concluded

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.

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 mined potassium chloride. The quantity of potash was measured as the K₂O equivalent. Quantity data are not published. Value of shipments f.o.b. plant are reported by the producer.

Pozzolan — Values are those received by the shippers.

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 was valued by applying the average price of the sulphur content of pyrite in Eastern Canada. Calcined pyrrhotite is measured as by-products iron ore.

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.

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.

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 plants of the Aluminum Company of Canada, Ltd., Arvida, Quebec and Sherbrooke Metallurgical Ltd., Dunnville, Ontario. 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 beneficiated 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 Sorelfux. 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 very little 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 in 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.

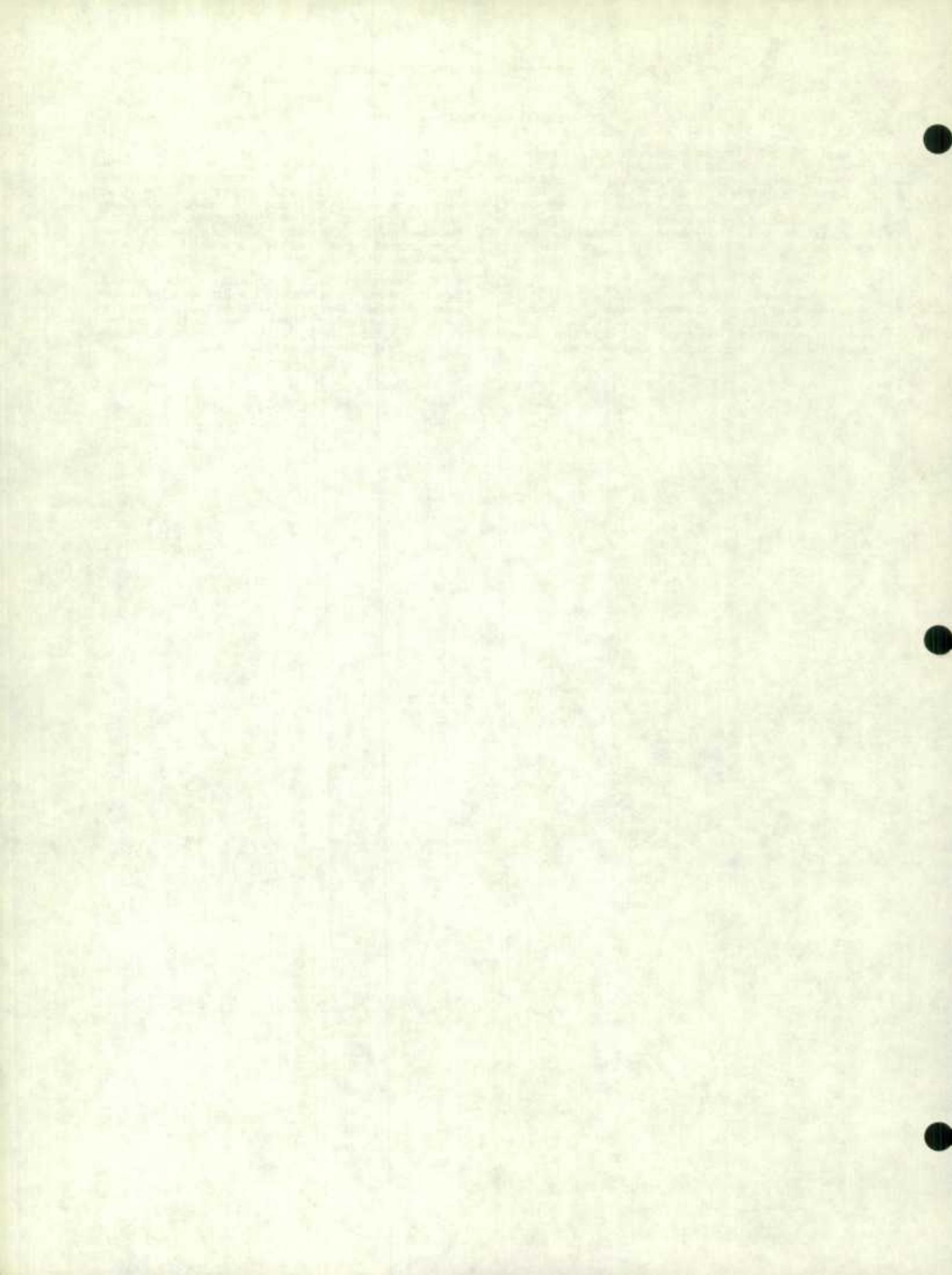
STRUCTURAL MATERIALS - Concluded

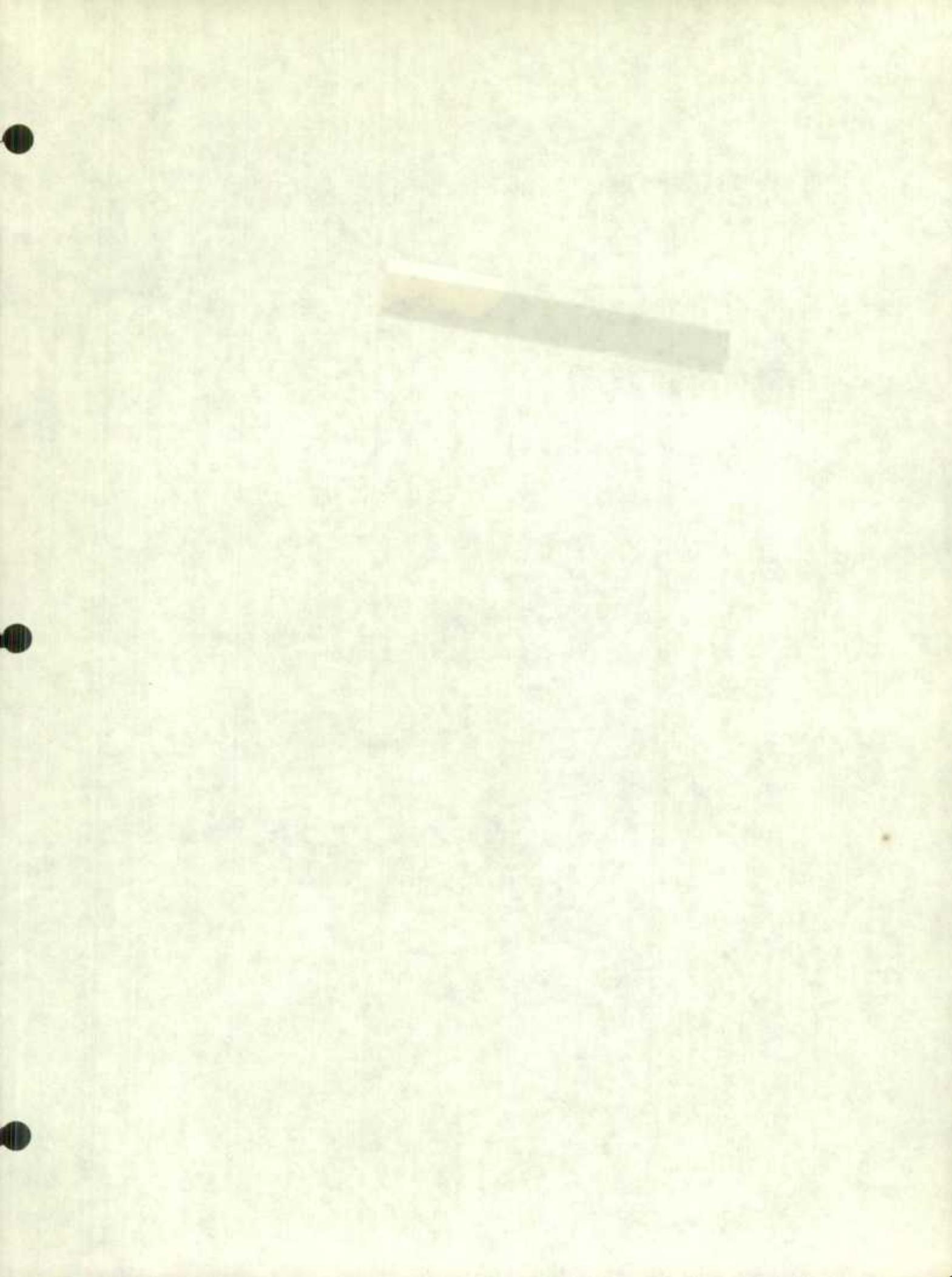
Lime - Production represents the tonnage of hydrated and quicklime shipped (sold by the producer) together with the tonnage of these limes produced and consumed by the producers of chemicals and allied products. The values taken are as reported by the producer. If waste or "spent" lime is "recalcedined"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

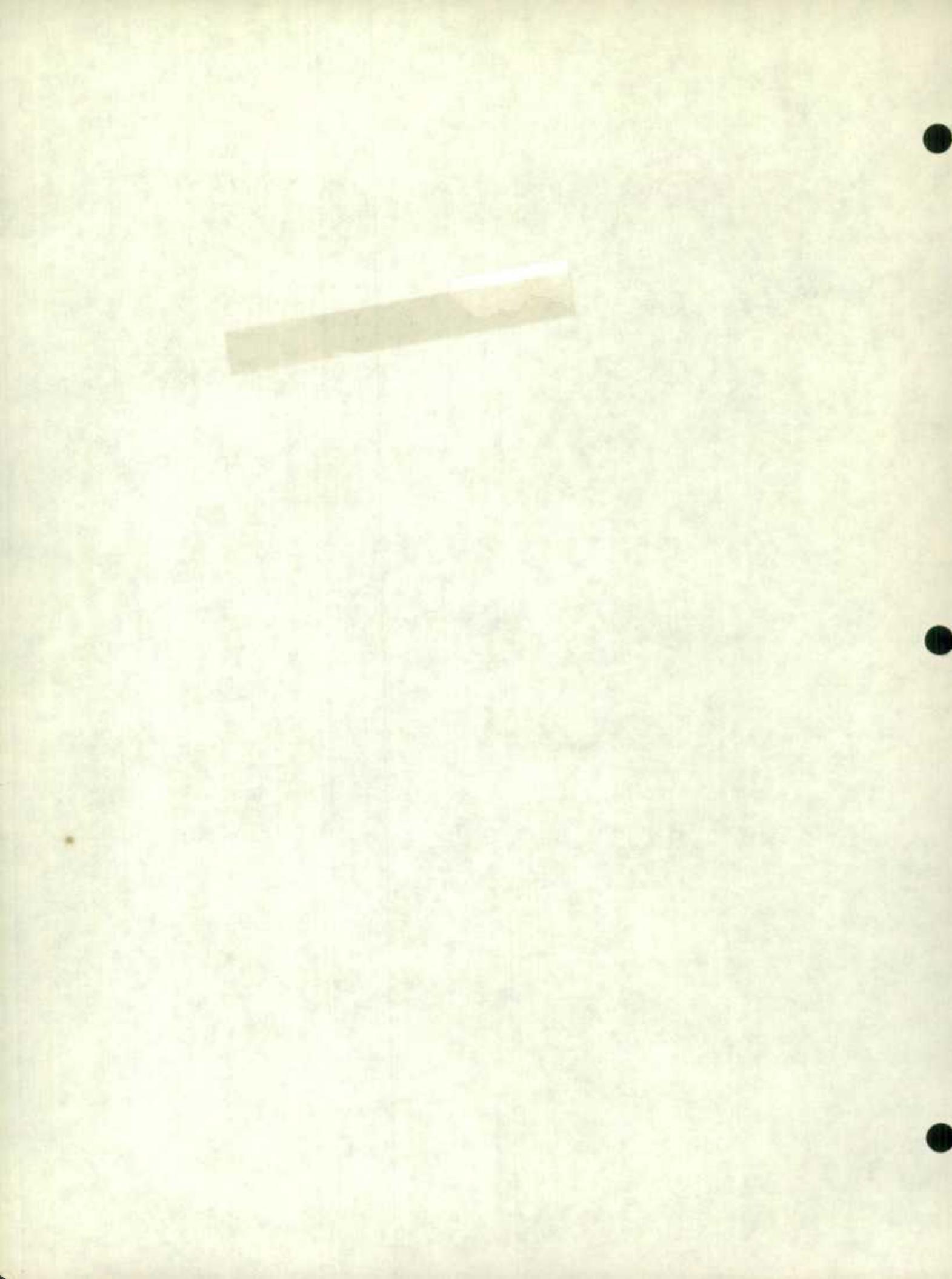
Sand and gravel - Production represents shipments at the values reported by operators of sand and gravel pits or dredges. Special forms are utilized in the collection of data for sands produced by provincial, municipal and other governments employed on highway, construction or other public works.

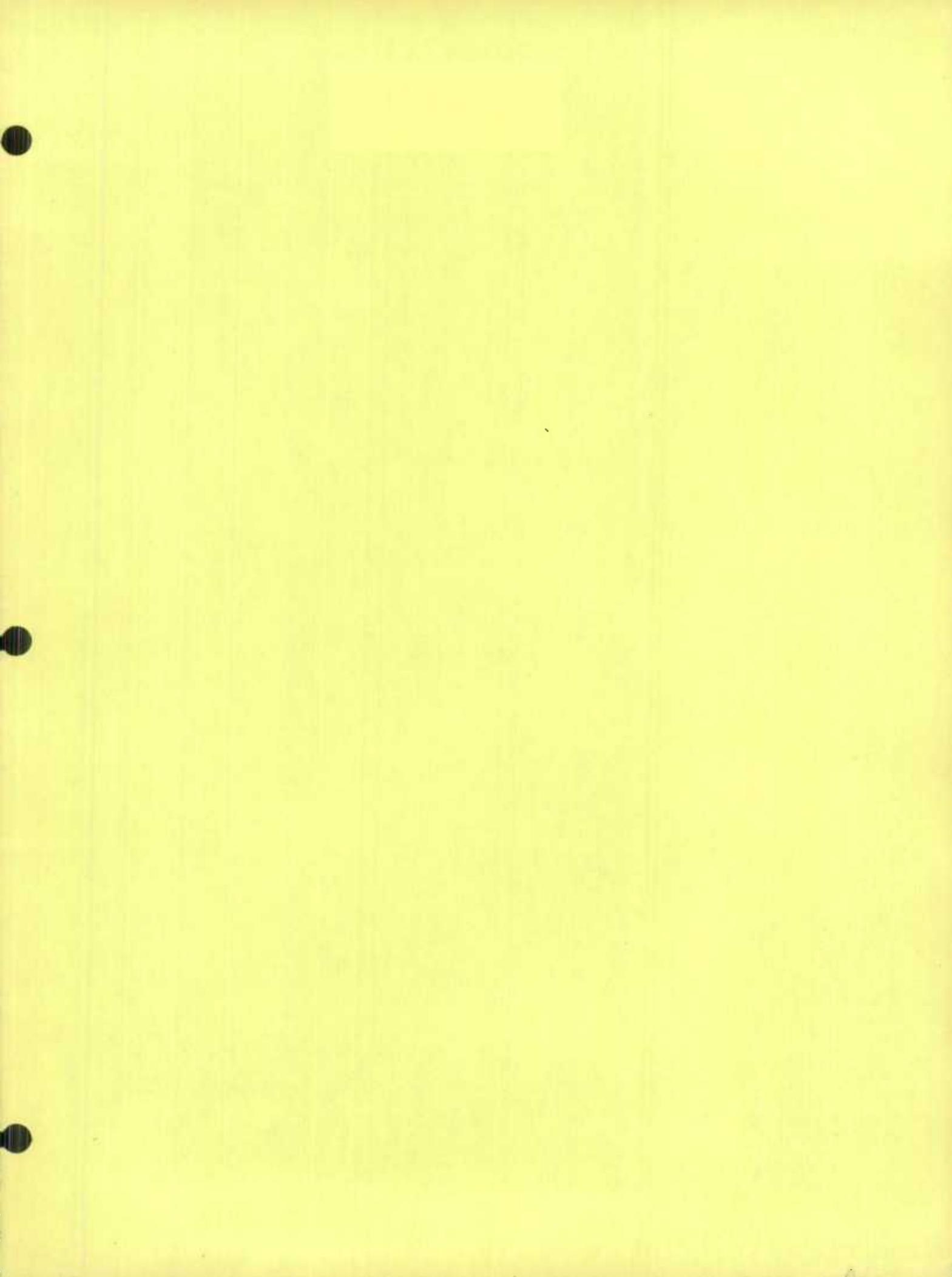
Stone - Production represents quarry shipments of crude or undressed stone, crushed stone, and dressed stone, if the latter is prepared by the quarry operators at values as reported by the operators. The figures include data for both private and public or municipally-owned properties and special questionnaires 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.









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