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CANADA—DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH

PRELIMINARY REPORT

ON THE

MINERAL PRODUCTION OF CANADA

DURING THE CALENDAR YEAR

1931

Published by Authority of the Hon. H. H. Stevens, M.P.,
Minister of Trade and Commerce



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1932

LIST OF PUBLICATIONS

PREPARED IN THE

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 10 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. A list of operating companies with their office and plant addresses is included. 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—Directory of Reporting Firms—Notes on the Methods of Computing Values—Index.

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—

(a) MINERAL PRODUCTION—

Metals.—Arsenic—Cobalt—Copper—Gold—Lead—Nickel—Metals of the Platinum Group—Silver—Zinc—Miscellaneous Metals including Aluminium, Antimony, Chromite, Iron ore, Manganese, Mercury, Molybdenum, Tin, Tungsten.

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, Fluorspar, Graphite, Magnesite, Magnesium Sulphate, Mineral Waters, Natro-Alunite, Peat, Phosphate, Pyrites, Sodium Carbonate, Sodium Sulphate.

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

(b) MINERAL INDUSTRY.—Each bulletin of this group shows in synopsis, material to be published subsequently as one chapter of the annual report on the *Mineral Production of Canada*. These bulletins are published in mimeograph form from time to time during the year as the necessary material becomes available.

By Industries.—Gold Mining Industry including Alluvial Gold Mining, Auriferous Quartz Mining and Copper-Gold-Silver Mining—Silver Cobalt and Silver-Lead-Zinc Mining Industry—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.

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

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PREFACE

The present statistical report is issued in continuance of the Bureau's policy of preparing preliminary estimates regarding Canada's mineral production. It is designed to supplement the preliminary report on this subject issued by the Dominion Bureau of Statistics for the six months ending June 30, 1931, and the preliminary estimate of the calendar year production issued to the press on January 1, 1932. This report provides in detail the first figures on production for the whole of the calendar year with comparative figures for the preceding calendar year.

The compilation shows that the value of production was considerably less than in 1930, due to lower prices and the falling-off in demand for Canada's metals and minerals, but the reduction in quantity of many of the minerals produced was not as great as the reduction in values, and on the whole Canada is holding up well in the face of the adverse conditions prevailing.

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.

Further progress has been made in the co-ordination of provincial and Dominion statistics relating to mineral production. Arrangements similar to those which have been working satisfactorily for a number of years with the provinces of Quebec, Ontario and British Columbia were made during the year with the Department of Mines and Natural Resources of Manitoba. The provinces and the Bureau use joint forms in the collection of mineral statistics and the advantage gained is appreciable. By these arrangements the operators are now required to file only one form, in duplicate, which tends to greater comparability in Dominion and provincial figures.

The cordial thanks of the Bureau are tendered to mine and smelter operators, to the Department of the Interior, to the federal Department of Mines, 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.

The 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, 1932.

Quantities and values of Mineral products from Canadian Sources, 1930 and 1931

	1930		1931		Per cent Increase (+) or Decrease (-)	
	Quantity	Value	Quantity	Value	Quantity	Value
METALLICS						
Arsenic..... lb.	4,524,220	\$ 129,527	-	\$ 150,993	-	+ 16.6
Bismuth..... lb.	12,732	6,366	118,207	157,650	-	-
Cadmium..... lb.	-	337,871	-	180,958	-	- 46.4
Cobalt..... lb.	694,163	1,144,007	521,051	651,179	- 24.9	- 43.1
Copper..... lb.	303,478,356	37,948,359	293,154,655	24,185,119	- 3.4	- 36.3
Gold..... fine oz.	2,102,068	43,453,601	2,695,219	55,715,120	+ 28.2	+ 28.2
Titaniferous iron ore..... tons	412	1,239	1,509	10,261	-	-
Lead..... lb.	332,894,163	13,102,635	267,339,293	7,260,060	- 19.7	- 44.6
Manganese ore..... tons	273	1,356	117	2,893	- 57.1	+ 113.3
Nickel..... lb.	103,768,857	24,455,133	65,666,320	15,267,453	- 36.7	- 37.6
Palladium, Rhodium, Iridium, etc. fine oz.	34,092	895,867	46,918	1,217,717	+ 37.6	+ 35.9
Platinum..... fine oz.	34,024	1,543,261	44,745	1,595,830	+ 31.5	+ 3.4
Selenium..... lb.	-	-	21,500	40,850	-	-
Silver..... fine oz.	26,443,823	10,069,376	20,558,216	6,140,739	- 22.3	- 39.1
Zinc..... lb.	267,643,505	9,635,186	237,245,451	6,059,249	- 11.4	- 37.1
Total	-	142,743,764	-	118,636,071	-	- 16.0
NON-METALLICS—Fuels						
Coal..... tons	14,891,324	52,849,748	12,230,616	41,178,107	- 17.8	- 22.1
Natural gas..... M cu. ft.	29,376,919	10,260,985	26,530,902	9,144,204	- 9.7	- 11.1
Peat..... tons	2,847	10,932	1,170	5,937	- 58.9	- 45.7
Petroleum, crude..... brls.	1,522,220	5,033,820	1,537,000	4,260,685	+ 1.0	- 15.4
Total	-	68,184,485	-	54,588,933	-	- 19.9
Other Non-Metallics						
Actinolite..... tons	34	437	35	456	+ 2.9	+ 4.3
Asbestos..... tons	242,114	8,390,163	164,297	4,812,886	- 32.1	- 42.6
Barytes..... tons	66	1,484	16	363	- 75.8	- 75.5
Bituminous sands..... tons	2,067	8,268	1,015	4,060	- 50.9	- 50.9
Diatomite..... tons	554	13,247	1,624	33,070	+ 193.1	+ 149.6
Feldspar..... tons	26,796	268,469	18,881	189,850	- 29.5	- 29.3
Fluorspar..... tons	80	1,240	40	620	- 50.0	- 50.0
Graphite..... tons	1,535	96,392	548	32,149	- 64.3	- 66.6
Grindstones..... tons	830	62,021	343	12,924	- 58.7	- 79.2
Gypsum..... tons	1,070,968	2,818,788	854,329	2,099,381	- 20.2	- 25.5
Iron oxides..... tons	6,596	83,873	5,520	49,205	- 16.3	- 41.3
Magnetite..... tons	13,336	336,162	11,411	295,579	- 14.4	- 12.1
Manganese (bog)..... tons	275	1,650	-	-	-	-
Mica..... tons	1,170	96,004	1,252	52,683	+ 7.0	- 45.1
Mineral waters..... Imp. gals.	227,141	24,481	217,408	13,324	- 4.3	- 45.6
Phosphate..... tons	40	760	-	-	-	-
Quartz..... tons	226,200	418,127	194,474	299,796	- 14.0	- 26.3
Salt..... tons	271,695	1,694,631	259,047	1,904,149	- 4.7	+ 12.4
Silica brick..... M	2,418	97,379	900	35,746	- 62.6	- 63.3
Soapstone..... tons	-	50,168	-	34,439	-	- 31.4
Sodium carbonate..... tons	364	4,550	411	4,932	+ 12.9	+ 8.4
Sodium sulphate..... tons	-	293,847	-	419,497	-	+ 42.8
Sulphur..... tons	37,730	314,835	50,107	429,457	+ 32.8	+ 36.4
Talc..... tons	11,841	136,048	11,806	122,044	- 0.3	- 10.3
Volcanic dust..... tons	242	4,840	128	2,560	- 47.1	- 47.1
Total	-	15,217,864	-	16,846,170	-	- 28.7
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS—Clay Products						
Brick—Soft mud process Face..... M	11,350	247,220	5,491	116,498	- 51.6	- 52.9
Common..... M	56,487	861,905	38,035	581,525	- 32.7	- 32.5
Stiff mud process Face..... M	99,284	2,135,871	77,636	1,766,547	- 21.8	- 17.3
Common..... M	105,225	1,480,905	70,974	1,190,557	- 32.6	- 19.6
Dry process Face..... M	29,434	604,197	19,392	420,052	- 34.1	- 30.5
Common..... M	16,915	208,495	8,990	113,566	- 46.9	- 45.5
Fancy or ornamental brick..... M	339	27,649	335	20,631	- 1.2	- 25.4
Sewer brick..... M	804	15,299	2,253	43,834	+ 180.2	+ 186.5
Paving brick..... M	9	297	19	682	+ 111.1	+ 129.6
Firebrick..... M	3,789	177,608	2,248	107,507	- 40.7	- 39.4
Fireclay..... tons	2,870	25,975	1,233	14,857	- 57.0	- 42.8
Bentonite..... tons	74	1,396	299	3,068	+ 304.1	+ 119.8
Fireclay blocks and shapes.....	-	147,309	-	101,601	-	- 31.0
Hollow blocks..... tons	165,359	1,667,783	106,855	1,049,230	- 35.4	- 37.1
Roofing tile..... No.	3,056	356	6,935	720	+ 126.9	+ 102.2
Floor tile (quarries)..... sq. ft.	179,786	56,230	107,499	31,415	- 40.2	- 44.1
Drain tile..... M	25,291	687,070	14,178	354,197	- 43.9	- 48.4
Sewer pipe, copings, flue linings, etc.....	-	1,721,815	-	1,464,804	-	- 14.9
Pottery, glazed or unglazed.....	-	294,866	-	259,173	-	- 12.1
Other clay products.....	-	231,372	-	171,952	-	- 25.7
Total	-	10,593,578	-	7,812,504	-	- 26.3
Other Structural Materials						
Cement..... brls.	11,032,538	17,713,067	10,161,658	15,826,243	- 7.9	- 10.7
Lime..... tons	490,802	4,038,698	339,452	2,647,125	- 30.8	- 34.5
Sand and gravel..... tons	28,547,511	8,344,913	24,608,413	6,563,327	- 13.8	- 21.3
Slate..... tons	150	3,000	-	-	-	-
Stone..... tons	9,994,506	13,034,209	8,223,799	10,532,992	- 17.7	- 19.2
Total	-	43,133,867	-	35,569,687	-	- 17.5
Grand Total	-	279,873,578	-	277,456,365	-	- 18.7

DOMINION BUREAU OF STATISTICS

R. H. COATS, B.A., F.S.S., (Hon.), F.R.S.C., Dominion Statistician

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

PRELIMINARY REPORT
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Many events of far-reaching importance have occurred in the financial and economic world in 1931. Although these have had a deterrent effect on the output of all commodities, yet the activities and production of the Canadian mining industry have shown remarkable stability. The total value of mineral production of this country in 1931 amounted to \$227,456,365. This is a decrease of 18.7 per cent from last year and we must go back to 1925 before a year may be found with a smaller output value but the quantity of most of the metals produced in 1931, although not so large as in 1930, was far greater than in 1925. Prices in 1925 were, in many cases however, double those of 1931.

The drop in values in 1931 is not reflected to the same extent in volume or quantity output. In order that a comparison of the volume produced in the past two years might be made, the 1931 production was computed at the average 1930 unit price for each metal and mineral and the result showed a drop of only 9.0 per cent; as against 18.7 per cent when the actual value of the production of the two years was compared.

Metals as a group reached a total value of \$118,636,071 as against \$142,743,764 in 1930; fuels, which include coal, natural gas, crude petroleum and peat, totalled \$54,588,933, a decrease of 19.9 per cent from the previous year; other non-metals, the principal items being asbestos, gypsum, salt, quartz, feldspar, and sodium sulphate, totalled \$10,849,170, which was less than 1930 by 28.7 per cent; and the structural materials group, including brick, cement, lime, stone and sand and gravel, reflected the decreased activity in building programs and stood at \$43,382,191, a falling-off of 19.3 per cent.

The production for the past ten years is shown in the following table:—

Values of Mineral Production of Canada by Classes, 1922-1931

Year	Metallies	Coal, natural gas, peat and crude petroleum	Other non- metallies	Clay products and other structural materials	Total
					\$
1922.....	61,785,707	71,990,674	10,986,120	39,534,741	184,297,242
1923.....	84,391,218	78,465,622	13,471,110	37,751,381	214,079,331
1924.....	102,406,528	59,770,024	12,025,985	35,380,860	209,583,406
1925.....	117,082,298	57,354,055	14,497,746	37,649,234	226,583,333
1926.....	115,237,581	68,743,933	16,490,211	39,959,398	240,431,123
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	271,999,487
1929.....	154,454,056	76,787,397	21,073,950	58,534,834	310,850,246
1930.....	142,743,764	68,184,485	15,217,864	53,727,465	279,873,578
1931.....	118,636,071	54,588,933	10,849,170	43,382,191	227,456,365

But the value of Canada's mineral production does not adequately show the place this industry assumes in the life of this country. Exclusive of the amount spent in exploration, which is considerable, the total capital invested in Canada's mines, smelters and refineries, oil and gas wells, clay products plants, cement mills, sand and gravel pits, and stone quarries amounts to upwards of \$888,000,000. In 1930, the last year for which industrial figures are available, some 89,000 men were employed who received \$114,000,000 in salaries and wages and although conditions at the present time may not be all that could be desired, our gold, silver, copper, nickel, lead, zinc, and coal resources have been proven to the point that we can readily be assured of an ample supply, both for home use and for export, for many years to come.

PRINCIPAL MINERALS

A short description of the present situation regarding Canada's eighteen leading metals and minerals follows in order of their total value of production in 1931.

Gold.—Though outputs of practically all mineral products show a downward trend, the gold mining situation in Canada was never better. The output of gold was never so high and the prospecting for and development of new properties was most active. Gold production in 1931 totalled 2,695,219 fine ounces which when valued at the standard rate of \$20.671834 per fine ounce, was worth \$55,715,120. In addition the gold mines of Canada received \$1,895,476 in premium payments due to the exchange situation which arose when England went off the gold standard on September 21, 1931.

Gold is now Canada's most valuable mineral, even surpassing coal which held the premier position for so many years. Production is recorded from the provinces of Nova Scotia, Quebec, Ontario, Manitoba, Alberta, British Columbia and the Yukon district, thus showing its continent wide distribution. As in other recent years the Nova Scotia output was small. The Quebec production is showing a marked annual increase. Two gold mines in Quebec, the Siscoe and Granada, increased their outputs over 1930 and this with the much greater production by Noranda than in former years places Quebec second among the gold producing provinces of the Dominion. In 1929 production from Quebec totalled 90,798 fine ounces, in 1930 the output reached 141,747 fine ounces, and in 1931 this province produced 300,877 fine ounces. Production in Ontario passed the two million ounce mark for the first time, the figures being 2,085,818 fine ounces. The Porcupine area accounted for 962,252 fine ounces and 1,051,377 fine ounces were produced at the Kirkland lake camp; the remainder came from other gold properties and the nickel-copper mines. Manitoba production at 102,969 fine ounces also showed an increase when compared with 1930. This was due in large part to the continuous operation of the Hudson Bay smelter which treats the copper-zinc ore of the Hudson Bay and Sherritt-Gordon mines; the ore from these properties carries precious metal values in small amounts. The Central Manitoba mine operated continuously, the Gem Lake which was brought into production late in the fall of 1931 made its first shipment of bullion before the end of the year. Some ore recovered in development work on the Kiskoba was shipped to Trail. In Alberta a small recovery of gold was made by individuals working the gravels on rivers west of Edmonton and it is reported that a new gold dredge now under construction will be in operation in 1932. Production of lode mines in British Columbia was not as large as in 1930 caused by a decreased yield of by-product gold from copper mining, a lower output from the Premier and the closing down of the Nickel Plate at Hedley. These decreases were offset in part by a much larger production by the Pioneer, increases from the Union and Reno and a larger placer output. Total production for the year from British Columbia totalled 160,594 fine ounces as against 164,331 fine ounces in 1930. Yukon gold production at 44,306 fine ounces, practically all of which was of placer origin, showed a marked increase over 1930.

Coal.—Coal output during the year was lower in all provinces except in Saskatchewan and in the Yukon. Production consisted of 8,857,195 tons of bituminous coal, 471,302 tons of sub-bituminous coal and 2,902,119 tons of lignite. Anthracite imports consisted of 2,236,423 tons from the United States, 876,364 tons from Great Britain, 60,762 tons from Germany, and 4,592 tons from the French East Indies.

Bituminous importations were obtained principally from the United States. Exports of Canadian coal declined 42 per cent in 1931. Coal made available for consumption in Canada during 1931 totalled 25,402,594 tons as compared with 31,876,886 tons in the preceding year.

Employment in Canadian coal mines was at a lower level in 1931 than in the previous year. In January, 30,001 men were on the mine payrolls; a steady decline was recorded during the following months and in June the low point for the year of 23,423 was reached. The usual rising seasonal trend in employment was apparent in the following months and in November 28,795 men were employed. The year closed with 28,548 men on the mine payrolls.

Though the production was lower, progress was made, by means of Government assistance, in marketing coal in areas which had hitherto been served practically entirely with coal from sources other than our own mines.

Copper.—Canada's copper production at 293,154,655 pounds decreased only 3 per cent when compared with 1930, but owing to the lower prices the total value was less by 36 per cent. The price of electrolytic copper in New York in January last was 9·838 cents per pound; this price gradually fell to an average of 6·558 cents in November and the average price in December showed very little improvement. Copper is produced in Quebec, Ontario, Manitoba, and British Columbia and during the past two years considerable progress has been made in the matter of handling raw output. At the present time a large part of the Dominion output of blister copper is refined either at the Canadian Copper Refineries at Montreal East where there is a rated capacity of 75,000 tons of refined copper annually or at the Ontario Refining Co. Ltd., Copper Cliff, Ontario, where the annual capacity is 120,000 tons. Some blister copper and copper concentrates are still being exported. During the year under review the various copper producing provinces contributed to the total production as follows: Quebec, 23·6 per cent; Ontario, 38·6 per cent; Manitoba, 15·6 per cent; and British Columbia, 22·2 per cent. On December 22nd the Copper Institute announced that copper producers representing 70 per cent of the world's output agreed to reduce their production to approximately 26½ per cent of their rated capacity. January 1st was the date set for bringing this agreement into effect and it is expected that production would be restricted to approximately 85,000 tons per month. According to Metal and Mineral Markets the International Nickel Company will not be affected by these restrictions as their August reduction brought their output to 25 per cent of possible capacity. Noranda will reduce output to 40 per cent. Output by Hudson Bay and Sherritt-Gordon will not be curtailed. Britannia and Granby plan to reduce to 26½ per cent.

Cement.—Although construction generally was lower than in the previous year, cement sales held up remarkably well. Production totalled 10,161,658 barrels worth \$15,826,243 as against 11,032,538 barrels worth \$17,713,067 in 1930. The larger part of this production comes from mills in Ontario and Quebec but the combined shipments from the plants situated in Manitoba, Alberta and British Columbia are responsible for 17·2 per cent of the total quantity.

Nickel.—Nickel production was severely affected by the general trade depression and the decline in the output of steel reacted very unfavourably towards this metal since very important quantities are employed in the manufacture of certain steels. Output for the year of nickel in nickel-copper matte exported, electrolytic nickel and nickel in nickel oxide totalled 65,666,320 pounds as against 103,768,857 pounds in 1930.

Stone.—Stone, particularly limestone, has a wide variety of uses. Many of Canada's most beautiful buildings are constructed of stone found within her own borders and as road metal or in concrete aggregate nothing has yet been found that will take its place. Production in 1931 totalled 8,223,799 tons valued at \$10,532,992.

Natural Gas.—Natural gas production in Canada amounted to 26,530,902 thousand cubic feet in 1931, a decline of 9·7 per cent from the 1930 total of 29,376,919 thousand cubic feet. Production from Alberta wells declined 10·9 per cent in 1931 to 18,482,355 thousand cubic feet; from Ontario wells, 7·2 per cent to 7,395,000 thousand cubic feet, and from New Brunswick wells, 1·4 per cent to 652,947 thousand cubic feet. Alberta's average daily output of natural gas in December was estimated at 382,000 thousand cubic feet; approximately 10 per cent of this quantity was utilized.

Clay Products.—The value of clay products produced which includes the manufacture of brick of all kinds, sewer pipe and pottery, was less than in 1930, which reflected the drop in building activities but the total value of this production, amounting to \$7,812,504 represents a much more important section of the mining industry in Canada than is often supposed.

Lead.—The principal source of lead in Canada is the Sullivan mine in British Columbia though shipments were made to The Trail smelter from other mines in the province. This province contributed 98 per cent of the total output for the year, the Yukon contributed nearly four and a half million pounds and Ontario nearly a million pounds. The total Canadian production totalled 267,339,203 pounds during the year, a falling-off of 20 per cent from the preceding year.

Sand and Gravel.—Because of its wide distribution and its general usefulness for road making or in concrete, sand and gravel production ranks well up among the principal minerals. Production during the year under review totalled 24,608,413 tons worth \$6,563,327.

Silver.—Silver production during the year totalled 20,558,216 fine ounces as against 26,443,823 fine ounces in 1930, a decrease of 22 per cent in quantity and the total value decreased from \$10,089,376 in 1930 to \$6,140,739 in 1931. Silver prices in 1931 reached the lowest level ever recorded, the average for February being 26.773 cents per fine ounce. Prices strengthened towards the close of the year but the average price for the year in New York transposed to Canadian funds was 29.87 cents. Silver is recovered in Quebec as a by-product in gold and copper mining. Ontario production dropped to 7,470,681 fine ounces from 10,205,683 fine ounces in 1930. Manitoba's output was much higher than last year owing to the steady output of blister copper from the Hudson Bay smelter. Reduced output from the Sullivan and Premier mines accounted for the reduction from British Columbia. Yukon production was only slightly under the previous year's output.

Zinc.—Zinc production which constituted the refined zinc made at Trail and at Flin Flon, Manitoba, totalled 237,245,451 pounds. The average price of zinc on the London market for the year transposed to Canadian funds was 2.554 cents per pound.

Asbestos.—This important non-metallic has been for many years one of the principal economic minerals of the Province of Quebec. Competition from Africa and Russia has had some effect on this output and the adverse trade conditions during the past year resulted in the lowest production since 1922. Production in 1931 amounted to 164,297 tons valued at \$4,812,886.

Petroleum.—Petroleum production from Canadian wells increased approximately 1.0 per cent to a new high record in 1931 when 1,537,000 barrels were produced. This output consisted of 1,408,058 barrels from Alberta, 122,365 barrels from Ontario and 6,577 barrels from New Brunswick. The Alberta production included 1,331,070 barrels from the Turner Valley field, 60,806 barrels from the Red Coulee field and 16,182 barrels from the Wainwright-Ribstone field. During the first six months of the year Canada's petroleum output recorded an increase of 46.6 per cent over the total for the corresponding period of 1930. Owing to lessened demand for crude naphtha and to the provincial government's natural gas conservation measures, the production from the Turner Valley field showed a considerable decline during the last six months of the year.

Metals of the Platinum Group.—Platinum metals, practically all of which were obtained from the nickel-copper ores of the Sudbury district were valued at \$2,813,547. Refining of these metals is carried on at Acton near London, England.

Lime.—Because of its various uses lime is perhaps one of the most important mineral products. Production was lower in all provinces. Output in 1931 totalled 339,452 tons valued at \$2,647,125 as against 490,802 tons worth \$4,038,698 in the previous year.

Gypsum.—Gypsum quarries are operated in Nova Scotia, New Brunswick, Ontario, Manitoba, and British Columbia. Nova Scotia production totalled 698,394 tons, the greater part of which was exported. New Brunswick accounted for 58,957 tons; Ontario, 53,358 tons; Manitoba, 23,076 tons, and British Columbia, 20,544 tons.

Salt.—Salt production in 1931 totalled 259,047 tons as against 271,695 tons in the previous year. The drop in production was caused by the fact that less brine was used by chemical plants. Production of salt, other than that used in brine, showed a slight increase. Salt produced in Ontario comes from wells. The only other province producing salt at the present time is Nova Scotia where Malagash salt is recovered by mining methods.

REVIEW BY AREAS

Nova Scotia.—Coal is the principal mineral produced in Nova Scotia. In 1931 production reached 4,952,182 tons valued at \$19,004,402 as compared with 6,252,552 tons worth \$24,528,860 in 1930. Although production is down due to the general curtailment of consumption, markets have been extended in Canada considerably beyond the boundaries heretofore thought to have been the westerly limit, due to the assistance granted to the coal industry by the government.

Gypsum is another important mineral, the greater part of the annual output being exported to the United States. Nova Scotia is the only province outside of Ontario where salt is produced in commercial quantities, and small annual outputs of barytes, quartz and diatomite are also reported. Gold production was small totalling 460 fine ounces valued at \$9,509. It is reported that diamond drilling was done at the Indian Path Mines, Lunenburg county, and experimental work on tungsten ore from this property was carried on at the Technical College in Halifax.

New Brunswick.—Coal, gypsum, natural gas, petroleum, grindstones and some structural materials are produced in New Brunswick. Production of coal, totalled 181,327 tons valued at \$740,471 as against 209,349 tons worth \$864,118 in 1930. Assistance amounting to one-sixth of one cent per ton per mile is allowed by the government on movements of coal to the provinces of Quebec and Ontario. During the year an antimony property at Lake George made a test shipment of ore to Liverpool, England. It is also reported that a shipment of 120 tons of material described as manganese clay was shipped from Stoney Creek.

Quebec.—Quebec for many years was noted for its production of non-metallies, particularly asbestos, feldspar and mica, but in recent years the metallic deposits in the northwestern section of the province have attracted the most interest. From a small beginning in 1923 and 1924 this province can now boast of a copper mine almost unequalled anywhere, in that the gold content of the ore is unusually high, which renders operations profitable even in these times of extremely low copper prices. The smelter is situated at the mine and the company has a substantial interest in a refinery at Montreal East and in a fabricating plant adjacent to it. The Siseoe mine in Dubuisson township and the Granada mine in Rouyn increased their gold output over 1930. Development work was continued at the O'Brien-Cadillac and the Venus from which properties small shipments of gold were made. Much interest was shown in the exploratory and development work at the Beattie property. The new gold region in the townships of Pascalis and Louvreccourt was the centre of active development work in 1931; extensive diamond drilling was done on several deposits in this district. A mill which will make a pyrites concentrate as well as a copper concentrate has been completed at the Aldermac mine. The pyrite is to be shipped to pulp and paper mills where the sulphur will be roasted off and it is hoped that this material will eventually supplant the foreign brimstone now imported. The total value of the mineral production of the province amounted to \$35,673,395 in 1931.

Ontario.—Mineral production of Ontario was valued at \$96,126,990 as against \$113,530,976 in 1930. On account of the low commodity prices and the premium resulting from the exchange situation, the gold miners are bending every effort towards greater production. Output of gold for the year totalled 2,085,818 fine ounces which when valued at the standard rate for gold of \$20.671834 per fine ounce was worth \$43,117,684. The Kirkland Lake camp with a production of 1,051,377 fine ounces displaced the older Porcupine camp as the leading gold producing area in Canada, and the Lake Shore mine is now Canada's leading gold mine. Gold ore treated during the year showed a considerable advance over 1930 due in the main part to the bringing in of the new Dome mill, late in 1930 with a daily capacity of 1,500 tons; the enlarging of the mill at Lake Shore to handle 2,400 tons per day as against 1,375 tons, and the Teck-Hughes mill to treat 1,300 tons per day instead of 925 tons. The new McIntyre mill increased the quantity of ore handled each day from 1,580 tons to 1,800 tons in 1931 and the Howey Mill in Red Lake was stepped up from 442 tons to 623 tons. Hollinger production was maintained at a high level throughout the year and Comiurum output showed a rising trend in the closing months of the year. Increased activity was in evidence at many other properties.

Gold was recovered in appreciable quantities from the nickel-copper ores of the Sudbury district. The Mining Corporation continued development work on the Ashley property in Bannockburn township, Matachewan area. The main shaft is being sunk to 500 feet and present plans call for the building of a mill in 1932.

Copper production in Ontario amounted to 112,892,826 pounds as against 127,718,871 pounds in 1930 and included copper in blister copper made at Port Colborne and Copper Cliff and copper in matte exported by the International Nickel Company and the Falconbridge Nickel Mines Ltd. The Ontario Refining Co. Ltd., at Copper Cliff operated steadily throughout the year on blister received from the International Nickel Co., blister produced from Sherritt-Gordon ores at the Hudson Bay Smelter and blister from the Granby Consolidated in British Columbia. Selenium is recovered as a by-product from these ores and appears for the first time in the annual list of metals and minerals produced in Canada.

Notwithstanding decreased nickel production due to industrial depression, considerable advance was made during 1931 in opening up new avenues for the use of nickel. The various nickel steels and nickel in iron alloys shared in this expansion. The use of monel metal in the construction of household appliances broadened out appreciably during the year. Increasing quantities of white nickel alloys for architectural use were utilized in 1931. Some twenty-four nations now include nickel coins in their currency.

The silver mines of Cobalt and the surrounding district held up remarkably well in the face of the lowest price for this metal ever recorded. The continued low price will have a serious effect on this famous camp as many properties continued to produce through 1931 in the hope that the price would rise to a point that would ensure a reasonable profit. Production from all sources totalled 7,470,681 fine ounces as against 10,205,683 fine ounces in 1930. In addition to that produced by the silver mines proper, appreciable amounts are recovered from Sudbury ores and from gold bullion.

Lead production in Ontario was less; the Kingdon lead mine at Galetta closed down in April, 1931, owing to the low price obtainable for this metal.

Crude petroleum production showed improvement over 1930 but natural gas output was slightly lower; salt output, not including the salt in brine used for chemical purposes, was higher but many of the other non-metallies registered recessions. Production of brick, lime, cement and stone and sand and gravel were all lower than in 1930.

Manitoba.—Manitoba, once considered only as an agricultural province, is now deserving of distinct notice as a mineral producer. A large copper smelter, a zinc refinery, a gold mine in steady operation and another gold mine with a mill under construction is certainly establishing this province in a position of both prominence and promise. The metallurgical plants of the Hudson Bay Mining and Smelting Co. which were brought into production late in 1930 operated steadily throughout the year producing blister copper and refined zinc. The Sherritt-Gordon mine began shipping concentrates to this smelter early in 1931. Prospecting for gold properties was quite active with encouraging results.

Saskatchewan.—Production of coal from Saskatchewan was 14 per cent greater than last year. The federal government assists the coal miners by allowing them a reduction of one-seventh of one cent per ton per mile from the existing rates, providing that the assistance should not exceed one dollar per ton. This assistance extends to competitive points in Manitoba and as far east as Sioux Lookout and Fort Frances. Sodium sulphate production was greater than in 1930.

Alberta.—Coal production from Alberta totalled 4,562,004 tons valued at \$13,339,816; in the previous year, 5,755,528 tons worth \$18,063,225. Output consisted of 1,846,306 tons of bituminous coal, 471,302 tons of sub-bituminous coal, and 2,244,396 tons of lignite coal. Movements of Alberta coal have also been stimulated by government assistance. Natural gas production totalled 18,482,355 thousand cubic feet valued at \$4,384,694 as against 20,748,583 thousand cubic feet worth \$4,929,226 last year. Crude petroleum output was recorded at 1,408,058 barrels worth \$4,025,000, a slight gain in quantity over the 1930 production of 1,398,160 barrels but a lower value.

British Columbia.—It is in this province that the major quantities of Canada's lead and zinc are produced and for some years it has been the premier silver producer while copper production has played no small part in the annual output. Nevertheless all the large producers operated continuously. British Columbia suffered more than any other province on account of the low price of the metals. Though profits may have been small or non-existent, great credit

is due the operators and miners who combined in every effort to keep costs down and thereby provide employment for those who were dependent on the successful operation of the properties for their livelihood.

Production of placer gold was higher than in 1930 but lode gold output was less due in part to the decreased yield of by-product gold from the copper mining industry, a lowered output from the Premier and the closing down of the Nickel Plate mine at Hedley. The decrease was offset in part by the larger production at the Pioneer and increases from the Union and Reno.

Production of lead and zinc was curtailed to conform to a policy that had been adopted by lead and zinc producers throughout the world and having as its object the stabilization of market conditions by regulating production in relation to demand. Silver is associated with the ores of the Sullivan mine and when the output of lead and zinc is curtailed the silver output is also reduced.

Coal production totalled 1,876,476 tons worth \$7,151,461 as against 2,083,818 tons in 1930. In May, 1931, the government authorized assistance to the extent of twenty-five cents per net ton to be paid coal producers or distributors on British Columbia coal sold for bunkering purposes and also on any exports to countries other than the United States. This measure of assistance was increased in October last with the result that the money now provided is fifty cents per gross ton on coal sold for bunkers or ships' stores and one dollar per gross ton on exports to foreign countries, other than the United States.

Yukon.—In the Yukon district placer gold output was larger than in 1930. Silver output from the Mayo camp was only slightly under 1930 but the lead production was only half as large as last year.

The Northwest Territories.—A review of Canada's mining areas would not be complete without some mention of the discoveries of pitchblende and native silver made on the easterly side of Great Bear Lake at Echo Bay. It is without question the outstanding event of the year as far as new prospects are concerned. Sufficient development work has been done to satisfy the owners that they have a very valuable source of radium. At the present value of radium the ore could easily meet the high cost of transportation to rail head at Waterways. Samples of native silver, which is associated with the pitchblende, that have been brought out are extremely rich. A small quantity of the ore is now in the hands of the ore testing department of the Mines Branch at Ottawa and some 20 tons are stored at Waterways awaiting its ultimate destination which has not yet been decided upon.

Canada, during the past twenty years and more particularly the past ten years, has been able to build up a mining and metallurgical industry which today is one of the chief prop upon which many other industries can lean for support in these times of national and international financial stress. The value of the mineral production has fallen but quantities have fallen to a much less extent, and equipment has been considerably extended. With the turn of events Canada will be better equipped than ever before to meet any demand which may arise.

Mineral Production in Canada by Provinces, 1929-1931

Province	1929		1930		1931	
	Value of production	Per cent of total	Value of production	Per cent of total	Value of production	Per cent of total
	\$		\$		\$	
Nova Scotia*	30,904,453	9.94	27,019,367	9.65	21,065,891	9.26
New Brunswick	2,439,072	0.79	2,191,425	0.76	2,082,246	0.92
Quebec	46,358,285	14.93	41,215,220	14.73	35,673,395	15.68
Ontario	117,662,505	37.85	113,530,976	40.57	96,126,990	42.26
Manitoba	5,423,825	1.75	6,453,182	1.05	9,978,556	4.39
Saskatchewan	2,253,506	0.72	2,368,612	0.85	2,114,372	0.93
Alberta	34,739,986	11.17	30,619,898	10.95	23,970,793	10.54
British Columbia	69,162,878	21.92	54,953,320	19.64	34,302,146	15.08
Yukon	2,905,736	0.93	2,521,588	0.90	2,141,986	0.94
Total	319,850,246	100.00	279,873,578	100.00	237,456,365	100.00

*Includes small production from Prince Edward Island.

Mineral Production in Canada, by Provinces, 1931

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon
METALLICS									
Arsenic..... lb.	-	-	-	-	-	-	-	-	-
\$	-	-	-	150,993	-	-	-	-	-
Bismuth..... lb.	-	-	-	7,331	-	-	-	110,876	-
\$	-	-	-	3,532	-	-	-	154,118	-
Cadmium..... lb.	-	-	-	-	-	-	-	323,139	-
\$	-	-	-	-	-	-	-	180,958	-
Cobalt..... lb.	-	-	-	521,051	-	-	-	-	-
\$	-	-	-	651,179	-	-	-	-	-
Copper..... lb.	-	-	69,225,430	112,892,826	45,821,432	-	-	65,214,567	-
\$	-	-	5,794,169	9,097,203	3,835,254	-	-	5,458,493	-
Gold..... fine oz.	460	-	300,877	2,035,818	102,969	-	105	180,504	44,306
\$	9,509	-	6,219,679	43,117,634	2,128,558	-	4,031	3,318,773	915,896
Titaniferous ore..... tons	-	-	1,509	-	-	-	-	-	-
\$	-	-	10,261	-	-	-	-	-	-
Lead..... lb.	-	-	-	995,333	-	-	-	251,899,096	4,444,774
\$	-	-	-	41,875	-	-	-	7,097,727	120,458
Manganese ore..... tons	60	57	-	-	-	-	-	-	-
\$	2,400	493	-	-	-	-	-	-	-
Nickel..... lb.	-	-	-	65,666,320	-	-	-	-	-
\$	-	-	-	15,267,453	-	-	-	-	-
Paladium, Rhodium, etc..... fine oz.	-	-	-	46,918	-	-	-	-	-
\$	-	-	-	1,217,717	-	-	-	-	-
Platinum..... fine oz.	-	-	-	44,725	-	-	-	20	-
\$	-	-	-	1,595,117	-	-	-	713	-
Selenium..... lb.	-	-	-	16,899	3,870	-	-	731	-
\$	-	-	-	32,108	7,353	-	-	1,389	-
Silver..... fine oz.	48	-	535,802	7,470,681	836,547	-	29	8,030,465	3,684,644
\$	14	-	160,044	2,231,492	249,877	-	9	2,398,700	1,100,603
Zinc..... lb.	-	-	-	-	35,173,749	-	-	202,071,702	-
\$	-	-	-	-	898,338	-	-	5,160,911	-
Total..... \$	11,923	493	12,184,153	73,406,333	7,119,380	-	4,640	23,772,782	2,136,947
NON-METALLICS									
Fuels									
Coal..... tons	4,952,182	181,327	-	-	-	657,723	4,562,004	1,876,476	904
\$	19,004,402	740,471	-	-	-	936,918	13,339,816	7,151,461	5,039
Natural gas... M cu. ft.	-	652,947	-	7,395,000	600	-	18,482,355	-	-
\$	-	322,330	-	4,437,000	180	-	4,384,694	-	-
Peat..... tons	-	-	1,170	-	-	-	-	-	-
\$	-	-	5,937	-	-	-	-	-	-
Petroleum, crude... bbl.	-	6,577	-	122,365	-	-	1,408,058	-	-
\$	-	15,693	-	219,992	-	-	4,025,000	-	-
Total..... \$	19,004,402	1,078,494	5,937	4,656,992	180	936,918	21,749,510	7,151,461	5,039
Other Non-Metallics									
Actinolite..... tons	-	-	-	35	-	-	-	-	-
\$	-	-	-	456	-	-	-	-	-
Asbestos..... tons	-	-	164,297	-	-	-	-	-	-
\$	-	-	4,812,896	-	-	-	-	-	-
Barytes..... tons	16	-	-	-	-	-	-	-	-
\$	363	-	-	-	-	-	-	-	-
Bituminous sands... tons	-	-	-	-	-	-	1,015	-	-
\$	-	-	-	-	-	-	4,060	-	-
Diatomite..... tons	1,498	-	-	60	-	-	-	86	-
\$	29,960	-	-	840	-	-	-	2,270	-
Feldspar..... tons	-	-	10,381	8,500	-	-	-	-	-
\$	-	-	86,842	103,008	-	-	-	-	-
Fluorspar..... tons	-	-	-	40	-	-	-	-	-
\$	-	-	-	620	-	-	-	-	-
Graphite..... tons	-	-	-	548	-	-	-	-	-
\$	-	-	-	32,149	-	-	-	-	-
Grindstones..... tons	-	243	-	-	-	-	-	100	-
\$	-	12,174	-	-	-	-	-	750	-
Gypsum..... tons	698,394	58,957	-	53,358	23,076	-	-	20,544	-
\$	806,517	451,264	-	374,469	231,124	-	-	176,907	-
Iron oxides..... tons	-	-	5,410	-	-	-	-	110	-
\$	-	-	48,205	-	-	-	-	1,000	-
Magnesite..... tons	-	-	11,411	-	-	-	-	-	-
\$	-	-	295,579	-	-	-	-	-	-
Mica..... tons	-	-	290	962	-	-	-	-	-
\$	-	-	30,601	22,082	-	-	-	-	-
Mineral waters, Imp. gal.	-	-	19,868	197,540	-	-	-	-	-
\$	-	-	4,746	8,578	-	-	-	-	-
Pyrites (see sulphur)	-	-	-	-	-	-	-	-	-
Quartz..... tons	2,116	-	26,737	97,888	67,214	-	-	519	-
\$	3,836	-	69,656	148,642	76,624	-	-	1,038	-
Salt..... tons	27,718	-	-	231,329	-	-	-	-	-
\$	143,761	-	-	1,760,388	-	-	-	-	-

Mineral Production in Canada, by Provinces, 1931—Concl.

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon
Other Non-Metallics—									
Concl.									
Silica brick..... M	621	-	-	279	-	-	-	-	-
\$	22,044	-	-	13,702	-	-	-	-	-
Sodium carbonate... tons	-	-	-	-	-	-	-	411	-
\$	-	-	-	-	-	-	-	4,932	-
Sodium sulphate... tons	-	-	-	-	-	-	-	-	-
\$	-	-	-	-	-	410,497	-	-	-
Sulphur*..... tons	-	-	14,586	6,508	-	-	-	29,013	-
\$	-	-	108,617	65,080	-	-	-	255,760	-
Talc and soapstone... tons	-	-	-	11,806	-	-	-	-	-
\$	-	-	34,439	122,044	-	-	-	-	-
Volcanic dust..... tons	-	-	-	-	-	-	128	-	-
\$	-	-	-	-	-	2,560	-	-	-
Total..... \$	1,066,481	463,438	5,491,571	2,652,058	307,748	422,057	4,068	441,757	-
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS									
Clay Products									
Brick—Soft mud process—									
Face..... M	120	100	-	4,989	-	-	302	-	-
\$	1,560	2,200	-	105,186	-	-	7,550	-	-
Common..... M	780	2,584	-	22,679	4,769	415	1,734	5,074	-
\$	10,660	35,636	-	352,293	72,208	5,451	22,280	83,007	-
Stiff mud process (wire cut)—									
Face..... M	349	910	32,669	40,880	794	576	675	783	-
\$	9,970	25,669	781,448	972,474	17,577	20,233	12,328	26,848	-
Common..... M	3,728	1,578	45,701	16,575	470	1,831	379	712	-
\$	54,573	24,311	830,827	243,534	4,840	18,095	3,267	11,110	-
Dry press—									
Face..... M	-	-	2,894	14,031	-	27	1,982	458	-
\$	-	-	74,970	301,294	-	720	24,952	18,116	-
Common..... M	-	-	250	2,874	-	-	3,944	1,922	-
\$	-	-	2,500	42,137	-	-	40,162	28,767	-
Fancy or ornamental brick... M	-	-	76	259	-	-	-	-	-
\$	-	-	3,944	16,687	-	-	-	-	-
Sewer brick..... M	-	-	-	1,946	-	-	-	307	-
\$	-	-	-	33,463	-	-	-	10,371	-
Paving brick..... M	-	-	-	-	-	-	-	19	-
\$	-	-	-	-	-	-	-	682	-
Firebrick..... M	7	-	-	-	-	415	24	1,802	-
\$	240	-	-	-	-	24,568	1,193	81,506	-
Fireclay..... tons	65	48	-	-	-	484	-	636	-
\$	650	1,030	-	-	-	3,915	-	8,362	-
Bentonite..... tons	-	-	-	-	-	-	-	299	-
\$	-	-	-	-	-	-	-	3,068	-
Fireclay blocks and shapes..... \$	825	535	18,562	-	-	63,603	-	18,076	-
Hollow blocks..... tons	7,372	1,776	41,027	43,552	1,278	3,177	5,300	3,313	-
\$	86,632	10,706	471,543	354,852	15,703	28,209	42,276	33,219	-
Roofing tile..... No	-	-	-	6,935	-	-	-	-	-
\$	-	-	-	720	-	-	-	-	-
Floor tile (quarries) sq. ft.									
\$	-	-	-	107,418	-	81	-	-	-
Drain tile..... M	159	3	692	11,924	248	-	55	1,007	-
\$	6,611	127	24,622	271,397	12,300	-	1,721	37,419	-
Sewer pipe, copings, flue linings, etc... \$	295,405	-	149,492	671,527	-	-	227,305	121,075	-
Pottery, glazed or unglazed..... \$	-	27,190	-	81,860	-	1,031	146,502	2,581	-
Other clay products \$	-	-	-	187,533	-	322	178	3,019	-
Total..... \$	467,126	134,313	2,357,908	3,546,342	122,628	166,257	529,714	488,216	-
Other Structural Materials									
Cement..... brls.	-	-	4,942,323	3,470,058	544,160	-	626,483	578,636	-
\$	-	-	7,092,895	5,006,826	1,267,893	-	1,286,080	1,172,540	-
Lime..... tons	18,439	11,241	112,504	143,831	21,014	-	2,856	29,576	-
\$	79,418	127,054	805,585	1,129,219	207,401	-	25,185	273,269	-
Sand and gravel..... tons	507,178	304,140	6,657,789	9,349,852	949,857	3,137,520	1,336,672	2,368,205	-
\$	219,733	81,175	1,738,106	2,870,000	312,127	589,140	353,787	449,259	-
Stone..... tons	81,404	59,001	4,218,348	3,262,713	153,648	-	7,366	441,319	-
\$	216,808	247,279	5,997,240	2,850,206	641,109	-	18,407	552,853	-
Total..... \$	515,939	405,508	15,633,826	11,865,245	2,428,620	589,140	1,683,459	2,447,930	-
Grand Total.....	21,065,891	2,082,246	35,673,395	96,128,990	9,978,556	2,114,372	23,970,783	34,302,146	2,141,886

*Sulphur content of pyrites shipped and estimated quantity of sulphur contained in the sulphuric acid made from bessemer gases.

Monthly Production of Principal Minerals in Canada, 1931*

—	Asbestos	Cement	Clay Products	Coal	Copper	Feldspar	Gold	Gypsum
	tons	brls.	\$	tons	lb.	tons	fine oz.	tons
January.....	12,901	343,975	422,345	1,178,945	21,859,908	600	202,351	10,000
February.....	13,487	417,515	384,406	962,710	22,970,724	377	195,113	19,162
March.....	13,454	607,872	494,738	1,050,301	25,508,733	800	204,038	10,828
April.....	14,204	835,769	674,040	898,455	27,845,741	707	222,073	32,576
May.....	12,446	1,000,449	939,639	912,036	26,508,601	2,100	215,775	95,240
June.....	13,237	1,242,864	802,139	891,180	23,327,829	1,643	228,593	125,322
July.....	13,597	1,111,253	793,271	831,615	23,676,241	2,105	227,868	130,482
August.....	13,079	1,118,482	764,927	767,472	27,159,496	2,160	228,248	123,790
September.....	15,786	1,086,428	693,068	1,012,313	24,887,931	1,893	242,136	112,801
October.....	16,546	1,135,339	720,966	1,223,380	22,910,471	1,937	238,617	80,686
November.....	14,068	801,040	595,984	1,298,952	23,641,405	1,207	237,312	50,135
December.....	10,523	370,672	526,381	1,203,257	23,089,126	591	240,622	53,207
Calendar Year....	163,388	10,161,658	7,812,504	12,230,616	293,476,206	16,120	2,682,776	844,032

—	Lead	Lime	Natural Gas	Nickel	Petroleum	Salt	Silver	Zinc
	lb.	tons	M cu. ft.	lb.	brls.	tons	fine oz.	lb.
January.....	28,420,331	27,033	3,200,000	6,500,944	179,711	10,698	2,117,670	20,313,866
February.....	19,048,424	23,704	2,970,140	6,693,185	155,651	10,844	2,111,705	20,553,489
March.....	25,664,846	29,249	2,750,721	8,358,289	160,358	13,346	1,886,652	23,297,788
April.....	29,037,271	29,990	2,454,063	4,134,541	153,705	13,976	1,685,842	22,707,451
May.....	19,574,813	31,104	2,036,490	10,653,724	156,392	13,065	1,785,940	24,213,078
June.....	24,139,013	30,956	1,554,928	4,349,879	148,272	14,125	1,419,353	22,471,392
July.....	21,873,634	29,733	1,458,814	5,309,456	119,327	14,126	2,069,171	20,831,627
August.....	21,148,583	27,195	1,299,165	4,432,598	103,314	14,152	1,553,297	19,198,013
September.....	19,099,117	28,829	1,557,723	5,038,816	101,435	12,661	1,238,741	16,435,590
October.....	20,311,407	29,609	1,901,073	3,096,300	99,924	16,101	1,697,052	16,803,673
November.....	17,457,154	27,988	2,539,948	3,285,927	99,037	14,354	1,548,377	15,841,329
December.....	21,371,076	23,972	2,899,290	3,530,525	106,201	13,641	1,525,203	14,578,807
Calendar Year....	267,145,669	339,452	26,628,355	65,484,184	*1,583,327	161,089	20,639,053	237,244,103

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

(Metal Prices, 1927-1931)

Metal	Market	Unit	1927	1928	1929	1930	1931
Antimony (ordinaries).....	New York.....	Pound....	0-12393	0-10305	0-08956	0-07667	0-06720
Arsenic, white.....	New York.....	Pound....	0-0383	0-04	0-04	0-04	0-045
Cobalt.....	New York.....	Pound....	2-50	2-63	2-52	2-50	2-50
Cobalt oxide.....	New York.....	Pound....	2-10	2-10	2-10	2-00	1-75
Copper.....	New York.....	Pound....	0-12920	0-14570	0-18107	0-12982	0-08110
	Montreal.....	Pound....	0-1478	0-16402	0-19978	0-1498	0-10006
	New York.....	Pound....	0-06755	0-06305	0-06833	0-05517	0-04243
Lead.....	Montreal.....	Pound....	0-0673	0-0606	0-06678	0-05496	0-04168
	Toronto.....	Pound....	0-0683	0-06206	0-06775	0-050	0-04238
	London.....	Long ton.	24-192	21-060	23-246	18-007	12-958
Nickel.....	New York.....	Pound....	0-36	0-36	0-35	0-36	0-36
Platinum.....	New York.....	Ounce....	84-636	78-58	67-655	45-358	35-665
Silver.....	New York.....	Ounce....	0-56370	0-58176	0-52993	0-38154	0-287
Tin.....	New York.....	Pound....	0-62747	0-50472	0-45155	0-31694	0-24467
	St. Louis.....	Pound....	0-06242	0-06027	0-06512	0-04556	0-0364
Zinc.....	Montreal.....	Pound....	0-07710	0-07144	0-0687	0-05084	0-03961
	London.....	Long ton.	28-513	25-284	24-793	16-570	12-215

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

Metal Prices by Months, 1930-1931

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)	
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
January.....	17-775	9-838	83-250	47-524	6-500	40-640	6-250	4-802	21-545	31-872
February.....	17-775	9-724	83-500	47-950	6-425	4-530	6-236	4-552	21-188	13-444
March.....	17-775	9-854	83-405	47-699	5-950	4-510	5-662	4-527	18-807	13-128
April.....	15-021	9-302	74-338	45-375	5-650	4-250	5-537	4-412	18-219	12-375
May.....	12-750	8-665	59-545	42-175	5-330	3-930	5-523	3-818	17-795	11-491
June.....	12-049	8-025	56-750	38-966	5-360	3-920	5-410	3-917	17-941	11-582
July.....	11-023	7-608	52-522	37-293	5-360	4-135	5-250	4-400	18-160	12-731
August.....	10-093	7-292	50-725	35-388	5-400	3-964	5-488	4-400	18-294	11-944
September.....	10-310	6-988	49-500	36-148	5-320	3-800	5-500	4-400	17-909	11-932
October.....	9-597	6-775	45-772	41-000	4-820	3-095	5-151	3-964	15-747	13-227
November.....	10-113	6-558	48-963	41-190	4-810	4-162	5-100	3-937	15-934	14-577
December.....	10-300	6-580	50-065	44-409	4-930	4-268	5-100	3-792	15-283	15-188
Average.....	12-982	8-116	61-528	42-093	5-496	4-168	5-317	4-243	18-077	12-953

*Transposed into Canadian funds at par the average value of lead in 1930 was 3-927 cents per pound. In 1931 using the par of exchange in London for the first 9 months and the average monthly rate of exchange for each of the remaining three months the average value of lead for the year in Canadian funds was 2-7101 cents per pound.

Using the par of exchange on New York for the first 9 months of 1931 and the average monthly rate of exchange for each of the last three months the average value of copper in Canadian funds for the year was 8-370 per pound.

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)	
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
January.....	45-000	29-423	20-896	13-810	5-950	4-360	5-229	4-035	19-634	12-747
February.....	43-193	26-773	20-008	12-432	5-825	4-230	5-180	4-012	19-209	12-303
March.....	41-654	29-192	19-298	13-524	5-550	4-220	4-934	4-002	18-304	12-190
April.....	42-428	28-279	19-554	13-120	5-340	3-960	4-843	3-717	17-819	11-353
May.....	40-736	27-650	18-850	12-858	5-070	3-860	4-841	3-396	16-639	10-484
June.....	34-595	27-250	16-049	12-707	4-990	3-890	4-441	3-416	16-422	11-270
July.....	34-346	28-255	15-928	13-197	4-920	3-978	4-350	3-893	16-171	12-280
August.....	35-192	27-524	16-283	12-815	4-880	3-786	4-360	3-817	15-953	11-444
September.....	36-315	28-180	16-738	14-101	4-830	3-707	4-270	3-744	15-773	11-571
October.....	35-846	29-538	16-563	17-153	4-480	3-750	4-059	3-377	14-446	12-733
November.....	35-908	32-223	16-625	19-393	4-600	4-014	4-206	3-209	14-706	13-845
December.....	32-635	30-120	15-201	20-023	4-570	4-068	4-099	3-149	13-762	14-361
Average.....	38-154	28-700	17-666	14-594	5-084	3-861	4-556	3-610	16-570	12-215

*Transposed into Canadian funds at par the average value of zinc in 1930 was 3-6 cents per pound. In 1931 using the par of exchange in London for the first 9 months and the average monthly rate of exchange for each of the remaining three months the average value of zinc for the year in Canadian funds was 2-554 cents per pound.

Using the par of exchange on New York for the first 9 months of 1931 and the average monthly rate of exchange for each of the last three months, the average value of silver in Canadian funds for the year was 29-87 cents per fine ounce.

Table showing the amount paid in Canadian dollars for one United States dollar by months, 1920, 1921, 1922 and 1930, 1931

	1920	1921	1922	1930	1931
January.....	1-1056	1-1437	1-0553	1-01345	1-0020
February.....	1-1497	1-1362	1-0351	1-00599	1-0002
March.....	1-1178	1-1337	1-0297	1-00209	1-0002
April.....	1-1112	1-1216	1-0208	1-00043	1-0004
May.....	1-1134	1-1164	1-0125	1-00172	1-0005
June.....	1-1381	1-1294	1-0138	1-000	1-0026
July.....	1-1134	1-1328	1-0001	0-99914	1-00321
August.....	1-1275	1-1168	1-0023	0-99901	1-00304
September.....	1-1075	1-1106	0-9998	0-99838	1-04293
October.....	1-1016	1-0331	1-0011	0-99889	1-12370
November.....	1-2131	1-0904	0-9998	0-99891	1-12342
December.....	1-1643	1-0687	0-9906	1-0023	1-21048

Abrasives.

Diatomite.—Canadian diatomite production totalled 1,624 tons valued at \$33,070 in 1931 as compared with an output of 554 tons worth \$13,247 in 1930. Production was reported from Nova Scotia, Ontario, and British Columbia.

Grindstones, Pulpstones and Scythestones.—Production of grindstones, pulpstones and scythestones from New Brunswick and British Columbia quarries during 1931 totalled 343 tons with a value of \$12,924. In 1930 shipments from Nova Scotia, New Brunswick and British Columbia amounted to 830 tons valued at \$62,021.

Volcanic Dust.—Volcanic dust from the vicinity of Waldeck, Saskatchewan, totalled 128 tons valued at \$2,560 as against 242 tons worth \$4,840 in 1930.

Imports into Canada and Exports of Abrasives, 1930 and 1931

	1930		1931	
	Quantity	Value	Quantity	Value
IMPORTS—		\$		\$
Abrasives—				
Artificial abrasives in bulk, crushed or ground, when imported for use in the manufacture of abrasive wheels and polishing composition.....	-	205,042	-	184,280
Carborundum wheels or stones, not further manufactured than moulded or burned.....	-	57,731	-	-
Diamond dust or bort and black diamonds for borers.....	-	1,440,871	-	450,148
Emery in bulk, crushed or ground.....	-	37,353	-	26,280
Grinding wheels.....	-	150,503	-	125,673
Grinding stones or blocks.....	-	127,795	-	28,969
Grindstones not mounted and not less than 36 inches in diameter.....	-	229,436	-	111,770
Grindstones, n.o.p.....	-	12,134	-	7,228
Pumice and pumice stone, lava and calcareous tufa, not further manufactured than ground.....	-	36,089	-	34,542
Sand paper, glass, flint and emery paper or emery cloth.....	-	342,771	-	201,277
Manufactures of emery or of artificial abrasives, n.o.p.....	-	60	-	44,429
Diatomaceous earth or infusorial earth (kiesulguhr), ground or unground..... cwt.	6,582	12,004	17,000	25,788
Iron sand or globules or iron shot, and dry putty for polishing or sawing.....	-	41,758	-	25,319
Total.....	-	2,693,547	-	1,265,793
EXPORTS—				
Grindstones, manufactured.....	-	11,674	-	10,776
ABRASIVES—				
Natural, n.o.p..... cwt.	7,455	8,072	14,372	14,185
Artificial, crude, including carborundum..... cwt.	1,128,775	2,842,289	851,206	1,981,713
Artificial, made up into wheels, stones, etc.....	-	36,489	-	19,576
Total.....	-	2,889,424	-	2,026,250

* April to December, 1930.

Actinolite

Actinolite is obtained from occurrences in Elzevir and Kaladar townships, Hastings and Addington counties, Ontario. During 1931 shipments totalled 35 tons worth \$456 as compared with 34 tons worth \$437 in 1930.

Antimony

Antimony ores occur in the provinces of Nova Scotia, New Brunswick, British Columbia and in the Yukon and sometimes antimony is recovered from the cobalt ores of Ontario. In 1931 the Lake George mine of New Brunswick made a test shipment of 25 tons of antimony ore to Liverpool, England.

Imports into Canada of antimony in 1931 amounted to 919,724 pounds valued at \$56,458 as against an import of 1,303,560 pounds valued at \$87,027 in the previous year. Imports of antimony salts for dyeing amounted to 46,017 pounds valued at \$2,763 and imports of antimony salts, viz., tartar emetic, chloride and lactate (antimonine) totalled 3,178 pounds valued at \$482.

Arsenic

Production in Canada, Imports and Exports of Arsenic, 1930 and 1931

	1930		1931	
	Quantity	Value	Quantity	Value
	lb.	\$	lb.	\$
PRODUCTION—				
From arsenical concentrates and residues exported.....	1,773,540	19,599	-	-
White arsenic and arsenic in other forms.....	2,750,680	109,928	-	150,993
Total.....	4,524,220	129,527	-	150,993
IMPORTS—				
White arsenic (arsenious oxide).....	12,160	749	167,015	5,824
Sulphide of arsenic.....	25,113	2,308	10,412	1,347
Soda, arseniate, bitarseniate and stannate of.....	2,998	315	704	202
Arsenate of lead.....	1,009,383	112,769	1,248,460	116,996
Arsenate of lime.....	655,619	36,211	821,509	42,167
Total.....	-	152,252	-	166,476
EXPORTS—				
Arsenic, n.o.p..... Total.....	2,335,606	86,825	3,092,560	116,614

Asbestos

Output and Shipments of Canadian Asbestos, 1930 and 1931

Classification	1930				1931		
	Total output	Sold or shipped			Sold or shipped		
		Quantity	Total sales value at mill	Average value per ton	Quantity	Total sales value at mill	Average value per ton
	tons	tons	\$	\$ cts.	tons	\$	\$ cts.
Crude No. 1.....	653	720	345,750	480-21	206	88,880	431-46
Crude No. 2.....	2,882	1,440	411,179	285-54	543	117,478	216-35
Other crudes.....	436	161	10,314	67-79	-	-	-
Spinning stocks.....	14,432	10,411	1,473,522	141-52	8,560	917,776	107-22
Shingle stocks.....	23,590	19,909	1,406,385	70-64	15,988	938,856	58-72
Mill board and paper stocks.....	80,129	79,739	2,817,295	35-33	-	-	-
Fillers, floats and other short fibres.....	119,290	129,734	1,925,118	11-84	-	-	-
Paper stocks.....	-	-	-	-	39,867	1,381,889	34-66
Waste, stucco or plaster.....	-	-	-	-	6,310	159,044	25-29
Refuse or shorts.....	-	-	-	-	92,823	1,208,964	13-02
Total.....	216,412	242,114	8,390,163	-	161,297	4,812,866	29-29
Sand and gravel.....	40,729	40,309	12,413	0-31	7,209	5,952	0-83

NOTE.—There were some slight changes in the classification in 1931.

Imports into Canada and Exports of Asbestos, 1930 and 1931

	1930		1931	
	tons	\$	tons	\$
IMPORTS—				
Asbestos brake and clutch lining.....	-	193,824	-	241,880
Asbestos in any form other than crude, and all manufactures of, n.o.p.....	-	697,915	-	312,484
Asbestos packing.....	87	82,111	69	63,455
Total.....	-	873,850	-	617,819
EXPORTS—				
Asbestos.....	104,262	6,441,939	70,903	3,929,317
Asbestos, sand and waste.....	131,238	2,011,318	88,535	1,246,326
Asbestos manufactures, including asbestos roofing.....	-	199,793	-	111,241
Total.....	-	8,653,040	-	5,286,884

Barytes

Shipments of barytes during 1931 amounted to 16 tons valued at \$363 as against 66 tons at \$1,484 in 1930. The deposit at Lake Ainslie, Inverness county, Nova Scotia, as in previous years, was the source of the total output.

Barytes imports were recorded at 1,686 tons evaluated at \$32,712 in 1931; in the previous year 1,949 tons worth \$35,945 were imported.

Bismuth

Bismuth production including metallic bismuth made at Trail, B.C., and the bismuth contained in silver-lead-bismuth bullion shipped by the Deloro Smelting and Refining Company totalled 118,207 pounds valued at \$157,650.

Imports of metallic bismuth into Canada during 1931 amounted to 125 pounds valued at \$50.

Bituminous Sands

Bituminous sands production from the Fort McMurray district, Alberta, during 1931 amounted to 1,015 tons valued at \$4,060 as compared with a total of 2,067 tons worth \$8,268 in 1930.

Importations of asphalt, solid, into Canada in 1931 were recorded at 36,900 tons appraised at \$517,532; asphalt, not solid, to the value of \$35,854 and asphaltum oil for paving purposes worth \$45,557 were also imported.

Cement

Production in Canada, Imports and Exports of Cement, 1930 and 1931

	1930		1931	
	Barrels	Value	Barrels	Value
OUTPUT..... Total.....	11,790,408	\$ -	10,170,335	\$ -
SALES—				
Quebec.....	4,865,609	7,031,528	4,942,323	7,092,805
Ontario.....	3,942,690	5,779,404	3,470,056	5,006,826
Manitoba.....	977,906	2,268,742	544,160	1,267,893
Alberta.....	525,289	1,144,160	626,483	1,286,080
British Columbia.....	721,044	1,489,233	578,636	1,172,549
Total.....	11,032,538	17,713,067	10,161,658	15,826,243
Stocks, December 31.....	2,246,621	-	2,259,298	-
IMPORTS—				
Portland.....	143,436	569,848	38,392	143,491
Manufactures.....	-	34,672	-	13,243
Total.....	-	604,520	-	156,734
EXPORTS—Total.....	198,736	212,071	114,064	124,267
APPARENT CONSUMPTION—Total.....	10,977,238	-	10,085,986	-

Chromite

There was no production of chromite in Canada in 1931. This material is known to occur in Quebec, British Columbia, and Ontario.

Clay and Clay Products

Production of Clay Products from Domestic Clays in Canada, by Provinces, 1930 and 1931

Province	1930	1931
	\$	\$
Prince Edward Island.....	-	-
Nova Scotia.....	495,333	467,126
New Brunswick.....	162,536	134,313
Quebec.....	2,464,044	2,357,908
Ontario.....	5,221,214	3,546,342
Manitoba.....	215,967	122,628
Saskatchewan.....	349,283	166,257
Alberta.....	997,685	629,714
British Columbia.....	687,516	488,216
Canada.....	10,592,578	7,812,504

Coal

Output and Value of Coal in Canada by Kinds and by Provinces, 1930 and 1931

Province	1930		1931	
	Quantity	Value	Quantity	Value
NOVA SCOTIA (Bituminous).....	6,252,552	24,528,860	4,952,182	19,004,402
NEW BRUNSWICK (Bituminous).....	200,349	864,118	181,327	740,471
SASKATCHEWAN (Lignite).....	579,424	968,863	657,723	936,918
ALBERTA—				
Bituminous.....	2,278,467	7,971,401	1,846,306	6,249,779
Sub-bituminous.....	603,358	1,705,236	471,302	1,210,717
Lignite.....	2,873,703	8,386,588	2,244,396	5,879,320
Total.....	5,755,529	18,063,225	4,562,004	13,339,816
BRITISH COLUMBIA (Bituminous).....	2,083,818	8,421,572	1,876,476	7,151,461
YUKON (Bituminous).....	653	3,110	904	5,039
CANADA—				
Bituminous.....	10,824,839	41,789,061	8,857,195	33,151,152
Sub-bituminous.....	803,358	1,705,236	471,302	1,210,717
Lignite.....	3,453,127	9,355,451	2,902,119	6,816,238
Total.....	14,881,324	52,849,748	12,230,616	41,178,107

Shipments of Coal from Canadian Mines by Grades and Destinations, 1930 and 1931

(Short tons)

Destination	1930				1931			
	Run-of-mine	Screened	Slack	Total	Run-of-mine	Screened	Slack	Total
Prince Edward Island.....	3,399	82,313	2,193	87,904	3,339	68,654	3,285	75,278
Nova Scotia.....	214,339	572,208	738,516	1,525,063	241,003	443,846	441,158	1,126,007
New Brunswick.....	167,344	141,067	195,737	504,148	127,002	114,633	223,945	465,580
Quebec.....	53,034	984,711	875,749	1,894,094	67,558	806,093	873,633	1,747,284
Ontario.....	845	26,022	4,845	31,712	395	22,229	5,774	28,398
Manitoba.....	167,621	366,714	241,531	775,866	146,408	282,710	289,814	718,932
Saskatchewan.....	205,247	893,078	440,544	1,538,869	218,303	647,134	429,721	1,295,218
Alberta.....	250,352	463,005	508,441	1,221,798	199,179	375,622	444,065	1,019,466
British Columbia.....	40,213	710,100	249,036	999,409	45,197	574,480	243,902	863,579
Yukon.....	-	293	-	293	-	260	-	260
Total domestic shipments.....	1,168,993	4,219,571	3,256,592	8,585,156	1,048,444	3,335,661	2,855,897	7,340,002
Railroads.....	3,021,284	750,493	313,451	4,085,228	2,307,450	591,710	187,771	3,146,937
Ship's bunkers.....	250,311	82,481	895	333,687	166,308	55,135	-	221,438
Total railroads and ship's bunkers.....	3,271,595	832,974	314,346	4,418,915	2,533,758	646,845	187,771	3,368,375
United States.....	10,647	74,234	64,899	149,780	1,417	40,484	82,528	124,429
Alaska.....	-	26,456	-	26,456	-	18,022	-	18,022
Newfoundland.....	2,080	204,120	57,637	263,837	1,899	106,701	-	108,599
Other places.....	-	-	-	-	-	372	-	372
Lost at sea.....	-	4,318	3,416	7,734	-	-	-	-
Total external shipments.....	12,727	809,128	125,922	447,777	3,306	165,579	82,528	251,413
Total.....	4,393,315	5,361,673	3,696,860	13,451,848	3,585,509	4,149,085	3,226,186	10,959,790

Output, Exports, Interprovincial Shipments, Imports and Coal made Available for Consumption
in Canada, by Provinces, 1931
(Short tons)

Province	Canadian Coal				Imported from U.S.A.	Imported from Great Britain	Imported from other countries	Coal available for con- sumption
	Output	Received from other provinces	Shipped to other provinces	Exported				
PRINCE EDWARD ISLAND—								
Anthracite.....	-	-	-	-	1,271	7,413	-	8,684
Bituminous.....	-	75,278	-	-	3,246	1,833	-	80,357
Total.....	-	75,278	-	-	4,517	9,246	-	89,041
NOVA SCOTIA—								
Anthracite.....	-	-	-	-	15,304	34,844	4,592	54,740
Bituminous.....	4,952,182	-	2,231,234	151,912	5,685	38,352	-	2,613,073
Total.....	4,952,182	-	2,231,234	151,912	20,989	73,196	4,592	2,667,813
NEW BRUNSWICK—								
Anthracite.....	-	-	-	-	39,420	45,598	-	85,018
Bituminous.....	118,327	408,818	98	54,986	31,068	6,102	-	572,391
Total.....	118,327	408,818	98	54,986	70,488	51,700	-	657,309
QUEBEC—								
Anthracite.....	-	-	-	-	544,063	786,301	60,762	1,392,026
Bituminous.....	-	1,747,184	-	57	858,015	75,560	-	2,680,702
Sub-bituminous..	-	67	-	-	-	-	-	67
Lignite.....	-	33	-	-	-	-	-	33
Total.....	-	1,747,284	-	57	1,402,078	861,861	60,762	4,072,828
CENTRAL ONTARIO—								
Anthracite.....	-	-	-	-	1,613,435	2,208	-	1,615,643
Bituminous.....	-	455	-	30	8,619,083	391	-	8,619,899
Sub-bituminous..	-	5,792	-	-	-	-	-	5,792
Lignite.....	-	22,151	-	38	-	-	-	22,113
Total.....	-	28,398	-	68	10,232,518	2,599	-	10,263,447
MANITOA AND HEAD OF LAKES—								
Anthracite.....	-	-	-	-	21,997	-	-	21,997
Bituminous.....	-	155,494	-	92	703,130	-	-	858,532
Sub-bituminous..	-	48,250	-	-	-	-	-	48,250
Lignite.....	-	515,188	-	1,196	-	-	-	513,992
Total.....	-	718,932	-	1,288	725,127	-	-	1,442,771
SASKATCHEWAN—								
Anthracite.....	-	-	-	-	-	-	-	-
Bituminous.....	-	120,700	-	9	1,535	-	-	122,236
Sub-bituminous..	-	27,215	-	-	-	-	-	27,215
Lignite.....	657,723	822,812	246,036	2,233	23	-	-	1,232,289
Total.....	657,723	970,727	246,036	2,242	1,558	-	-	1,381,730
ALBERTA—								
Bituminous.....	1,846,306	34,247	214,904	230	912	-	-	1,666,331
Sub-bituminous..	471,302	-	119,027	-	-	-	-	352,275
Lignite.....	2,244,396	33	1,211,630	961	-	-	-	1,031,838
Total.....	4,562,004	34,280	1,545,561	1,191	912	-	-	3,050,444
Brit. Columbia—								
Anthracite.....	-	-	-	-	23	-	-	33
Bituminous.....	1,876,470	62,666	158,606	128,986	2,298	-	-	1,653,848
Sub-bituminous..	-	37,703	-	-	-	-	-	37,703
Lignite.....	-	97,449	-	19,123	6,387	-	-	84,713
Total.....	1,876,470	197,818	158,606	148,109	8,718	-	-	1,776,297
YUKON—								
Bituminous.....	904	-	-	-	10	-	-	914
CANADA—								
Anthracite.....	-	-	-	-	2,236,423	876,264	165,354	3,178,141
Bituminous.....	8,857,185	2,604,842	2,604,842	336,362	10,724,982	122,298	-	18,668,178
Sub-bituminous..	-	-	-	-	-	-	-	-
Lignite.....	471,302	119,027	119,027	-	-	-	-	471,302
Total.....	2,902,119	1,457,666	1,457,666	23,551	6,410	-	-	2,884,078
Total.....	12,230,616	4,181,535	4,181,535	359,853	12,467,815	898,662	65,354	25,462,594

† Consists of 60,762 tons from Germany, 4,592 tons from French East Indies.

* Includes all coal shipped to any point in Ontario from Western mines.

Imports of Anthracite, Bituminous and Lignite Coal into Canada, by Months, 1930 and 1931

(Short tons)

Month	1930				1931			
	United States	Great Britain	Other countries	Total	United States	Great Britain	Other countries	Total
ANTHRACITE—								
January	331,283	16,046	—	347,329	239,420	5,699	—	245,119
February	327,674	29,097	7,136	363,907	243,893	3,852	—	247,745
March	211,890	55,080	—	266,970	163,442	12,797	—	176,239
April	112,483	6,392	6,200	125,075	106,362	9,142	—	115,504
May	191,048	113,989	7,527	312,564	209,894	142,911	—	352,805
June	204,025	138,372	63,668	406,065	189,007	145,359	14,731	348,157
July	176,368	107,214	27,388	310,970	194,379	135,868	4,414	334,661
August	193,193	121,561	52,999	367,753	129,912	88,536	12,406	230,854
September	341,207	118,780	51,578	511,565	164,648	100,514	15,902	281,124
October	321,293	129,733	45,509	496,535	214,001	134,852	13,249	362,102
November	297,092	113,515	34,948	445,555	213,750	85,614	4,592	303,956
December	248,398	46,348	7,056	301,802	168,655	11,220	—	179,875
Total	2,955,954	996,127	1391,009	4,256,090	2,236,423	876,364	65,354	3,178,141
BITUMINOUS—								
January	850,111	800	—	850,911	546,241	22	—	546,263
February	673,315	3,498	10	676,823	570,975	11,026	—	582,001
March	797,599	5	—	797,604	635,130	2,765	—	637,895
April	532,204	2,800	—	535,004	421,786	2,65	—	421,811
May	1,035,101	25,525	—	1,060,626	829,586	8,525	—	838,111
June	1,463,150	17,988	—	1,481,138	844,604	5,657	—	850,261
July	1,442,043	27,291	20	1,469,374	899,395	11,156	—	910,551
August	1,416,964	15,620	3	1,432,587	1,252,405	14,932	—	1,267,337
September	1,510,255	24,018	—	1,534,273	1,210,754	15,010	—	1,225,764
October	1,434,240	22,132	—	1,456,372	1,090,565	22,564	—	1,113,129
November	1,118,665	3,654	—	1,122,319	1,095,040	14,526	—	1,109,566
December	915,459	2,868	—	918,327	828,501	16,090	—	844,591
Total	13,199,076	146,199	133	13,345,308	10,224,982	122,298	—	10,347,280
LIGNITE—								
January	2,593	—	—	2,593	1,444	—	—	1,444
February	2,311	—	—	2,311	863	—	—	863
March	896	—	—	896	1,295	—	—	1,295
April	383	—	—	383	215	—	—	215
May	383	—	—	383	101	—	—	101
June	294	—	—	294	61	—	—	61
July	989	—	—	989	183	—	—	183
August	258	—	—	258	163	—	—	163
September	1,028	—	—	1,028	362	—	—	362
October	3,115	—	—	3,115	442	—	—	442
November	3,613	—	—	3,613	560	—	—	560
December	2,993	—	—	2,993	721	—	—	721
Total	18,676	—	—	18,676	6,410	—	—	6,410

†Consists of 201,407 tons from Russia, 11,489 tons from Germany, 1,122 tons from French East Indies.

*Consists of 60,762 tons from Germany, 4,592 tons from French East Indies.

‡Imported from Newfoundland.

Coal Made Available for Consumption in Canada, 1930 and 1931

(Short tons)

Month	1930				1931			
	Output	Imports	Exports	Coal made available for use	Output	Imports	Exports	Coal made available for use
January	1,643,623	1,200,833	71,356	2,773,100	1,178,945	792,826	37,017	1,934,754
February	1,194,711	1,043,041	45,801	2,191,051	962,710	830,609	21,641	1,771,678
March	1,136,765	1,065,380	35,830	2,166,315	1,030,301	815,429	32,251	1,833,479
April	913,203	690,462	14,731	1,558,934	898,455	537,530	12,431	1,423,554
May	1,124,545	1,373,573	38,900	2,459,218	912,036	1,191,017	27,887	2,075,166
June	1,151,963	1,887,497	68,362	2,971,099	891,180	1,198,479	38,066	2,051,583
July	1,058,424	1,781,283	28,554	2,816,153	831,615	1,245,395	35,603	2,041,407
August	1,111,676	1,800,598	88,341	2,823,933	767,472	1,498,354	27,436	2,238,390
September	1,252,902	2,046,866	67,384	3,232,384	1,012,313	1,507,250	25,410	2,494,153
October	1,659,315	1,966,022	47,259	3,578,078	1,223,380	1,476,673	37,782	2,661,271
November	1,349,694	1,571,487	62,266	2,858,915	1,298,952	1,414,082	21,922	2,691,112
December	1,284,503	1,223,032	60,728	2,446,807	1,203,257	1,025,187	42,407	2,186,071
Total	14,881,324	17,620,074	624,512	31,876,886	12,230,616	13,531,831	359,863	25,402,594

Cobalt

Production in Canada and Exports of Cobalt, 1930 and 1931

	1930		1931	
	Pounds	\$	Pounds	\$
PRODUCTION—				
Cobalt, computed as cobalt in metal, oxides sold, and in ores and residues exported.....				
Total	694,163	1,144,007	521,651	651,179
EXPORTS—				
Cobalt, alloys, cobalt metallics, cobalt oxides, cobalt salts and cobalt ores.....				
Total	-	1,319,870	-	735,225

Coke

Production in Canada, Imports, Exports and Apparent Consumption of Coke, by Provinces, 1930 and 1931

(Short tons)

	Year	Nova Scotia, New Brunswick and Quebec	Ontario	Manitoba, Saskatchewan, Alberta and British Columbia	Canada
Production.....	1930	680,911	1,516,080	189,003	2,385,994
	1931	536,262	1,117,488	181,872	1,835,622
Imports.....	1930	49,721	993,815	17,504	1,061,040
	1931	23,969	694,982	14,323	733,274
Exports.....	1930	1,253	317	28,231	29,801
	1931	897	106	19,977	20,980
Apparent consumption.....	1930	729,379	2,509,578	178,276	3,417,233
	1931	559,334	1,812,364	176,218	2,547,916

Coke Production in Canada by Months, 1931

(Short tons)

Month	Bituminous coal used for coke making			Coke made	Disposition of coke by makers				
	Can- adian	Im- ported	Total		Used in		Sold to	Sold for	Total
					Makers' Coke Plants	Makers' Smelters	Other Smelters	Domestic use, etc.	
January.....	60,840	175,036	235,882	170,885	27,422	58,375	10,316	134,703	230,816
February.....	56,842	178,041	234,883	165,255	25,316	59,660	6,870	122,176	214,022
March.....	57,262	189,455	246,717	179,125	27,307	69,718	6,922	97,024	200,971
April.....	52,382	178,039	230,422	169,098	23,841	60,610	7,865	52,777	145,093
May.....	47,566	181,417	228,983	169,254	24,916	58,504	5,568	31,874	120,802
June.....	43,605	166,552	210,157	154,966	22,652	51,369	5,167	41,909	121,097
July.....	42,744	149,940	192,684	138,830	19,892	41,469	11,441	47,135	119,928
August.....	42,360	143,972	186,332	132,017	21,570	39,827	11,474	50,592	123,463
September.....	47,254	132,005	179,259	125,609	24,097	31,318	10,190	68,865	134,470
October.....	33,155	157,451	190,606	140,328	25,168	20,622	6,927	139,415	192,132
November.....	41,382	156,710	198,092	143,497	23,553	27,921	8,932	151,915	212,321
December.....	36,148	161,236	197,384	146,758	24,789	26,550	9,518	132,414	193,271
Total.....	561,547	1,972,954	2,534,401	1,835,622	290,523	545,934	101,138	1,070,799	2,008,256

Copper

Production in Canada, Imports and Exports of Copper, 1930 and 1931

	1930		1931	
	Pounds	Value	Pounds	Value
PRODUCTION—		\$		\$
By Provinces—				
Quebec.....	80,310,363	10,425,891	69,225,430	5,794,169
Ontario.....	127,718,871	16,187,259	112,892,826	9,007,203
Manitoba.....	2,087,609	215,018	45,821,432	3,835,254
British Columbia.....	93,318,885	12,114,657	65,214,967	5,458,493
Yukon.....	42,628	5,534	-	-
Total.....	393,478,356	37,948,359	293,154,655	24,185,119
By Sources—				
In blister copper produced.....	223,890,467	27,965,905	244,652,996	20,505,635
In ores exported.....	67,878,023	8,811,467	35,261,539	2,951,278
In nickel-copper matte exported.....	11,709,866	1,170,987	13,240,120	728,206
Total.....	393,478,356	37,948,359	293,154,655	24,185,119
IMPORTS—				
Copper in bars 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.....	30,906,700	4,368,678	9,339,200	960,190
Copper in bars or rods, in coil or otherwise, in lengths of not less than 6 feet, unmanufactured.....	1,595,900	305,381	348,200	52,552
Copper in blocks, pigs or ingots.....	7,867,200	1,022,936	965,500	97,526
Copper, old and scrap.....	1,443,700	173,114	753,400	73,289
Copper, ore and concentrates.....	-	-	-	-
Copper in strips, sheets or plates not polished or coated.....	1,844,700	410,565	1,074,600	181,782
Copper tubing in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured.....	1,895,872	442,842	1,874,087	353,685
Copper wire, plain, tinned or plated.....	722,729	178,299	144,125	30,961
Copper wire cloth, or woven wire of copper.....	-	9,509	-	7,947
Copper wire, single or several, covered with cotton, linen silk, rubber or other materials, including cable so covered.....	-	557,027	-	65,094
Copper, all other, manufactures of, n.o.p.....	-	768,393	-	483,203
Copper, precipitate of, crude.....	-	-	9,237	1,239
Anodes of nickel, zinc, copper, silver or gold.....	-	9,745	-	4,377
Copper, sub-acetate of, or verdigris, dry.....	7,328	1,323	2,081	586
Copper, sulphate of (blue vitriol).....	6,085,027	224,067	4,842,583	192,283
Copper, sulphate of, dehydrated, for agricultural or spraying purposes.....	931,552	49,775	389,140	18,045
Copper rollers adapted for use in calico printing.....	-	81,406	-	87,965
Total.....	-	8,693,060	-	2,639,724
EXPORTS—				
Copper, fine, contained in ore, matte, regulus, etc.....	74,804,600	7,236,456	48,761,200	3,891,045
Copper blister.....	147,521,400	22,428,176	37,697,700	3,597,146
Copper, old and scrap.....	6,765,600	740,000	5,127,000	298,228
Copper, pig.....	-	-	-	-
Copper in bars, rods, strips, sheets, plates and tubing.....	6,959,200	827,944	105,203,200	9,278,441
Copper wire and cable.....	-	111,678	-	52,463
Copper manufactures, n.o.p.....	-	10,191	-	38,390
Total.....	-	31,354,544	-	17,155,713
Copper coin, foreign.....	-	0,261	-	32,653
Canadian.....	-	25	-	72

Feldspar

Production in Canada, Imports and Exports of Feldspar, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
PRODUCTION—		\$		\$
Quebec.....	17,074	163,802	10,381	86,842
Ontario.....	9,722	104,667	8,500	103,008
Total.....	26,796	268,469	18,881	189,850
IMPORTS—Total.....	3,177	53,341	1,877	37,297
EXPORTS—Total.....	21,183	165,482	19,975	88,913

In June 1931 the United States Tariff Commission commenced an investigation into the tariff rate on feldspar imported from Canada. As a result of this investigation it was announced in December that the duty on crude feldspar was reduced from \$1.00 a ton to 50 cents a ton. There was no change in the rate for ground feldspar, which is subject to a 30 per cent duty. Based on data obtained for the year 1930, this commission showed that the cost of Canadian feldspar, exclusive of the cost of grinding, but including the weighted average cost of transportation from mines to grinding mills and from grinding mills to principal markets in the United States exceeds the corresponding cost of domestic feldspar by \$2.44 per ton.

Fluorspar

Fluorspar production from a deposit near Madoc, Ontario, during 1931, amounted to 40 tons valued at \$620. In 1930, shipments from the same district totalling 80 tons were worth \$1,240.

Imports of fluorspar in 1931 totalled 3,215 tons worth \$31,257 as compared with 12,652 tons worth \$160,995 in the preceding year. Hydrofluosilicic acid amounting to 13 tons valued at \$3,264 was also imported in 1931 as against 5 tons worth \$1,353 in 1930.

Gold

Production of Gold in Canada by Provinces and by Sources, 1930 and 1931

	1930		1931	
	Fine ounces	Value	Fine ounces	Value
		\$		\$
NOVA SCOTIA—				
In gold bullion.....	1,272	26,295	460	9,509
QUEBEC—				
In blister copper and in gold bullion.....	141,747	2,930,170	300,877	6,219,079
ONTARIO—				
Porcupino area.....	859,084	17,758,842	962,252	19,891,514
Kirkland Lake area.....	830,733	17,172,775	1,051,377	21,733,891
Sudbury area.....	23,803	492,051	23,385	483,411
Miscellaneous including Northwestern Ontario.....	22,392	462,884	48,804	1,008,868
Total.....	1,736,012	35,886,552	2,085,818	43,117,684
MANITOBA—				
In gold bullion and in blister copper.....	23,180	479,359	102,069	2,128,558
ALBERTA.....	-	-	195	4,031
BRITISH COLUMBIA—				
In alluvial gold.....	7,164	148,093	14,118	291,845
In gold bullion.....	31,177	644,480	37,370	772,630
In blister copper.....	25,799	533,313	26,364	544,902
In base bullion and in ores exported.....	100,191	2,071,131	82,736	1,710,300
Total.....	164,331	3,397,023	160,594	3,319,773
YUKON—				
In alluvial gold.....	35,160	726,822	44,061	910,822
In ores exported.....	357	7,380	245	5,004
Total.....	35,517	734,202	44,306	915,886
Canada.....	2,192,668	43,453,661	2,695,219	55,715,129

Receipts at the Royal Mint, Ottawa, Ont., by Sources, 1930 and 1931

Source	1930			1931		
	Gross weight	Precious metal content		Gross weight	Precious metal content	
		Fine gold	Fine silver		Fine gold	Fine silver
	Oz.	Oz.	Oz.	Oz.	Oz.	Oz.
Nova Scotia.....	1,382.63	1,272.052	66.94	563.69	460.222	47.86
New Brunswick.....	-	-	-	-	-	-
Quebec.....	26,264.37	22,905.661	1,936.81	137,568.54	129,451.047	3,643.39
Ontario.....	908,209.45	712,527.229	86,418.76	1,762,480.64	1,441,661.884	171,467.93
Manitoba.....	36,373.08	16,118.436	1,841.39	56,937.51	25,901.456	3,781.17
Saskatchewan.....	-	-	-	11.77	8.935	0.55
Alberta.....	-	-	-	48.40	40.438	4.35
British Columbia including Dominion of Canada Assay Office, Vancouver.....	115,507.29	94,623.462	14,776.13	116,787.19	94,145.269	16,085.85
Yukon.....	2.72	2.283	0.29	10.00	7.835	1.73
Jewellery and scrap, various sources.....	34,004.48	14,625.742	4,350.94	47,246.43	29,489.420	4,344.02
Foreign.....	-	-	-	78.04	70.097	0.55
Total.....	1,121,744.02	862,071.865	109,391.26	2,121,782.21	1,721,236.603	200,217.80

Gold Bullion Received at Dominion of Canada Assay Office, Vancouver, B.C., 1931

	Calendar Year 1931			
	No. of deposits	Weight before melting and assaying	Weight after melting and assaying	Net value of deposits
		Troy ounces	Troy ounces	\$
Bar, nugget and dust, amalgam, etc.—				
British Columbia.....	888	67,349.14	63,230.33	1,107,870.35
Yukon Territory.....	187	27,124.77	26,727.01	437,331.98
Alaska.....	2	152.09	151.38	2,610.45
Alberta.....	60	180.94	170.39	3,065.95
Miscellaneous.....	8	15.23	13.10	222.57
Dental and jewellery scrap.....	829	6,795.35	6,141.30	58,250.34
Total.....	1,974	101,617.52	98,423.51	1,609,351.64

Imports into Canada and Exports of Gold, 1930 and 1931

	1930	1931
	\$	\$
IMPORTS—		
Coin and bullion—		
Coins, British, Canadian and foreign gold coins.....	38,389,019	1,646,990
Gold bullion in bars, blocks, ingots, drops, sheets or plates, unmanufactured.....	693,090	391,003
Total.....	39,082,109	2,037,993
Gold, other—		
Bullion or gold fringe.....	18,543	9,506
Manufactures of gold and silver—		
Leaf.....	106,116	76,431
Sweepings.....	1,000	35
Manufactures, n.o.p.....	66,669	31,878
Electroplated ware.....	1,014,645	575,234
Medals of gold, silver or copper and other metallic articles, actually bestowed as trophies or prizes, and received and accepted as honorary distinctions, and cups or other metallic prizes won in bona fide competitions.....	24,558	21,251
Total.....	1,231,531	714,335
EXPORTS—		
Coin and bullion—		
Gold coin—		
Canadian.....	750	920
Foreign.....	18,004,160	37,439,464
Gold bullion—		
Canadian.....	—	31,887,899
Foreign.....	—	—
Total—Canadian.....	750	31,888,819
Foreign.....	18,004,160	37,439,464
Total coin and fine gold bullion.....	18,004,910	69,328,283
Gold-bearing quartz, dust, nuggets and crude bullion obtained direct from mining operations.....	22,312,605	17,682,563
Jewellers' sweepings (gold, silver and platinum).....	380,379	234,276
Total.....	22,692,984	17,916,839

Graphite

Production, Imports and Exports of Graphite, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTION..... Total	1,535	96,392	548	32,149
IMPORTS—				
Crucibles, plumbago.....	—	52,458	—	34,215
Plumbago, not ground or otherwise manufactured.....	—	2,033	—	1,404
Plumbago, ground and manufactures of, n.o.p.....	—	61,742	—	81,233
Total.....	—	116,233	—	116,852
EXPORTS—				
Graphite or plumbago, crude or refined..... Total	2,417	127,291	951	44,696

Gypsum

Production in Canada, Imports and Exports of Gypsum, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTION—				
Crude—				
(1) Lump or mine run.....	56,628	116,401	28,638	69,085
Crushed.....	845,210	673,623	702,684	813,421
Fine ground.....	8,160	38,894	4,584	22,056
(2) Calcined.....	160,970	1,689,870	118,423	1,194,819
Total.....	1,070,968	2,818,788	854,329	2,099,381
IMPORTS—				
Gypsum, crude (sulphate of lime).....	898	25,882	484	13,491
Plaster of Paris or gypsum ground, not calcined.....	219	5,352	158	4,476
Plaster of Paris, calcined and prepared wall plaster.....	16,608	190,832	11,050	120,516
Total.....	17,725	222,066	11,692	138,483
EXPORTS—				
Gypsum or plaster, crude.....	719,381	871,567	618,765	741,376
Plaster of Paris, ground, and prepared wall plaster.....	7,281	119,092	3,086	50,774
Total.....	726,662	990,659	621,851	792,150

(1) Includes some anhydrite produced in Nova Scotia in 1930.

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

Iron Ore, Pig Iron, Steel Ingots and Castings

Export shipments of titaniferous iron ore from the Baie St. Paul district, Quebec, during 1931 amounted to 1,509 tons worth \$10,261 as against 412 tons worth \$1,239 in 1930.

No other iron ore production was reported but imports into Canada totalled 808,420 short tons valued at \$1,718,443.

Shipments from Wabana mines, Newfoundland, while not included in the mineral production of Canada, are of interest because of the tonnage shipped to Nova Scotia. During 1931 shipments from Wabana mines totalled 789,897 tons valued at \$2,053,732. Of this amount 234,148 tons valued at \$608,785 were shipped to Canada, 37,767 tons valued at \$98,194 to Great Britain, 25,670 tons worth \$66,742 were exported to the United States; and 492,312 tons worth \$1,280,011 were exported to Germany.

Production of Pig Iron and Ferro-Alloys in Canada, 1930 and 1931

(Tons of 2,240 lb.)

Item	1930			1931		
	For own use	For sale	Total	For own use	For sale	Total
IN BLAST FURNACE—						
Basic.....	481,791	12,440	494,231	308,437	3,413	311,850
Foundry.....	36,863	156,211	193,074	718	80,174	80,892
Malleable.....	13,220	46,653	59,873	-	27,296	27,296
Total.....	531,874	215,304	747,178	309,155	110,883	420,038
Ferro-alloys.....	-	65,223	65,223	-	45,731	45,731

Production of Steel Ingots and Castings in Canada, 1930 and 1931

(Tons of 2,240 lb.)

Item	1930			1931		
	For own use	For sale	Total	For own use	For sale	Total
STEEL INGOTS—						
Open-hearth—Basic.....	924,674	753	925,427	610,438	1,524	611,962
Acid.....	-	-	-	-	-	-
Electric.....	30,071	1,390	31,461	26,035	-	26,035
Other.....	-	-	-	-	-	-
Total steel ingots.....	954,745	2,143	956,888	636,473	1,524	637,997
STEEL CASTINGS—						
Open-hearth—Basic.....	4,833	19,939	24,772	1,337	13,547	14,884
Acid.....	-	-	-	-	19	19
Bessemer.....	46	2,268	2,314	40	1,488	1,528
Electric.....	1,301	24,213	25,604	238	18,421	18,659
Total direct steel castings.....	6,270	46,420	52,690	1,615	33,475	35,090
Grand Total.....	961,015	48,563	1,009,578	638,088	34,999	673,087

Iron Oxides

Iron oxides production from deposits in Quebec and British Columbia amounted to 5,520 tons worth \$49,205 in 1931 as compared with 6,596 tons worth \$83,873 in 1930.

Kaolin

No production of kaolin from Canadian deposits has been reported during the past three years. Experimental shipments were made from the St. Remi d'Amherst deposit in Quebec during 1927 and 1928.

Lead

Production in Canada, Imports and Exports of Lead, 1930 and 1931

	1930		1931	
	Pounds	Value	Pounds	Value
		\$		\$
PRODUCTION—				
Ontario.....	2,193,856	116,034	995,333	41,875
British Columbia.....	321,803,725	12,637,232	261,898,096	7,097,727
Yukon.....	8,896,582	349,309	4,444,774	120,458
Total.....	332,894,163	13,102,635	267,339,203	7,260,060
IMPORTS—				
Old and scrap, pig and block.....	764,305	32,029	250,978	8,749
Bars and sheets.....	1,621,359	95,793	539,654	24,635
Litharge.....	2,865,600	213,240	3,866,100	232,280
Acetate of lead.....	172,387	16,496	102,955	9,146
Nitrate of lead.....	150,904	10,066	102,361	6,183
Other manufactures.....	-	243,837	-	162,430
Pipe lead.....	369,082	23,067	127,525	5,750
Shots and bullets.....	9,043	907	8,699	791
Tea lead.....	17,920	1,430	17,780	1,275
Lead pigments—				
Dry white lead.....	47,287	4,099	95,470	7,084
White lead, ground in oil.....	58,602	5,894	53,119	4,736
Dry red lead and orange mineral.....	1,352,076	110,075	1,491,320	98,103
Total.....	-	756,933	-	561,068
EXPORTS—				
Lead, contained in ore.....	26,323,200	1,258,272	4,321,700	176,964
Pig lead.....	205,432,600	7,015,308	216,425,800	4,482,812
Total.....	231,755,800	8,273,580	220,847,500	4,659,776

Lime

Production in Canada, Imports and Exports of Lime, 1930 and 1931

	1930		1931				Total	
	Total		Quicklime		Hydrated Lime			
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
PRODUCTION—								
Nova Scotia.....	31,114	113,250	17,790	73,018	640	6,400	18,430	79,418
New Brunswick.....	12,521	135,304	5,161	61,729	6,080	65,325	11,241	127,054
Quebec.....	129,350	967,650	102,195	726,969	10,309	78,616	112,504	805,585
Ontario.....	252,066	2,177,587	109,548	749,217	34,283	379,996	143,831	1,129,213
Manitoba.....	24,098	260,325	16,575	128,789	4,439	80,612	21,014	207,401
Alberta.....	5,136	49,525	2,794	24,447	62	738	2,856	25,185
British Columbia.....	36,517	335,057	20,114	191,078	9,462	82,191	29,576	273,269
Total.....	490,802	4,038,698	274,177	1,853,247	65,275	693,878	339,452	2,647,125
IMPORTS—Total.....	2,096	28,107	-	-	-	-	568	10,561
EXPORTS—Total.....	22,364	444,728	-	-	-	-	14,425	283,459

Magnesite

Production in Canada, Imports and Exports of Magnesite, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
Production—Calcined or clinkered—Total.....	13,336	\$ 336,162	11,411	\$ 295,579
IMPORTS—				
Magnesia pipe covering.....	-	297,513	-	126,210
Magnesite, crude rock.....	260	5,187	-	-
Magnesite, dead burned, sintered, caustic, calcined or plastic magnesia*.....	1,182	22,069	1,787	40,028
Brick, fire, magnesite.....	-	270,180	-	152,435
Total.....	-	594,949	-	319,273
EXPORTS—				
Magnesite, calcined, dead burned, etc.....	1,851	48,536	1,610	45,257

*For nine months ended December 31, 1930.

Magnesium Sulphate

There has been no production of magnesium sulphate since 1923 when 121 tons were recovered from a deposit near Ashcroft, B.C. Importation of magnesium sulphate or epsom salts during 1931 reached a total of 2,060 tons valued at \$43,807; in 1930, 2,566 tons valued at \$52,718 were imported.

Manganese

Shipments of manganese ore from properties in Nova Scotia and New Brunswick totalled 117 tons worth \$2,893. There was no production reported from British Columbia during the year under review.

Mercury

There is a small occurrence of cinnabar near Kamloops, British Columbia, but production has been very limited. During 1931 imports into Canada of mercury amounted to 21,159 pounds valued at \$25,454 as against 105,755 pounds worth \$153,837 in 1930.

Metals of the Platinum Group

Production of Platinum Group Metals, Canada, 1930 and 1931

	1930		1931	
	Platinum	Palladium, Rhodium, etc.	Platinum	Palladium, Rhodium, etc.
Produced from Canadian Ores.....	Oz. 34,007	34,092	44,725	46,918
Recovered from alluvial sands.....	\$ 1,542,490	895,867	1,595,117	1,217,717
	Oz. 17	-	20	-
	\$ 771	-	713	-
Total.....	Oz. 34,024	34,092	44,745	46,918
	\$ 1,543,261	895,867	1,595,830	1,217,717

Imports into Canada and Exports of Platinum, 1930 and 1931

	1930		1931	
	Oz.	Value	Oz.	Value
IMPORTS—				
Platinum retorts, pans, condensers, tubing and pipe.....	-	\$ 23,135	-	\$ 1,520
Platinum wire and bars, strips, sheets or plates, also platinum, palladium, iridium, osmium, ruthenium and rhodium in lumps, ingots, powder, sponge or scrap.....	-	87,467	-	45,802
Platinum crucibles.....	-	12,249	-	7,106
Total.....	-	122,851	-	54,428
EXPORTS—				
Platinum, etc., contained in concentrates or other forms.....	19,835	1,610,945	14,202	1,135,388
Platinum, old and scrap.....	285	15,653	81	2,070
Total.....	-	1,626,598	-	1,137,458

Mica

Production of Mica in Canada, 1930 and 1931

Grade	1930			1931		
	Quantity	Value, f.o.b. shipping point	Price per pound	Quantity	Value, f.o.b. shipping point	Price per pound
	Lb.	\$	\$	Lb.	\$	\$
Rough cobbled.....	44,330	1,142	0-02	-	-	-
Thumb trimmed.....	8,096	8,281	1-02	46,956	5,292	0-11
Splittings.....	77,530	35,601	0-46	37,465	14,397	0-38
Scrap.....	2,211,022	50,980	0-02	2,417,718	32,994	0-01
Total.....	2,340,978	96,004	0-04	2,502,139	52,683	0-02

Imports into Canada and Exports of Mica, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
		\$		\$
IMPORTS—				
Mica and manufactures of, n.o.p.— Total.....	-	102,775	-	92,294
EXPORTS—				
Rough cobbled and thumb trimmed.....	2	1,461	23	3,428
Mica splittings.....	39	35,351	19	14,672
Mica, scrap and waste.....	1,039	48,436	1,232	32,600
Mica, plate and manufactures of (micanite).....	-	1,289	-	797
Total.....	-	86,537	-	51,497

Mineral Waters

Mineral springs and wells in Canada produced 217,408 imperial gallons valued at \$13,324 during 1931. In the preceding year sales amounted to 227,141 imperial gallons worth \$24,481. Production was from Ontario and Quebec wells.

Molybdenum

No production of molybdenum was reported for 1931. In 1929 considerable work was done at a property in northwestern Quebec and 17 tons of molybdenite concentrates, averaging 85 per cent MoS₂ were produced, of which 9½ tons were shipped in that year.

Natural Gas

Production in Canada and Imports of Natural Gas, 1930 and 1931

	1930		1931	
	M cu. ft.	Value	M cu. ft.	Value
		\$		\$
PRODUCTION—				
New Brunswick.....	661,975	325,751	652,947	322,330
Ontario.....	7,965,781	5,034,828	7,395,000	4,437,000
Manitoba.....	600	180	600	180
Alberta.....	20,748,583	4,020,220	18,482,355	4,384,094
Total.....	29,376,919	10,289,985	26,530,902	9,144,204
IMPORTS—				
Gas for cooking, heating or illuminating, imported by pipe line— Total.....	151,671	96,763	109,168	74,904

Nickel

Production in Canada, Imports and Exports of Nickel, 1930 and 1931

	1930		1931	
	Quantity	Value	Quantity	Value
	Lb.	\$	Lb.	\$
PRODUCTION—				
Nickel in matte and spoils exported (n)	41,959,927	7,552,574	33,093,483	6,004,827
Refined and electrolytic nickel produced.....	57,478,651	15,485,391	28,972,201	8,097,271
Nickel in oxides and salts sold.....	4,330,270	1,417,178	3,001,636	1,115,355
Total.....	103,768,857	24,455,132	65,066,320	15,267,453
IMPORTS—				
Nickel, nickel silver and German silver in ingots or blocks, n.o.p. .	37,462	9,250	36,001	5,318
Nickel in bars and rods, strips, sheets and plates	1,120,122	347,461	616,027	228,435
Nickel silver and German silver in bars, rods, strips, sheets, plates or anodes.....	180,122	69,064	85,708	26,558
Nickel chromium in bars or rods, etc.....	44,344	44,434	44,111	45,033
German, Nevada and nickel silver, manufactures of, not plated....	-	471,036	-	229,412
Nickel-plated household hollow-ware.....	-	18,401	-	13,213
Nickel kitchenware.....	-	2,261	-	2,597
Nickel-plated ware, n.o.p.....	-	2,004,398	-	1,185,115
Total nickel and its products.....	-	2,966,965	-	1,735,681
EXPORTS—				
Nickel, fine	43,122,500	11,262,512	27,132,700	7,140,420
Nickel contained in matte	44,890,400	8,142,794	33,287,500	6,048,508
Nickel in oxide	3,733,000	1,100,018	3,108,300	992,637
Total	91,745,900	20,505,324	63,528,600	14,181,565

(a) Nickel in matte exported valued at 18 cents per pound.

Output from Nickel-Copper Mines and Smelters, 1929-1931

	Unit	1929	1930	1931
Ore mined.....	ton	1,991,910	2,127,043	1,714,075
Ore shipped.....	ton	1,991,910	2,115,139	1,689,874
Content of ores, etc., shipped—				
Copper.....	pound	103,457,449	142,948,534	123,641,190
Nickel.....	pound	128,901,304	122,193,531	89,424,886
Ore and concentrates treated at smelters	ton	2,033,457	2,357,134	1,884,959
Matte produced at smelters.....	ton	132,030	166,703	100,273
Content of matte—				
Copper.....	pound	92,630,143	141,600,753	77,021,143
Nickel.....	pound	116,190,232	122,224,692	81,285,931
Matte shipped to Canadian refineries.....	ton	115,599	137,364	63,076
Matte exported from Canadian smelters and refineries.....	ton	25,086	34,550	30,294

Peat

Shipments of peat from the province of Quebec during 1931 totalled 1,170 tons valued at \$5,937.

Petroleum

Production of Crude Petroleum in Canada, 1930 and 1931

	1930		1931	
	Barrels	Total value	Barrels	Total value
		\$		\$
NEW BRUNSWICK—Total.....	6,758	17,378	6,577	15,693
ONTARIO—				
Petrolia and Enniskillen.....	55,126	109,741	57,515	101,945
Oil Springs.....	29,160	60,038	30,792	57,623
Moore Township.....	1,691	3,366	3,739	6,621
Sarnia Township.....	1,036	2,063	1,466	2,800
Plympton Township.....	296	589	295	523
Bothwell.....	21,177	42,115	18,024	31,933
West Dover.....	457	909	891	1,581
Tilbury East.....	149	296	-	-
Onondaga.....	231	762	34	129
Moza Township.....	7,166	14,252	8,517	15,092
Thamesville.....	447	889	463	822
Dutton.....	306	726	508	902
Euphemia.....	-	-	121	216
Total for Ontario.....	117,302	235,746	122,365	219,992
ALBERTA—Total.....	1,398,160	4,780,696	1,408,058	4,025,000
Canada.....	1,522,228	5,033,529	1,537,660	4,260,685

Imports into Canada and Exports of Petroleum and Its Products, 1930 and 1931

	1930		1931	
	Quantity	Value	Quantity	Value
IMPORTS—		\$		\$
Crude petroleum in the natural state, 0.7900 specific gravity or heavier at 60 degrees temperature, when imported by oil refiners to be refined in their own factories.....gal	1,012,029,544	38,241,270	1,017,388,091	22,670,225
Crude petroleum, gas oils other than naphtha, benzene and gasoline lighter than 0.8235 but not less than 0.775 specific gravity at 60 degrees.....gal	539,045	58,593	77,280	3,221
Petroleum (not including crude petroleum imported to be refined or illuminating or lubricating oils) 0.8235 specific gravity or heavier at 60 degrees temperature.....gal	65,733,147	2,406,223	53,550,063	1,760,513
Petroleum, and other oils imported by miners or mining companies or concerns, for use in the concentration of ores of metals in their own concentrating establishments.....gal	134,001	55,242	127,830	59,426
Petroleum, crude, not in its natural state, 0.725 specific gravity or heavier, but not heavier than 0.770 specific gravity, at 60 degrees temperature when imported by oil refiners to be refined in their own factories.....gal	8,466,369	600,899	3,296,711	161,228
KEROSENE, FUEL AND ILLUMINATING OILS				
Coal oil and kerosene lighter than .8235 specific gravity at 60 degrees temperature, n.o.p.....gal	4,911,647	360,518	3,493,349	212,420
Illuminating oils, composed wholly or in part of the products of petroleum, coal, shale or lignite, costing more than 30 cents per gallon.....gal	10,687	4,660	33,322	15,033
Engine distillate lighter than 0.8235 specific gravity at 60 degrees temperature.....gal	64,757	9,856	172,588	15,246
Fuel oil, ex-warehoused for ships' stores.....gal	31,560,548	821,313	35,900,828	891,962
LUBRICATING OILS				
Lubricating oils, composed wholly or in part of petroleum, and costing less than 25 cents per gallon.....gal	8,048,755	1,477,639	9,319,547	1,591,795
Lubricating oils, n.o.p.....gal	8,261,051	3,540,113	4,459,269	1,975,349
GASOLINE AND OTHER OILS				
Gasoline under 0.725 specific gravity at 60 degrees temperature.....gal	93,822,017	9,488,190	-	-
Gasoline, 0.725 specific gravity and heavier, but not heavier than 0.770 specific gravity at 60 degrees temperature.....gal	49,953,335	6,712,502	8,610	821
Natural casinghead, compression or absorption gasoline lighter than 0.6690 specific gravity at 60 degrees temperature*.....gal	9,140,725	784,525	32,140,805	2,152,102
Gasoline lighter than 0.8235 specific gravity at 60 degrees temperature.....gal	-	-	73,243,020	6,372,346
Gasoline, n.o.p.....gal	10,530,470	1,129,284	11,320,370	1,147,897
All other oils, n.o.p.....gal	308,019	131,324	578,535	127,343
OTHER PRODUCTS OF PETROLEUM				
Grease, axle.....lb.	5,341,098	288,994	4,148,459	206,770
Paraffine wax.....lb.	3,464,065	126,770	2,473,199	54,561
Paraffine wax candles.....lb.	383,063	79,766	429,976	79,437
Vaseline, and all similar preparations of petroleum for toilet medicinal or other purposes.....	-	230,800	-	186,290
Naphtha and products of petroleum, n.o.p., lighter than 0.8235 specific gravity at 60 degrees temperature.....gal	1,667,160	251,743	3,443,531	329,867
Total	-	65,806,224	-	40,013,852
EXPORTS—				
Oil, petroleum, crude.....gal	19,259,585	881,452	16,277,182	677,378
Oil, coal and kerosene, refined.....gal	1,460,676	138,455	504,364	52,328
Oil, gasoline and naphtha.....gal	7,256,557	1,226,561	5,500,606	889,827
Oil mineral, n.o.p.....gal	315,779	120,231	885,122	185,177
Wax, mineral.....cwt.	18,958	74,933	9,469	31,062
Total	-	2,441,632	-	1,835,862

*From September, 1930.

Phosphate

Imports of rock phosphate (fertilizer) into Canada totalled 141,722 tons worth \$619,079 as against 47,206 tons worth \$297,522 in 1930. There was no production in Canada in 1931. Some experimental shipments of phosphate were made by the Consolidated Mining and Smelting Company from a deposit near Fernie, B.C., during 1927, 1928 and 1929.

Pyrites*

Production in Canada, Imports and Exports of Pyrites, 1930 and 1931

	1930		1931	
	Sulphur content	Value	Sulphur content	Value
	tons	\$	tons	\$
PRODUCTION—				
Quebec.....	12,653	93,038	14,586	108,617
Ontario.....	7,277	73,855	6,598	65,080
British Columbia.....	17,800	147,942	29,013	255,760
Total.....	37,730	314,835	50,107	429,457
IMPORTS—				
Brimstone, or sulphur, crude or in roll or flour.....	179,728	3,177,492	124,192	2,281,654
EXPORTS—				
Pyrites (Sulphur content).....	26,592	159,866	26,613	139,814

*Sulphur.—It has been the practice of the Bureau in past years to report exports shipments of pyrites in terms of the sulphur content of the pyrites. In view of the fact that there is now an important production of sulphur in the form of sulphuric acid made from waste bessemer gases, it has been decided to modify the method of reporting production so as to show the total sulphur content of pyrites shipped and of bessemer gases used in the manufacture of sulphuric acid.

Quartz

Production in Canada and Imports of Quartz, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTION—				
Nova Scotia.....	8,057	18,494	2,116	3,836
Quebec.....	49,561	119,668	26,737	69,656
Ontario.....	167,487	274,674	97,888	148,642
Manitoba.....	—	—	67,214	76,624
British Columbia.....	1,095	5,291	519	1,038
Total.....	226,200	418,127	194,474	299,796
IMPORTS—				
Siles or crystallized quartz, ground or unground.....	5,040	111,473	6,358	141,818
Flint and ground flint stones.....	3,878	37,811	2,616	23,653
Total.....	8,918	149,284	8,974	165,471

Salt

Production of Salt in Canada, by Grades, 1930 and 1931

Grade	1930			1931		
	Manu- factured	Sold	Value of salt sold (Not includ- ing pack- ages)	Manu- factured	Sold	Value of salt sold (Not includ- ing pack- ages)
	Tons	Tons	\$	Tons	Tons	\$
Table and dairy.....	49,050	49,467	868,396	51,296	51,360	1,064,250
Common fine.....	54,212	55,373	302,526	55,510	57,886	339,459
Common coarse.....	44,635	44,149	326,326	44,295	45,326	326,970
Land salt.....	281	281	1,414	542	527	1,861
Other grades.....	7,557	7,688	80,025	6,010	5,990	72,387
Brine for chemical works (Salt equivalent sold or used).....	114,737	114,737	115,944	97,958	97,958	99,222
Total.....	270,472	271,695	1,694,631	255,611	259,047	1,904,149
Value of containers.....	—	—	499,740	—	—	491,357
Grand total.....	270,472	271,695	2,194,371	255,611	259,047	2,395,506

Imports into Canada and Exports of Salt, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
IMPORTS—		\$		\$
Salt, for use of the sea or gulf fisheries.....	56,134	195,760	56,166	248,155
Salt, in bulk, n.o.p.....	40,909	169,948	40,323	177,738
Salt, n.o.p., in bags, barrels, etc.....	31,273	273,448	34,112	309,203
Salt, table, made by an admixture of other ingredients, when containing not less than 90 per cent of pure salt.....	69	21,747	294	16,842
Total.....	128,385	660,903	130,895	751,938
EXPORTS—				
Total.....	8,758	74,397	6,125	55,110

Sand-Lime Brick

Statistics relating to the production of sand-lime brick are not included in the totals for the structural, materials industries as both sand and lime used have been so recorded; production of sand-lime brick is regarded as a manufacturing operation and therefore is shown in the report on the *Manufactures of the Non-Metallic Minerals*, issued annually by the Bureau.

Figures on the production of sand-lime brick had not been received in sufficient detail at the time of going to press with this report to make an estimate for 1931. Production in 1930 totalled 52,770 thousand valued at \$567,022.

Sand and Gravel

Sand and gravel production in Canada during 1931 totalled 24,608,413 tons with a valuation of \$6,563,327 as compared with 28,547,511 tons valued at \$8,344,913 shipped in 1930.

Imports of sand and gravel into Canada during 1931 amounted to 155,482 tons worth \$139,935 while silica sand imported for the manufacture of glass and carborundum and for use in foundries amounted to 107,711 tons valued at \$235,191. Corresponding data in 1930 showed 185,362 tons worth \$167,642 and silica sand 164,349 tons at \$352,796. Exports of sand and gravel in 1931 totalled 485,813 tons appraised at \$146,060 as against a total of 2,589,431 tons worth \$468,380 exported in 1930.

Silver

Production, Imports and Exports of Silver, 1930 and 1931

	1930		1931	
	Quantity fine ozs.	Value \$	Quantity fine ozs.	Value \$
NOVA SCOTIA—				
In gold bullion— Total	67	26	48	14
QUEBEC—				
In gold ores, in blister copper and in copper ores exported— Total ...	571,164	217,922	535,802	160,044
ONTARIO—				
In silver bullion and nuggets.....	8,150,811	3,113,294	5,725,213	1,710,121
In gold bullion.....	204,135	112,224	304,323	108,823
In matte, blister copper and in silver ores, concentrates and residues exported.....	1,751,737	668,358	1,381,145	412,548
Total	10,205,683	3,893,876	7,470,681	2,231,492
MANITOBA—				
In gold bullion and in blister copper— Total	94,653	36,114	836,547	240,877
ALBERTA.....				
Total	-	-	29	9
BRITISH COLUMBIA—				
In alluvial gold.....	1,612	615	3,170	949
In gold bullion.....	2,593	989	6,805	2,060
In blister copper.....	1,101,045	420,093	820,715	245,148
In base bullion and in ores exported.....	10,720,680	4,090,368	7,199,679	2,150,513
Total	11,825,930	4,512,065	8,030,165	2,398,700
YUKON—				
In alluvial gold.....	7,911	3,018	9,914	2,961
In ores exported.....	3,738,415	1,426,355	3,674,730	1,007,642
Total	3,746,326	1,429,373	3,684,644	1,000,603
Canada	26,443,823	10,089,376	20,558,216	6,140,730
IMPORTS—				
Silver in bars, etc., unmanufactured.....	-	610,634	-	467,404
Silver manufactures of n.o.p., and articles consisting wholly or in part of sterling or other silverware.....	-	100,123	-	115,127
Silver coin.....	-	-	-	260
Total	-	709,757	-	582,791
EXPORTS—				
Silver contained in ore, concentrates, etc.....	8,473,189	3,401,340	4,017,162	1,168,261
Silver bullion.....	15,778,755	6,180,412	14,649,185	4,230,998
Total	24,251,944	9,581,752	18,666,367	5,399,259
Silver coin, Foreign.....	-	2,417,822	-	3,447,323
" " Canadian.....	-	30	-	17,461

Slate

No slate production was reported for 1931. Imports into Canada during the year under review were, roofing slate 3,777 squares valued at \$42,523; slate pencils valued at \$3,309; school writing slates worth \$78,371, slate mantles and other manufactures of slate valued at \$30,805.

Sodium Carbonate

The output of sodium carbonate crystals in 1931 amounted to 411 tons worth \$4,932 as compared with shipments of 364 tons at \$4,550 in the preceding year.

Soda ash is manufactured from salt brine at Amherstburg, Ontario, by the Brunner, Mond Canada, Limited.

Sodium Sulphate

Shipments of natural sodium sulphate from deposits in Saskatchewan during 1931 were valued at \$419,497 as against \$293,847 in 1930. The large increase was due in the main part to the demand for this material by a Canadian chemical company for the manufacture of nitre cake at Coppercliff, Ontario, to be used in the smelting of nickel-copper ores.

Stone

Production in Canada, Imports and Exports of Stone, 1930 and 1931

	1930		1931	
	Tons	Value \$	Tons	Value \$
PRODUCTION—				
Nova Scotia.....	152,463	320,316	81,404	216,808
New Brunswick.....	111,612	284,869	59,001	247,279
Quebec.....	3,818,126	5,752,786	4,218,348	5,997,240
Ontario.....	5,396,233	4,850,528	3,262,713	2,859,206
Manitoba.....	147,079	1,085,479	153,648	641,199
Alberta.....	7,903	21,736	7,366	18,407
British Columbia.....	361,091	718,495	441,319	552,853
Canada.....	9,994,506	13,834,209	8,223,799	10,532,992
IMPORTS—				
Building stone, other than marble or granite, sawn on more than two sides, but not sawn on more than four sides.....	139	2,029	837	7,824
Building stone other than marble or granite, planned, turned, cut or further manufactured than sawn on four sides.....	1,492	78,904	110	3,544
Flagstone, sandstone, and all building stone, not hammered, sawn or chiselled.....	-	309,930	-	152,387
Flagstone and building stone, other than marble or granite sawn on not more than two sides.....	-	107,783	-	20,377
Granite, sawn only.....	-	8,999	-	3,815
Granite, manufactures of, n.o.p.....	-	42,158	-	19,848
Granite monuments.....	-	132,622	-	94,806
Granite, rough, not hammered or chiselled.....	-	78,283	-	48,805
Paving blocks.....	-	2,876	-	25
Marble, rough, not hammered or chiselled.....	-	243,621	-	90,528
Marble, sawn or sand rubbed, not polished.....	-	264,869	-	144,971
Marble, manufactures of, n.o.p.....	-	170,001	-	90,363
Refuse stone.....	303,462	233,182	214,973	186,360
Manufactures of stone, n.o.p.....	-	65,301	-	62,376
Total.....	-	1,740,558	-	932,027
EXPORTS—				
Crushed stone.....	136,837	235,406	74,244	135,140
Granite and marble, unwrought.....	1,768	21,913	2,938	52,058
Freestone, limestone, and other building stone, unwrought.....	2,149	15,829	305	2,087
Dressed stone.....	-	4,110	-	3,080
Total.....	-	277,258	-	192,365

Production of Stone in Canada by Kinds and by Provinces, 1931

	Granite		Limestone		Marble		Sandstone	
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
Nova Scotia.....	24,930	72,519	19,599	59,664	-	-	36,875	84,025
New Brunswick.....	2,583	149,881	35,378	73,398	-	-	21,040	24,000
Quebec.....	746,578	2,077,307	2,615,831	2,793,322	14,619	627,256	841,320	499,355
Ontario.....	141,621	249,039	3,112,794	2,561,162	4,298	29,005	4,000	20,000
Manitoba.....	-	-	153,258	634,776	390	6,423	-	-
Alberta.....	-	-	7,289	14,607	-	-	67	3,900
British Columbia.....	392,230	322,664	130,179	152,391	5,000	62,790	3,910	15,098
Total for Canada.....	1,217,942	2,871,410	6,074,338	6,289,329	21,307	725,474	907,212	646,788

Talc and Soapstone

Production in Canada, Imports and Exports of Talc and Soapstone, 1930 and 1931

	1930		1931	
	Tons	Value	Tons	Value
PRODUCTION—		\$		\$
Soapstone.....	-	50,168	-	34,439
Talc.....	11,841	136,048	11,806	122,044
Total.....	-	186,216	-	156,483
IMPORTS—				
Talc or soapstone, ground or unground— Total.....	4,799	85,779	2,670	49,452
EXPORTS—				
Talc— Total.....	8,512	98,855	7,861	83,765

Zinc

Production in Canada, Imports and Exports of Zinc, 1930 and 1931

	1930		1931	
	Pounds	Value	Pounds	Value
PRODUCTION—		\$		\$
Quebec.....	9,754,160	351,150	-	-
Ontario.....	3,527,894	127,004	-	-
Manitoba.....	3,822,141	139,757	35,173,749	893,338
British Columbia.....	250,479,310	9,017,255	202,071,702	5,160,911
Total.....	267,642,505	9,635,166	237,245,451	6,059,249
IMPORTS—				
Zinc dust.....	506,670	37,853	527,641	40,032
Zinc in blocks, pigs, bars and rods, and zinc plates, n.o.p.....	2,588,853	124,128	403,205	12,798
Zinc in sheets and strips and zinc plates for marine boilers.....	6,024,973	410,467	4,013,796	272,012
Zinc spelter.....	1,860,276	90,270	22,378	1,073
Zinc white.....	14,575,729	885,580	11,483,357	641,570
Zinc, sulphate and chloride of.....	2,685,186	96,242	2,242,204	77,278
Zinc, manufactures of, n.o.p.....	-	161,583	-	122,131
Lithopone.....	16,051,513	722,341	13,862,914	560,037
Total.....	-	2,528,464	-	1,726,931
EXPORTS—				
Zinc in ore.....	46,964,100	1,014,915	-	-
Zinc scrap, dross and ashes.....	4,808,900	92,651	1,093,100	10,018
Zinc spelter.....	150,964,100	5,146,215	238,018,000	5,554,511
Total.....	-	6,253,781	-	5,564,529

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