

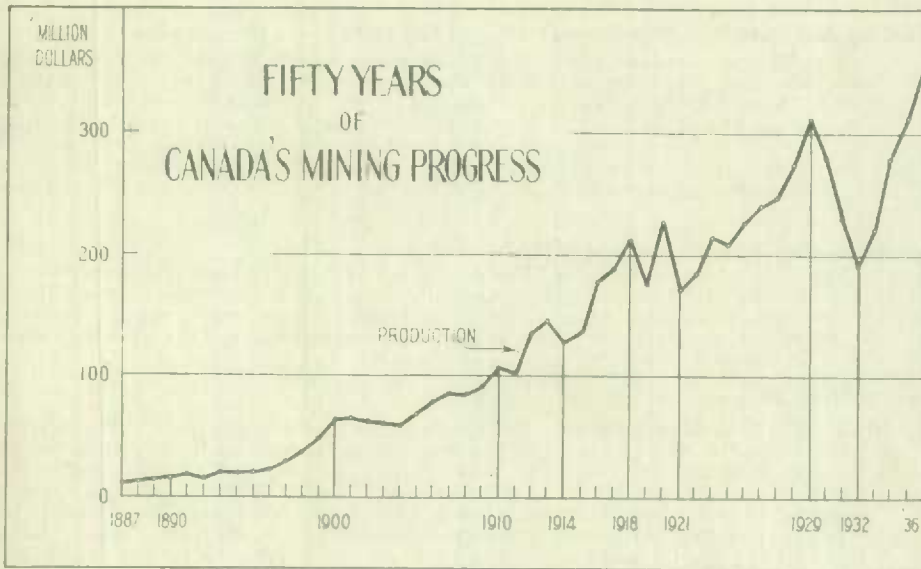
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CANADA—DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
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PRELIMINARY REPORT
ON THE
**MINERAL PRODUCTION OF
CANADA**
DURING THE CALENDAR YEAR
1936

Published by Authority of the Hon. W. D. Euler, M.P.,
Minister of Trade and Commerce



OTTAWA
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LIST OF PUBLICATIONS

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MINING, METALLURGICAL AND CHEMICAL BRANCH DOMINION BUREAU OF STATISTICS

MINERAL PRODUCTION (Mining and Metallurgy).

General Reports

Preliminary Reports (semi-annual) on the Mineral Production of Canada.

Monthly Reports on Canada's Leading Mineral Products.

Annual Report on the Mineral Production of Canada. (In one volume.)

A comprehensive record of the mining industry embodying historical and world data, detailed information on mineral production, imports and exports for Canada and general statistics relative to the mining industry on capital investment, employment, fuel consumption and power equipment arranged in 9 chapters each dealing with a particular branch of the industry. Statistics on production and trade in mineral products appear in detail in the appropriate chapters. Fully indexed. Chapter titles are: Canada—The Gold Mining Industry—The Silver Mining Industry—The Nickel-Copper Industry—Miscellaneous Metal Mining Industries—The Non-Ferrous Smelting and Refining Industry—The Coal Mining, Coke, Natural Gas, Peat and Petroleum Industries—Non-Metal Mining Industries (Other than Fuels)—The Clay Products and Other Structural Materials Industries—Notes on the Methods of Computing Values—Index—Directory.

COAL—

Monthly and Quarterly Reports on Coal and Coke Statistics for Canada.

A condensed report on production, imports and exports of coal and coke is issued monthly, publication being made about the twentieth of the next following month.

A more general review is published quarterly, showing statistics for each month, for the quarter, and for the year to date on the output by coal-mining districts and by provinces, imports and exports by ports and by kinds of coal, employment in coal-mining, and tonnage lost. There is also a section on coke showing production, imports, exports, distribution and consumption by months and by provincial groups.

Annual Report on Coal Statistics for Canada.

Text and tables showing for Canada, and for each of the coal-producing provinces, historical and current data on output, tonnage lost, disposition of coal from the mines, domestic and foreign shipments, exports and imports by ports, consumption of coal, prices, employment, salaries and wages paid, power equipment, capital investment, etc.

ANNUAL BULLETINS—

Metals—The Gold Mining Industry in Canada, which includes Alluvial Gold Mining, Auriferous Quartz Mining, Copper-Gold-Silver Mining, and tables showing Canadian and world production of Gold.—The Silver Mining Industry in Canada, which includes Silver-Cobalt-Arsenic Mining, Silver-Lead-Zinc Mining, and tables showing Canadian and world production of Arsenic, Cobalt, Lead, Silver and Zinc.—The Nickel-Copper Mining, Smelting and Refining Industry, which includes Canadian and world production of Nickel.—The Canadian and World Production of Copper.—Metals of the Platinum Group.—The Production of Miscellaneous Metals, including Antimony, Beryl, Bismuth, Cadmium, Chromite, Lithium, Manganese, Mercury, Molybdenite, Radium, Selenium, Tin, Titanium, Tungsten.—The Non-Ferrous Smelting and Refining Industry.

Non-Metals.—Abrasives—Asbestos—Coal—Feldspar—Gypsum—Iron Oxides—Mica—Natural Gas—Petroleum—Quartz—Salt—Talc and Soapstone—Miscellaneous Non-Metallic Minerals, including Actinolite, Barytes, Bituminous Sands, Fluorspar, Graphite, Magnesite dolomite, Bog Manganese, Natural Mineral Waters, Phosphate, Silica Brick, Sodium Carbonate, Sodium Sulphate, Sulphur (Pyrites).

Structural Materials.—Cement—Clay and Clay Products—Lime—Sand and Gravel—Stone.

SEE INSIDE BACK COVER FOR PUBLICATIONS ON MANUFACTURES BASED CHIEFLY ON MINERALS.

PREFACE

The present statistical report on Canada's mineral production is issued annually for presentation at the Annual Meeting of the Canadian Institute of Mining and Metallurgy. It contains the first detailed figures of production for 1936 and is designed to supplement the estimate issued, in bulletin form, on January 1st.

Outstanding features of this report are: a new high record for the total value of Canada's mineral production; an increase in the number of operating gold mines and mills over the preceding year; new output records for gold, copper, lead, nickel, zinc, platinum metals, tellurium, cadmium, salt, sulphur, magnesitic dolomite and sodium sulphate; and the strengthening of prices for base metals.

For several years the Bureau has co-operated with the Mines Departments of Quebec, Ontario, Manitoba, and British Columbia, whereby the Bureau and the provinces use joint forms for the collection of mineral statistics. Similar arrangements were made in 1935 with the Department of Public Works and Mines for Nova Scotia. By this system the operators are required to file only one form.

As in former years, the Bureau has continued to co-operate with the provinces of Nova Scotia, New Brunswick, Saskatchewan, Alberta and British Columbia in the collection of coal statistics.

The cordial thanks of the Bureau are tendered to mine and smelter operators, to the Department of Mines and Natural Resources, and to the Royal Canadian Mint for assistance given and information made available. The railway and other transportation companies, as well as smelter operators outside of Canada, have also furnished data, the receipt of which is gratefully acknowledged.

This report has been prepared under the direction of Mr. W. H. Losee, B.Sc., Chief of the Mining, Metallurgical and Chemical Branch, by Mr. R. J. McDowall, B.Sc., and Mr. B. R. Hayden of the mineral division staff.

R. H. COATS,
Dominion Statistician.

DOMINION BUREAU OF STATISTICS,
OTTAWA, March 9, 1937.

Quantities and Values of Mineral Products from Canadian Sources, 1935 and 1936

	1935		1936		Per cent Increase (+) or Decrease (-)	
	Quantity	Value	Quantity	Value	Quantity	Value
METALLICS						
Arsenic (As ₂ O ₃)..... lb.	2,558,789	75,326	1,365,606	42,491	-46.6	-43.6
Bismuth..... lb.	13,797	13,245	364,165	360,523	-	-
Cadmium..... lb.	580,530	441,203	785,916	699,465	+35.4	+58.5
Chromitet..... lb.	-	14,947	-	8,508	-	-43.1
Cobalt..... lb.	681,419	512,705	881,995	801,857	+29.4	+56.4
Copper..... lb.	418,997,700	32,311,960	420,922,720	39,507,869	+ 0.5	+22.3
Gold valued at standard rate..... fine oz.	3,284,890	67,904,700	3,735,305	77,215,604	+13.7	+13.7
Estimated exchange equalization on gold produced.....	-	47,600,579	-	53,632,129	-	-
Lead..... lb.	339,105,079	10,624,772	382,754,774	14,976,046	+12.9	+41.0
Lead..... tons	100	800	221	1,316	+121.0	+64.5
Manganese ore..... lb.	138,516,240	35,345,103	160,737,864	43,878,413	+22.5	+24.1
Nickel..... lb.	84,772	1,962,937	103,671	2,480,075	+22.3	+26.3
Palladium, rhodium, iridium, etc..... fine oz.	105,374	3,445,730	131,571	5,320,731	+24.9	+54.4
Platinum..... fine oz.	-	-	-	-	-	-
Radium and Uranium Products						
Selenium..... lb.	366,425	703,530	350,535	620,447	- 4.3	-11.8
Silver..... fine oz.	16,618,558	10,767,148	18,231,419	8,227,840	+ 9.7	-23.6
Tellurium..... lb.	16,425	32,850	52,724	93,322	+221.0	+184.1
Titanium ore..... tons	2,288	16,400	2,568	18,318	+12.2	+11.7
Zinc..... lb.	320,649,859	9,936,908	333,857,460	11,067,375	+ 4.1	+11.4
Total	-	221,800,849	-	258,952,328	-	+16.7
NON-METALLICS						
Fuels						
Coal..... tons	13,888,006	41,963,110	15,214,606	45,752,806	+ 9.6	+ 9.0
Natural gas..... M cu. ft.	24,910,786	9,363,141	27,363,602	10,585,868	+ 9.8	+13.1
Peat..... tons	1,340	5,761	1,641	7,826	+22.5	+35.8
Petroleum, crude..... brls.	1,446,620	3,492,188	1,498,006	3,616,037	+ 3.6	+ 3.5
Total	-	54,824,300	-	59,967,537	-	+ 9.4
OTHER NON-METALLICS						
Asbestos..... tons	210,467	7,054,614	301,287	9,958,183	+43.2	+41.2
Bituminous sands..... tons	40	160	-	-	-	-
Diatomite..... tons	823	33,140	670	14,750	-18.6	-55.5
Feldspar..... tons	17,742	144,330	17,895	147,891	+ 0.9	+ 2.5
Fluorspar..... tons	75	900	75	900	-	-
Graphite.....	-	79,781	-	92,820	-	+16.3
Grindstones..... tons	708	34,010	167	4,760	-76.4	-86.0
Gypsum..... tons	541,864	932,203	816,999	1,265,488	+50.8	+35.8
Iron oxides (ochre)..... tons	5,516	77,075	5,854	69,629	+ 6.1	- 9.7
Magnetite dolomite.....	-	486,084	-	769,176	-	+58.2
Magnesium sulphate..... tons	340	7,985	654	13,712	+92.4	+72.2
Mica..... tons	128	32,038	701	67,290	+11.6	-18.0
Mineral waters..... Imp. gals.	146,516	16,590	128,386	17,558	-12.4	+ 5.5
Nepheline syenite.....	-	-	-	37,426	-	-
Phosphate..... tons	186	1,103	625	4,027	+182.3	+346.7
Quartz..... tons	233,002	424,882	1,050,625	616,585	+350.9	+45.1
Salt..... tons	360,343	1,880,978	391,316	1,773,143	+ 8.6	- 5.7
Silica brick..... M	2,461	96,194	2,393	97,285	- 2.8	+ 1.1
Soapstone.....	-	32,053	-	32,770	-	+ 2.2
Sodium carbonate..... tons	242	2,430	192	1,677	-20.7	-31.0
Sodium sulphate..... tons	44,817	343,764	75,559	552,086	+88.6	+60.6
Sulphur**..... tons	67,446	634,235	122,132	1,033,055	+81.1	+62.9
Talc..... tons	13,803	139,479	22,599	143,929	+63.7	+ 3.2
Total	-	12,504,068	-	16,715,940	-	+33.7

†Quebec only.

*Data not available for publication

**Sulphur content of pyrites shipped and estimated sulphur contained in sulphuric acid made from waste smelter gases.

**Quantities and Values of Mineral Products from Canadian Sources,
1935 and 1936—concluded**

	1935		1936		Per cent Increase (+) or Decrease (-)	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$		\$		\$
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS						
Clay Products						
Brick—Soft mud process. } Face..... M	6,995	122,215	4,138	71,183	- 40.8	-41.8
} Common..... M	21,197	259,504	17,708	223,100	- 16.5	-14.0
Stiff mud process. } Face..... M	25,289	500,066	30,944	597,842	+ 22.4	+19.6
(wire-cut)..... } Common..... M	32,334	437,123	40,280	539,039	+ 24.6	+23.3
Dry press..... } Face..... M	8,454	175,042	11,051	192,377	+ 30.7	+ 9.9
} Common..... M	8,381	55,253	8,812	78,870	+ 38.1	+42.7
Fancy or ornamental brick..... M	13	728	24	1,295	+ 84.6	+77.9
Sewer brick..... M	175	5,236	413	6,696	+136.0	+27.9
Paving brick..... M	15	697	16	646	+ 6.7	+ 3.0
Firebrick..... M	1,817	90,149	2,651	125,364	+ 45.9	+39.1
Fireclay..... tons	2,272	15,574	2,552	17,639	+12.3	+13.3
Bentonite..... tons	41	781	-	-	-	-
Kaolin..... tons	170	1,520	-	-	-	-
Fireclay blocks and shapes.....	-	71,344	-	65,171	-	- 8.7
Structural Tile—Hollow blocks..... tons	47,195	344,608	62,750	484,673	+ 33.0	+40.6
Roofing tile..... No.	82,015	3,069	51,130	2,139	- 62.3	-41.7
Floor tile (quarries)..... sq. ft.	51,765	7,829	97,738	13,793	+ 88.8	+80.9
Ceramic tile.....	-	615	-	-	-	-
Drain tile..... M	7,124	205,538	7,438	216,153	+ 4.4	+ 5.2
Sewer pipe, copings, flue linings, etc.....	-	481,559	-	563,286	-	+17.0
Pottery, glazed or unglazed.....	-	220,711	-	218,402	-	- 1.0
Other clay products.....	-	13,274	-	12,360	-	- 6.9
Total.....	-	3,012,543	-	3,436,833	-	+13.9
Other Structural Materials						
Cement..... brls.	3,648,080	5,580,043	4,508,718	6,911,416	+ 23.0	+23.9
Lime..... tons	405,419	2,925,791	473,264	3,271,912	+ 16.7	+11.8
Sand and gravel..... tons	21,213,489	6,389,440	19,487,271	7,187,068	- 8.1	-12.5
Slate..... tons	1,129	4,329	287	2,634	- 74.6	-39.3
Stone..... tons	4,316,818	5,303,234	4,949,736	4,961,094	+ 14.7	- 6.5
Total.....	-	20,292,837	-	22,331,124	-	+10.5
Grand Total in Canadian Funds.....	-	312,344,457	-	361,394,062	-	+15.7

DOMINION BUREAU OF STATISTICS

R. H. COATS, LL.D., F.R.S.C., F.S.S. (Hon.), Dominion Statistician

W. H. LOSEE, B.Sc., Chief of the Mining, Metallurgical and Chemical Branch

PRELIMINARY REPORT ON THE MINERAL PRODUCTION OF CANADA DURING THE CALENDAR YEAR 1936

The value of Canada's mineral production in 1936 at \$361,394,062 exceeded 1935, the previous record year, by 15.7 per cent. Gains were general to all groups—metals, fuels, non-metallic minerals other than fuels, and structural materials.

Production of all the principal metals, excepting cobalt, silver and selenium was the highest on record and the increases in the prices of copper and lead benefited the base metal producers. Zinc prices improved also towards the close of the year. In addition, several base metal properties which had lain dormant during the period of low metal prices were preparing for production in 1937. Gold continued to maintain, by a wide margin, its premier position as the most valuable metal produced from Canadian mines and the value of the platinum metals almost equalled that of silver. Selenium and tellurium are increasing in importance annually. The total value of metal production at \$258,952,328 represented 71 per cent of the total value of the mineral production of the country and was 16.7 per cent greater than in 1935.

The fuels group, including coal, natural gas, crude petroleum and peat, at \$59,962,537 was 9.4 per cent above 1935. Each coal producing province marked a gain over the preceding year. Natural gas output was greater also. Production of crude petroleum was slightly higher than in 1935. A program of deep drilling in Alberta resulted in the bringing in of three wells and indicated a definite area from which crude oil recoveries may be expected.

Non-metallic minerals, other than fuels, were valued at \$16,715,040, an increase of 33.7 per cent. New highs were established for salt, sulphur, sodium sulphate and magnesitic-dolomite. Many other non-metallic minerals which are finding increasing industrial use showed a marked improvement over 1935.

Structural materials, including cement, brick and tile, stone and sand and gravel, which in normal years form no inconsiderable portion of Canada's total mineral production, improved 11 per cent in total value to \$25,764,157.

Values of Mineral Production of Canada by Classes 1927-1936

Year	Metallics*	Coal, natural gas, peat and crude petroleum	Other non- metallics	Clay products and other structural materials	Total
	\$	\$	\$	\$	\$
1927.....	113,561,030	71,426,516	17,559,730	44,809,419	247,356,695
1928.....	132,012,454	74,413,160	18,826,692	49,737,181	274,989,487
1929.....	154,454,056	76,787,397	21,073,959	58,534,834	310,850,246
1930.....	142,743,764	68,184,485	15,217,864	53,737,465	279,873,578
1931.....	120,930,147	54,453,143	10,893,141	44,158,295	230,434,726
1932.....	112,041,753	49,047,342	7,740,837	22,398,283	191,228,215
1933.....	147,015,593	47,778,436	10,004,537	16,696,687	221,495,253
1934.....	194,110,968	54,262,099	10,501,762	19,286,761	278,161,590
1935.....	221,800,849	54,824,200	12,504,008	23,215,400	312,344,457
1936.....	258,952,328	59,962,537	16,715,040	25,764,157	361,394,062

* Beginning with 1931 the estimated exchange equalization on gold produced is included.

Gold production at 3,735,305 fine ounces valued at \$130,847,733, in Canadian funds, exceeded 1935, the previous record year, by 13.7 per cent. According to early figures, as reported in the Engineering and Mining Journal, on world gold production for 1936, Canada is in third position. The Transvaal is first with 11,339,000 fine ounces, Russia is second with 7,289,000 fine ounces,

and the United States fourth with an output of 3,713,000 fine ounces. The increase in the price of gold has stimulated prospecting to such a degree that new gold finds of considered merit are constantly being reported. Ore reserves of the older producing properties have been increased and mines that were abandoned years ago are being actively investigated.

Silver production at 18,231,419 fine ounces indicated an increase of 9.7 per cent but, owing to the drop in price, from an average of 64.79 cents in 1935 to 45.13 cents in 1936, the total value of production was less by 23.6 per cent. Silver is mined to a very large extent in association with other metals, principally lead, zinc, copper, and copper-nickel, and since the prices of base metals have shown such an improvement it is not expected the output of silver will show any diminution during the present year. British Columbia produces 53 per cent of the total Canadian output, Ontario, 29 per cent, and the nickel-copper ores of the Sudbury area accounted for 48 per cent of the total for Ontario.

Lead production totalled 382,754,774 pounds, an increase of 13 per cent over 1935 and zinc production, 333,857,460 pounds, a gain of 4 per cent. British Columbia accounts for 99 per cent of the total Canadian production of lead and 76 per cent of the total for zinc. The Sullivan mine is the principal source of these metals. During the year lead concentrates were exported from the Yukon, British Columbia, Quebec and Nova Scotia for treatment in foreign smelters. Zinc concentrates were sold abroad by mining companies in British Columbia, Quebec and Nova Scotia. Refined lead and zinc are made at Trail, British Columbia, and refined zinc is produced at Flin Flon, Manitoba.

Copper production at 420,922,720 pounds was a record. Ontario mines accounted for 68.5 per cent of the total, Quebec, 16 per cent, Manitoba and Saskatchewan combined, 10.5 per cent, and British Columbia, 5 per cent. The Britannia was the only copper mine producing in British Columbia during the year but it is expected the Granby Consolidated will re-open their property at Copper Mountain in the southern part of the province during 1937. The Flin Flon mine is the source of the Manitoba and Saskatchewan production, the nickel-copper ores of the Sudbury area account for the Ontario output, and the Noranda and Eustis supply the Quebec quota. In northwestern Quebec the Aldermac property enlarged the shaft and renovated the mill and were ready to start production at the year end. With the increase in prices of the base metals, it is not unlikely that the Normetal and the Waite-Amulet will reopen.

Nickel production at 169,737,864 pounds was another record. Additions were made during the year by the International Nickel Company with a view to enlarging their output and the Falconbridge Nickel Mines increased their smelting capacity.

Platinum metals, which are obtained as by-products in the treatment of the nickel-copper ores, increased 23 per cent over 1935. Selenium and tellurium are produced at the copper refineries at Copper Cliff and Montreal East. Cadmium, which has been produced at Trail for some years, was made for the first time in 1936 at Flin Flon. Bismuth metal was produced at Trail and in the form of lead-bismuth bullion at Deloro.

Cobalt, including production at Deloro, Ontario, and in ores exported was larger than in 1935. Radium and uranium salts production was continued at the Port Hope refinery from pitchblende ores of Great Bear Lake.

Total coal production at 15,214,606 tons, increased 9.6 per cent over 1935. During the year 2,356,313 tons of Canadian coal were moved under Dominion Government assistance as compared with 2,124,748 tons in 1935. Canadian imports of coal totalled 13,743,685 tons. Imports of anthracite from the United States totalled 1,685,848 tons, from Great Britain, 1,331,279 tons, and from Germany, French Indo-China, Belgium, the Netherlands and China proper, 519,373 tons. Canada imported 10,042,127 tons of bituminous coal from the United States, and 149,905 tons from Great Britain. Natural gas production totalled 27,363,602 thousand cubic feet of which 60.9 per cent came from Alberta wells, 36.6 per cent from Ontario wells, 2.2 per cent from New Brunswick and 0.3 per cent from Saskatchewan. Crude petroleum output totalled 1,498,006 barrels of which 1,310,000 barrels were produced in Alberta and 165,495 barrels in Ontario.

Non-metallic minerals, other than fuels, were valued at \$16,715,040, an increase of 34 per cent over 1935. Canada's export trade in these minerals has reached very considerable proportions. Among the most outstanding are asbestos, gypsum, mica, feldspar, talc, graphite, pyrites and magnesitic-dolomite. A home market has been built up for several others, chief of which

are salt, sodium sulphate, quartz, sulphur in the form of sulphuric acid, and iron oxides. Indec some of Canada's largest chemical industries have been developed as a direct result of her salt deposits.

The value of structural materials, which include brick, cement, lime, stone, and sand and gravel at \$25,764,157 exceeded that for the preceding year by 11 per cent. Construction operations are possibly the last to feel a falling-off because of contracts undertaken in prosperous times: conversely construction cannot improve until the slack caused by over-building in boom times has been taken up. Signs of improvement in building operations in 1937 are hopeful.

Mineral Production in Canada, by Provinces, 1935-1936

Province	1935		1936	
	Value of production	Per cent of total	Value of production	Per cent of total
	\$	%	\$	%
Nova Scotia	23,183,128	7.4	26,569,204	7.3
New Brunswick	2,821,027	0.9	2,499,380	0.7
Quebec	39,124,696	12.5	49,516,345	13.7
Ontario	158,034,269	50.9	184,543,453	51.1
Manitoba	12,052,417	3.9	11,342,302	3.1
Saskatchewan	3,816,943	1.2	6,923,349	1.9
Alberta	22,289,681	7.1	23,364,390	6.5
British Columbia	48,692,050	15.6	54,266,107	15.0
Northwest Territories and Yukon	1,430,246	0.5	2,369,002	0.7
Total	312,344,457	100.0	361,394,062	100.0

Mineral Production in Canada, by Provinces, 1936

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and Northwest Territories	
METALLIC										
Arsenic (As ₂ O ₃).....lb.	-	-	-	1,365,606	-	-	-	-	-	
\$	-	-	-	42,491	-	-	-	-	-	
Bismuth.....lb.	-	-	-	3,552	-	-	-	360,613	-	
\$	-	-	-	3,516	-	-	-	357,007	-	
Cadmium.....\$	-	-	-	-	131,838	99,457	-	468,170	-	
Chromite.....tons	-	-	-	†	-	-	-	-	-	
\$	-	-	8,508	†	-	-	-	-	-	
Cobalt.....lb.	-	-	-	881,995	-	-	-	-	-	
\$	-	-	-	801,857	-	-	-	-	-	
Copper.....lb.	779,307	-	66,340,175	287,910,908	29,853,220	14,971,609	-	21,051,776	13,725	
\$	73,878	-	6,289,048	26,898,350	2,830,085	1,419,309	-	1,995,708	1,491	
Gold.....fine oz.	11,962	-	666,139	2,369,410	139,288	48,981	109	449,126	50,344	
\$	246,036	-	13,770,318	48,980,174	2,879,338	1,012,527	2,253	9,284,258	1,040,703	
Estimated exchange equalization on gold produced.....\$	170,891	-	9,564,534	34,020,468	1,999,921	703,277	1,565	6,448,626	722,847	
Lead.....lb.	1,901,712	-	2,040,810	17,442	-	-	-	376,261,263	2,533,547	
\$	74,408	-	79,851	682	-	-	-	14,721,974	99,130	
Manganese ore.....tons	-	221	-	-	-	-	-	-	-	
\$	-	1,316	-	-	-	-	-	-	-	
Nickel.....lb.	-	-	-	169,737,864	-	-	-	-	-	
\$	-	-	-	43,878,413	-	-	-	†	-	
Palladium, Rhodium, Iridium, etc.....fine oz.	-	-	-	103,671	-	-	-	-	-	
\$	-	-	-	2,480,075	-	-	-	-	-	
Platinum.....fine oz.	-	-	-	131,551	-	-	-	-	20	
\$	-	-	-	5,319,922	-	-	-	-	809	
Radium, uranium (products).	-	-	-	(Data not available for publication)						-
Selenium.....lb.	-	-	169,000	100,300	50,099	25,136	-	-	-	
\$	-	-	299,130	188,151	88,675	44,491	-	-	-	
Silver.....fine oz.	107,642	-	719,958	5,205,109	791,491	642,497	9	9,710,979	1,053,733	
\$	48,579	-	324,917	2,349,066	357,200	289,959	4	4,382,565	475,550	
Tellurium.....lb.	-	-	33,000	10,197	6,344	3,183	-	-	-	
\$	-	-	58,419	18,049	11,229	5,634	-	-	-	
Titanium ore.....tons	-	-	2,566	-	-	-	-	-	-	
\$	-	-	18,318	-	-	-	-	-	-	
Zinc.....lb.	6,876,319	-	6,803,875	-	36,744,051	27,692,869	-	255,649,446	-	
\$	227,950	-	228,532	-	1,218,095	918,019	-	8,474,779	-	
Total\$	841,742	1,316	30,641,563	164,981,214	9,516,351	4,492,672	3,822	46,133,896	2,339,721	

† Not available for publication.

Mineral Production in Canada, by Provinces, 1936—Continued

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and Northwest Territories
NON-METALLICS									
Fuels									
Coal..... tons	6,648,933	358,112	-	-	4,390	1,017,868	5,696,763	1,488,030	510
\$	22,972,466	1,163,863	-	-	9,525	1,456,982	14,657,404	5,490,280	2,286
Natural gas... M cu. ft	-	606,246	-	10,018,444	600	90,312	16,650,000	-	-
\$	-	298,819	-	6,009,866	180	9,003	4,268,000	-	-
Peat..... tons	-	-	45	1,596	-	-	-	-	-
\$	-	-	255	7,571	-	-	-	-	-
Petroleum, crude... brels	-	17,112	-	165,495	-	-	1,310,000	-	5,399
\$	-	24,075	-	350,767	-	-	3,214,200	-	26,995
Total..... \$	22,972,466	1,486,757	255	6,368,261	9,705	1,465,985	22,139,604	5,490,280	29,281
Other Non-Metallics									
Asbestos..... tons	-	-	301,287	-	-	-	-	-	-
\$	-	-	9,958,183	-	-	-	-	-	-
Diatomite..... tons	565	-	-	60	-	-	-	45	-
\$	11,300	-	-	3,000	-	-	-	450	-
Feldspar..... tons	-	-	8,115	7,680	2,100	-	-	-	-
\$	-	-	75,703	65,888	6,300	-	-	-	-
Fluorspar..... tons	-	-	-	75	-	-	-	-	-
\$	-	-	-	900	-	-	-	-	-
Graphite..... tons	-	-	-	92,820	-	-	-	-	-
\$	-	-	-	-	-	-	-	-	-
Grindstones..... tons	-	80	-	-	-	-	-	87	-
\$	-	260	-	-	-	-	-	4,500	-
Gypsum..... tons	712,236	38,271	-	40,350	12,064	-	-	14,078	-
\$	794,587	122,862	-	183,705	87,076	-	-	77,258	-
Iron oxides (ochre)... tons	-	-	5,458	-	-	-	-	396	-
\$	-	-	65,629	-	-	-	-	4,000	-
Magnesitic dolomite \$	-	-	769,176	-	-	-	-	-	-
Magnesium sulphate tons	-	-	-	-	-	-	-	654	-
\$	-	-	-	-	-	-	-	13,712	-
Mica..... tons	-	-	212	490	-	-	-	-	-
\$	-	-	57,670	9,620	-	-	-	-	-
Mineral waters Imp. gal	-	-	105,286	23,100	-	-	-	-	-
\$	-	-	16,441	1,117	-	-	-	-	-
Nepheline syenite... \$	-	-	525	37,426	-	-	-	-	-
Phosphate..... tons	-	-	4,927	-	-	-	-	-	-
\$	-	-	77,476	890,106	44	76,089	-	140	-
Quartz..... tons	6,764	-	315,374	213,471	44	76,089	-	788	-
\$	10,819	-	-	350,044	2,498	-	-	-	-
Salt..... tons	38,774	-	-	1,557,077	32,151	-	-	-	-
\$	183,915	-	-	471	-	-	-	-	-
Silica brick..... M	1,922	-	-	26,715	-	-	-	-	-
\$	70,570	-	-	-	-	-	-	-	-
Soapstone..... \$	-	-	32,770	-	-	-	-	-	-
Sodium carbonate... tons	-	-	-	-	-	-	-	192	-
\$	-	-	-	-	-	-	-	1,677	-
Sodium sulphate... tons	-	-	-	-	-	75,550	-	-	-
\$	-	-	-	-	-	552,086	-	-	-
Sulphur*..... tons	-	-	43,084	14,152	-	-	-	64,896	-
\$	-	-	282,743	141,520	-	-	-	608,792	-
Talc..... tons	-	-	-	22,561	-	-	-	38	-
\$	-	-	-	143,701	-	-	-	228	-
Total..... \$	1,671,191	123,122	11,578,616	2,476,960	125,571	628,175	-	711,405	-

*Sulphur content of pyrites shipped and estimated sulphur contained in sulphuric acid made from waste smelter gases.

Mineral Production in Canada, by Provinces, 1936—Concluded

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and North-west Territories
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS									
Clay Products									
Brick—Soft mud process—									
Face..... M	20	-	-	3,826	-	-	58	234	-
\$	290	-	-	60,124	-	-	1,332	9,447	-
Common..... M	350	1,477	1,030	8,139	2,639	80	1,564	2,429	-
\$	3,500	20,653	7,824	97,811	40,958	960	18,418	32,976	-
Stiff mud process (wirecut) Face. M	953	400	9,803	18,549	283	355	13	588	-
\$	22,901	9,800	191,085	341,268	7,012	11,834	227	13,715	-
Common..... M	4,496	1,500	18,922	13,613	-	304	370	1,075	-
\$	53,379	19,000	248,647	197,896	-	3,085	2,180	14,852	-
Dry press—									
Face..... M	-	-	2,161	7,086	-	87	1,717	-	-
\$	-	-	52,096	117,835	-	3,746	18,709	-	-
Common..... M	-	-	-	2,871	-	11	5,930	-	-
\$	-	-	-	37,612	-	210	41,048	-	-
Fancy or ornamental brick..... M	-	-	-	24	-	-	-	-	-
\$	-	-	-	1,295	-	-	-	-	-
Sewer brick..... M	-	-	-	411	-	-	-	-	2
\$	-	-	-	6,641	-	-	-	-	55
Paving brick..... M	-	-	-	-	-	-	-	-	16
\$	-	-	-	-	-	-	-	-	646
Firebrick..... M	6	-	-	-	-	514	18	2,113	-
\$	210	-	-	-	-	26,022	850	98,282	-
Fireclay..... tons	1,214	150	-	-	-	621	-	567	-
\$	3,902	1,415	-	-	-	4,065	-	7,657	-
Fireclay blocks and shapes..... \$	471	894	-	-	-	40,068	-	16,838	-
Structural tile—									
Hollow blocks..... tons	5,000	1,600	16,786	31,601	377	1,100	2,745	3,541	-
\$	32,000	14,000	135,144	233,283	3,903	8,700	23,530	34,113	-
Roofing tile..... No.	-	-	-	42,000	-	-	-	9,130	-
\$	-	-	-	1,856	-	-	-	283	-
Floor tile (quarries) Sq. ft.	-	-	-	95,540	-	-	-	2,198	-
\$	-	-	-	13,484	-	-	-	314	-
Drain tile..... M	1,000	162	438	5,022	64	-	27	725	-
\$	45,000	7,300	13,714	118,842	3,691	-	1,751	25,855	-
Sewer pipe, copings, flue linings, etc. \$	205,108	-	26,659	235,238	-	-	67,604	28,677	-
Pottery, glazed or unglazed..... \$	-	29,529	-	51,507	-	-	134,491	2,875	-
Other clay products \$	-	-	-	9,587	-	1,206	-	1,567	-
Total..... \$	366,751	102,591	675,169	1,524,279	55,564	107,396	310,131	288,152	-
Other Structural Materials									
Cement..... brls	-	-	2,093,130	1,542,403	348,042	-	243,534	281,549	-
\$	-	-	2,945,074	2,180,895	783,095	-	482,197	520,155	-
Lime..... tons	15,664	20,716	132,732	248,985	21,747	-	9,129	24,291	-
\$	119,230	157,017	715,066	1,858,948	205,042	-	78,259	138,350	-
Sands and gravel..... tons	1,872,602	785,039	5,270,531	7,071,525	1,817,453	529,090	639,907	1,501,124	-
\$	910,810	486,785	1,313,592	2,834,988	575,278	229,120	324,189	512,306	-
Slate..... tons	-	-	103	-	-	-	-	181	-
\$	-	-	155	-	-	-	-	2,479	-
Stone..... tons	164,798	28,507	1,402,520	2,738,312	49,971	-	13,876	491,752	-
\$	287,104	141,792	1,646,895	2,318,365	71,666	-	26,188	469,084	-
Total..... \$	1,317,144	785,594	6,626,782	9,193,196	1,635,081	229,120	910,833	1,642,374	-
Grand Total in Canadian Funds..... \$	26,569,294	2,499,390	49,516,385	84,543,853	11,342,302	6,922,349	23,364,390	51,266,107	2,369,062

Monthly Production of Principal Minerals in Canada, 1936*

—	Asbestos	Cement	Clay Products	Coal	Copper	Feldspar	Gold	Gypsum
	tons	barrels	\$	tons	pounds	tons	fine oz.	tons
January.....	17,016	96,512	117,050	1,391,521	34,289,634	901	277,554	4,887
February.....	17,038	94,602	102,230	1,492,207	32,911,842	937	266,422	2,877
March.....	16,225	167,129	103,873	1,028,661	36,478,815	878	299,102	5,329
April.....	19,605	293,538	226,722	938,933	35,491,618	825	299,269	40,007
May.....	27,361	418,839	306,825	998,447	35,044,332	1,229	308,492	76,634
June.....	23,136	550,321	343,591	1,037,709	31,421,070	2,565	316,670	136,537
July.....	27,749	530,145	373,476	1,064,249	28,570,506	2,859	319,505	132,461
August.....	25,128	601,387	377,096	1,055,872	35,388,972	1,910	328,697	81,896
September.....	31,067	701,763	368,652	1,445,571	36,155,266	2,749	330,820	87,510
October.....	38,231	566,940	341,145	1,805,197	34,652,376	2,245	334,080	157,490
November.....	37,056	309,103	269,144	1,464,495	37,031,762	1,820	319,265	75,661
December.....	21,485	155,686	200,772	1,493,744	43,631,366	1,500	330,130	59,303
Calendar Year.....	301,127	4,503,965	3,190,576	15,214,666	421,076,559	†20,418	3,730,006	860,592
	Lead	Lime	Natural Gas	Nickel	Petroleum	Salt‡	Silver	Zinc
	pounds	tons	M cu. ft.	pounds	barrels	tons	fine oz.	pounds
January.....	28,105,650	30,206	3,499,092	14,052,702	121,231	11,013	1,213,488	27,384,732
February.....	27,149,114	28,133	4,011,882	16,151,374	107,928	11,662	1,235,039	20,678,372
March.....	31,294,840	32,929	2,838,626	15,666,457	117,824	13,411	1,460,402	26,287,026
April.....	33,670,727	36,296	2,297,181	11,018,947	107,748	16,064	1,461,621	23,704,058
May.....	32,047,660	39,239	1,784,601	11,815,188	114,297	27,016	1,419,146	29,629,858
June.....	28,523,448	37,294	1,377,373	14,070,491	114,050	19,257	1,650,683	29,988,104
July.....	32,324,511	36,927	1,210,414	12,569,576	139,940	20,962	1,795,927	34,754,949
August.....	33,987,026	36,598	1,140,433	12,352,757	139,789	19,726	1,539,360	33,506,293
September.....	29,128,356	40,100	1,430,039	15,871,633	135,623	19,404	1,328,661	31,133,738
October.....	28,260,126	45,170	1,961,024	12,741,986	137,004	22,496	1,580,405	31,688,437
November.....	38,316,019	42,613	2,469,043	15,055,755	129,152	30,205	1,639,491	22,753,900
December.....	40,389,544	41,967	3,055,635	18,011,386	139,701	14,305	1,835,604	21,294,862
Calendar Year.....	383,197,021	447,472	27,075,343	169,378,252	1,564,287	225,521	18,165,827	332,804,329

*This information was compiled from monthly reports received from the principal operators. The totals for the calendar year do not therefore, necessarily agree with those shown in the first table of this report.

†Includes some exports of nepheline syenite.

‡Commercial salt only.

World Production* of Copper, Gold, Silver, Lead and Zinc, by Countries, during 1936

(SOURCE—American Bureau of Metal Statistics)

	1936				
	Copper	Gold	Silver	Lead (Refined)	Zinc (e)
	(short tons)	1,000 (fine ounces)	1,000 (fine ounces)	(short tons) (a)	(short tons)
United States.....	605,000	4,295 (a)	62,842	431,953 (e)	524,271
Canada.....	205,000	3,721	18,718	182,885 (f)	-
Mexico.....	38,000	770	(d)	231,974	-
Colombia.....	-	392	-	-	-
Peru.....	35,500	-	18,713	-	-
Chile.....	265,000	261	-	-	-
British India.....	-	332 (c)	-	-	-
Japan.....	75,500	672 (c)	9,600	-	-
Other Asia.....	-	878	3,500 (c)	-	-
New Zealand.....	-	165	-	-	-
Other Australia and New Guiana.....	-	592	-	-	-
Queensland.....	-	115	-	-	-
Western Australia.....	-	836	-	-	-
Anglo-Australian.....	-	-	-	216,839 (c)	145,865
Other Australasia.....	-	-	13,167 (a)	-	-
South Africa.....	-	11,339	1,074	-	-
Rhodesia.....	-	803	-	-	23,217
Belgian Congo.....	-	386	3,800 (b)	-	-
British West Africa.....	-	510	-	-	-
Tunis.....	-	-	-	22,380	-
Africa.....	270,000	375 (d)	(e) 700 (c)	-	-
Belgium.....	-	-	-	-	226,996 (a)
France.....	-	-	-	-	59,535
Germany.....	30,000	-	-	159,564	150,265
Italy.....	-	-	-	45,000 (e)	28,687 (c)
Netherlands.....	-	-	-	-	-
Poland.....	-	-	-	-	-
Russia.....	89,000	7,000(e)	-	-	-
Spain.....	-	-	-	45,000 (e)	8,603
Other Europe.....	135,000	-	-	189,700 (b)	-
Other America.....	-	847	16,545	-	186,758 (d)
Europe.....	-	621 (b)	17,000 (c)	-	-
Burma (Refined).....	-	-	5,932	81,936	-
Elsewhere.....	48,500	-	-	34,300 (d)	274,100 (b)
Total, 1936.....	1,796,500	34,910	171,611 (f)	1,641,531	1,628,297
Total, 1935.....	1,603,132	30,660	207,958	1,573,396	1,487,388

Reference Copper: Statistics are based on blister copper, referred to countries wherein ore originated. Estimated by "Engineering and Mining Journal," New York.

Reference Gold: (a) Includes Philippines. (b) Exclusive of Russia, accounts chiefly for Sweden and Roumania. (c) Principal mines only, but nearly complete. (d) Other Africa. (e) Chiefly Siberia; estimated at average rate of 1936.

Reference Silver: (a) Includes Australia refined, other Australia and New Zealand. (b) Estimated on basis of 1935 output. (c) Revised annual total. (d) Not yet reported. (e) Other Africa. (f) Excluding Mexico.

Reference Lead: (a) From domestic material only. (b) Includes Belgium, Russia, Great Britain, Poland, France, Austria, Czechoslovakia, and Yugoslavia; partly estimated. (c) Includes Australian lead refined in Great Britain. (d) Includes Argentina, Peru, Japan and the product of foreign ore smelted in U.S.A.; partly estimated. (e) Partly estimated. (f) Revised annual total.

Reference Zinc: (a) Belgium and Netherlands, partly estimated. (b) Includes Norway, Poland, Japan and Indo-China together with estimates for Czechoslovakia, Yugoslavia and Russia. (c) Estimated on basis of figures for first six months of 1936. (d) Revised annual total; for Canadian total zinc production see preceding tables. (e) The figures include zinc derived from dross and ashes at primary works in the United States, Belgium, France and Germany.

* Subject to revision.

Metal Prices, 1932-1936

Metal	Market	Unit	1932	1933	1934	1935	1936
			\$	\$	\$	\$	\$
Antimony (ordinaries)	New York	Pound	0-05592	0-06528	0-08901	0-13616	0-12240
Arsenic, white (nominal)	New York	Pound	0-04	0-04	0-04	0-035	0-035
Cobalt (nominal)	New York	Pound	2-50	2-50	2-50	2-50	2-50
Cobalt Oxide (nominal)	New York	Pound	1-35	1-35	1-35	1-37	1-38
Copper	New York	Pound	0-05555	0-07025	0-08428	0-08649	0-09474
	Montreal	Pound	0-07516	0-08684	0-0822	0-08488	0-10070
	London	Long ton	35-962	36-359	33-319	35-430	42-650
Gold (in Canadian funds)	New York	Fine oz.	23-47	28-00	34-50	35-19	35-03
	Montreal	Pound	0-03180	0-03869	0-03860	0-04065	0-04710
	London	Long ton	11-913	11-670	10-935	14-238	17-599
Lead	New York	Pound	0-35	0-35	0-35	0-35	0-35
	Montreal	Pound	0-03511	0-03705	0-04488	0-03925	0-04642
	London	Long ton	11-913	11-670	10-935	14-238	17-599
Nickel	New York	Pound	0-35	0-35	0-35	0-35	0-35
Platinum	New York	Fine oz.	10-104*	*7-630	*7-75	*7-325	*8-138
Silver	New York	Fine oz.	0-27892	0-34727	0-47973	0-64273	0-45087
	Montreal	Pound	0-22017	0-39110	0-52191	0-50420	0-46441
Tin	New York	Pound	0-02876	0-04029	0-04158	0-04328	0-04901
	St. Louis	Pound	0-03724	0-04488	0-04059	0-03992	0-04153
Zinc	Montreal	Pound	0-03724	0-04488	0-04059	0-03992	0-04153
	London	Long ton	13-545	15-666	13-657	14-082	14-920

Note.—All prices in dollars per unit excepting London copper, lead and zinc prices which are quoted in pounds sterling per long ton.

* Prices for platinum are quoted in pounds sterling per fine ounce.

Metal Prices by Months, 1935-1936

Month	Copper (Electrolytic)				Pig Lead					
	New York (In cents per pound)		London (In £ sterling per long ton)		Montreal (In cents per pound)		New York (In cents per pound)		London (In £ sterling per long ton)	
	1935	1936	1935	1936	1935	1936	1935	1936	1935	1936
January	8-775	9-026	31-201	38-788	3-250	4-362	3-692	4-500	10-321	15-397
February	8-775	9-025	30-234	39-463	3-250	4-516	3-528	4-515	10-216	16-022
March	8-775	9-025	31-607	40-227	3-321	4-614	3-579	4-690	11-012	16-608
April	8-775	9-169	34-763	41-131	3-426	4-368	3-692	4-600	12-231	16-097
May	8-775	9-275	36-733	40-839	3-686	4-130	3-962	4-600	13-861	15-530
June	8-634	9-275	34-039	40-357	3-711	4-093	4-020	4-600	13-776	15-170
July	7-775	9-352	34-261	41-228	3-882	4-213	4-123	4-600	14-451	15-856
August	7-979	9-525	35-976	42-375	4-164	4-412	4-254	4-600	15-774	16-772
September	8-504	9-525	37-952	43-267	4-298	4-695	4-413	4-600	16-262	18-009
October	8-967	9-503	39-609	45-295	4-716	4-676	4-512	4-631	18-209	18-446
November	9-025	10-161	39-396	48-467	4-740	5-384	4-500	5-114	17-938	21-723
December	9-025	10-763	30-313	50-364	4-655	6-246	4-500	5-554	16-803	25-560
Average	8-640	9-474	35-430	42-650	3-925	4-642	4-065	4-710	14-238	17-599

Transposed into Canadian funds the average price of copper, based on the London market, was 7-79542 cents per pound in 1935 and 9-47695 cents in 1936; the average price of lead, based on the same market, was 3-13318 cents per pound in 1935 and 3-91277 cents in 1936.

Metal Prices by Months, 1935-1936

Month	Silver				Zinc					
	New York (In cents per oz. ·999 fine)		London (In pence per oz. ·925 fine)		Montreal (In cents per pound)		St. Louis (In cents per pound)		London (In £ sterling per long ton)	
	1935	1936	1935	1936	1935	1936	1935	1936	1935	1936
January	54-418	47-250	24-584	20-250	3-650	4-221	3-730	4-848	11-994	14-488
February	54-002	44-750	24-818	19-796	3-640	4-400	3-714	4-859	11-819	15-125
March	59-048	44-750	27-380	19-663	3-636	4-548	3-894	4-900	12-095	15-983
April	67-788	44-892	30-986	20-245	3-600	4-235	4-030	4-900	12-891	15-181
May	74-356	44-869	33-865	20-248	3-943	3-980	4-220	4-900	14-574	14-536
June	71-940	44-750	32-346	19-770	3-816	3-886	4-299	4-880	13-734	13-896
July	68-216	44-750	30-500	19-590	3-905	3-796	4-325	4-783	14-065	13-579
August	66-366	44-750	29-478	19-490	4-080	3-807	4-535	4-800	14-714	13-528
September	65-375	44-750	29-255	19-579	4-224	3-891	4-669	4-850	15-414	13-906
October	65-375	44-750	29-368	19-977	4-467	3-914	4-825	4-850	10-440	14-554
November	65-375	45-431	29-284	21-050	4-490	4-388	4-850	4-974	16-193	16-301
December	59-420	45-352	25-563	21-238	4-364	4-768	4-850	5-273	15-091	17-957
Average	64-273	45-067	28-952	20-075	3-992	4-153	4-328	4-901	14-082	14-920

The average price of silver in Canadian funds based on the New York market in 1935 was 64-78991 cents per fine ounce and in 1936 it was 45-12654 cents.

The average price of zinc in Canadian funds based on the London market in 1935 was 3-09899 cents per pound and in 1936 it was 3-31501 cents.

Table showing the amount paid in Canadian dollars for one £ Sterling and one United States dollar, by months, 1935-1936

	London		New York	
	1935	1936	1935	1936
January.....	4 887	4 966	0 999	1 001
February.....	4 883	4 994	1 001	0 999
March.....	4 825	4 978	1 010	1 001
April.....	4 862	4 967	1 005	1 005
May.....	4 896	4 980	1 002	1 002
June.....	4 943	5 033	1 001	1 003
July.....	4 967	5 027	1 002	1 001
August.....	4 985	5 027	1 003	1 000
September.....	4 970	5 039	1 008	1 000
October.....	4 978	4 897	1 014	1 000
November.....	4 978	4 882	1 011	0 999
December.....	4 976	4 904	1 000	0 999
Average	4 929	4 975	1 005	1 001

General Statistics on the Mineral Producing Industries in Canada, 1935, with Comparative Totals for 1934

Industries	No. of plants	Capital employed	No. of employees	Salaries and wages	Net Income from sales (a)
METAL MINING—					
		\$		\$	\$
Alluvial gold.....	86	9,198,533	702	1,227,971	2,106,025
Auriferous quartz.....	384	193,728,802	19,834	31,523,907	75,120,774
Copper-gold-silver.....	18	38,481,682	3,430	5,040,196	13,243,163
Silver-cobalt.....	28	6,380,731	402	494,791	2,070,716
Silver-lead-zinc.....	70	16,506,941	1,657	2,431,110	10,553,086
Nickel copper.....	7	26,685,284	3,552	6,059,407	11,030,921
Miscellaneous.....	12	733,497	52	83,612	22,847
Smelting and refining.....	14	145,686,299	8,944	12,687,356	x 59,441,583
Total..... 1935	619	437,471,769	38,603	53,524,350	173,588,815
Total..... 1934	636	465,583,818	31,111	51,818,448	186,785,532
NON-METAL MINING, INCLUDING FUELS—					
Coal.....	556	110,516,517	26,198	26,595,344	26,894,671
Natural gas.....	3,100	60,221,051	1,719	1,932,937	6,580,061
Crude petroleum.....	2,285	33,398,894	940	1,046,046	3,217,927
Abrasives.....	9	114,114	42	25,135	60,824
Asbestos.....	9	16,805,583	2,072	1,904,053	4,996,163
Feldspar and quartz.....	28	1,151,980	260	182,792	511,200
Gypsum.....	13	5,737,114	467	367,007	745,176
Iron oxides (ochre).....	5	175,935	32	26,748	64,836
Mica.....	24	145,557	92	45,247	81,343
Salt.....	10	3,776,333	473	597,785	1,667,038
Talc and soapstone.....	8	630,501	94	69,803	134,121
Miscellaneous.....	44	2,555,124	366	357,837	785,784
Total..... 1935	6,181	211,237,709	32,755	33,153,794	45,739,144
Total..... 1934	5,976	263,120,280	32,195	31,763,192	68,540,554
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS—					
Brick, tile, sewer pipe, etc.....	136	20,141,431	1,609	1,293,159	2,127,241
Stoneware and pottery.....	3	357,575	119	94,765	205,714
Cement.....	9	52,454,004	924	1,027,416	3,958,369
Lime.....	54	5,767,391	756	556,049	2,115,354
Sand and gravel.....	5,400	4,849,792	3,015	2,479,418	6,273,377
Stone.....	496	12,277,518	2,475	1,950,698	4,573,224
Total..... 1935	6,098	81,790,621	8,898	7,491,595	19,253,309
Total..... 1934	5,111	102,319,089	7,167	5,541,216	19,286,761
Grand Total..... 1935	12,898	777,500,099	81,256	100,080,359	238,581,268
Grand Total..... 1934	12,023	831,023,187	73,505	88,126,186	266,652,847
Provinces					
Nova Scotia.....	267	53,566,182	14,550	11,301,510	14,207,064
New Brunswick.....	520	4,522,963	2,300	1,865,407	2,497,339
Quebec.....	3,850	117,534,858	11,811	12,794,600	33,679,150
Ontario.....	6,273	322,300,192	25,294	38,152,140	130,220,081
Manitoba.....	119	40,944,700	2,346	3,403,649	9,040,591
Saskatchewan.....	223	11,390,801	1,457	1,313,041	2,869,351
Alberta.....	585	102,656,116	4,706	10,862,198	16,738,472
British Columbia.....	1,048	118,291,187	12,352	16,479,606	28,172,657
Yukon and Northwest Territories.....	13	6,290,130	380	878,408	1,186,593
Canada..... 1935	12,898	777,500,099	80,256	100,080,359	238,581,268
Canada..... 1934	12,023	831,023,187	73,505	88,126,186	266,652,847

(a) In 1935, for the first time, the value of process supplies and cost of electric power used were deducted from the value of sales, therefore the net income from sales is not comparable with those given in previous reports.

(x) Value added by smelting.

Antimony

Antimony has not been produced in Canada for several years. Ores containing antimony are located in Hants county, Nova Scotia, and in York county, New Brunswick. A small amount has been recovered from these deposits. Some silver-lead ores of British Columbia carry antimony in small amounts and the refined metal was produced from these ores at Trail, British Columbia, by the Consolidated Mining and Smelting Company of Canada, Limited, in 1907, 1909, 1915 and 1916. Antimony is sometimes contained in the silver-lead-bismuth bullion made at Deloro, Ontario, from the ores of the Cobalt district. China is the principal antimony producing country with approximately 95 per cent coming from Hunan province.

During recent years a large proportion of the world's antimony output has been absorbed in the manufacture of storage batteries and bearing metals; the metal is also employed in the manufacture of pigments, type metal, solder, rubber goods and various other products.

The average price of standard brands of antimony in the New York market was 12.24 cents per pound in 1936.

Imports of antimony or regulus of, not ground, totalled 1,279,535 pounds valued at \$109,656 in 1936 as compared with 926,959 pounds worth \$113,072 in 1935. Antimony and titanium oxide imports totalled 4,198,017 pounds worth \$424,451 and antimony salts, namely, tartar emetic, chloride and lactate (antimonine) totalled 45,356 pounds valued at \$7,149. Imports of antimony salts for dyeing amounted to 366 pounds worth \$40 during the year under review.

Arsenic

Arsenic is recovered in Canada by the Deloro Smelting and Refining Company, Ltd., Deloro, Ontario, in the treatment of the silver-cobalt-arsenic ores of the Cobalt district of Ontario. Arsenical gold ores occur in Nova Scotia, Quebec, Ontario, Manitoba and British Columbia but no commercial production was reported by the mines in these provinces during 1936. The O'Brien gold mine in western Quebec is equipped with a roasting plant and bag house for the purpose of removing the arsenic. The calcines are cyanided. No refined arsenic has been made at this property to date. The chief uses of arsenic are in the manufacture of Paris green, lead arsenate, lime arsenate, weed killer, grasshopper poison, cattle dips, and in the manufacture of glass. Consumption of arsenic acid and arsenious acid in the manufacture of insecticides in Canada totalled 2,736,089 pounds valued at \$86,983 in 1935 as compared with 4,709,443 pounds worth \$168,185 in 1934.

Production in Canada, Imports and Exports of Arsenic, 1935 and 1936

	1935		1936	
	Quantity	Value	Quantity	Value
	lb.	\$	lb.	\$
PRODUCTION—				
White arsenic and arsenic in other forms..... Total	2,538,789	75,326	1,365,666	42,491
IMPORTS—				
White arsenic (arsenious oxide).....	11,759	546	529	90
Sulphide of arsenic.....	27,777	3,396	17,940	2,307
Soda, arseniate, bisarsenite and stannate of.....	2,128	666	6,520	1,863
Arsenate of lead.....	324,328	26,388	223,300	20,096
Arsenate of lime.....	144,023	7,780	276,552	16,372
Total	-	38,782	-	40,728
EXPORTS—				
Arsenic, n.o.p..... Total	2,230,606	69,866	688,490	25,604

Bismuth

Canadian production of bismuth in 1936 totalled 364,165 pounds valued at \$360,523 as compared with 13,797 pounds valued at \$13,245 in 1935. Bismuth is contained in a silver-lead-bismuth bullion made by the Deloro Smelting and Refining Company, Limited, Deloro, Ontario, which is exported for treatment in a foreign refinery. Metallic bismuth is made at Trail, British Columbia, by the Consolidated Mining and Smelting Company, Limited. Bismuth is utilized in the manufacture of various alloys with low melting points and in the production of astringents and various chemical products. The United States, Bolivia, and Spain are the chief bismuth producing countries. In Bolivia and Spain the ores of bismuth are mined whilst in other countries the metal is recovered as a by-product in the refining of ores.

Cadmium

Production of cadmium in 1936 was valued at \$699,465 as compared with \$441,203 in 1935. Cadmium is produced at Trail, British Columbia, by the Consolidated Mining and Smelting Company, Ltd., and at Flin Flon, Manitoba, by the Hudson Bay Mining and Smelting Co. Ltd. The latter company has been recovering and storing cadmium residues and began commercial production for the first time in 1936. The uses of cadmium are increasing. Cadmium alloys are now used in the manufacture of bearings for automobiles. The use of a cadmium-copper alloy for tramway trolley wires and for overhead telegraph and telephone lines is increasing. A copper-cadmium alloy with a low cadmium content is being introduced for long span, high voltage transmission lines. The average price was 89 cents per pound in 1936 as compared with 76 cents per pound in 1935. (London prices in Canadian funds.)

Chromite

A small quantity of chromite was produced from the Thetford-Black Lake area of the Eastern Townships of Quebec. Chromite is mined also near Obonga Lake, northwestern Ontario; the ore is milled at the property and the concentrates hauled to Collins Station on the Canadian National Railways from which point they are shipped to the company's smelter at Sault Ste. Marie.

Cobalt

Cobalt is recovered from ore deposits in the Belgian Congo, Southern Rhodesia, Morocco and Canada. It was reported that cobalt was being produced in Japan in 1935 and interest has been taken in cobalt deposits in Russia. Canadian production is entirely from the silver-cobalt ores of the Cobalt and Gowganda districts of Ontario. The Deloro Smelting and Refining Company, Ltd., Deloro, Ontario, treat these ores and produce cobalt metal and cobalt oxide. Ores are also exported for treatment in foreign smelters. Cobalt oxide finds considerable use in the ceramic industry and the metal is an important constituent of the cobalt-chromium-tungsten alloy "stellite," a high speed cutting tool for use on the lathe. This alloy has also found favour in other ways where hardness and resistance to wear are of prime importance.

Production in Canada and Exports of Cobalt, 1935 and 1936

	1935		1936	
	Pounds	\$	Pounds	\$
PRODUCTION—				
Cobalt, computed as cobalt in metal, in oxides sold and in ores and residues exported.....				
Total	681,419	512,765	881,995	801,857
IMPORTS—				
Cobalt oxide.....	160	173	410	610
EXPORTS—				
Cobalt, alloys, cobalt metallic, cobalt oxides, cobalt salts and cobalt ores.....				
Total	-	541,554	-	842,347

Copper

Copper output from Canadian mines was only slightly greater than in 1935 but owing to the increase in price, the value was greater by 22 per cent. Ontario and Saskatchewan copper producing mines recorded an increase in copper production but the output from Quebec, Manitoba and British Columbia was less. The Granby Consolidated Mining, Smelting and Power Co., Ltd., closed down their property at Anyox, British Columbia, in August, 1935, leaving the Britannia mine at Howe Sound as the only important producer in the province. Output from this mine was greater than in 1935, the concentrates being exported to Tacoma, Washington, U.S.A., for treatment. It is expected the Granby Company will re-open their Copper Mountain property, located near Princeton, British Columbia, during 1937.

Production of copper in Manitoba and Saskatchewan originates entirely from the ores of the Flin Flon mine. Blister copper made at the Flin Flon smelter is refined by Canadian Copper Refiners, Limited, at Montreal East, Quebec. It is expected that the Sherritt-Gordon Mine in Manitoba will re-open during the summer of 1937.

Ontario production consists of copper in converter copper made by the International Nickel Company, Limited, at Copper Cliff, and copper in copper matte exported by that company and by the Falconbridge Nickel Mines, Ltd.

Quebec production consisted of blister copper in anode form made at the smelter of Noranda Mines, Limited, Noranda, and copper in concentrates exported from Eustis, Quebec, by the Consolidated Copper and Sulphur Co., Ltd. During the year preparations were made for the re-opening of the former Aldermac Mines Ltd. The shaft was enlarged, the mill was overhauled, and at the year end was practically ready to commence production.

Prices of copper improved greatly during the year. The price rose from an average of 8.599 cents per pound (London prices transposed to Canadian funds) in January to 11.0266 cents in December. The average for the year was 9.47695 cents per pound as compared with 7.8 cents in 1935.

Production in Canada, Imports and Exports of Copper, 1935 and 1936

	1935		1936	
	Pounds	Value \$	Pounds	Value \$
PRODUCTION—				
By Provinces—				
Nova Scotia.....	—	—	779,307	73,878
Quebec.....	79,050,906	6,162,350	66,340,175	6,289,048
Ontario.....	252,027,928	19,295,965	287,910,908	20,898,350
Manitoba.....	38,011,371	2,963,146	29,853,220	2,830,085
Saskatchewan.....	11,429,452	890,974	14,971,609	1,419,309
British Columbia.....	38,478,043	2,999,525	21,067,501	1,997,199*
Total.....	418,997,700	32,311,960	420,922,720	39,507,869
By Sources—				
In blister and anode copper produced.....	386,840,587	30,155,849	382,310,369	36,232,561
In ores, concentrates and copper matte exported.....	19,612,074	1,528,889	25,622,857	2,430,991
In nickel-copper matte exported.....	12,544,439	627,222	12,989,494	844,317
Total.....	418,997,700	32,311,960	420,922,720	39,507,869
IMPORTS—				
Copper in burs or rods, when imported by manufacturers of trolley, telegraph and telephone wires and electric cables for use only in the manufacture of such articles in their own factories.....	611,500	72,117	742,400	93,489
Copper bars for use only in the manufacture of rods to be used exclusively in the manufacture of electrical conductors, and copper rods for such manufacture, individual units of conductors not to exceed area of No. 7-0 gauge conductor.....	6,600	700	18,700	1,858
Copper in bars or rods, in lengths of not less than 6 feet, unmanufactured.....	120,800	20,435	165,500	30,723
Copper in blocks, pigs or ingots.....	37,200	3,719	189,300	19,858
Copper, scrap, cathode plates, etc.....	16,300	1,416	7,000	316
Copper in strips, sheets or plates not polished or coated.....	324,300	60,044	378,700	71,262
Copper tubing in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured.....	362,778	81,193	431,244	106,253
Copper wire.....	16,271	3,586	21,055	5,017
Copper wire cloth, or woven wire of copper.....	—	3,242	—	6,263
Copper, manufactures of, n.o.p.....	—	352,961	—	388,399
Copper, precipitate of, crude.....	4,420	486	—	—
Anodes of nickel, zinc, copper, silver or gold.....	—	—	—	6,384
Copper, sub-acetate of, or verdigris, dry.....	6,613	1,062	7,015	1,212
Copper, sulphate of (blue vitriol).....	5,518,899	161,092	4,542,122	149,889
Copper rollers adapted for use in calico printing.....	—	71,836	—	78,621
Copper, sulphate of, dehydrated, for agricultural or spraying purposes.....	32,100	2,747	7,000	583
Total.....	—	836,616	—	960,127
EXPORTS—				
Copper, fine, contained in ore, matte, regulus, etc.....	38,702,700	1,870,542	45,519,600	2,971,042
Copper, blister.....	73,356,200	5,589,624	—	—
Copper, old and scrap.....	6,327,400	360,000	8,108,700	535,753
Copper in ingots, burs, cakes, slabs and billets.....	243,535,200	18,061,278	310,860,400	27,460,714
Copper in rods, strips, sheets, plates, and tubing.....	36,516,100	3,065,480	48,152,900	4,769,923
Copper wire and cable.....	—	469,552	—	469,789
Copper manufactures, n.o.p.....	—	245,221	—	294,433
Total.....	—	29,661,697	—	36,501,654
Copper coin, foreign.....	—	1,596	—	3,048
Copper coin, Canadian.....	—	93	—	570

*Includes a small production from the N.W.T.

Gold

Production of gold in Canada in 1936 totalled 3,735,305 fine ounces which, when valued at \$35.03 per fine ounce, was worth \$130,847,733 as compared with 3,284,890 fine ounces worth \$115,595,279 in 1935. The value of Canadian gold production is 36 per cent of the total of all minerals produced and 51 per cent of the value of all metals produced. In addition to the auriferous quartz mines, gold is recovered in substantial quantities from complex copper-gold-silver ores, copper-zinc ores, and nickel-copper ores.

Production from Nova Scotia mines totalled 11,902 fine ounces as against 9,376 fine ounces in the preceding year. The provincial government has played an active part in stimulating activities in that province. Geological knowledge of the goldfields of the province was made available to the prospectors, diamond drills were placed at the disposal of bona fide prospectors, ball mills were installed for experimental use at several of the important developments, and cheap electric power was made available to the mining centres.

Operations in Quebec have been most active along the northern gold belt. Production totalled 666,139 fine ounces as against 470,552 fine ounces in the preceding year. Many mills have stepped up their capacity during the year and several properties came into production for the first time. Among the most outstanding are the Siscoe, Lamaque, Beattie, Canadian Malartic, Sullivan, O'Brien and McWatters. The new producers in 1936 were the Shawkey, Belleterre, Stadacona, Randall and Thompson Cadillac. The latter commenced operations again after a previous shutdown. Heavy development work which will lead to production in a short time was conducted at the Sigma, Sladen Malartic, East Malartic and several others.

Ontario production totalled 2,369,416 fine ounces as against 2,220,336 fine ounces in 1935. Of the total, the Porcupine Camp accounted for 43 per cent, the Kirkland Lake camp, 41 per cent, the Sudbury nickel-copper ores, 3 per cent, and the remainder came from active properties in other sections of the province. In the Thunder Bay district the Little Long Lac mine produced steadily and the McLeod Cockshutt and Hard Rock carried on intensive development work. In the Red Lake area, the Howey is the principal producer; the Red Lake Gold Shore brought in its 150 ton mill, the Madsen is planning large developments and the Mackenzie Red Lake will increase the capacity of its mill. The Pickle Crow and Central Patricia are very important producers in the Crow river area. The Omega at Larder Lake operated steadily and work on the Kerr Addison and Martin Bird suggest an increased production in this field. Properties are opening up in the Kenora district, a section of Ontario which was a gold producer in the eighties.

The Flin Flon copper-gold-zinc ore body is the greatest source of gold in Manitoba and in addition several auriferous quartz properties are now steady producers. The San Antonio, which has been producing for five years, enlarged their development program and made a new find on the 1,050 foot level which is very promising. The Central Manitoba met with some success in their search for new ore and the ore situation at God's Lake gold mine improved as a result of the year's work. Gunnar Gold Mines began mill operations in April with a 150 ton mill. The Laguna Gold Mines Ltd., on Herb Lake, resumed operations in June, 1934, and mill production commenced in August of the year under review. Underground work and surface operations were carried on by many other companies. Very encouraging news came out from operations at Lake Athabasca in the northern part of Saskatchewan and Alberta; the discovery of a rich find at Outpost Island in Great Slave Lake is sure to increase interest in that area during the coming season.

British Columbia's production at 449,126 fine ounces marked an increase of 15 per cent over 1935. The Bralorne expanded operations, the Pioneer was engaged in an extensive development program, and the Cariboo gold quartz resumed production on a larger scale. Interest was intensified in the old Hedley camp in the Osoyoos mining division with the successful development of the Hedley Mascot. Conditions in the Nelson district showed improvement and output should be enlarged from the Stewart district as a direct result of the amalgamation of the Premier with other properties in that area under the name of the Silbak Premier Mining Company. The chief contributing placer areas, the Omineca, Cariboo and Atlin, produced more gold than in 1935.

Gold production of the Yukon Territory was higher also, the largest operator in this district being the Yukon Consolidated Gold Corporation.

Production of New Gold in Canada, by Provinces and Sources, 1935 and 1936

(Gold at \$20,671834 per fine ounce)

	1935		1936	
	Fine troy ounces	\$	Fine troy ounces	\$
NOVA SCOTIA—				
In gold bullion and ores exported.....	9,376	193,819	11,902	246,036
Estimated exchange equalization on gold produced.....	—	136,123	—	170,891
Total value—Canadian funds.....	—	329,942	—	416,927
QUEBEC—				
In blister copper, in ores shipped and in gold bullion.....	470,552	9,727,173	666,139	13,770,315
Estimated exchange equalization on gold produced.....	—	6,831,552	—	9,564,534
Total Value—Canadian funds.....	—	16,558,725	—	23,334,849
ONTARIO—				
*Porcupine area—In gold bullion.....	968,546	20,021,622	1,019,037	21,065,364
*Kirkland Lake—In gold bullion.....	948,044	19,597,808	964,262	19,933,064
*Other gold mines—In gold bullion.....	234,545	4,848,475	312,740	6,464,909
Copper-nickel and other ores.....	69,201	1,430,512	73,377	1,516,837
Total	2,220,336	45,898,417	2,369,416	48,980,174
Estimated exchange equalization on gold produced.....	—	32,235,207	—	34,020,468
Total Value—Canadian funds.....	—	78,133,624	—	83,000,642
MANITOBA—				
In gold bullion, ores shipped and in blister copper.....	142,613	2,948,072	139,288	2,879,338
Estimated exchange equalization on gold produced.....	—	2,070,479	—	1,999,921
Total Value—Canadian funds.....	—	5,018,551	—	4,879,259
SASKATCHEWAN—				
In ores shipped to Canadian smelters and crude gold to Royal Canadian Mint.....	14,323	296,083	48,981	1,012,527
Estimated exchange equalization on gold produced.....	—	207,943	—	703,277
Total value—Canadian funds.....	—	504,026	—	1,715,804
ALBERTA—				
In alluvial gold.....	150	3,101	109	2,253
Estimated exchange equalization on gold produced.....	—	2,178	—	1,565
Total Value—Canadian funds.....	—	5,279	—	3,818
BRITISH COLUMBIA—				
In alluvial gold.....	24,744	511,504	34,711	717,540
In gold bullion.....	191,138	3,951,173	211,204	4,365,974
In blister copper.....	5,170	106,873	—	—
In base bullion and in matte and ores exported.....	170,581	3,526,222	203,211	4,200,744
Total	391,633	8,095,772	449,126	9,284,258
Estimated exchange equalization on gold produced.....	—	5,685,793	—	6,448,626
Total Value—Canadian funds.....	—	13,781,565	—	15,732,884
YUKON AND NORTH WEST TERRITORIES—				
In alluvial gold.....	35,705	738,088	50,192	1,037,561
In ores shipped.....	202	4,175	152	3,142
Total	35,907	742,263	50,344	1,040,703
Estimated exchange equalization on gold produced.....	—	521,304	—	722,847
Total Value—Canadian funds.....	—	1,263,567	—	1,763,550
Total for Canada	3,284,890	67,904,700	3,735,305	77,215,604
Total estimated exchange equalization on gold produced	—	47,690,579	—	53,632,129
Grand total value including exchange	—	115,595,279	—	130,847,733

* Includes relatively small amounts of gold contained in slags and ore shipped.

NOTE—In 1935 the estimated average price of a troy ounce of fine gold in Canadian funds was \$35.19, in 1936 the corresponding price was \$35.03.

Imports into Canada and Exports of Gold, 1935 and 1936

	1935	1936
	\$	\$
IMPORTS—		
Coins and bullion—		
Coins, British, Canadian and foreign gold coins.....	847,123	863,855
Gold bullion in bars, blocks, ingots, drops, sheets or plates, unmanufactured.....	366,750	28,522
Total	1,213,873	892,377
Gold, other—		
Bullion or gold fringe.....	15,771	8,633
Manufactures of gold and silver—		
Leaf.....	62,430	61,724
Sweepings.....	-	321
Manufactures, n.o.p.....	24,285	26,865
Electroplated ware.....	439,613	1,077,866
Gold, unmanufactured, for commercial purposes.....	137,427	135,764
Total	679,526	1,310,873
EXPORTS—		
Coin and bullion—		
Gold coin—		
Canadian.....	-	-
Foreign.....	9,601,367	4,746,207
Gold bullion—		
† Canadian.....	95,990,234	(a) 71,488,985
Foreign.....	-	-
Total—Canadian	95,990,234	71,488,985
Foreign	9,601,367	4,746,207
Total coin and fine gold bullion	105,591,601	76,235,192
*Gold-bearing quartz, dust, nuggets and crude bullion obtained direct from mining operations.....	4,316,421	5,891,517
Jewellers' sweepings (gold, silver and platinum).....	772,725	825,251
Total	5,089,146	6,716,769

* Metal content in 1936—172,176 fine ounces of gold. (a) Non monetary.

† Metal content in 1936—2,039,237 fine ounces of gold.

Fine Gold and Fine Silver Content of Shipments to the Royal Canadian Mint, Ottawa, Canada, by Sources, 1936

	Gold	Silver
	Fine ounces	Fine ounces
British Columbia.....	281,492-846	48,792-86
Alberta sundries.....	108-577	8-85
Saskatchewan sundries.....	-	-
Manitoba.....	72,313-529	10,594-07
Ontario.....	2,346,528-522	379,692-08
Quebec.....	751,386-258	54,855-57
Nova Scotia.....	10,758-137	356-51
Jewellery and scrap.....	30,363-625	7,933-88
Vancouver Assay Office.....	93,437-787	18,692-34
Yukon sundries.....	6-585	1-76
Foreign coin.....	16,934-077	-
Total	4,693,329-943	526,928-52

IRON AND STEEL

Pig iron production in Canada during 1936 was 13 per cent higher than in 1935 and the output of primary steel was up 18 per cent. Pig iron at 678,672 long tons and steel at 1,114,550 long tons each recorded an improvement, for the fourth year in succession, after the low in 1932 of 144,130 tons for pig iron and 339,346 tons for steel, but fell short of the high established in 1929 at 1,080,160 tons for pig iron and 1,378,024 tons for steel.

Support for this primary industry was afforded by an improvement in business generally. The employment index for all iron and steel industries advanced to 92.1 on December 1, 1936, from 86.8 on December 1, 1935. The primary group was up to 120.9 from 115.7 but the major gain was to 140.5 from 120.0 in the plants making automobiles and parts, due to plant expansions and extensive retooling operations. The heavy machinery index advanced to 110.4 from 93.6 and the heating appliances index to 121.6 from 105.3. The mining index rose to 150.3 from 131.1.

Production of Pig Iron and Ferro-Alloys in Canada, 1935 and 1936

(Tons of 2,240 pounds)

	1935			1936		
	For own use	For sale	Total	For own use	For sale	Total
PIG IRON—						
Basic.....	447,913	20,331	468,244	513,953	17,222	531,175
Foundry.....	—	62,294	62,294	1,300	82,493	83,793
Malleable.....	—	69,337	69,337	2,126	61,578	63,704
Total.....	447,913	151,962	599,875	517,379	161,293	678,672
Ferro-alloys.....	—	56,616	56,616	—	74,065	74,065

Production of Steel Ingots and Castings, 1935 and 1936

(Tons of 2,240 pounds)

	1935			1936		
	For own use	For sale	Total	For own use	For sale	Total
STEEL INGOTS—						
Open hearth—Basic.....	871,681	763	872,444	1,036,951	55	1,037,006
Electric.....	36,742	—	36,742	43,506	—	43,506
Other.....	—	—	—	—	—	—
Total Steel Ingots.....	908,423	763	909,186	1,080,457	55	1,080,512
STEEL INGOTS—						
Open hearth—Basic.....	1,615	7,504	9,119	1,421	8,744	10,165
Bessemer.....	—	645	645	—	565	565
Electric.....	3,995	18,582	22,577	3,460	19,848	23,308
Total Direct Steel Castings.....	5,610	26,731	32,341	4,881	29,157	34,038
Grand Total.....	914,033	27,494	941,527	1,085,338	29,212	1,114,550

Lead

Lead production consisting of lead in base bullion made at Trail, British Columbia, and lead in concentrates exported totalled 382,754,774 pounds valued at \$14,976,045 as compared with 339,105,079 pounds worth \$10,624,772 in 1935, an increase of 13 per cent in quantity and 41 per cent in value. Over 98 per cent of Canada's lead is produced from ores mined in British Columbia and the famous Sullivan silver-lead-zinc deposit is the principal source. Several other properties in the Kootenay district of the province shipped concentrates to Trail and the increase in price during the year was of considerable assistance to the operators. Lead is also contained in ores exported by the Silbak Premier Company and by the Britannia mine. The Yukon production

was from concentrates shipped from the Mayo camp. The Tetreault mine in Quebec accounted for the output from that province. Concentrates from this property are exported to Belgium. Nova Scotia entered the lists again this year as a lead producer with exports of concentrates from the Sterling mine in Cape Breton by the British Metal (Canada) Corporation.

Lead prices improved steadily during the year. In January the price of lead in London, converted to Canadian funds, averaged 3.413 cents per pound; in September, 4 cents; in November 4.7 cents, and December, 5.596 cents. The average for the year was 3.913 cents per pound as compared with 3.133 cents in 1935.

Production in Canada, Imports and Exports of Lead, 1935 and 1936

	1935		1936	
	Pounds	Value \$	Pounds	Value \$
PRODUCTION—				
Nova Scotia	—	—	1,901,712	74,408
Quebec	2,047,624	64,156	2,040,810	79,851
Ontario	22,532	706	17,442	682
Manitoba	19,179	601	—	—
British Columbia	336,784,326	10,552,059	376,261,263	14,721,974
Yukon and North West Territories	231,418	7,250	2,833,547	99,130
Total	339,165,079	10,624,772	382,754,774	14,976,045
IMPORTS—				
Old and scrap, pig and block	108,863	5,472	63,879	4,234
Bars and sheets	69,794	2,959	36,192	2,117
Litharge	1,750,400	100,689	1,968,600	124,001
Acetate of lead	216,600	16,504	128,569	8,637
Nitrate of lead	201,160	11,447	163,283	9,292
Other manufactures	—	70,988	—	79,823
Pipe lead	4,022	301	24,084	1,815
Shots and bullets	9,824	696	8,066	828
Tea lead	3,410	252	—	—
Lead arsenate	324,328	26,388	223,300	20,096
Lead tetraethyl, compounds of	2,381,734	1,249,477	3,019,356	1,414,720
Lead capsules for bottles	—	44,965	—	63,964
Lead pigments—				
Dry white lead	10,196	1,089	21,302	1,458
White lead, ground in oil	16,788	1,424	15,137	1,348
Dry red lead and orange mineral	595,584	35,392	847,859	55,353
Total	—	1,568,043	—	1,787,689
EXPORTS—				
Lead, contained in ore	11,305,100	280,955	9,305,500	287,569
Pig lead	282,913,500	6,871,469	321,350,900	10,113,282
White lead	217,100	14,068	634,200	43,555
Total	—	7,175,492	—	10,444,406

Manganese Ore

Manganese ore production totalled 221 tons valued at \$1,316. This was mined in the province of New Brunswick. The world's chief sources of manganese are Russia, Southern and Central India, Brazil, the Gold Coast of Africa, Union of South Africa, and Czechoslovakia. The principal use is in the manufacture of manganese-iron alloys which are used in the production of special steels.

Molybdenite

No molybdenite production from Canadian sources has been reported since 1931. This mineral has been found in Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and British Columbia, and mines have been actively operated in Quebec and Ontario. Considerable interest centres around the Phoenix Molybdenum Corporation's operation in Renfrew county, Ontario, where development work is being carried on at the present time. The Consolidated Mining and Smelting Company, Limited, did a small amount of development work on a molybdenite property near Clinton, British Columbia. Some preliminary work was also done on the Bain property, Hull county, Quebec.

Nickel

Nickel production in 1936 was the greatest ever recorded in Canada's mining history. Heavy expenditures for enlargements were made during 1936 by the International Nickel Company, Ltd., and the Falconbridge Nickel Mines, Ltd., took advantage of a forced shutdown, caused by a disastrous fire at the plant from which they derive their power, to increase the furnace capacity of the smelter. An interesting development in the Canadian nickel industry in 1936 was the production and shipment of copper-nickel matte by Cuniptau Mines, Ltd.; this was produced from ores mined in Strathy township, Temagami district, Ontario. In western Canada, the B.C. Nickel Mines, Ltd., continued development work at its property at Choate, British Columbia, and made a shipment of nickel ore to Japan.

Production in Canada, Imports and Exports of Nickel, 1935 and 1936

	1935		1936	
	Quantity	Value	Quantity	Value
	Lb.	\$	Lb.	\$
PRODUCTION—				
Nickel in matte and spiegs exported.....				
Refined and electrolytic nickel produced.....				
Nickel in oxides and salts sold.....				
	138,516,240	35,345,103	169,737,864	43,978,413
IMPORTS—				
Nickel, nickel silver and German silver in ingots or block, n.o.p. ...	3,643	959	10,008	2,603
Nickel in bars and rods, strips, sheets and plates.....	445,112	191,330	760,061	300,141
Nickel silver and German silver in bars, rods, strips, sheets, plates or anodes.....	79,978	10,015	101,585	27,920
Nickel chromium in bars or rods, etc.....	43,434	41,381	52,825	51,170
German, Nevada and nickel silver, manufactures of, not plated....	—	127,831	—	126,081
Nickel-plated household hollow-ware.....	—	3,736	—	2,212
Nickel kitchenware.....	—	149	—	1,473
Nickel-plated ware, n.o.p.....	—	814,456	—	665,649
Total nickel and its products.....	—	1,199,457	—	1,177,249
EXPORTS—				
Total (metal in all forms).....	142,726,500	36,285,482	173,637,500	44,594,296

Output from Canadian Nickel-Copper Mines and Smelters, 1933-1936

	Unit	1933	1934	1935	1936
Ore and concentrates treated.....	tons	1,523,814	2,896,959	3,616,223	2,725,775†
Refined nickel(*) produced in Ontario.....	"	20,748	35,487	40,191	51,951
Blister copper produced in Ontario (copper content).....	"	60,398	95,826	119,720	137,360
Matte exported.....	"	43,315	46,755	47,061	54,874
Nickel content of matte.....	"	20,811	28,771	29,044	33,078
Copper content of matte.....	"	12,323	6,692	7,414	9,635

(*) Includes nickel in salts and oxides.

† Represents crude ore and concentrates smelted and is not comparable with figures shown for previous years which represent the tonnage of crude ore smelted together with the tonnage of ore milled; also in addition to the total given for 1936 a relatively small tonnage of nickel bearing ore was exported from British Columbia.

Metals of the Platinum Group

Metals of the platinum group are produced in Canada almost entirely from the nickel-copper ores of the Sudbury district. A small quantity is recovered annually from placer deposits in British Columbia. Platinum, palladium and other metals of this group, recovered in the form of residues in the refineries of the International Nickel Company, are shipped to Acton, England, for refining. Platinum metals produced by the Falconbridge Nickel Co. Ltd. are contained in the nickel-copper matte which is shipped to their refinery in Norway. Russia, Colombia and South Africa are also important producers of these metals. The jewellery industry is the most important user of platinum metals and the amount going into jewellery reflected the accelerating rate of industrial and business recovery. Platinum and palladium have been standard materials for dental purposes for many years. New uses for platinum are continually being found in the chemical and electrical industries.

Production of Platinum Group Metals, Canada, 1935 and 1936

	1935		1936	
	Platinum	Palladium, Rhodium, etc.	Platinum	Palladium, Rhodium, etc.
Produced from Canadian ores.....	Oz. 105,335	84,772	131,551	103,671
Recovered from alluvial sands.....	\$ 3,444,455	1,902,937	5,319,922	2,480,075
	Oz. 39	-	20	-
	\$ 1,275	-	809	-
Total.....	Oz. 105,374	84,772	131,571	103,671
	\$ 3,445,730	1,902,937	5,320,731	2,480,075

Imports into Canada and Exports of Platinum, 1935 and 1936

	1935		1936	
	Oz.	Value	Oz.	Value
IMPORTS—		\$		\$
Platinum retorts, pans, condensers, tubing and pipe.....	-	14,355	-	23,788
Platinum wire and bars, strips, sheets or plates, also platinum, palladium, iridium, osmium, ruthenium and rhodium in lumps, ingots, powder, sponge or scrap.....	-	55,878	-	140,868
Platinum crucibles.....	-	7,665	-	6,489
Total.....	-	77,898	-	171,145
EXPORTS—				
Platinum, and metals of the platinum group contained in concen- trates.....	-	5,055,901	-	6,841,040
Platinum, old and scrap.....	618	25,617	317	10,657
Total.....	-	5,081,518	-	6,952,597

Radium-Uranium

During recent years, Canada has become an important producer of radium. A deposit of pitchblende in association with silver was discovered by Gilbert Labine in the fall of 1930 at Echo Bay, Great Bear Lake, Northwest Territories. Owing to the long distance from civilization, transportation difficulties were tremendous but these have been overcome and mine development has been carried steadily forward. A plant for the recovery of radium and uranium salts was established at Port Hope, Ontario, to which concentrates are being regularly shipped. Uranium products of the company are principally orange and yellow sodium uranate and uranium oxide. Figures of production are not available for publication.

Selenium

Selenium is produced in Canada as a by-product in the refining of blister copper by the Canadian Copper Refiners Ltd. at Montreal East, Quebec, and the Ontario Refining Company, Ltd. at Copper Cliff, Ontario. Production totalled 350,535 pounds valued at \$620,447 as compared with 366,425 pounds valued at \$703,536 in 1935. Production is credited to the provinces from whose ores the blister copper, electrolytically refined, was obtained. The principal use of selenium is in the manufacture of alloys, glass, and rubber goods. The average price of selenium in 1936 on the London market transposed to Canadian funds was \$1.77 per pound.

Silver

Canadian silver production, including silver in base bullion made at Trail, British Columbia, fine silver made at Deloro, Ontario, silver in blister copper made at the various Canadian copper smelters, silver in crude gold bullion produced, and silver in ores, concentrates and matte exported for treatment in foreign smelters and reduction works, totalled 18,231,419 fine ounces valued at \$8,227,840, an increase of 9.7 per cent in quantity over 1935, but, owing to the drop in average price, the total value of production was 23.6 per cent less than in the preceding year.

The mines of British Columbia account for 53 per cent of the total Canadian output and the famous Sullivan silver-lead-zinc mine at Kimberley, British Columbia, owned and operated by the Consolidated Mining and Smelting Company, Ltd., is by far the largest single source. Other mines in the Kootenay district shipped to the Trail smelter during the year and helped to augment

the total. The former Premier Gold Mining Company has amalgamated with several other companies in its immediate district under the name Silbak Premier Mines Ltd. Production of silver from this area was greater in 1936 than in the preceding year.

Yukon production is largely in the form of silver-lead concentrates which are exported to United States smelters. Output from Northwest Territories originates with the silver-radium ores of Great Bear Lake. The principal source of silver in Manitoba and Saskatchewan is the Flin Flon ore body. Production from this mine is computed as the silver content in blister copper made. A small amount is recovered from the crude gold bullion.

For many years the Cobalt, Gowganda and South Lorrain camps of Ontario produced the bulk of the silver in that province. It is of interest to note that the silver produced in association with the nickel-copper ores was greater than the output from these once-famous silver areas. Quebec production is obtained from the Noranda copper-gold-silver ores, the silver in crude gold bullion produced, silver in copper concentrates exported, and silver in concentrates exported from the Tetreault silver-lead-zinc mine which was re-opened in 1935 after a shutdown of several years.

The average price of silver in 1936 was 45.1265 cents per fine ounce as compared with 64.7899 cents in 1935. These are London prices transposed to Canadian funds.

Production, Imports and Exports of Silver, 1935 and 1936

	1935		1936	
	Quantity fine oz.	Value \$	Quantity fine oz.	Value \$
NOVA SCOTIA—				
In gold bullion and in silver-lead ores exported..... Total	372	241	197,642	48,579
QUEBEC—				
In gold ores, in blister copper, and in copper and silver-lead zinc ores exported..... Total	668,836	433,338	719,959	324,917
ONTARIO—				
In silver bullion and nuggets.....	2,022,296	1,310,244	1,891,380	853,580
In gold bullion.....	441,982	286,360	481,689	217,386
In blister copper produced; and in ores, concentrates, residues and matte exported or treated in smelters outside the province.....	2,697,373	1,747,025	2,832,040	1,278,100
Total	5,161,651	3,344,229	5,205,109	2,349,066
MANITOTA—				
In gold bullion and in blister copper..... Total	1,206,454	781,660	791,491	357,200
SASKATCHEWAN—				
In copper-gold-silver ores shipped to Canadian smelters..... Total	201,608	130,622	642,497	289,959
ALBERTA—				
In alluvial gold..... Total	16	10	9	4
BRITISH COLUMBIA—				
In alluvial gold.....	5,567	3,607	7,810	3,525
In gold bullion.....	44,992	29,150	50,945	22,991
In blister copper.....	282,050	182,740	—	—
In base bullion and in ores exported.....	8,845,791	5,731,180	9,652,224	4,356,049
Total	9,178,400	5,946,677	9,710,979	4,982,565
YUKON AND NORTH WEST TERRITORIES—				
In alluvial gold.....	8,034	5,205	11,293	5,097
In ores exported or shipped to Canadian smelters.....	193,187	125,166	1,042,440	470,453
Total	201,221	130,371	1,053,733	475,550
CANADA	16,618,558	10,767,148	18,231,419	8,227,840
IMPORTS—				
Silver in bars, etc., unmanufactured.....	—	5,584,906	—	2,389,842
Silver, manufactures of, n.o.p., and articles consisting wholly or in part of sterling or other silverware.....	—	64,596	—	158,747
Silver and other coin except gold.....	—	—	—	—
Total	—	5,649,502	—	2,548,589
EXPORTS—				
Silver contained in ore, concentrates, etc.....	1,364,008	882,106	3,347,167	1,494,237
Silver bullion—Domestic (a).....	16,963,181	10,953,083	12,783,708	5,789,310
Total	18,327,189	11,835,189	16,130,875	7,283,547
Silver bullion—Foreign (b).....	7,098,435	4,501,088	3,093,263	1,410,827
Silver coin—Foreign.....	—	896,010	—	931,129
Silver coin—Canadian.....	—	38,198	—	65,446

Tellurium

Tellurium is produced at Copper Cliff, Ontario, and Montreal East, Quebec, in the refining of blister copper. It is used as hardening and strengthening agent in lead and its alloys. It is also employed in the manufacture of rubber products, its function being to increase tensile strength and resistance to abrasion. Production totalled 52,724 pounds in 1936 valued at \$93,322 as compared with 16,425 pounds worth \$32,850 in 1935. The average price of tellurium in 1936 on the London market and transposed to Canadian funds was \$1.77 per pound.

Titanium Ore

Shipments of titanium ore (ilmenite) were entirely from deposits located near Baie St. Paul, Quebec. The utilization of titanium white and titanium pigments is increasing annually; consumption by the Canadian paint industry in 1935 amounted to 2,513,026 pounds worth \$261,506, as compared with 1,710,188 pounds with a value of \$186,678 in 1934.

Zinc

Refined zinc is produced at Trail, British Columbia, by the Consolidated Mining and Smelting Company, Ltd., and at Flin Flon, Manitoba, by the Hudson Bay Mining and Smelting Company, Ltd. Canadian production includes the zinc made at these two refineries and zinc contained in concentrates exported. The Britannia Mining and Smelting Co., Ltd., exported zinc concentrates.

Quebec production is accounted for in concentrates exported by the Tetreault mine. The Stirling mine in Cape Breton, Nova Scotia, recommenced exportation of zinc concentrates to European smelters during the year under review. The average price of zinc, in Canadian funds, for 1936, based on London quotations, was 3.315 cents per pound as compared with 3.099 cents for 1935.

Production in Canada, Imports and Exports of Zinc, 1935 and 1936

	1935		1936	
	Pounds	Value \$	Pounds	Value \$
PRODUCTION—				
Nova Scotia.....	—	—	6,876,319	227,950
Quebec.....	5,322,844	164,955	6,803,875	228,532
Manitoba.....	51,129,980	1,584,513	30,744,951	1,218,095
Saskatchewan.....	8,974,720	278,126	27,692,899	918,019
British Columbia.....	255,222,315	7,909,314	255,649,446	8,474,779
Total.....	320,649,859	9,936,908	333,837,460	11,067,375
IMPORTS—				
Zinc dust.....	1,648,100	80,837	1,619,800	68,914
Zinc in blocks, pigs, bars and rods, and zinc plates, n.o.p.....	18,100	2,111	11,400	1,238
Zinc in sheets and strips, and zinc plates for marine boilers.....	5,579,000	349,013	5,739,200	394,327
Zinc spelter.....	115,300	4,254	—	—
Zinc white (zinc oxide).....	11,768,314	460,122	13,240,889	519,425
Zinc sulphate.....	2,042,284	29,459	832,886	12,830
Zinc, chloride of.....	1,869,056	55,942	1,933,034	60,724
Zinc, manufactures of n.o.p.....	—	128,536	—	121,863
Lithopone.....	17,383,273	620,615	18,859,517	666,667
Total.....	—	1,730,880	—	1,815,988
EXPORTS—				
Zinc, contained in ore.....	19,600,300	337,732	39,132,000	727,253
Zinc, scrap, dross and ashes.....	6,267,500	63,719	5,007,100	63,875
Zinc, spelter.....	270,918,800	7,809,691	280,422,900	8,523,906
Total—Exports.....	296,786,600	8,211,142	324,562,000	8,315,034

FUELS

Coal

The Canadian output of coal in 1936 totalled 15,214,606 tons; in the preceding year, 13,888,006 tons were produced. Nova Scotia operators reported an output of 6,648,933 tons as compared with 5,822,075 tons in 1935. An advance of 3.5 per cent was recorded in New Brunswick's production; the 1936 total was 358,112 tons and the 1935 output, 346,024 tons. Manitoba's production in 1936 amounted to 4,390 tons. Output from Saskatchewan mines rose to 1,017,868 tons from the 1935 total of 921,785 tons. Due in the main part to a 7.3 per cent advance in lignite production, Alberta's output rose 233,842 tons in 1936 to 5,696,763 tons. British Columbia mines produced 1,488,030 tons in 1936 as against 1,331,287 tons, a year ago. The Yukon production in 1936 declined to 510 tons from the 1935 total of 835 tons.

Imports of coal into Canada in 1936 were recorded at 13,743,685 tons, or an increase of 5.7 per cent over the tonnage imported in 1935. Anthracite importations during the year under review consisted of 1,685,848 tons from the United States, 1,331,279 tons from Great Britain, 359,994 tons from Germany, 97,485 tons from French Indo-China, 44,543 tons from Belgium, 16,231 tons from the Netherlands, and 1,120 tons from China. Receipts of bituminous coal were made up of 10,042,127 tons from the United States, 149,905 tons from Great Britain, 9,421 tons from Germany, and minor tonnages from Norway, Newfoundland, Esthonia, Denmark, Sweden, and the Netherlands. Lignite coal imports from the United States totalled 4,747 tons in 1936.

Canada exported 411,574 tons of coal in 1936 as compared with 418,391 tons a year ago. The 1936 total included 401,130 tons of bituminous coal and 10,444 tons of lignite coal.

Output and Value of Coal in Canada, by Kinds and by Provinces, 1935 and 1936

(Short tons)

Province	1935		1936	
	Quantity	Value	Quantity	Value
		\$		\$
NOVA SCOTIA (Bituminous).....	5,822,075	20,391,227	6,648,933	22,972,466
NEW BRUNSWICK (Bituminous).....	346,024	1,129,019	358,112	1,163,863
MANITOBA (Lignite).....	3,106	7,408	4,390	9,525
SASKATCHEWAN (Lignite).....	921,785	1,293,668	1,017,868	1,456,982
ALBERTA—				
Bituminous.....	2,248,620	6,583,542	2,288,734	6,597,287
Sub-bituminous.....	566,425	1,410,926	566,775	1,432,741
Lignite.....	2,647,849	6,100,327	2,841,254	6,627,376
Total.....	5,462,894	14,094,795	5,696,763	14,657,404
BRITISH COLUMBIA (Bituminous).....	1,331,287	5,043,510	1,488,030	5,490,280
YUKON (Bituminous).....	835	3,483	510	2,286
Canada—				
Bituminous.....	9,748,841	33,159,781	10,784,319	36,226,182
Sub-bituminous.....	566,425	1,410,926	566,775	1,432,741
Lignite.....	3,572,740	7,401,403	3,863,512	8,093,883
Total.....	13,888,006	41,963,110	15,214,606	45,752,806

Shipments of Coal from Canadian Mines, by Grades and Destinations, 1935 and 1936

(Short tons)

Destination	1935					Total
	Run-of-mine	Cobble	Lump	Nut and other grades	Slack	
Prince Edward Island.....	10,288	-	50,834	-	10,172	71,294
Nova Scotia.....	144,045	-	353,668	-	756,307	1,251,020
New Brunswick.....	110,675	-	85,345	-	270,407	466,427
Quebec.....	16,483	-	546,103	-	1,196,752	1,759,338
Ontario.....	490	220	55,013	10,075	20,359	86,157
Manitoba.....	75,286	74,314	235,078	218,358	340,914	943,950
Saskatchewan.....	223,887	89,170	723,996	344,305	219,374	1,600,732
Alberta.....	193,981	-	477,030	292,374	252,173	1,216,158
British Columbia.....	18,158	-	414,899	114,446	141,055	688,558
Yukon.....	-	-	-	310	-	310
Total domestic shipments.....	793,293	163,704	2,942,566	979,868	3,207,513	8,086,944
Railroads—						
In Canada.....	2,588,061	621	1,135,952	21,552	116,936	3,863,122
In United States.....	10,571	-	-	-	-	10,571
In Newfoundland.....	-	-	17,309	-	-	17,309
Ships' bunkers.....	275,189	-	135,781	15,056	1,824	427,850
Total railroads and ships' bunkers.....	2,873,821	621	1,289,042	36,608	118,760	4,318,852
United States.....	5,368	-	25,295	14,126	74,415	119,204
Alaska.....	-	-	14,895	318	-	15,213
Newfoundland.....	12,922	-	108,969	-	9	121,900
Other countries.....	125	-	7,401	-	-	7,526
Lost at sea.....	-	-	0,720	-	-	6,720
Total external shipments.....	18,415	-	163,280	14,444	74,424	276,363
Total.....	3,685,529	164,325	4,394,888	1,030,920	3,400,697	12,676,359

Destination	1936					Total
	Run-of-mine	Cobble	Lump	Nut and other grades	Slack	
Prince Edward Island.....	5,947	-	49,073	4,343	11,333	70,696
Nova Scotia.....	152,328	-	341,492	20,705	843,448	1,357,973
New Brunswick.....	177,101	-	102,396	12,582	300,556	592,635
Quebec.....	27,317	-	1,101,721	154,069	1,591,355	2,878,062
Ontario.....	604	135	77,384	21,307	30,164	129,594
Manitoba.....	59,030	83,950	248,080	278,937	317,541	987,541
Saskatchewan.....	204,028	109,042	786,845	423,623	247,880	1,771,418
Alberta.....	229,877	-	510,330	302,105	283,150	1,325,462
British Columbia.....	29,827	-	238,647	223,302	205,801	697,637
Yukon.....	-	-	-	75	-	75
Total domestic shipments.....	886,059	193,127	3,458,974	1,441,648	3,831,288	9,811,096
Railroads—						
In Canada.....	2,651,812	-	556,366	27,832	66,616	(a)3,307,626
In United States.....	9,050	-	326	483	-	9,839
In Newfoundland.....	-	-	3,672	-	-	3,672
Ships' bunkers.....	278,104	-	96,175	44,073	2,141	420,583
Total railroads and ships' bunkers.....	2,939,050	-	656,539	72,368	68,757	3,736,720
United States.....	5,195	-	23,580	27,428	110,358	166,561
Alaska.....	-	-	12,588	125	-	12,713
Newfoundland.....	11,839	-	94,346	-	248	106,433
Other countries.....	151	-	3,404	-	-	3,615
Lost at sea.....	-	-	-	-	-	-
Total external shipments.....	17,185	-	133,978	27,553	110,806	289,522
Total.....	3,442,300	193,127	4,249,491	1,541,569	4,010,651	13,837,138

(a) A considerable quantity of coal shipped to Quebec for railroad purposes has been included with other shipments to Quebec.

Output, Exports, Interprovincial Shipments, Imports and Coal made Available for Consumption in Canada, by Provinces, 1936

(Short tons)

Province	Canadian coal				Imported from U.S.A.	Imported from Great Britain	Imported from Germany	Imported from other countries	Coal available for consumption
	Output	Received direct from mines in other provinces	Shipped direct to other provinces	Exported					
PRINCE EDWARD ISLAND—									
Anthracite.....	-	-	-	-	1,479	5,224	-	-	6,703
Bituminous.....	-	82,558	-	5	111	5,576	-	-	88,240
Total.....	-	82,558	-	5	1,590	10,800	-	-	94,943
NOVA SCOTIA—									
Anthracite.....	-	-	-	-	7,534	43,628	4,041	-	55,203
Bituminous.....	6,648,933	-	3,861,458	202,503	2	40,940	2,321	-	2,628,235
Total.....	6,648,933	-	3,861,458	202,503	7,536	84,568	6,362	-	2,683,438
NEW BRUNSWICK—									
Anthracite.....	-	-	-	-	15,079	73,539	-	-	88,618
Bituminous.....	358,112	594,527	12,366	74,603	16,854	22,253	-	-	904,777
Total.....	358,112	594,527	12,366	74,603	31,933	95,792	-	-	993,395
QUEBEC—									
Anthracite.....	-	-	-	-	261,645	1,158,387	355,952	150,970	1,926,963
Bituminous.....	-	3,163,075	-	18	645,006	77,670	7,100	985	3,893,818
Total.....	-	3,163,075	-	18	906,651	1,236,057	363,052	151,964	5,820,781
CENTRAL ONTARIO—									
Anthracite.....	-	-	-	-	1,377,965	50,325	-	7,280	1,435,570
Bituminous.....	-	38,258	-	27	8,516,579	2,185	-	-	8,556,955
Sub-bituminous.....	-	21,846	-	-	-	-	-	-	24,846
Lignite.....	-	49,748	-	84	-	-	-	-	49,664
Total.....	-	109,852	-	111	9,894,544	52,510	-	7,280	10,064,075
MANITOBA AND HEAD OF LAKES—									
Anthracite.....	-	-	-	-	22,058	170	-	-	22,234
Bituminous.....	-	260,813	-	575	858,661	619	-	-	1,119,518
Sub-bituminous.....	-	76,449	-	-	-	-	-	-	76,449
Lignite.....	4,390	665,634	-	545	168	-	-	-	669,647
Total.....	4,390	1,002,896	-	1,120	880,887	795	-	-	1,887,848
SASKATCHEWAN—									
Anthracite.....	-	-	-	-	58	-	-	-	58
Bituminous.....	-	72,450	-	398	847	-	-	-	72,899
Sub-bituminous.....	-	20,756	-	-	-	-	-	-	20,756
Lignite.....	1,017,868	1,159,764	443,012	3,360	20	-	-	-	1,731,270
Total.....	1,017,868	1,252,960	443,012	3,758	925	-	-	-	1,824,983
ALBERTA—									
Anthracite.....	-	-	-	-	-	-	-	-	-
Bituminous.....	2,288,734	11,424	338,095	696	1,205	-	-	-	1,962,602
Sub-bituminous.....	596,775	-	157,891	-	-	-	-	-	498,884
Lignite.....	2,841,254	-	1,507,221	1,353	33	-	-	-	1,332,713
Total.....	5,696,763	11,424	2,003,207	2,019	1,238	-	-	-	3,794,199
BRITISH COLUMBIA—									
Anthracite.....	-	-	-	-	30	-	1	1,120	1,151
Bituminous.....	1,488,030	131,006	142,195	122,334	2,801	662	-	-	1,757,973
Sub-bituminous.....	-	38,840	-	-	-	-	-	-	38,840
Lignite.....	-	75,097	-	5,102	4,526	-	-	-	74,521
Total.....	1,488,030	244,946	142,195	127,436	7,357	662	1	1,120	1,472,485
YUKON—									
Bituminous.....	510	-	-	1	61	-	-	-	570
Total.....	510	-	-	1	61	-	-	-	570
CANADA—									
Anthracite.....	-	-	-	-	1,685,818	1,331,279	359,994	159,379	3,536,500
Bituminous.....	10,784,319	4,351,114	4,354,114	401,130	10,612,127	119,905	9,121	(b) 985	20,585,627
Sub-bituminous.....	566,775	157,891	157,891	-	-	-	-	-	566,775
Lignite.....	3,863,312	1,950,233	1,950,233	10,414	1,747	-	-	-	3,857,815
Total.....	15,214,696	6,462,238	6,462,238	411,574	11,732,722	1,481,184	369,415	169,364	28,546,717

(a) Includes 44,543 tons from Belgium, 97,485 tons from French Indo-China, 16,231 tons from Netherlands and 1,120 tons from China.

(b) Includes 361 tons from Norway, 124 tons from Denmark, 45 tons from Sweden, 35 tons from Netherlands, 286 tons from Newfoundland and 134 tons from Estonia.

Imports of Anthracite, Bituminous and Lignite Coal into Canada, by Months,
1935 and 1936

(short tons)

Month	1935				1936			
	United States	Great Britain	Other countries	Total	United States	Great Britain	Other countries	Total
ANTHRACITE—								
January	161,808	5,820	—	167,631	139,017	19,132	—	159,049
February	179,913	11,166	—	191,079	203,788	22,957	—	226,745
March	121,452	12,687	—	134,139	143,432	20,163	—	163,595
April	112,013	23,010	—	135,023	58,256	70,646	130	129,032
May	132,589	260,182	20,242	413,013	179,253	207,275	16,474	403,002
June	187,513	156,072	30,100	373,685	163,630	227,835	57,683	449,148
July	127,911	208,908	48,208	385,027	105,951	197,845	63,577	367,373
August	96,292	185,484	37,400	319,176	95,838	129,700	96,227	321,765
September	122,316	209,362	40,794	372,472	133,249	136,201	63,929	333,379
October	210,143	198,751	68,671	477,565	171,637	159,875	84,887	426,399
November	80,511	158,283	64,980	303,774	126,880	106,012	73,925	306,817
December	137,624	24,790	16,317	178,731	104,017	33,638	53,441	251,096
Total	1,670,085	1,454,521	326,712	3,451,318	1,685,848	1,331,279	519,373	3,536,500
BITUMINOUS—								
January	302,074	8,728	—	310,802	285,033	7,512	—	292,545
February	297,473	5,271	—	302,744	296,484	6,344	—	302,828
March	379,300	12,922	40	392,262	335,047	6,430	—	341,077
April	509,841	7,090	—	516,931	346,736	15,156	—	361,892
May	994,117	78,779	1	1,072,897	945,133	13,347	33	958,513
June	1,111,413	20,933	165	1,132,511	1,217,789	16,558	209	1,234,556
July	980,343	64,880	40	1,045,263	1,028,548	18,972	1,562	1,049,082
August	1,169,048	40,485	51	1,209,584	1,208,207	11,176	134	1,219,517
September	996,398	57,865	56	1,054,319	1,048,010	10,645	2,447	1,061,102
October	797,764	38,182	—	835,946	1,182,997	23,732	301	1,207,030
November	1,024,777	30,692	31	1,055,500	1,275,550	14,665	1,613	1,291,828
December	605,880	14,818	—	620,698	871,393	5,368	4,107	880,868
Total	9,168,428	380,645	384	9,549,457	10,042,127	119,965	10,406	10,202,438
LIGNITE—								
January	590	—	—	590	484	—	—	484
February	668	—	—	668	1,269	—	—	1,269
March	430	—	—	430	588	—	—	588
April	117	—	—	117	222	—	—	222
May	150	—	—	150	83	—	—	83
June	—	—	—	—	—	—	—	—
July	193	—	—	193	—	—	—	—
August	59	—	—	59	92	—	—	92
September	486	—	—	486	430	—	—	430
October	617	—	—	617	315	—	—	315
November	784	—	—	784	349	—	—	349
December	1,152	—	—	1,152	915	—	—	915
Total	5,246	—	—	5,246	4,747	—	—	4,747

Coal Made Available for Consumption in Canada, 1935 and 1936

(Short tons)

Month	1935				1936			
	Output	Imports	Exports	Coal made available for use	Output	Imports	Exports	Coal made available for use
January	1,520,325	479,026	28,109	1,971,242	1,391,521	452,678	40,727	1,803,472
February	1,018,092	494,491	39,997	1,472,586	1,492,207	530,842	26,836	1,996,213
March	1,038,668	526,831	23,648	1,541,851	1,028,061	506,260	40,782	1,494,139
April	892,896	652,071	12,868	1,532,099	936,933	491,146	14,765	1,413,314
May	926,493	1,486,060	19,599	2,392,954	998,447	1,361,598	23,664	2,336,381
June	930,093	1,506,196	33,527	2,402,762	1,037,709	1,683,704	32,639	2,688,774
July	981,080	1,430,483	41,961	2,369,602	1,064,249	1,116,455	30,182	2,450,522
August	987,846	1,528,819	37,556	2,479,100	1,055,872	1,541,374	33,689	2,563,557
September	1,118,198	1,427,277	33,425	2,512,050	1,445,571	1,394,911	34,374	2,806,108
October	1,558,683	1,314,128	47,278	2,855,533	1,805,197	1,633,744	36,522	3,402,419
November	1,622,322	1,360,058	45,981	2,936,399	1,464,495	1,598,094	47,652	3,014,937
December	1,293,310	800,581	54,442	2,039,449	1,493,744	1,132,879	49,742	2,576,881
Total	13,888,006	13,066,021	418,391	26,475,636	15,211,606	13,743,685	411,574	28,546,217

Coke
Coke Statistics for Canada, by Months, 1936
 (Short tons)

Months	Bituminous coal used in coke making			Coke Made	Disposition of coke by makers				Total
	Canadian	Imported	Total		Used		Sold		
					In coke or gas plants	In makers' smelters	For domestic use	For other uses	
January.....	95,313	199,607	294,920	212,101	21,422	61,047	165,855	32,549	280,873
February.....	89,904	188,868	278,772	197,510	21,053	57,068	171,909	29,260	279,290
March.....	89,758	191,808	281,566	202,411	21,180	58,881	88,069	28,672	196,802
April.....	95,135	171,825	266,960	190,041	20,820	57,373	67,694	27,555	173,442
May.....	84,425	193,221	277,646	200,122	20,614	57,152	24,935	28,216	130,917
June.....	90,808	185,252	276,060	198,953	18,321	55,428	52,256	28,151	154,156
July.....	75,153	193,724	268,877	193,264	16,162	44,815	86,616	26,988	174,581
August.....	70,704	194,282	264,986	190,853	16,824	45,697	80,430	26,331	169,282
September.....	74,010	189,023	263,039	188,991	20,310	46,889	65,652	25,335	188,186
October.....	106,315	189,327	295,642	212,344	19,696	62,401	142,206	29,150	253,453
November.....	98,777	190,424	289,201	208,432	19,612	66,731	140,145	27,882	254,170
December.....	101,799	200,914	302,713	217,138	20,631	73,302	130,336	31,448	255,717
Total.....	1,072,107	2,288,275	3,360,382	2,412,160	236,645	686,784	1,246,103	341,337	2,510,869

Production in Canada, Imports and Exports of Coke, by Provinces, 1935 and 1936
 (Short tons)

		Nova Scotia, New Brunswick and Quebec	Ontario	Manitoba, Saskatchewan, Alberta and British Columbia	Canada
Production.....	1935	730,469	1,334,081	193,054	2,257,604
	1936	774,026	1,452,825	185,609	2,412,190
Imports.....	1935	22,231	496,196	14,499	532,926
	1936	33,035	561,119	18,704	612,858
Exports.....	1935	604	—	20,045	20,649
	1936	1,086	94	17,035	18,216
Available for Consumption.....	1935	752,096	1,830,277	187,508	2,769,881
	1936	805,975	2,013,550	187,278	3,006,803

NATURAL GAS

Natural gas production in Canada during 1936 increased 9.8 per cent to 27,363,602 thousand cubic feet from the 1935 total of 24,910,786 thousand cubic feet. Alberta's output rose 3.7 per cent to 16,650,000 thousand cubic feet. The Alberta production figures include only the natural gas consumed for industrial and domestic purposes and do not take into account the waste gas burned in the Turner Valley field and the gas piped into the Bow Island field for repressuring. Ontario produced 10,016,444 thousand cubic feet, or 22.8 per cent above the preceding year's output. New Brunswick's production amounted to 606,246 thousand cubic feet; a year ago, 615,454 thousand cubic feet were produced. Output from Saskatchewan advanced to 90,312 thousand cubic feet from the 1935 total of 75,558 thousand cubic feet.

Production in Canada and Imports of Natural Gas, 1935 and 1936

	1935		1936	
	M cu. ft.	Value	M cu. ft.	Value
PRODUCTION—		\$		\$
New Brunswick.....	615,454	303,886	606,246	298,819
Ontario.....	8,159,825	4,938,084	10,016,444	6,009,866
Manitoba.....	600	180	600	180
Saskatchewan.....	75,558	7,555	90,312	9,003
Alberta.....	16,060,349	4,113,436	16,650,000	4,268,000
Total.....	24,910,786	9,363,141	27,363,602	10,585,868
IMPORTS—				
Gas for cooking, heating or illuminating, imported by pipe line..	106,401	70,154	119,056	75,985

Peat

The Canadian output of peat for use as fuel amounted to 1,641 tons in 1936. This output was obtained from bogs in Ontario and Quebec.

Petroleum

Crude petroleum production in Canada during 1936 reached a total of 1,498,006 barrels; in the preceding year 1,446,620 barrels were produced. All petroleum producing provinces recorded increased outputs in 1936.

Drilling operations were in progress on 45 wells in Alberta during 1936; approximately 96,000 feet were drilled during the year. A fourth absorption plant commenced operations in the Turner Valley field, Alberta, in 1936.

Production of Crude Petroleum in Canada, 1935 and 1936

Province	1935		1936	
	Barrels	Value	Barrels	Value
NEW BRUNSWICK.....	12,954	18,230	17,112	24,075
ONTARIO—		\$		\$
Petrolia and Enniskillen.....	59,282	123,243	59,092	124,088
Oil Springs.....	31,646	68,926	31,795	69,947
Moore Township.....	3,264	6,783	3,200	6,720
Sarnia Township.....	871	1,810	584	1,226
Plympton Township.....	237	493	248	521
Bothwell Township.....	34,714	72,136	36,534	76,719
West Dover.....	13,117	27,257	15,536	32,625
Onondaga.....	431	874	262	609
Mosa Township.....	8,788	18,262	8,182	17,182
Brooke.....	122	254	—	—
Dunwich.....	408	848	307	645
Raleigh and Tilbury East.....	195	405	1,126	2,364
Thamesville.....	428	889	458	962
Dawn and Euphemia.....	11,538	23,976	8,171	17,159
Total for Ontario.....	165,041	346,156	165,495	350,767
ALBERTA—				
Turner Valley.....	1,234,872	3,071,951	1,278,000	3,180,000
Red Coilee.....	14,772	16,847	17,000	21,700
Wainwright—Skiff.....	13,866	11,429	15,000	12,500
Total for Alberta.....	1,263,510	3,102,227	1,310,000	3,214,200
NORTHWEST TERRITORIES.....	5,115	25,575	5,399	26,995
Canada.....	1,446,620	3,492,188	1,498,006	3,616,637

Imports into Canada and Exports of Petroleum and Its Products, 1935 and 1936

Imports	1935		1936		Exports	1935		1936	
Petroleum and asphalt (Total) \$	44,092,526	49,727,188	Oil, petroleum, crude..... Gal.			897		216	
Asphalt, solid..... Cwt.	120,024	125,048		\$		132		9	
	\$ 126,979	145,527	Oil, coal and kerosene, re-						
Other asphalt..... \$	14,603	7,768	fined..... Gal.			806,760		631,681	
Petroleum oils (Total)..... Gal.	1,293,005,855	1,377,636,905		\$		99,783		93,267	
	\$ 43,102,761	48,585,634	Oil, gasoline and naphtha.. Gal.			3,357,903		3,378,983	
Crude petroleum..... Gal.	1,188,872,841	1,261,894,325		\$		413,469		509,150	
	\$ 35,042,835	39,954,488	Fuel oil (from April, 1935) .. Gal.			8,340,733		10,412,825	
Fuel oil for ships..... Gal.	18,389,862	24,048,703		\$		240,577		654,928	
	\$ 507,283	692,951	Oil, mineral, n.o.p..... Gal.			1,152,090		614,332	
Gasoline..... Gal.	68,032,212	58,476,986		\$		144,541		181,777	
	\$ 4,551,120	4,095,510	Wax, mineral..... Cwt.			5,829		375	
Kerosene, refined..... Gal.	1,353,112	2,580,758		\$		26,022		1,830	
	\$ 120,398	209,215	Total Exports..... \$			924,524		1,440,961	
Lubricating oil..... Gal.	13,251,270	14,296,949							
	\$ 2,040,325	2,946,710							

NON-METALLICS (except Fuels)

Abrasives

Corundum.—Corundum was produced several years ago in the northern part of Renfrew county, Ontario. There has, however, been no recent commercial output of the mineral in Canada.

Grindstones, Pulpstones and Scythestones.—Quarries for the production of these products are located at Shediac, Stonehaven, and in the parish of Derby, New Brunswick, also in Pictou county, Nova Scotia, and at Haddington and Gabriola Islands, British Columbia.

During 1936 crude sandstone blocks for abrasive purposes were shipped from Shediac, New Brunswick, while in British Columbia, pulpstones were produced by a company operating quarries on Gabriola and Haddington Islands. The total output of these particular abrasives in 1936 totalled 167 tons valued at \$4,760.

Volcanic Dust.—Volcanic dust was produced for some years from deposits occurring in Saskatchewan; volcanic dust also occurs in Alberta and British Columbia. The material is utilized as a filler, abrasive and filtering medium; no production has been reported in the Dominion since 1934.

Diatomite.—Shipments of diatomite were made in 1936 from deposits located at New Amman, Nova Scotia; Martin's Siding, Muskoka district, Ontario, and Quesnel, British Columbia. Production of diatomite in Canada during 1936 totalled 670 tons valued at \$14,750.

Imports into Canada and Exports of Abrasives in 1935 and 1936

	1935		1936	
	Quantity	Value	Quantity	Value
		\$		\$
IMPORTS				
Artificial abrasives in bulk, crushed or ground, when imported for use in the manufacture of abrasive wheels and polishing composition...	-	454,818	-	520,655
Diamond dust or bort, and black diamonds for borers.....	-	1,578,503	-	2,429,480
Emery in bulk, crushed or ground.....	-	42,102	-	43,535
Grinding wheels, manufactured by the bonding together of either natural or artificial abrasives.....	-	76,246	-	85,545
Grinding stones or blocks manufactured by the bonding together of either natural or artificial abrasives.....	-	9,253	-	7,339
Grindstones, not mounted, and not less than 36 inches in diameter. No	1,089	140,208	1,013	122,028
Grindstones, n.o.p.,..... No	3,683	4,015	5,180	6,968
Pumice and pumice stone, lava and calcareous tufa, not farther manufactured than ground.....	-	30,971	-	21,275
Sand paper, glass, flint and emery paper or emery cloth.....	-	114,617	-	85,398
Manufactures of emery or of artificial abrasives, n.o.p.....	-	43,616	-	55,305
Diatomaceous earth or infusorial earth (kieselguhr), ground or unground..... cwt.	38,470	56,832	57,031	78,687
Total	-	2,551,181	-	3,456,215
EXPORTS				
Grindstones, manufactured.....	-	74	-	1,688
Abrasives—				
Natural, n.o.p., in ore or bulk, crushed or ground*..... cwt.	11,128	15,501	9,661	15,200
Artificial, crude, including silicon carbide..... cwt.	1,401,635	3,925,364	1,703,721	5,132,041
Artificial, made up into wheels, stones, etc.....	-	51,676	-	129,431
Total	-	3,992,615	-	5,278,360

* Including infusorial earth, rotten stones, tripoli, etc.

Asbestos

Asbestos is Canada's most important non-metallic mineral from point of value, other than coal, and this country is the world's greatest producer. The output from Canadian mines in 1936 was the second greatest on record, being surpassed only by that of 1929. Production was entirely from the Eastern Townships of the province of Quebec. Both surface and underground methods are utilized in the mining of Quebec asbestos and the milling practices employed in the recovery

of the various high grade fibres are very efficient. Exploration and development on the properties of the operating companies have disclosed reserves of the mineral sufficient for many years to come.

Sales of Asbestos in Canada, 1935 and 1936

Grades	1935			1936		
	Shipments and sales		Average value per ton	Shipments and sales		Average value per ton
	Tons	Value		Tons	Value	
		\$	\$		\$	\$
Crudes.....	2,278	539,558	236.86	3,440	790,971	299.93
Fibres.....	102,270	4,873,255	47.65	133,288	6,483,946	48.65
Shales.....	105,919	1,641,801	15.50	164,559	2,683,266	16.30
Total.....	210,467	7,054,614	33.52	301,287	9,958,183	33.05
Sand, gravel and stone (waste rock only).....	3,025	2,053	0.68	3,103	2,356	0.76
Total.....	213,492	7,056,667	-	304,390	9,960,539	-
		1935 Tons			1936 Tons	
Rock mined.....		2,852,118			4,692,004	
Rock milled.....		2,256,994			3,568,992	

Imports into Canada and Exports of Asbestos, 1935 and 1936

	1935		1936	
	tons	\$	tons	\$
IMPORTS—				
Asbestos brake and clutch lining.....	-	235,620	-	321,163
Asbestos in any form other than crude, and all manufactures of, n.o.p.....	-	420,469	-	506,046
Asbestos packing.....	60	56,208	84	60,978
Total.....	-	712,297	-	888,287
EXPORTS—				
Asbestos.....	100,186	5,300,176	130,547	7,391,517
Asbestos sand and waste.....	100,025	1,583,481	157,678	2,567,343
Asbestos manufactures, including asbestos roofing.....	-	175,452	-	175,038
Total.....	-	7,061,109	-	10,133,898

Bituminous Sands

The Fort McMurray district of Alberta has long been famous for its extensive deposits of bituminous sands and investigations leading to their utilization have been carried on for many years. Experiments have followed three main channels—(1) the use as a bituminous binder in road construction; (2) the use of the separated bitumen as a source of gasoline, lubricant, etc., and (3) its use for the production of certain of the higher priced classes of asphaltic materials. Production in 1936 was for experimental purposes.

Feldspar

Feldspar production was reported from the provinces of Quebec, Ontario and Manitoba. Crude feldspar is exported to grinding mills in the United States, though a considerable proportion of the Canadian output is now ground in Canada at Buckingham, Quebec, and at Kingston, Ontario. Feldspar is used in the manufacture of glass enamels, white tableware, sanitary ware, electrical porcelain, and certain cleansers. Improved business conditions in Canada in these industries have shown a corresponding increase in the domestic consumption of Canadian feldspar.

The main part of the production consists of potash feldspar but requirements of the trade for soda feldspar are now supplied from deposits in the Buckingham district.

Production in Canada, Imports and Exports of Feldspar, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
PRODUCTION—(Sales)		\$		\$
Quebec.....	7,002	63,075	8,115	75,703
Ontario.....	8,656	75,003	7,680	65,888
Manitoba.....	2,084	6,252	2,100	6,300
Total.....	17,742	144,330	17,895	147,891
IMPORTS—				
Crude.....	-	5	23	285
Ground.....	608	10,995	718	13,955
Total.....	608	11,000	741	14,240
EXPORTS—Total (a).....	9,959	59,893	14,133	94,537

(a) Includes nepheline syenite in 1936.

Fluorspar

Fluorspar production in Canada in 1936 totalled 75 tons valued at \$900; all from the province of Ontario. The Consolidated Mining and Smelting Company, Ltd., owns a large fluorspar deposit near Grand Forks, British Columbia, which is operated intermittently for the purpose of securing fluorspar for use in their own plant at Trail. Imports of fluorspar into Canada during 1936 amounted to 11,194 tons valued at \$95,268 as against 11,591 tons valued at \$92,775 in 1935.

Graphite

Graphite production in Canada in 1936 was valued at \$92,820 as compared with \$79,781 in 1935. The entire output was from the Black Donald mine in Renfrew county, Ontario. This deposit contains exceptionally high-grade graphite, unsuitable for crucibles but well adapted for lubricants and foundry purposes. Black Donald graphite is now being used in the manufacture of pencils, a market which at one time was enjoyed almost entirely by Mexican producers. The world's consumption of graphite has been estimated at approximately 20 per cent for crucibles, 40 per cent for foundry work, 15 per cent for paints, 7 per cent for electrical conductors, 7 per cent for lubricants, 5 per cent for electric batteries, 4 per cent for crayons, and 2 per cent for miscellaneous purposes.

Some of the more important graphite producing countries are Germany, Korea, Austria, Madagascar, Ceylon, Italy and Mexico.

Production, Imports and Exports of Graphite, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
PRODUCTION—Total.....	-	\$ 79,781	-	\$ 92,820
IMPORTS—				
Crucibles, plumbago.....	-	38,066	-	38,559
Plumbago, not ground or otherwise manufactured.....	-	6,559	-	5,166
Plumbago, ground, and manufactures of, n.o.p.....	-	92,552	-	88,188
Total.....	-	137,177	-	131,913
EXPORTS—				
Graphite or plumbago, crude or refined.....	3,548	145,772	3,384	138,454

Gypsum

Gypsum is produced in Canada in the provinces of Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia. A large proportion of the Nova Scotia output is exported in the crude form while that from the other provinces is largely calcined and manufactured into various gypsum products.

An increasing proportion of the calcined material each year is used in the manufacture of wallboard, gypsum blocks, insulating material, acoustic plaster, etc.

Extensive deposits of gypsum are known in northern Ontario. These are not being worked at present. Deposits in northern Alberta, although situated at a distance from markets, are of good grade.

Production in Canada, Imports and Exports of Gypsum, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
PRODUCTION—(Sales)		\$		\$
Crude—				
(1) Lump or mine run.....	38,403	54,122	113,188	148,477
Crushed.....	437,699	488,186	626,837	690,466
Fine ground.....	369	2,893	738	4,108
(2) Calcined (sold and used).....	65,393	387,002	76,236	422,437
Total.....	541,864	932,203	816,999	1,265,488
IMPORTS—				
Gypsum, crude (sulphate of lime).....	17	196	4	150
Plaster of Paris or gypsum ground, not calcined.....	262	7,846	340	9,548
Plaster of Paris or gypsum calcined and prepared wall plaster.....	1,727	27,676	826	19,661
Total.....	2,006	35,718	1,170	29,359
EXPORTS—				
Gypsum or plaster, crude.....	439,341	508,338	650,377	756,010
Plaster of Paris, ground, and prepared wall plaster.....	717	38,074	752	19,280
Total.....	440,058	546,412	651,129	775,290

(1) Includes some anhydrite produced in Nova Scotia.

(2) Does not include gypsum calcined in the manufacturing plants at Montreal and Calgary.

Iron Oxides

Mine shipments of iron oxides totalled 5,854 tons valued at \$69,629 in 1936 as compared with 5,516 tons worth \$77,075 in 1935. Quebec has been, for many years, the principal producer of iron oxide. The raw product is dried and shipped for use in purifying illuminating gas, or calcined and ground to be used as a pigment in the paint industry. British Columbia also reports a small annual production which is used entirely in gas works. Other deposits are known to exist in Nova Scotia, Alberta, Saskatchewan and Manitoba.

Magnesitic Dolomite

Canadian production of magnesitic dolomite is confined to Argenteuil county, Quebec. The mineral is crushed and ground to about 100 mesh, after which it is burnt in kilns.

The products are utilized as refractories in the lining of steel furnaces and copper smelting and refining furnaces. Burned brick and chemically bonded unburned brick have also been developed for use in cement kilns and metallurgical furnaces.

Several new plastic refractories have been developed for use in various industries and have shown economy in practice.

Production in Canada, Imports and Exports, of Magnesitic-Dolomite, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
PRODUCTION—		\$		\$
Calcined or clinkered— Total.....	-	486,084	-	769,176
IMPORTS—				
Magnesia pipe covering.....	-	37,523	-	33,451
Magnesite, crude rock.....	-	8	20	1,271
Magnesite, dead burned, sintered, caustic, calcined or plastic magnesia.....	765	42,644	1,163	58,515
Brick, fire, magnesite.....	-	384,141	-	568,565
Total.....	-	464,316	-	659,802
EXPORTS—				
Magnesite, calcined, dead burned, etc.....	1,577	43,338	2,928	71,183

Magnesium Sulphate

Magnesium sulphate or epsom salts is produced in the Kamloops district of the province of British Columbia. Output in 1936 totalled 654 tons valued at \$13,712 as compared with 340 tons valued at \$7,965 in 1935. This mineral occurs also in association with sodium sulphate deposits in Saskatchewan. In addition to its medicinal value, it is used in the finishing of cotton fabrics and for weighting paper, silk and leather.

Imports of magnesium sulphate or epsom salts totalled 1,790 tons valued at \$37,928 in 1936 as compared with 1,842 tons valued at \$40,407 in 1935.

Mica

The Canadian mica production is confined almost exclusively to the phlogopite variety termed in the trade—amber mica. Deposits of muscovite or white mica are known, but attempts to mine this type have usually not proved profitable, and the production has been negligible. The productive mica region lies, for the most part, within a radius of about one hundred miles from the city of Ottawa, the northern portion of the field lying principally between or adjacent to the Gatineau and Lievre rivers, in Quebec, and the southern portion in the Perth-Kingston district in Ontario.

Mica finds its greatest value as an insulator in the manufacture of electrical equipment. Scrap mica is ground and graded into various sizes for use in the manufacture of roofing and rubber goods. It has been used also for its decorative effect in stucco and plaster.

During recent years Canada has been exporting increasingly larger quantities of mica to England. Demands from the English market are said to be very good at the present time.

Production of Mica in Canada, 1935 and 1936

Grade	1935			1936		
	Quantity	Value, f.o.b. shipping point	Price per pound	Quantity	Value, f.o.b. shipping point	Price per pound
	Lb.	\$	\$	Lb.	\$	\$
Knife trimmed.....	111,459	52,959	0.48	97,344	42,207	0.43
Thumb trimmed.....	12,013	3,616	0.30	14,753	3,472	0.24
Spittings.....	32,921	15,506	0.47	24,376	9,780	0.40
Scrap.....	1,068,618	7,509	0.007	1,232,503	10,092	0.008
Rough cobbed.....	30,605	2,448	0.08	14,775	1,739	0.12
Total	1,255,616	82,038	-	1,403,751	67,290	-

Imports into Canada and Exports of Mica, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
		\$		\$
IMPORTS—				
Mica and manufactures of, n.o.p.— Total	-	66,801	-	77,822
EXPORTS—				
Rough cobbed and thumb trimmed.....	75	52,196	84	61,474
Mica splittings.....	17	16,615	13	10,331
Mica, scrap and waste.....	670	6,189	1,237	14,152
Mica, plate, and manufactures of (micanite).....	-	950	-	1,343
Total	-	75,950	-	87,290

Mineral Waters

Sales of natural mineral waters in Canada during 1936 totalled 128,386 imperial gallons valued at \$17,558 as compared with 146,516 imperial gallons valued at \$16,590 in 1935. These shipments were made from mineral springs in Ontario and Quebec.

Mineral and aerated waters, n.o.p., imported during 1936 totalled \$89,505. Exports of mineral and aerated waters amounted to \$4,057.

Nepheline Syenite

Nepheline syenite was produced commercially in Canada for the first time in 1936 from deposits located in Peterborough county, Ontario. This mineral is employed in the manufacture of glass.

Phosphate

Canadian phosphate production totalled 525 tons valued at \$4,927 in 1936 as compared with 186 tons valued at \$1,103 in 1935. Between the years 1878 and 1892 the mining of apatite or mineral phosphate was an important industry in eastern Canada but cheaper foreign phosphate displaced that from Canadian mines.

Imported rock phosphate is used in the manufacture of superphosphates by Canadian fertilizer manufacturers. Imports of this material for fertilizer purposes totalled 83,478 tons valued at \$298,179 in 1936 as against 63,514 tons valued at \$234,580 in 1935.

Pyrites (Sulphur)

The sulphur content of pyrites shipped and sulphur recovered from non-ferrous smelter gas amounted in 1936 to 122,132 tons valued at \$1,033,055, as compared with 67,446 tons valued at \$634,235 in 1935. Production during both years came from the provinces of Quebec, Ontario and British Columbia.

No pyrites is being directly mined as such at the present time, but pyrites concentrates which are separated from copper sulphides at Eustis, Quebec, and at the Britannia mine, British Columbia, are sold to Canadian and foreign consumers. Part of the concentrate from the Britannia mine is exported to the Tacoma smelter for use as a fluxing material. Sulphuric acid is made from waste smelter gases at the Trail and Copper Cliff smelters. Elemental sulphur is also being recovered from smelter gases at Trail.

Production in Canada, Imports and Exports of Pyrites, 1935 and 1936

	1935		1936	
	Sulphur content	Value	Sulphur content	Value
	tons	\$	tons	\$
*PRODUCTION—				
Quebec.....	7,370	47,779	43,084	282,743
Ontario.....	13,292	132,920	14,152	141,520
British Columbia.....	46,784	453,536	64,896	608,792
Total.....	67,446	634,235	122,132	1,033,055
IMPORTS—				
Brinestone, or sulphur, crude or in roll or flour.....	136,675	2,207,650	168,774	2,802,282
EXPORTS—				
Pyrites (Sulphur content).....	7,610	48,440	52,192	284,718

*Includes sulphur in pyrites, concentrates and sulphur recovered from smelter gases.

Quartz

Canadian quartz production includes silica used by smelters for fluxing purposes, for the manufacture of scouring compounds, for glass manufacturing, moulding, ferrosilicon production brick-making and for artificial abrasive manufacturing. The price range varies greatly, depending upon the purity of the product which in turn depends on the purpose for which it is to be used.

Production in Canada and Imports of Quartz*, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTION—				
Nova Scotia.....	9,640	13,978	6,764	10,819
Quebec.....	51,948	226,839	77,476	315,374
Ontario.....	83,034	120,005	890,106	213,471
Manitoba.....	147	220	44	44
Saskatchewan.....	77,177	59,069	76,089	76,089
British Columbia.....	11,056	4,771	146	788
Total.....	233,002	424,882	1,050,625	616,585
IMPORTS—				
Ganister.....	2,151	8,395	4,097	8,140
Silic or crystallized quartz, ground or unground.....	3,359	75,708	4,050	84,393
Flint and ground flint stones.....	2,277	24,014	1,234	23,079
Silica sand†.....	123,576	282,930	143,610	270,824
Total.....	—	391,107	—	386,436

*Includes both crude and crushed quartz and quartzite, silica fluxing gravel and natural silica sands.

†For making carborundum and glass and for filtration and sand blasting.

Salt

Salt is produced commercially in Canada in the provinces of Nova Scotia, Ontario and Manitoba, though it is known to occur either in natural brines or in beds of rock salt in nearly every province of Canada. At the Malagash mine in Nova Scotia salt is produced by direct mining methods and in the other provinces it is extracted by evaporation from the brine. In addition to the ordinary domestic uses, the consumption of salt in the manufacture of soda compounds and chlorine is increasing. Some of Canada's largest heavy chemical producing industries are the direct result of deposits of salt favourably located with regard to markets and shipping facilities.

It is interesting to note that a new salt plant is being built at Waterways, Alberta.

Production of Salt in Canada, by Grades, 1935 and 1936

Grade	1935			1936		
	Manu- factured	Sold	Value of salt sold (Not includ- ing con- tainers)	Manu- factured	Sold	Value of salt sold (Not includ- ing con- tainers)
	Tons	Tons	\$	Tons	Tons	\$
Table, dairy and pressed blocks.....	72,210	73,704	990,222	77,428	76,567	867,215
Common, fine.....	84,748	82,608	422,724	81,046	83,095	358,775
Common, coarse.....	23,057	22,014	181,543	27,477	28,162	218,176
Land salt.....	289	261	962	1,061	1,046	3,780
Other grades.....	32,488	36,323	140,094	38,364	36,564	159,315
Brine for chemical works (Salt equivalent sold or used).....	145,433	145,433	145,433	165,882	165,882	165,882
Total.....	358,225	360,343	1,890,978	391,858	391,316	1,773,143
Value of containers.....	-	-	492,050	-	-	527,647
Grand total.....	358,225	360,343	2,373,028	391,858	391,316	2,300,790

Imports into Canada and Exports of Salt, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
		\$		\$
IMPORTS—				
Salt, for use of the sea or gulf fisheries.....	50,942	147,611	31,467	99,214
Salt, in bulk, n.o.p.....	46,610	183,447	43,129	148,404
Salt, n.o.p., in bags, barrels, etc.....	30,028	193,520	33,764	212,423
Salt, table, made by an admixture of other ingredients, when con- taining not less than 90 per cent of pure salt.....	67	2,162	42	957
Total.....	128,247	526,740	108,422	460,998
EXPORTS—				
Total.....	9,045	51,239	5,549	46,601

Sodium Carbonate

Sodium carbonate production totalled 192 tons valued at \$1,677 during 1936 as compared with 242 tons worth \$2,430 in the preceding year and came entirely from deposits located on or near the line of the Pacific and Great Eastern Railway in British Columbia.

Sodium carbonate, or soda ash, has many industrial uses, being employed in the manufacture of glass, soap, and in the purification of oils, etc.

Imports of soda ash or barilla during 1936 totalled 1,592 tons valued at \$16,372 as compared with 1,324 tons worth \$37,995 in 1935.

Sodium Sulphate

The sodium sulphate deposits of Saskatchewan have become, annually, of increasing importance. Production in 1936 was 68 per cent greater than in 1935. Its principal uses are in the metallurgical treatment of nickel-copper matte and in the manufacture of "kraft paper." Production in 1936 totalled 75,559 tons valued at \$552,086 as compared with 44,817 tons worth \$343,764 in 1935. Imports of salt cake in 1936 amounted to 11,747 tons valued at \$110,676 as against 5,176 tons worth \$49,354 in the preceding twelve months. Nitre cake imports totalled 596 tons valued at \$15,727 as compared with 469 tons worth \$12,793 in 1935; Glauber's salt imports amounted to 1,255 tons valued at \$27,521 in 1936.

Talc and Soapstone

Canadian talc production in 1936, as for some years past, came chiefly from important deposits of foliated white talc located near Madoc, Ontario; two companies operate mines and mills in this area and produce various grades of high quality talc. Preparation of the mineral for the market includes crushing, drying, grinding and bolting; the products from these mills are marketed in Canada, United States and Europe. Both companies were in continuous operation throughout 1936.

In British Columbia shipments of talc were made in 1936 from Marne, on the P.C.E. R.R.; most of the production in this province is consumed in the manufacture of roofing materials.

Soapstone products are produced from deposits of the mineral occurring in the Eastern Townships, Quebec. These properties were actively operated in 1936. The mineral is mainly used, in the shape of blocks, as a refractory lining in alkali recovery furnaces in paper mills using the sulphite process. Powdered soapstone finds a good market as a filler in various industries. Mixed with Portland cement it has been used successfully for interior plastering purposes giving a very white velvet finish. It is now used in the manufacture of fireless cookers, fireplaces, stoves, wood or coal burners and electrical heaters. Soapstone is easily carved and when polished takes a soft marble-streaked appearance. Various objects, such as tobacco jars, candlesticks, clock cases, and book-ends made of carved and polished soapstone have lately been put on the market.

Production in Canada, Imports and Exports of Talc and Soapstone, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
PRODUCTION—		\$		\$
Soapstone	—	32,053	—	32,770
Talc	13,803	139,479	22,599	143,929
Total	—	171,532	—	176,699
IMPORTS—				
Talc or soapstone, ground or unground— Total	2,634	44,503	2,936	43,185
EXPORTS—				
Talc— Total	8,927	90,923	10,222	102,071

STRUCTURAL MATERIALS AND CLAY PRODUCTS

The value of production of items included in this group was higher than in the preceding year. The outlook for 1937 has improved by the rehabilitation plan sponsored by the Employment Commission and the present Administration in co-operation with the banks. Through the incentive to home owners of low interest loans for modernization, renovation and repair work, it is hoped that substantial activity and increased employment will result not only in the building trades but in associated fields as well.

Cement

Cement production showed improvement in 1936. Close chemical control and improvement in equipment has resulted in remarkable uniformity in the product. During recent years several plants have been converted from the dry to the wet process. The largest rotary kiln in the western hemisphere, 455 feet long, was put in operation during 1936 at Belleville, Ontario.

Production in Canada, Imports and Exports of Cement, 1935 and 1936

	1935		1936	
	Barrels	Value \$	Barrels	Value \$
OUTPUT—Total	3,487,602	-	4,539,030	-
SALES—				
Quebec.....	1,751,012	2,472,008	2,093,130	2,945,074
Ontario.....	1,243,836	1,752,148	1,542,463	2,180,895
Manitoba.....	266,457	604,857	348,042	783,095
Alberta.....	219,555	436,914	243,534	482,197
British Columbia.....	187,226	314,116	281,549	520,155
Total	3,648,086	5,580,043	4,508,718	6,911,416
Stocks, December 31.....	1,402,017	-	1,832,380	-
IMPORTS—				
Portland.....	17,738	60,079	39,867	107,180
Manufactures.....	-	17,102	-	7,141
Total	-	77,181	-	114,321
EXPORTS—Total	55,607	44,365	68,929	56,909
APPARENT CONSUMPTION—Total	3,610,217	-	4,479,656	-

Clay Products

The combined values of all varieties of clay products made from domestic clay produced during 1936 amounted to \$3,430,033 as compared with \$3,012,563 in 1935.

Production (Sales) of Domestic Clay and Clay Products in Canada, 1935 and 1936

Products	Unit of measure	Sales or Shipments			
		1935		1936	
		Quantity	Value \$	Quantity	Value \$
Clay—Fullers earth.....	ton	-	-	-	-
Bentonite.....	ton	41	781	-	-
Fireclay.....	ton	2,272	15,574	2,552	17,639
Kaolin (china clay).....	ton	170	1,820	-	-
Fireclay blocks and shapes.....	x x x x	-	71,344	-	65,171
Firebrick.....	M	1,817	90,149	2,651	125,364
Brick—Soft mud process—Face.....	M	6,695	122,215	4,138	71,183
Common.....	M	21,197	259,504	17,708	223,100
Stiff mud process—Face.....	M	25,289	500,066	30,994	597,842
(wire cut).....	M	32,334	437,123	40,280	539,039
Dry press—Face.....	M	8,454	175,042	11,051	192,377
Common.....	M	6,381	55,253	8,812	78,870
Fancy or ornamental brick (including special shapes, embossed and enamelled brick).....	M	13	728	24	1,295
Sewer brick.....	M	175	5,236	413	6,696
Paving brick.....	M	15	627	16	646
Structural tile.....					
Hollow blocks (including fireproofing, and load-bearing tile).....	ton	47,195	344,608	62,750	484,673
Roofing tile.....	No.	82,015	3,069	51,130	2,139
Floor tile (quarries).....	sq. ft.	51,765	7,629	97,738	13,798
Ceramic or glazed floor and wall tile.....	x x x x	-	615	-	-
Drain tile.....	M	7,124	205,336	7,438	216,153
Sewer pipe (including copings, flue linings, etc.).....	x x x x	-	481,559	-	563,286
Pottery, glazed or unglazed (including coarse earthenware, stoneware, and all other pottery).....	x x x x	-	220,711	-	218,402
Other products.....	x x x x	-	13,274	-	12,360
Total	x x x x	-	3,012,563	-	3,430,033

Imports into Canada and Exports of Clay and Clay Products, 1935 and 1936

	Unit of measure	1935		1936	
		Quantity	\$	Quantity	\$
IMPORTS—					
Building brick.....	ton	570	8,519	2,544	24,310
Building blocks.....		-	3,200	-	7,274
Clays—China.....	cwt.	708,890	287,997	833,807	342,654
Fire.....	"	993,947	156,361	1,398,931	192,640
Pipe.....		-	6,489	-	2,793
Other clays, n.o.p.....		-	259,044	-	238,159
Zirconium silicate.....		-	2,307	-	2,547
Zirconium oxide.....		-	13,824	-	23,133
Drain tile, unglazed.....		-	11	-	22
Drain, sewer pipe and earthenware fittings therefor, chimney linings or vents, chimney tops or inverted blocks, glazed or unglazed.....		-	8,219	-	15,297
Tiles or blocks of earthenware or stone prepared for mosaic flooring.....		-	28,890	-	46,377
Tiles, earthenware, for roofing purposes.....		-	5,146	-	6,120
Tiles, earthenware, n.o.p.....		-	97,779	-	132,305
Insulators, electric, porcelain.....		-	63,428	-	67,596
Pottery and chinaware.....		-	3,363,970	-	3,672,867
Brick, fire, other, valued at not less than \$100 per M, rectangular shaped; the dimensions of each not to exceed 125 cubic inches for use exclusively in the construction or repair of a furnace, kiln, etc.....		-	110,863	-	93,293
Brick, fire, n.o.p., for use exclusively in the construction or repair of a furnace, kiln, or other equipment of a manufacturing establishment.....		-	492,961	-	357,733
Firebrick, n.o.p.....		-	224,735	-	608,749
Firebrick, chrome.....		-	46,882	-	68,082
Magnesite brick.....		-	384,141	-	568,565
Silica brick (containing not less than 90 per cent silica). Paving brick.....	ton	2,505	18,787	1,216	261,974
Artificial teeth, not mounted.....		-	306,922	-	11,122
Baths, bathtubs, basins, laundry tubs, etc., of earthen- ware, cement or clay, n.o.p.....		-	85,350	-	90,614
Ceramic insulator cores, not further manufactured than burned and glazed, printed or decorated or not, and without fittings, when imported by manu- facturers of spark plugs for use exclusively in the manufacture of spark plugs, in their own factories.....		-	130,069	-	54,516
Crucibles, clay or sand.....		-	44,586	-	54,162
Other manufactures of clay.....		-	73,053	-	70,992
Total.....			6,435,642		7,351,148
EXPORTS—					
Building brick.....	M	367	6,784	666	11,590
Clay—Unmanufactured.....	cwt.	5,591	2,595	3,297	2,600
Manufactured.....		-	15,502	-	36,803
Earthenware.....		-	49,843	-	82,936
Porcelain insulators.....		-	288,400	-	392,927
Total.....			363,124		526,856

Lime

Lime production in 1936 totalled 473,264 tons as compared with 405,419 tons in 1935. The uses for lime are widening annually. The demand from chemical and metallurgical plants is increasing and the specifications as to quality are becoming more rigid. A waterproof lime is now being produced in Canada. Pulverized quicklime is now being marketed in competition with hydrated lime as it has greater plasticity and is preferred for some chemical uses. It is marketed in multi-walled paper bags, which are rendered practically air-proof as one of the walls is made of cellophane or asphalt-treated paper; the pulverized quicklime when in these bags will keep for a much longer period than when in the lump form.

Production in Canada, Imports and Exports of Lime, 1935 and 1936

	Total 1935		1936					
			Quicklime		Hydrated lime		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
PRODUCTION—								
Nova Scotia.....	11,331	82,698	15,664	119,230	—	—	15,664	119,230
New Brunswick.....	16,272	124,775	13,449	104,142	7,267	52,875	20,716	157,017
Quebec.....	116,473	678,866	98,789	589,314	33,943	125,752	132,732	715,066
Ontario.....	220,140	1,696,867	220,146	1,583,939	28,839	275,009	248,985	1,858,948
Manitoba.....	18,615	185,517	17,314	133,227	4,433	71,815	21,747	205,042
Alberta.....	6,584	57,108	8,879	75,756	250	2,503	9,129	78,259
British Columbia.....	16,004	99,960	20,017	123,128	4,274	15,222	24,291	138,350
Total.....	405,419	2,925,791	394,258	2,728,736	79,006	543,176	473,264	3,271,912
IMPORTS—Total.....	635	9,181	—	—	—	—	938	12,036
EXPORTS—Total.....	5,230	50,296	—	—	—	—	11,668	97,574

Stone

The largest consumption of stone is for road building, concrete aggregate, and for railway ballast. Certain companies are now marketing washed stone for use in concrete aggregate. There is a growing demand for finely pulverized limestone for use as a mineral filler in the manufacture of rubber, linoleum, oilcloth, putty and other products. Finely crushed limestone is continually coming into more extensive use as a filler in chemical fertilizers where it has replaced inert fillers such as sand. Limestone dust is also used in large quantities for the dusting of coal mines.

Canada is fortunate in having many deposits of stone suitable for structural and ornamental purposes.

A new use for Canadian limestone is in the manufacture of rock wool for heat and sound insulation. Five Canadian companies are now producing this commodity.

Production (Sales) of Stone from Canadian Quarries, by Kinds and by Provinces, 1935 and 1936

Province	Granite	Limestone (a)	Marble	Sandstone	Total
1935					
Nova Scotia.....	tons 525	8,988	—	202,952	212,465
	\$ 23,800	19,188	—	578,844	621,832
New Brunswick.....	tons 31,091	53,213	—	840	85,144
	\$ 103,275	86,001	—	19,447	208,723
Quebec.....	tons 131,096	1,143,983	10,518	104,920	1,390,517
	\$ 800,685	1,087,320	43,455	122,301	2,053,761
Ontario.....	tons 44,473	2,061,206	4,726	12,536	2,122,941
	\$ 93,465	1,680,810	35,210	54,407	1,863,892
Manitoba.....	tons 387	146,100	127	—	146,614
	\$ 4,630	183,892	1,233	—	189,755
Alberta.....	tons —	2,242	—	—	2,242
	\$ —	6,981	—	—	6,981
British Columbia.....	tons 118,782	215,933	604	21,576	356,895
	\$ 100,432	189,381	5,471	63,006	358,290
Canada.....	tons 326,354	3,631,665	15,975	342,824	4,316,818
	\$ 1,126,287	3,253,573	85,369	838,005	5,303,234
1936					
Nova Scotia.....	tons 445	8,893	—	155,460	164,798
	\$ 25,175	20,529	—	241,400	287,104
New Brunswick.....	tons 1,090	23,252	—	4,165	28,507
	\$ 75,757	61,625	—	4,410	111,792
Quebec.....	tons 112,126	1,250,211	17,866	82,317	1,162,520
	\$ 393,493	1,023,299	138,294	91,809	1,646,895
Ontario.....	tons 486,472	2,246,738	2,626	2,476	2,738,312
	\$ 536,563	1,748,593	24,348	8,861	2,318,365
Manitoba.....	tons 245	49,726	—	—	49,971
	\$ 2,128	69,538	—	—	71,666
Alberta.....	tons —	13,876	—	—	13,876
	\$ —	26,188	—	—	26,188
British Columbia.....	tons 255,427	217,891	—	18,434	491,752
	\$ 140,750	192,390	—	135,944	469,084
Canada.....	tons 855,805	3,810,587	20,492	262,832	4,919,736
	\$ 1,123,866	3,142,162	162,642	482,424	4,961,094

NOTE.—In addition to the above production there were produced 1,129 tons of slate valued at \$4,329 in 1935 and 287 tons at \$2,634 in 1936; also not included in the limestone statistics is limestone consumed in the cement industry. Limestone used in the Canadian lime industry is also not included; it is estimated that approximately 800,000 tons of limestone were burned in the manufacture of lime in 1936.

(a) Includes dolomite.

Imports and Exports of Stone, 1935 and 1936

	1935		1936	
	Tons	Value	Tons	Value
IMPORTS—		\$		\$
Building stone, other than marble or granite, sawn on more than two sides, but not sawn on more than four sides.....	-	-	-	-
Building stone other than marble or granite, planed, turned, cut or further manufactured than sawn on four sides.....	20	1,127	92	9,222
Flagstone, sandstone, and all building stone, not hammered, sawn or chiselled.....	4,749	20,193	3,049	20,446
Flagstone and building stone, other than marble or granite, sawn on not more than two sides.....	514	3,091	460	3,456
Granite, sawn only.....	-	8,336	-	7,094
Granite, manufactures of, n.o.p.....	-	3,807	-	4,733
Granite monuments.....	-	22,008	-	17,628
Granite, rough, not hammered or chiselled.....	-	65,185	-	70,667
Marble, rough, not hammered or chiselled.....	-	4,926	-	15,765
Marble, sawn or sand rubbed, not polished.....	-	9,085	-	24,107
Marble, not further manufactured than sawn for tombstones.....	-	15,246	-	11,715
Marble, manufactures, of, n.o.p.....	-	9,640	-	15,774
Refuse stone.....	382,186	202,416	304,440	184,481
Slate—including roofing, pencils, writing, mantels and manufactures of n.o.p.....	-	36,388	-	34,155
Manufactures of stone, n.o.p.....	-	19,416	-	17,055
Total.....	-	421,264	-	426,298
EXPORTS—				
Crushed stone.....	54,669	98,244	49,728	90,024
Granite and marble, unwrought.....	1,255	10,301	1,156	8,788
Freestone, limestone and other building stone, unwrought.....	47	433	571	2,090
Dressed stone.....	-	1,917	-	3,380
Total.....	-	110,895	-	105,182

Sand and Gravel

Production of sand and gravel in 1936 totalled 19,487,271 short tons valued at \$7,187,068 as compared with 21,213,489 short tons worth \$6,389,440 in 1935. Ontario and Quebec, with outputs of 7,071,525 tons and 5,270,531 tons, respectively, were the largest provincial producers of these materials in 1936. Imports of sand and gravel in 1936 totalled 121,937 tons valued at \$77,668. Exports were recorded at 333,438 tons worth \$73,624.

Gravel is now being exclusively used as back filling in some of our larger gold mines. This is construed for statistical purposes as commercial consumption and as such is included with the 1936 total.

LIST OF PUBLICATIONS

PREPARED IN THE MINING, METALLURGICAL AND CHEMICAL BRANCH DOMINION BUREAU OF STATISTICS

STATISTICS OF MANUFACTURES—based chiefly on minerals.

General reports on the sections of manufactures covered by the Mining, Metallurgical and Chemical Branch are issued as follows:—

Annual Printed Reports—

Iron and Steel and Their Products: Primary Iron and Steel (Pig Iron, Ferro-Alloys, Steel and Rolled Products)—Castings and Forgings—Boilers, Tanks and Engines—Farm Implements—Machinery—Automobiles—Auto Parts—Bicycles—Railway Rolling Stock—Wire and Wire Goods—Sheet Metal Products—Hardware, Cutlery and Tools—Bridge Building and Structural Steel—Miscellaneous Iron and Steel Products.

Manufactures of Non-Ferrous Metals: Aluminium Products—Brass and Copper Products—White Metal Alloys—Jewellery and Silverware—Electrical Apparatus and Supplies—Miscellaneous Non-Ferrous Metal Products—Non-Ferrous Metal Smelting and Refining.

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Chemicals and Allied Products: Coal Tar Distillation—Acids, Alkalies and Salts—Compressed Gases—Explosives, Ammunition and Fireworks—Fertilizers—Medicinal and Pharmaceutical Preparations—Paints, Pigments and Varnishes—Soaps, Cleaning Preparations and Washing Compounds—Toilet Preparations—Inks—Adhesives—Polishes and Dressings—Wood Distillation—Miscellaneous Chemical Products, including (a) Boiler Compounds, (b) Cellulose Products, (c) Insecticides, (d) Sweeping Compounds, (e) Disinfectants, (f) Matches, (g) Dyes and Colours, (h) Miscellaneous Chemical Products, n.e.s.

Annual Bulletins.—In addition to the foregoing printed reports, a series of bulletins is issued annually, each of which presents the principal statistics relative to production: (a) in a particular industry, e.g. Automobiles—Petroleum Products, etc., (b) in each of the four main groups of industries, (c) on certain commodities, e.g., stoves, sulphuric acid, electric motors, etc. These are published in mimeograph form from time to time during the year as the necessary material becomes available and provide advance information on these industries.

Quarterly Reports.—

Production and Sales of Radio Receiving Sets.
Production and Imports of Galvanized Sheets.
Factory Sales of Electric Storage Batteries.

Monthly Reports.—

Production of Pig Iron and Steel in Canada.
Coal and Coke Statistics for Canada.
Automobile Statistics for Canada.

SPECIAL REPORTS.—

The Fertilizer Trade in Canada. (Annual).
Directory of Chemical Industries in Canada as of July 1, 1932.
Consumption of Chemicals in Municipal Waterworks, 1934 and 1935.

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