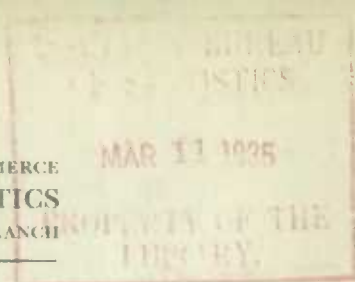


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CANADA—DEPARTMENT OF TRADE AND COMMERCE  
DOMINION BUREAU OF STATISTICS  
MINING, METALLURGICAL AND CHEMICAL BRANCH

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PRELIMINARY REPORT

ON THE

**MINERAL PRODUCTION OF  
CANADA**

DURING THE CALENDAR YEAR

1934

Published by Authority of the Hon. R. B. Hanson, K.C., M.P.,  
Minister of Trade and Commerce



OTTAWA  
J. O. PATENAUDE  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
1935

# 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. Fully indexed. Chapter titles are: Canada—The Gold Mining Industry—The Silver Mining Industry—The Nickel-Copper Industry—Miscellaneous Metal Mining Industries—The Non-Ferrous Smelting and Refining Industry—The Coal Mining, Coke, Natural Gas, Peat and Petroleum Industries—Non-Metal Mining, Industries (Other than Fuels)—The Clay Products and Other Structural Materials Industries—Notes on the Methods of Computing Values—Directory—Index.

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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.

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

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

SEE BACK COVER FOR PUBLICATIONS ON MANUFACTURES BASED CHIEFLY ON MINERALS

## PREFACE

The Preliminary Report on the Mineral Production of Canada is issued annually, in time for presentation at the Annual Meeting of the Canadian Institute of Mining and Metallurgy, and is designed to supplement the estimate issued, in bulletin form, by the Bureau on January 1st.

This report presents, in concise form, detailed figures of Canada's mineral production by provinces, imports and exports and other related data. It is divided into four sections—metals, fuels, non-metals other than fuels, and structural materials—and a short description of each metal or mineral is presented by alphabetical arrangement in each section.

It is gratifying to note the continued improvement, which began about June, 1933, in Canada's mineral production. In only two previous years has the total value been as great as in 1934. The value of gold produced was the highest on record, due to the new price of approximately \$35.00 per ounce and in no previous year was the production of base metals so great, despite the low prices which have prevailed. Coal output was higher and the production of other non-metallic minerals was in the main much better than in 1933. Structural materials also showed gains, due to improvement in general construction.

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.

Arrangements made, several years ago, with the provinces of Quebec, Ontario, Manitoba, and British Columbia, whereby the Bureau and these provinces use joint forms for the collection of mineral statistics, are working satisfactorily. By this system the operators are now required to file only one form.

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

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

R. H. COATS,  
Dominion Statistician.

DOMINION BUREAU OF STATISTICS,  
OTTAWA, March 2, 1935.

## Quantities and Values of Mineral Products from Canadian Sources, 1933 and 1934

	1933		1934		Per cent Increase (+) or Decrease (-)	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>METALLICS</b>						
Arsenic (As <sub>2</sub> O <sub>3</sub> )..... lb.	1,468,022	56,534	1,659,513	56,652	+ 13.0	+ 0.2
Bismuth..... lb.	78,303	81,526	253,644	301,215	+ 223.9	+ 269.5
Cadmium..... lb.	-	78,733	-	91,019	-	+ 15.6
Chromium..... tons	30	343	46	723	+ 53.3	+ 110.8
Cobalt..... lb.	466,702	597,752	588,566	589,933	+ 26.1	+ 1.3
Copper..... lb.	299,982,448	21,634,853	364,890,860	26,681,069	+ 21.6	+ 23.3
Gold valued at standard rate..... fine oz.	2,949,309	60,967,626	2,969,680	61,388,732	+ 0.7	+ 0.7
Estimated exchange equalization on gold produced.....	-	23,382,611	-	41,065,228	-	+ 75.6
Lead..... lb.	266,475,191	6,372,988	346,270,062	8,436,524	+ 29.9	+ 32.4
Nickel..... lb.	83,264,658	20,130,480	128,687,340	32,139,425	+ 54.6	+ 59.7
Palladium, rhodium, iridium, etc..... fine oz.	31,009	645,043	83,932	1,699,282	+ 170.7	+ 163.4
Platinum..... fine oz.	24,786	857,590	116,230	4,490,763	+ 368.9	+ 423.6
Selenium..... lb.	48,221	70,345	(a)	-	-	-
Silver..... fine oz.	15,187,950	5,746,027	10,441,361	7,803,218	+ 8.3	+ 35.8
Titanium ore..... tons	-	-	2,023	14,161	-	-
Zinc..... lb.	199,131,984	6,393,132	298,579,581	9,087,568	+ 49.9	+ 42.1
<b>Total.....</b>	-	<b>147,015,593</b>	-	<b>193,845,512</b>	-	+ <b>31.9</b>
<b>NON-METALLICS</b>						
<b>Fuels</b>						
Coal..... tons	11,903,344	35,923,962	13,795,649	41,922,253	+ 15.9	+ 16.7
Natural gas..... M cu. ft.	23,138,103	8,712,234	21,948,855	8,419,073	- 5.1	- 3.4
Peat..... tons	1,131	3,449	563	783	- 50.2	- 77.3
Petroleum, crude..... brls.	1,145,333	3,138,791	1,417,368	3,558,482	+ 23.8	+ 13.4
<b>Total.....</b>	-	<b>47,778,436</b>	-	<b>53,960,591</b>	-	+ <b>12.8</b>
<b>Other Non-Metallics</b>						
Actinolite..... tons	-	-	30	365	-	-
Asbestos..... tons	158,367	5,211,177	155,980	4,936,326	- 1.5	- 5.3
Barytes..... tons	20	60	-	-	-	-
Bituminous sands..... tons	466	1,662	862	3,449	+ 85.0	+ 107.5
Diatomite..... tons	1,789	36,648	1,370	54,750	- 23.4	+ 49.4
Feldspar..... tons	10,658	105,117	17,335	140,975	+ 62.6	+ 34.1
Fluorspar..... tons	73	1,004	150	2,100	+ 105.5	+ 97.4
Graphite..... tons	405	18,367	-	71,424	-	+ 288.9
Grudstones..... tons	498	21,919	887	46,478	+ 78.1	+ 112.0
Gypsum..... tons	382,736	675,822	461,194	804,204	+ 20.5	+ 27.9
Iron oxides (ochre)..... tons	4,357	53,450	4,919	65,966	+ 12.9	+ 23.4
Magnesite-dolomite.....	-	360,128	-	382,927	-	+ 6.3
Magnesium sulphate..... tons	120	3,360	42	1,100	- 65.0	- 67.3
Mica..... tons	944	49,284	998	97,071	+ 5.7	+ 97.0
Mineral waters..... Imp. gals	38,818	5,441	97,340	18,013	+ 150.8	+ 231.1
Phosphite..... tons	2,214	5,475	81	683	- 96.3	- 87.5
Quartz..... tons	185,783	297,820	272,075	489,872	+ 46.3	+ 64.5
Salt..... tons	280,115	1,939,874	321,753	1,959,953	+ 14.9	+ 0.8
Silica brick..... M	636	23,185	2,611	93,268	+ 310.5	+ 302.3
Soapstone.....	-	47,080	-	44,297	-	- 7.1
Sodium carbonate..... tons	559	5,773	244	1,920	- 56.4	- 66.7
Sodium sulphate..... tons	-	485,416	65,392	590,325	-	+ 21.6
Sulphur*..... tons	57,373	510,299	51,537	515,502	- 10.2	+ 1.0
Talc..... tone	15,181	143,156	13,059	136,480	- 8.0	- 4.7
Volcanic dust..... tons	118	2,360	31	620	- 73.7	- 73.7
<b>Total.....</b>	-	<b>10,064,537</b>	-	<b>16,513,063</b>	-	+ <b>5.1</b>
<b>CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS</b>						
<b>Clay Products</b>						
Brick-Soft mud process..... M	2,482	41,737	5,980	99,257	+ 140.9	+ 137.8
..... Common..... M	12,389	156,769	12,912	167,589	+ 4.2	+ 6.9
Stiff mud process..... M	19,602	412,367	22,627	467,093	+ 15.4	+ 13.3
..... (wire cut)..... M	23,894	356,498	28,793	405,349	+ 20.5	+ 13.7
Dry press..... M	4,544	101,252	5,621	124,335	+ 23.7	+ 22.8
..... Common..... M	3,910	44,377	5,869	62,048	+ 44.8	+ 39.8
Fancy or ornamental brick..... M	630	7,824	14	835	- 97.8	- 89.3
Sewer brick..... M	243	3,693	307	5,992	+ 26.3	+ 62.3
Paving brick..... M	1	42	-	-	-	-
Firebrick..... M	1,547	73,226	1,948	92,458	+ 25.9	+ 26.3
Fireclay and other clay..... tons	1,421	11,273	787	10,674	- 44.6	- 5.3
Fireclay blocks and shapes.....	-	80,625	-	80,112	-	- 0.6
Structural Tile-Hollow blocks..... tons	26,747	160,059	30,674	243,027	+ 14.7	+ 51.8
..... Roofing tile..... No.	20,469	1,136	44,115	1,852	+ 115.5	+ 63.0
..... Floor tile (quarries)..... sq. ft.	91,495	14,297	87,604	18,886	- 4.3	- 32.1
Drain tile..... M	10,057	222,829	6,757	219,369	- 32.8	- 1.6
Sewer pipe, copings, flue linings, etc.....	-	354,458	-	387,738	-	+ 9.4
Pottery, glazed or unglazed.....	-	202,500	-	224,295	-	+ 10.8
Bentonite..... tons	55	1,363	63	1,578	+ 14.5	+ 15.8
Kaolin..... tons	-	-	48	504	-	-
Other clay products.....	-	16,510	-	10,987	-	- 33.5
<b>Total.....</b>	-	<b>2,262,835</b>	-	<b>2,623,978</b>	-	+ <b>16.0</b>
<b>Other Structural Materials</b>						
Cement..... brls.	3,007,432	4,536,935	3,783,226	5,667,946	+ 25.8	+ 24.9
Lime..... tons	323,540	2,432,306	367,317	2,752,797	+ 13.5	+ 13.2
Sand and gravel..... tons	11,738,823	4,464,285	13,521,257	4,387,281	+ 15.2	- 1.7
Slate..... tons	250	3,750	-	-	-	-
Stone..... tons	2,939,574	2,996,576	3,661,800	3,801,000	+ 24.0	+ 26.8
<b>Total.....</b>	-	<b>14,433,852</b>	-	<b>16,609,114</b>	-	+ <b>15.1</b>
<b>Grand Total in Canadian Funds.....</b>	-	<b>221,495,253</b>	-	<b>277,492,263</b>	-	+ <b>25.3</b>

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

(a) Information not available for publication.

# DOMINION BUREAU OF STATISTICS

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

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

## PRELIMINARY REPORT ON THE MINERAL PRODUCTION OF CANADA DURING THE CALENDAR YEAR, 1934

### GENERAL REVIEW

General improvement in Canada's mining industry is revealed in the value of the mineral production for 1934, which totalled \$277,492,263 a gain of 25 per cent over 1933. Gains were general in all groups; metals, fuels, non-metals other than fuels, and structural materials. The most striking improvement is to be found in the metals group where several new high records of production were established.

The value of the Canadian gold output was greater than ever before; nickel production surpassed that of 1929, the previous record year; lead output exceeded the record established in 1928 and copper and zinc the high level of 1930. Production of metals of the platinum group, which occur in association with copper-nickel ores, was much larger than any former annual Canadian output. Metals as a group totalled \$193,845,512, an increase of 32 per cent over 1933 and an increase of 25 per cent over metallic production in 1929, the previous high year. In making this comparison, however, it must be realized that in 1934 gold was valued at \$34.50 per fine ounce, as against a valuation in 1929 of \$20.67 but to offset this, the prices of base metals were somewhat higher in 1929 than during the year under review.

Production of fuels, which include coal, natural gas, crude petroleum and peat, amounted in value to \$53,900,591, an increase of 13 per cent. Coal and crude petroleum showed increases over 1933 and production of natural gas was slightly lower. Among the non-metals other than fuels, 1934 production of practically every item was greater than in 1933 and totalled in value \$10,513,068 an increase of 5 per cent over the preceding year. Structural materials, which include cement, lime, clay products, stone and sand and gravel, advanced 15 per cent from \$16,696,687 for 1933 to \$19,233,092 in 1934.

**Values of Mineral Production of Canada by Classes 1925-1934**

Year	Metallics*	Coal, natural gas, peat and crude petroleum	Other non- metallics	Clay products and other structural materials	Total
	\$	\$	\$	\$	\$
1925.....	117,082,298	57,354,055	14,497,746	37,649,234	226,583,333
1926.....	115,237,581	68,743,933	16,496,211	39,959,398	240,437,123
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	274,990,487
1929.....	154,454,056	76,787,397	21,073,950	58,534,834	310,850,237
1930.....	142,743,704	68,184,485	15,217,864	53,727,465	279,873,518
1931.....	120,930,147	54,453,143	10,893,141	44,158,295	230,434,726
1932.....	112,041,763	49,047,342	7,740,837	22,398,283	191,228,225
1933.....	147,015,593	47,778,436	10,004,537	16,696,687	221,495,253
1934.....	193,845,512	53,900,591	10,513,068	19,233,092	277,492,263

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

Interest in gold mining was the outstanding feature in Canada's mineral industry in 1934. After September 21, 1931, when the price of gold started to rise, the search for profitable properties became intensified and the present price has resulted in the development of many new mines and

the active operation of properties closed down some years ago owing to the fact that they could not operate at the price then obtainable for gold. The quantity output of gold was only slightly greater than in 1933 since some of the larger mines are working lower grade ore. The new mills are just now reaching their stride and the quantity output for 1935 will be unquestionably higher than in 1934.

In no previous year was the output of lead and zinc as great as during the year under review. Canadian lead and zinc are sold principally on the basis of the London market. Average lead prices converted to Canadian funds were slightly lower and zinc prices slightly higher than in 1933. The Consolidated Mining and Smelting Co. produced the larger part of the Canadian production of these metals although lead and zinc, in the form of concentrates, are exported by the Base Metals Mining Corporation of Field, B.C., and from the Britannia Mine, B.C. Also at Flin Flon, Manitoba, electrolytic zinc is made from the ores of the Flin Flon copper-zinc mine. During the year silver-lead concentrates were exported from the Mayo Camp of the Yukon Territory to United States smelters. Silver bearing ores were also shipped from the Great Bear Lake Area to Canadian metallurgical plants.

Copper production was also a record, the previous high year being 1930. Average price of copper in 1930 was 12.982 cents per pound and in 1934, the average price was 7.4193 cents. Of the total Canadian output, Ontario mine production was 56 per cent; Quebec 21 per cent; Manitoba and Saskatchewan 10 per cent and British Columbia 13 per cent. Copper from the Flin Flon, Noranda and International Nickel properties is refined in Canada. Nickel-copper matte made by the Falconbridge Nickel Mines and a proportion of nickel-copper matte made by the International Nickel Co. is exported for treatment. The production from other sources is sent to United States smelters either in the form of concentrates or blister.

In no previous year in Canadian mining history was the output of nickel so great. Owing to intensive research many new uses are being developed for this metal, and the present known uses for the various nickel alloys are being constantly widened. Nickel production includes the nickel in matte exported, electrolytic nickel made in Canada, and nickel in oxide and salts produced. Nickel in these forms totalled 128,687,340 pounds in 1934, as compared with 83,264,658 pounds in 1933 and 110,275,912 pounds in 1929, the previous record year.

Silver production was also higher, the output totalling 16,441,361 fine ounces, as against 15,187,950 fine ounces in 1933. The prices rose steadily from a monthly average of 44.39405 cents per fine ounce in January to 52.956 cents in November. The average price for the year being 47.4609 cents as against 37.8328 cents in 1933. The first step towards implementing the International Silver Purchasing agreement was taken in 1934 when the Minister of Finance called for tenders as of August 20th, for the delivery of silver bullion up to the amount of 250,000 ounces. It is understood that at the end of the year the Canadian government had purchased, or committed for, their full quota for 1934.

The production of metals of the platinum group was much larger than ever before. These metals are mined in association with nickel-copper ores in the Sudbury district and the residues from nickel and copper refineries are exported to Acton, England, for treatment. Small amounts of placer platinum are recovered in British Columbia.

Cobalt production was higher also. Selenium is produced in the refining of copper. Tellurium enters the list of new metals produced in Canada but permission has not been given for the publication of the output. Cadmium is a by-product in the refining of zinc ores produced at Trail, B.C. Bismuth is also produced at the same plant. Radium and uranium salts were produced at the Port Hope, Ontario, refinery, from the pitchblende ores of the Great Bear Lake district.

Canadian coal output increased 16 per cent in quantity and 16.7 per cent in value. The output from Nova Scotia increased 39 per cent, coal from New Brunswick mines was 0.7 per cent above the 1933 total; Saskatchewan's production showed a slight falling off, on the other hand, British Columbia's output rose 7.4 per cent. Small amounts are produced in Manitoba and the Yukon each year. It should be mentioned that there has been a considerable increase in the consumption of Nova Scotia and Alberta coals in the areas previously supplied, to a large extent, by imported coal. The continued assistance given by the Dominion government was to a large extent responsible for the increased sales of Canadian coal in these highly competitive

markets. During the year under review 2,368,803 tons of Canadian coal were moved under Dominion government assistance, as compared with 1,932,711 tons in 1933. Canadian imports of coal during the year totalled 13,813,657 tons, a 20.5 per cent increase over the tonnage imported in 1933. Importations from the United States increased 23.4 per cent during the period, while receipts from Great Britain were 1.5 per cent higher. Great Britain supplied Canada with 1,643,516 tons of anthracite coal and 329,726 tons of bituminous coal. Importations from the United States were 1,804,127 tons of anthracite, 9,943,162 tons of bituminous and 2,791 tons of lignite coal. Anthracite coal imported from Germany totalled 72,103 tons and from Belgium 17,557 tons.

Canadian output of crude petroleum increased 24 per cent to 1,417,368 barrels from the 1933 total of 1,145,333 barrels. Increases were reported in all petroleum producing provinces. New Brunswick production was up 30.7 per cent, Ontario's total rose 3.9 per cent while Alberta's output increased 23.8 per cent.

The 1934 value of the production of non-metallic minerals other than fuels, totalled \$10,513,068, an increase of 5 per cent over 1933. Canada exports considerable of these non-metallic minerals, the most important of which are asbestos, gypsum, mica, feldspar, talc, graphite and pyrites. While other non-metallic minerals are consumed in considerable quantities in the home market—salt, sodium sulphate, quartz, and sulphur in the form of sulphuric acid, are the most outstanding of these.

The production of structural materials such as clay products, cement, lime, sand and gravel and stone, showed improvement in 1934, as compared with the preceding year and reflected to some extent the increased activities in building construction. The value of clay products was 16 per cent over 1933; cement production was 25.8 per cent higher; lime output rose to 367,317 tons from 323,540 tons. Stone production increased 24.6 per cent in quantity and 26.8 per cent in value. The value of sand and gravel produced declined 1.7 per cent to \$4,387,281.

Thus it will be seen that mining is becoming increasingly important to the whole economic structure of Canada. Prior to the war, and indeed before the depression, production of our mines occupied a relatively minor position when compared with the other two major primary industries,—agriculture and forestry.

Under the influence of the conditions which prevailed following 1929, all primary industries were seriously affected. The mining industry has shown far greater vitality and recuperative power than either of the other two. From the Atlantic to the Pacific, manifestations of interest in mining are not wanting. The addition of equipment by the older and well established companies and the many new mining and milling plants have supplied work and wages to Canadians employed in the secondary industries. Truck loads and car loads of supplies moving into the mining areas, and the ready market offered the farmers, who live in the mining districts, for their produce, serve to illustrate the benefits which other primary industries may reap from the successful operation of Canadian mines.

#### Mineral Production in Canada by Provinces, 1933-1934

Province	1933		1934	
	Value of production	Per cent of total	Value of production	Per cent of total
	\$		\$	
Nova Scotia.....	16,966,183	7.66	23,306,093	8.40
New Brunswick.....	2,107,682	0.95	2,128,746	0.80
Quebec.....	28,141,482	12.71	30,979,228	11.16
Ontario.....	110,205,021	49.76	145,497,625	52.43
Manitoba.....	9,026,951	4.07	7,226,368	2.60
Saskatchewan.....	2,477,425	1.12	5,370,630	1.92
Alberta.....	19,702,953	8.90	20,324,801	7.32
British Columbia.....	30,794,504	13.90	40,989,613	14.77
Yukon and Northwest Territories.....	2,073,052	0.93	1,669,159	0.60
<b>Total.....</b>	<b>221,495,253</b>	<b>100.00</b>	<b>277,492,363</b>	<b>100.00</b>

## Mineral Production in Canada, by Provinces, 1934

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and North West Territories
<b>METALLICS</b>									
Arsenic (As <sub>2</sub> O <sub>3</sub> )..... lb.	12,000	-	-	1,647,513	-	-	-	-	-
\$	240	-	-	56,412	-	-	-	-	-
Bismuth..... lb.	-	-	-	7,552	-	-	-	246,092	-
\$	-	-	-	3,444	-	-	-	297,771	-
Cadmium..... \$	-	-	-	-	-	-	-	91,019	-
Chromite..... tons	-	-	46	-	-	-	-	-	-
\$	-	-	723	-	-	-	-	-	-
Cobalt..... lb.	-	-	-	588,566	-	-	-	-	-
\$	-	-	-	589,933	-	-	-	-	-
Copper..... lb.	-	-	73,968,545	205,059,539	22,635,465	15,090,310	-	48,137,001	-
\$	-	-	5,487,948	14,822,704	1,679,393	1,119,595	-	3,671,429	-
Gold..... fine oz.	3,525	-	390,075	2,105,981	98,504	39,133	348	293,315	38,799
\$	72,868	-	8,063,566	43,534,490	2,036,258	808,950	7,194	6,003,359	802,047
Estimated exchange equalization on gold produced..... \$	48,745	-	5,394,022	29,121,855	1,362,130	541,137	4,812	4,056,008	536,519
Lead..... lb.	-	-	-	21,558	-	-	-	344,465,155	1,783,349
\$	-	-	-	525	-	-	-	8,392,540	43,450
Nickel..... lb.	-	-	-	128,687,340	-	-	-	-	-
\$	-	-	-	32,139,425	-	-	-	-	-
Palladium, Rhodium, Iridium, etc... fine oz.	-	-	-	83,932	-	-	-	-	-
\$	-	-	-	1,699,282	-	-	-	-	-
Platinum..... fine oz.	-	-	-	116,177	-	-	-	53	-
\$	-	-	-	4,488,712	-	-	-	2,051	-
Silver..... fine oz.	321	-	470,252	5,320,820	810,725	536,336	31	8,749,289	553,587
\$	152	-	223,186	2,525,309	384,777	254,550	15	4,152,491	262,738
Titanium ore..... tons	-	-	2,023	-	-	-	-	-	-
\$	-	-	14,161	-	-	-	-	-	-
Zinc..... lb.	-	-	-	29,656,368	19,770,912	601,748	-	249,152,301	-
\$	-	-	-	902,621	-	-	-	7,583,190	-
<b>Total..... \$</b>	<b>122,005</b>	<b>-</b>	<b>10,193,606</b>	<b>128,962,001</b>	<b>6,365,170</b>	<b>3,325,950</b>	<b>12,021</b>	<b>31,209,876</b>	<b>1,644,754</b>
<b>NON-METALLICS</b>									
<b>Fuels</b>									
Coal..... tons	6,340,790	314,681	-	-	3,037	903,776	4,748,074	1,484,653	638
\$	21,858,442	1,021,878	-	-	7,097	1,234,389	12,547,285	5,250,945	2,217
Natural gas..... M cu. ft.	-	607,000	-	7,327,474	600	13,781	14,000,000	-	-
\$	-	297,000	-	4,396,484	180	4,823	3,720,586	-	-
Pest..... tons	-	-	-	563	-	-	-	-	-
\$	-	-	-	783	-	-	-	-	-
Petroleum, crude... brls.	-	11,545	-	141,384	-	-	1,200,000	-	4,438
\$	-	23,300	-	299,874	-	-	3,213,120	-	22,188
<b>Total..... \$</b>	<b>21,858,442</b>	<b>1,312,178</b>	<b>-</b>	<b>4,697,141</b>	<b>7,277</b>	<b>1,239,212</b>	<b>19,440,991</b>	<b>5,250,945</b>	<b>24,405</b>
<b>Other Non-Metallics</b>									
Actinolite..... tons	-	-	-	30	-	-	-	-	-
\$	-	-	-	365	-	-	-	-	-
Asbestos..... tons	-	-	155,980	-	-	-	-	-	-
\$	-	-	4,936,326	-	-	-	-	-	-
Barytes..... tons	-	-	-	-	-	-	-	-	-
\$	-	-	-	-	-	-	-	-	-
Bituminous sands... tons	-	-	-	-	-	-	862	-	-
\$	-	-	-	-	-	-	3,449	-	-
Diatomite..... tons	1,320	-	-	44	-	-	-	-	-
\$	52,800	-	-	1,760	-	-	-	-	-
Feldspar..... tons	-	-	9,207	6,335	1,793	-	-	190	-
\$	-	-	78,859	56,353	6,763	-	-	-	-
Fluorspar..... tons	-	-	-	150	-	-	-	-	-
\$	-	-	-	2,109	-	-	-	-	-
Graphite..... tons	-	-	6,426	64,998	-	-	-	-	-
\$	-	-	-	-	-	-	-	-	-
Grindstones..... tons	50	535	-	-	-	-	-	302	-
\$	1,762	27,091	-	-	-	-	-	17,625	-
Gypsum..... tons	378,266	30,376	-	33,234	9,657	-	-	9,661	-
\$	488,532	104,649	-	141,389	81,553	-	-	48,081	-
Iron oxides (ochre)... tons	-	-	4,758	-	-	-	-	161	-
\$	-	-	64,366	-	-	-	-	1,600	-
Magnesite-dolomite \$	-	-	382,927	-	-	-	-	-	-
Magnesium Sulphate tons	-	-	-	-	-	-	-	42	-
\$	-	-	-	-	-	-	-	1,100	-
Mica..... tons	-	-	322	618	-	-	-	58	-
\$	-	-	85,967	9,059	-	-	-	2,045	-
Mineral waters Imp.gal.	-	-	75,565	21,775	-	-	-	-	-
\$	-	-	16,391	1,622	-	-	-	-	-
Phosphate..... tons	-	-	81	-	-	-	-	-	-
\$	-	-	683	-	-	-	-	-	-
Quartz..... tons	7,292	-	56,838	89,167	931	93,000	-	24,847	-
\$	12,107	-	228,787	133,069	3,031	93,000	-	19,878	-
Salt..... tons	42,886	-	-	276,751	1,664	452	-	-	-
\$	191,917	-	-	1,734,196	20,137	8,703	-	-	-



## Mineral Production in Canada, by Provinces, 1934—Concluded

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and North West Territories
<b>Other Non-Metallics—</b>									
<b>Concluded</b>									
Silica brick..... M	2,159	-	-	452	-	-	-	-	-
\$	71,215	-	-	22,053	-	-	-	-	-
Soapstone..... \$	-	-	44,297	-	-	-	-	-	-
Sodium carbonate... tons	-	-	-	-	-	-	-	244	-
\$	-	-	-	-	-	-	-	1,920	-
Sodium sulphate... tons	-	-	-	-	-	65,392	-	-	-
\$	-	-	-	-	-	590,325	-	-	-
Sulphur*..... tons	-	-	4,908	14,598	-	-	-	32,031	-
\$	-	-	50,398	145,980	-	-	-	319,124	-
Talc..... tons	-	-	-	13,934	-	-	-	25	-
\$	-	-	-	135,978	-	-	-	502	-
Volcanic dust..... tons	-	-	-	-	-	-	1	30	-
\$	-	-	-	-	-	-	20	600	-
<b>Total..... \$</b>	<b>818,333</b>	<b>131,740</b>	<b>5,895,427</b>	<b>2,447,922</b>	<b>111,484</b>	<b>692,048</b>	<b>3,449</b>	<b>412,665</b>	-
<b>CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS</b>									
<b>Clay Products</b>									
<b>Brick—Soft mud process—</b>									
Face..... M	40	-	1,000	4,577	350	13	-	-	-
\$	600	-	7,000	87,252	4,005	400	-	-	-
Common..... M	500	-	1,580	7,234	1,320	34	763	1,481	-
\$	5,000	-	13,349	100,587	20,301	540	9,178	18,034	-
Stiff mud process (wire cut) Face. M	545	267	7,967	13,563	160	30	63	32	-
\$	11,863	6,846	461,203	279,797	4,224	1,000	1,303	857	-
Common..... M	2,695	141	18,074	6,138	-	136	393	1,216	-
\$	32,024	2,239	263,497	84,959	-	1,369	4,216	16,145	-
<b>Dry press—</b>									
Face..... M	-	-	610	4,714	-	16	143	138	-
\$	-	-	15,951	100,768	-	380	1,660	5,576	-
Common..... M	-	-	-	2,046	-	-	3,623	-	-
\$	-	-	-	33,177	-	-	28,871	-	-
Fancy or ornamental brick.... M	-	-	-	14	-	-	-	-	-
\$	-	-	-	835	-	-	-	-	-
Sewer brick..... M	-	-	-	307	-	-	-	-	-
\$	-	-	-	5,992	-	-	-	-	-
Paving brick..... M	-	-	-	-	-	-	-	-	-
\$	-	-	-	-	-	-	-	-	-
Firebrick..... M	-	-	-	-	-	400	10	1,538	-
\$	-	-	-	-	-	20,000	658	71,800	-
Fireclay..... tons	24	-	-	-	-	200	50	513	-
\$	230	-	-	-	-	2,000	707	7,737	-
Fireclay blocks and shapes..... \$	367	-	-	-	-	70,000	-	9,745	-
<b>Structural tile—</b>									
Hollow blocks.... tons	1,068	151	13,400	13,563	158	-	1,234	1,100	-
\$	10,955	1,276	107,675	101,958	1,041	-	9,291	9,931	-
Roofing tile..... No.	-	-	-	44,115	-	-	-	-	-
\$	-	-	-	1,852	-	-	-	-	-
Floor tile (quarries) Sq. ft.	-	-	-	77,604	-	-	10,000	-	-
\$	-	-	-	16,886	-	-	2,000	-	-
Drain tile..... M	90	3	540	5,460	41	-	48	589	-
\$	3,179	142	63,143	127,890	3,412	-	2,144	20,459	-
Sewer pipe, copings, flue linings, etc.... \$	91,724	-	-	226,263	-	-	47,762	21,989	-
Pottery, glazed or unglazed..... \$	-	29,956	-	52,578	-	-	134,585	7,176	-
Bentonite..... tons	-	-	-	-	-	-	-	63	-
\$	-	-	-	-	-	-	-	1,578	-
Kaolin..... tons	-	-	48	-	-	-	-	-	-
\$	-	-	504	-	-	-	-	-	-
Other clay products. \$	316	-	-	9,790	-	-	-	881	-
<b>Total..... \$</b>	<b>157,158</b>	<b>40,459</b>	<b>632,322</b>	<b>1,230,544</b>	<b>32,883</b>	<b>95,689</b>	<b>242,375</b>	<b>192,508</b>	-
<b>Other Structural Materials</b>									
Cement..... brls.	-	-	1,613,641	1,702,128	181,166	-	163,946	122,345	-
\$	-	-	2,204,817	2,403,590	411,247	-	320,253	232,009	-
Lime..... tons	8,920	15,752	108,140	190,495	16,568	-	7,455	19,687	-
\$	67,954	126,409	641,829	1,533,444	63,608	-	65,697	153,856	-
Sands and gravel... tone	246,525	467,815	3,236,704	7,755,089	158,618	104,222	603,162	949,122	-
\$	112,554	307,699	814,281	2,530,688	51,833	17,701	185,611	336,614	-
Stone..... tons	117,974	41,409	1,116,439	2,140,512	42,430	-	2,747	200,280	-
\$	169,647	180,261	1,486,916	1,672,165	82,857	-	8,104	201,140	-
<b>Total..... \$</b>	<b>350,155</b>	<b>614,369</b>	<b>5,267,873</b>	<b>8,139,887</b>	<b>709,545</b>	<b>17,701</b>	<b>585,065</b>	<b>923,619</b>	-
<b>Grand Total in Canadian Funds..... \$</b>	<b>23,306,093</b>	<b>2,128,746</b>	<b>30,979,228</b>	<b>145,497,625</b>	<b>7,226,368</b>	<b>5,376,630</b>	<b>20,324,801</b>	<b>40,989,613</b>	<b>1,669,159</b>

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

## Monthly Production of Principal Minerals in Canada, 1934\*

—	Asbestos	Cement	Clay Products	Coal	Copper	Feldspar	Gold	Gypsum
	tons	barrels	\$	tons	pounds	tons	fine oz.	tons
January	8,502	68,784	115,353	1,290,338	26,514,543	1,344	231,288	3,303
February	9,256	66,571	90,428	1,009,864	24,515,502	1,025	222,637	3,309
March	12,629	107,425	130,128	1,031,366	30,832,982	1,579	249,310	4,888
April	10,611	210,186	196,762	814,578	31,739,138	602	227,856	25,483
May	13,171	381,562	258,775	1,004,944	35,680,539	506	259,706	53,353
June	13,719	520,832	259,094	982,918	27,850,099	936	242,713	67,109
July	12,042	564,711	267,660	991,071	29,484,128	1,236	245,516	64,737
August	15,322	567,785	245,178	1,096,879	32,703,462	1,730	264,870	58,889
September	14,814	499,085	229,497	1,304,950	27,623,428	1,865	244,180	43,988
October	18,391	480,938	260,322	1,560,610	32,965,700	1,910	265,076	38,317
November	20,240	223,347	207,754	1,425,044	34,357,662	1,691	250,000	66,572
December	10,616	82,498	119,938	1,283,087	31,370,556	1,436	261,374	27,686
<b>Calendar year..</b>	<b>159,913</b>	<b>3,773,724</b>	<b>2,386,889</b>	<b>13,795,649</b>	<b>365,646,739</b>	<b>15,860</b>	<b>2,964,826</b>	<b>457,634</b>
—	Lead	Lime	Natural Gas	Nickel	Petroleum	Salt †	Silver	Zinc
	pounds	tons	M cu. ft.	pounds	barrels	tons	fine oz.	pounds
January	28,322,117	26,060	2,961,453	9,268,292	124,425	10,503	1,489,694	21,767,490
February	27,051,190	27,388	2,697,423	7,268,537	116,546	10,072	1,469,244	19,150,013
March	22,174,753	34,220	2,598,738	10,436,852	130,046	14,626	1,049,961	22,774,662
April	26,203,879	28,653	2,177,805	12,924,418	118,899	19,224	1,032,744	26,012,656
May	25,939,731	32,071	1,442,521	10,033,939	117,693	20,082	1,508,323	26,132,534
June	28,613,779	31,984	1,142,526	13,401,648	109,022	15,688	1,161,702	21,617,223
July	31,240,043	30,639	951,466	10,660,423	120,772	16,507	1,237,340	22,186,356
August	30,276,573	29,249	898,456	14,272,129	114,778	18,597	1,725,673	30,028,555
September	32,269,623	26,965	1,176,365	8,773,247	114,242	18,052	1,333,697	27,115,656
October	29,126,551	29,790	1,437,584	8,902,320	122,056	21,899	1,312,617	27,012,329
November	31,571,724	33,090	1,937,526	12,159,388	113,228	20,279	1,535,070	27,222,359
December	32,146,753	34,020	2,414,594	10,714,382	117,113	11,531	1,363,238	27,684,930
<b>Calendar year..</b>	<b>345,626,716</b>	<b>365,029</b>	<b>21,836,457</b>	<b>129,815,575</b>	<b>1,418,811</b>	<b>195,060</b>	<b>16,219,212</b>	<b>298,704,763</b>

\*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.

†Commercial salt only.

## World Production\* of Gold, Silver, Lead and Zinc, by Countries, during 1933 and 1934

(Source—American Bureau of Metal Statistics)

—	1933				1934			
	Gold	Silver	Lead (Refined)	Zinc (Refined)	Gold	Silver	Lead (Refined)	Zinc (Refined)
United States	(a) 2,537,000	(fine ounces) 20,955,000	(short tons) 309,570	(short tons) 324,705	(a) 2,916,000	(fine ounces) 26,441,000	(short tons) 362,169	(short tons) 366,637
Canada	2,949,000	15,201,265	128,783	91,227	2,964,000	15,317,000	158,196	134,861
Mexico	638,000	68,400,000	132,923	30,712	600,000	74,928,000	188,151	38,543
Colombia	298,000	-	-	-	354,000	-	-	-
Peru	-	7,000,000	-	-	-	8,759,000	-	-
Other South America	600,000	-	-	-	720,000	-	-	-
British India	(b) 336,000	-	-	-	321,000	(b) -	-	-
Japan	(b) 434,000	6,000,000	-	-	466,000	(b) 6,804,000	-	-
Other Asia	-	8,725,000	-	-	-	2,525,000	-	-
New Zealand	162,000	-	-	-	147,000	-	-	-
Other Australia and New Guinea	254,000	-	-	-	341,800	-	-	-
Queensland	92,000	-	-	-	112,000	-	-	-
Western Australia	637,000	-	-	-	651,000	-	-	-
Anglo-Australian	-	-	-	106,425	-	-	-	116,675
Other Australasia	-	(g) 10,430,058	(i) 242,815	-	-	(g) 11,561,000	(j) 211,870	-
South Africa	11,014,000	-	-	-	10,483,000	-	-	-
Rhodesia	645,000	-	-	20,767	691,000	-	-	21,882
Belgian Congo	280,000	-	-	-	287,000	-	-	-
British West Africa	(c) 338,000	-	-	-	(c) 392,000	-	-	-
Tunis	-	-	16,410	-	-	-	30,105	-
Africa	-	1,467,445	-	-	-	1,455,000	-	-
Belgium	-	-	-	151,449	-	-	-	192,885
France	-	-	-	61,217	-	-	-	56,465
Germany	-	-	128,463	55,819	-	-	135,764	80,316
Italy	-	-	26,666	24,504	-	-	45,783	26,908
Netherlands	-	-	-	20,368	-	-	-	21,952
Poland	-	-	-	86,249	-	-	-	101,598
Russia	2,814,000	-	-	-	(e) 4,200,000	-	-	-
Spain	-	-	97,694	9,421	-	-	-	81,136
Other Europe	-	-	(f) 138,000	-	-	-	(f) 168,500	-
Other America	-	11,480,078	-	-	-	11,200,000	-	-
Europe	-	15,323,000	-	-	-	15,720,000	-	-
Burma (Refined)	-	(h) -	80,694	-	-	5,791,000	-	80,437
Elsewhere	1,350,000	-	(f) 24,600	(f) 126,425	1,421,000	-	(f) 23,400	(f) 118,100
<b>Total</b>	<b>25,378,000</b>	<b>164,699,846</b>	<b>1,326,618</b>	<b>1,109,288</b>	<b>27,126,000</b>	<b>(i) 180,501,000</b>	<b>1,485,511</b>	<b>1,285,838</b>

(a) Includes Philippines. (b) Principal mines only but nearly complete. (c) Gold Coast Colony, Sierra Leone, and Nigeria. (d) Includes West Indies, Central America, Europe, and Asiatic and African lands not separately reported. (e) Revised. (f) Partly estimated. (g) Includes all Australia, New Zealand, etc. (h) Included under other Asia. (i) Preliminary and subject to revision, which may be considerable. (j) Figures represent production from Australia only.

\* Preliminary.

## Metal Prices, 1930-1934

Metal	Market	Unit	1930	1931	1932	1933	1934
			\$	\$	¢	\$	\$
Antimony (ordinaries)	New York	Pound	0-07667	0-00720	0-05592	0-06528	0-08901
Arsenic, white	New York	Pound	0-04	0-045	0-04	0-04	0-04
Cobalt	New York	Pound	2-50	2-50	2-50	2-50	2-50
Cobalt Oxide	New York	Pound	2-00	1-75	1-35	1-35	1-35
Copper	New York	Pound	0-12982	0-08110	0-05555	0-07025	0-08428
	Montreal	Pound	0-1408	0-10006	0-07516	0-08684	0-0822
Gold (in Canadian funds)	London	Long ton	61-528	42-003	35-963	36-359	33-319
		Fine oz	20-67	21-55	23-47	28-90	34-50
Lead	New York	Pound	0-05517	0-04243	0-03180	0-03869	0-03860
	Montreal	Pound	0-05496	0-04108	0-03511	0-03705	0-03409
Nickel	London	Long ton	18-077	12-958	11-913	11-070	10-935
	New York	Pound	0-36	0-30	0-35	0-35	0-35
Platinum	New York	Fine oz	45-358	35-665	10-104*	*7-630	*7-73
Silver	New York	Fine oz	0-38154	0-287	0-27892	0-34727	0-47973
Tin	New York	Pound	0-31694	0-24407	0-22017	0-30110	0-52191
	(St. Louis)	Pound	0-04556	0-0364	0-02876	0-04029	0-04158
Zinc	Montreal	Pound	0-05084	0-02961	0-03724	0-04488	0-04059
	London	Long ton	16-570	12-215	13-545	15-060	13-657

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

\*Beginning with 1932 prices for platinum are quoted in pounds sterling per fine ounce.

## Metal Prices by Months, 1933-1934

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)	
	1933	1934	1933	1934	1933	1934	1933	1934	1933	1934
January	4-775	7-890	33-244	35-614	3-262	3-924	3-000	4-000	10-458	11-304
February	4-775	7-777	32-556	35-969	3-400	3-983	3-000	4-000	10-431	11-634
March	5-011	7-775	32-370	35-512	3-459	4-152	3-146	4-000	10-609	11-545
April	5-305	8-173	33-081	30-038	3-416	4-139	3-260	4-179	10-872	11-500
May	6-698	8-275	38-163	35-756	3-636	4-294	3-654	4-140	12-095	11-051
June	7-773	8-591	41-000	35-339	3-933	4-637	4-173	3-975	13-280	11-054
July	8-635	8-775	41-524	32-778	4-174	5-095	4-452	3-772	13-411	10-813
August	8-768	8-775	40-227	31-483	3-889	4-809	4-500	3-747	12-182	10-821
September	8-753	8-775	38-339	30-556	3-848	4-802	4-500	3-085	11-932	10-388
October	7-050	8-775	36-077	20-478	3-088	4-637	4-313	3-654	11-804	10-359
November	7-881	8-775	33-898	30-222	3-848	4-643	4-288	3-567	11-537	10-432
December	7-885	8-775	34-329	31-086	3-903	4-720	4-141	3-604	11-431	10-316
<b>Average</b>	<b>7-925</b>	<b>8-428</b>	<b>36-359</b>	<b>33-319</b>	<b>3-765</b>	<b>4-488</b>	<b>3-869</b>	<b>3-860</b>	<b>11-670</b>	<b>10-936</b>

Transposed into Canadian funds the average price of copper based on the London market was 7-4518 cents per pound in 1933 and 7-4193 cents in 1934; the average price of lead, based on the same market, was 2-3016 cents per pound in 1933 and 2-4304 cents in 1934.

## Metal Prices by Months, 1933-1934

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)	
	1933	1934	1933	1934	1933	1934	1933	1934	1933	1934
January	25-400	44-188	16-883	19-382	3-924	4-750	3-018	4-271	14-381	14-688
February	26-074	45-233	16-885	20-073	3-983	4-658	2-666	4-384	13-866	14-844
March	27-928	45-875	17-588	20-278	4-452	4-498	2-987	4-308	14-647	14-735
April	30-730	45-180	18-440	19-740	4-139	4-367	3-298	4-370	14-951	14-916
May	34-072	44-226	19-046	19-276	4-294	4-174	3-805	4-346	15-505	14-722
June	35-663	45-173	19-078	19-981	4-637	4-010	4-348	4-240	16-088	14-241
July	37-630	46-310	18-341	20-512	5-095	3-850	4-878	4-317	17-795	13-466
August	36-074	48-086	17-877	21-377	4-809	3-824	4-916	4-281	16-869	13-682
September	38-440	49-484	18-272	21-888	4-802	3-700	4-609	4-040	16-810	12-644
October	38-190	52-375	18-221	23-591	4-657	3-580	4-748	3-832	16-310	12-217
November	41-974	54-255	18-428	24-257	4-643	3-827	4-520	3-732	15-048	12-000
December	43-550	54-390	18-674	24-404	4-720	3-665	4-461	3-711	14-826	11-730
<b>Average</b>	<b>34-727</b>	<b>47-973</b>	<b>18-144</b>	<b>21-229</b>	<b>4-488</b>	<b>4-059</b>	<b>4-029</b>	<b>4-158</b>	<b>15-666</b>	<b>13-657</b>

The average price of silver in Canadian funds based on the New York market in 1933 was 37-8328 cents per fine ounce and in 1934 it was 47-4609 cents.

The average price of zinc in Canadian funds based on the London market in 1933 was 3-2105 cents per pound and in 1934 it was 3-0436 cents.

Table showing the amount paid in Canadian dollars for one £ Sterling and one United States dollar by months, 1933-1934

	London		New York	
	1933	1934	1933	1934
January.....	3-847	5-070	1-143	1-005
February.....	4-099	5-078	1-197	1-008
March.....	4-134	5-107	1-199	1-002
April.....	4-234	5-148	1-179	0-998
May.....	4-498	5-100	1-141	0-998
June.....	4-615	5-012	1-112	0-992
July.....	4-931	4-985	1-058	0-988
August.....	4-787	4-951	1-061	0-977
September.....	4-859	4-855	1-036	0-971
October.....	4-787	4-843	1-024	0-979
November.....	5-082	4-872	0-999	0-976
December.....	5-096	4-887	0-995	0-988
<b>Average.....</b>	<b>4-586</b>	<b>4-993</b>	<b>1-092</b>	<b>0-990</b>

## General Statistics on the Mineral Producing Industries in Canada, 1933

INDUSTRIES	No. of mines, quarries, smelters, gas wells, etc.	Capital employed	No. of employees*	Salaries and wages	Income from sales
		\$		\$	\$
<b>Metal Mining—</b>					
Alluvial gold.....	74	10,402,705	454	704,151	1,218,250
Auriferous quartz.....	216	158,590,931	12,823	20,536,012	69,151,535
Copper-gold-silver.....	29	40,238,026	2,841	3,938,778	7,707,270
Silver-cobalt.....	14	3,365,755	242	322,281	1,071,602
Silver-lead-zinc.....	43	17,705,026	1,100	1,501,012	7,569,967
Nickel-copper.....	7	30,048,125	1,599	2,518,181	6,108,325
Miscellaneous.....	5	563,500	24	14,275	343
Smelting and refining.....	14	146,085,284	6,360	8,403,181	*57,318,734
<b>Total.....</b>	<b>402</b>	<b>406,998,932</b>	<b>23,443</b>	<b>37,937,871</b>	<b>150,145,926</b>
<b>Non-Metal Mining including Fuels—</b>					
Coal.....	547	125,740,790	25,375	22,378,736	33,805,148
Natural gas.....	2,515	80,937,170	1,397	1,650,815	7,725,951
Petroleum.....	2,128	36,972,528	718	773,734	3,562,170
Abrasives.....	10	58,556	19	7,706	60,927
Asbestos.....	8	31,173,325	1,629	1,274,093	5,211,177
Feldspar and quartz.....	28	1,143,792	146	117,037	402,937
Gypsum.....	16	8,769,564	415	263,279	675,822
Iron oxides (ochre).....	4	156,551	22	15,631	53,450
Mica.....	15	312,390	41	25,007	49,284
Salt.....	9	3,708,358	400	473,420	1,939,874
Talc and soapstone.....	7	684,375	103	83,060	190,836
Miscellaneous.....	40	4,202,736	297	241,999	1,234,629
<b>Total.....</b>	<b>5,327</b>	<b>293,860,141</b>	<b>30,532</b>	<b>27,309,607</b>	<b>54,912,205</b>
<b>Clay Products and Other Structural Materials—</b>					
Brick, tile and sewer pipe.....	152	23,760,177	1,195	1,011,747	2,062,388
Stoneware and pottery.....	5	451,703	117	90,146	200,447
Cement.....	12	54,403,379	740	781,746	4,536,935
Lime.....	60	8,920,042	696	480,833	2,432,306
Sand and gravel.....	4,598	6,203,113	2,726	1,169,070	4,464,285
Stone.....	317	15,758,198	1,885	1,250,776	3,000,326
<b>Total.....</b>	<b>5,144</b>	<b>109,496,612</b>	<b>7,339</b>	<b>4,784,327</b>	<b>16,696,687</b>
<b>Grand total.....</b>	<b>10,873</b>	<b>810,355,705</b>	<b>63,334</b>	<b>70,031,805</b>	<b>221,754,818</b>
<b>PROVINCES</b>					
Nova Scotia.....	595	59,727,371	13,915	9,852,705	15,744,102
New Brunswick.....	399	5,185,718	1,629	1,402,114	2,088,331
Quebec.....	3,064	137,063,451	8,629	8,621,984	33,898,539
Ontario.....	5,210	310,789,173	17,306	25,600,168	109,060,404
Manitoba.....	120	30,130,497	1,370	1,847,251	8,433,130
Saskatchewan.....	134	12,368,385	1,265	1,111,001	2,614,337
Alberta.....	575	112,666,472	9,057	9,463,382	18,945,255
British Columbia.....	765	129,645,431	9,845	11,455,946	29,464,365
Yukon and North West Territories.....	11	12,159,207	309	677,194	1,516,355
<b>Canada.....</b>	<b>19,873</b>	<b>810,355,705</b>	<b>63,331</b>	<b>70,031,805</b>	<b>221,754,818</b>

NOTE.—Similar data for 1934 not yet available.

\*Value added by smelting.

### Antimony

No production of antimony was reported for 1934. Minerals containing antimony occur in Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and British Columbia, also in the Yukon. The greater part of the Canadian output of refined antimony was produced at Trail, B.C. in the years, 1907, 1909, 1915 and 1916 by the Consolidated Mining and Smelting Co. of Canada, Limited, the metal being recovered as a by-product in the treatment of silver-lead ores. Antimony is sometimes contained in the silver-lead-bismuth bullion made at Deloro, Ontario, in the refining of silver-cobalt ores. A small amount has also been recovered in the past from deposits in Nova Scotia and New Brunswick.

Imports of antimony, or regulus of, not ground, totalled 625,452 pounds, valued at \$45,124 in 1934, as compared with 626,854 pounds, valued at \$32,796 in 1933. Antimony salts for dyeing totalled 112 pounds, worth \$43, and antimony salts namely: tartar emetic, chloride and lactate (antimonine) totalled 41,926 pounds, valued at \$5,297 in 1934.

### Arsenic

White arsenic,  $As_2O_3$ , is produced at Deloro, Ontario, from the silver-cobalt ores of the Cobalt and Gowganda districts. Mispickel ores carrying gold occur in British Columbia, Ontario and Nova Scotia. In 1934 arsenical concentrates were shipped to England from Nova Scotian sources. Considerable research work is being carried on in connection with the recovery of arsenic from the gold-bearing arsenical ores of Northern Quebec. The chief uses of arsenic are in the manufacture of Paris green, lead arsenate, lime arsenate, weed killer, cattle dips, and in the manufacture of glass.

#### Production in Canada, Imports and Exports of Arsenic, 1933 and 1934

	1933		1934	
	Quantity	Value	Quantity	Value
	lb.	\$	lb.	\$
<b>PRODUCTION—</b>				
White arsenic and arsenic in other forms.....	-	56,534	-	56,052
<b>Total</b> .....	-	<b>56,534</b>	-	<b>56,052</b>
<b>IMPORTS—</b>				
White arsenic (arsenious oxide).....	164,642	5,074	1,637,382	41,688
Sulphide of arsenic.....	27,694	3,117	33,986	4,204
Soda, arseniate, bisarseniate and stannate of.....	390	101	638	211
Arsenate of lead.....	498,673	44,256	450,748	37,788
Arsenate of lime.....	287,420	17,426	165,077	9,123
<b>Total</b> .....	-	<b>70,574</b>	-	<b>93,074</b>
<b>EXPORTS—</b>				
Arsenic, n.o.p..... <b>Total</b> .....	<b>934,400</b>	<b>33,778</b>	<b>1,291,900</b>	<b>45,012</b>

### Bismuth

Bismuth in the metallic state is recovered in the metallurgical treatment of the lead-zinc ores of British Columbia. In the treatment of the silver-cobalt ores of Ontario at the Deloro smelter, silver-lead-bismuth bullion is produced which is exported to the United States for refining. The chief bismuth producing countries are the United States, Bolivia and Spain. In Spain and Bolivia, bismuth ores are mined; in the other countries the metal is recovered as a by-product in the refining of other ores. The chief use of bismuth is in the manufacture of pharmaceutical chemicals. It is also used in the production of alloys with a low melting point. Production of bismuth in Canada totalled 253,644 pounds, valued at \$301,215, as compared with an output of 78,303 pounds worth \$81,526 in 1933.

### Cadmium

Cadmium produced in Canada in 1934 was valued at \$91,019, compared with \$78,733 in 1933. The output in both years originated entirely in the zinc refining operations of the Consolidated Mining and Smelting Co. of Trail, B.C.

At Flin Flon, Manitoba, the Hudson Bay Mining and Smelting Co. Limited, produced, as a necessary part of the operation of their zinc plant, zinc plant residues and so-called cadmium precipitate. These were stored for future treatment. Cadmium is used to some extent as a plating metal; and is also used in silver, gold, copper and fusible alloys, and in the manufacture of pigments.

### Cobalt

Cobalt is produced in Canada by the Deloro Smelting and Refining Co. at Deloro, Ontario, in the treatment of silver-cobalt ores of Cobalt and Gowganda. It also occurs in minute quantities in the nickel-copper ores of the Sudbury district. No production is reported from this source. For many years Canada was the chief source of cobalt but during recent times, this country has been replaced as the leading producer by the Union Minière du Haut Katanga in the Belgian Congo. The copper ores of the Rokana Corporation of Northern Rhodesia also carry cobalt in commercial quantities.

#### Production in Canada and Exports of Cobalt, 1933 and 1934

	1933		1934	
	Pounds	\$	Pounds	\$
<b>PRODUCTION—</b>				
Cobalt, computed as cobalt in metal, in oxides sold, and in ores and residues exported..... <b>Total</b>	<b>466,702</b>	<b>597,752</b>	<b>588,566</b>	<b>589,933</b>
<b>EXPORTS—</b>				
Cobalt, alloys, cobalt metallics, cobalt oxides, cobalt salts and cobalt ores..... <b>Total</b>	<b>-</b>	<b>552,450</b>	<b>-</b>	<b>614,364</b>

### Copper

Canada's copper production consists of the copper in matte, in concentrates and in blister copper exported together with the copper content of blister copper made in Canadian smelters. Production in 1934 totalled 364,890,860 pounds, valued at \$26,681,069, as compared with 299,982,448 pounds, valued at \$21,634,853 in 1933.

British Columbia's production includes copper in concentrates made at the Britannia mine and blister copper produced at the Anyox smelter. These products are shipped to Tacoma, Washington, U.S.A. for treatment. Due to an announcement that the Granby operation is to be closed down late in the spring, it is not unlikely that production of copper in British Columbia will show a decline in 1935.

The Manitoba-Saskatchewan production originates entirely in the ores of the Flin Flon mine, which lies on the boundary between these two provinces. Blister copper made at this property is refined at Montreal East, Quebec.

Ontario output includes copper in matte exported by the Falconbridge and International Nickel Companies and copper in blister produced by the International Nickel Co. at Copper Cliff, Ontario. The blister copper is treated by the Ontario Refining Co. Ltd., at Copper Cliff.

The Noranda Mines, Ltd., is the chief producer of the metal in Quebec. Blister copper in anode form made at the Noranda Smelter is refined by the Canadian Copper Refiners Limited, at Montreal East. The Aldermac mine in Western Quebec produced copper concentrates, part of which was shipped to Noranda and the remainder to United States smelters. Copper concentrates from the Eustis mine in the Eastern Townships of the province were shipped to United States smelters also.

Copper prices declined during the year. January quotations, based on the London market for copper and transposed to Canadian funds, averaged 8.0611 cents per pound. The price stood at about 8 cents until June, after which it receded to a low average for October of 6.37347 cents. The December average was 6.78133 cents and the average for the year was 7.4193 cents.

## Production in Canada, Imports and Exports of Copper, 1933 and 1934

	1933		1934	
	Pounds	Value	Pounds	Value
		\$		\$
<b>PRODUCTION—</b>				
By Provinces—				
Quebec.....	69,943,882	5,214,177	73,968,545	5,487,948
Ontario.....	145,604,720	10,118,847	205,059,539	14,822,704
Manitoba.....	38,163,181	2,844,989	22,635,465	1,679,393
Saskatchewan.....	3,223,941	240,338	15,090,310	1,119,595
British Columbia.....	43,146,724	3,216,502	49,137,001	3,571,429
<b>Total.....</b>	<b>299,982,448</b>	<b>21,634,853</b>	<b>364,899,860</b>	<b>26,681,069</b>
By Sources—				
In blister copper produced.....	260,386,164	19,411,268	334,942,948	24,849,530
In ores, concentrates and copper matte exported.....	14,950,300	1,114,515	16,564,433	1,229,282
In nickel-copper matte exported.....	24,645,984	1,109,070	13,383,470	602,257
<b>Total.....</b>	<b>299,982,448</b>	<b>21,634,853</b>	<b>364,899,860</b>	<b>26,681,069</b>
<b>IMPORTS—</b>				
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.....	97,400	12,084	410,300	49,228
Copper bars for use only in the manufacture of rods to be used exclusively in the manufacture of electrical conductors, and copper rods for such manufacture, individual units of conductors not to exceed area of No. 7-0 gauge conductor.....	4,000	300	64,800	5,024
Copper in bars or rods, in coil or otherwise, in lengths of not less than 6 feet, unmanufactured.....	305,900	38,736	242,300	31,097
Copper in blocks, pigs or ingots.....	17,200	1,603	34,700	3,693
Copper, old and scrap.....	4,000	247	26,700	1,256
Copper in strips, sheets or plates not polished or coated.....	144,100	25,142	223,700	37,707
Copper tubing in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured.....	256,491	53,464	329,275	74,887
Copper wire.....	22,355	3,997	72,515	18,011
Copper wire cloth, or woven wire of copper.....	-	4,304	-	1,803
Copper, all other, manufactures of, n.o.p.....	-	249,980	-	287,429
Copper, precipitate of, crude.....	20	4	704	113
Anodes of nickel, zinc, copper, silver or gold.....	-	2,649	-	1,067
Copper, sub-acetate of, or verdigris, dry.....	210	43	2,844	554
Copper, sulphate of (blue vitriol).....	2,389,595	76,440	5,277,499	170,303
Copper rollers adapted for use in calico printing.....	-	51,115	-	53,222
Copper, sulphate of, dehydrated, for agricultural or spraying purposes.....	2,195,838	70,895	42,050	3,295
<b>Total.....</b>	<b>-</b>	<b>591,063</b>	<b>-</b>	<b>739,299</b>
<b>EXPORTS—</b>				
Copper, fine, contained in ore, matte, regulus, etc.....	35,438,100	1,723,705	35,145,200	1,655,930
Copper blister.....	15,138,000	1,250,750	26,962,200	2,113,200
Copper, old and scrap.....	4,860,800	264,882	3,888,200	222,909
Copper in ingots, bars, cakes, slabs and billets.....	153,348,300	10,346,590	187,554,000	13,943,724
Copper in rods, strips, sheets, plates and tubing.....	38,700,600	3,061,014	57,903,100	4,801,979
Copper wire and cable.....	-	122,260	-	323,683
Copper manufactures, n.o.p.....	-	148,745	-	252,331
<b>Total.....</b>	<b>-</b>	<b>16,917,946</b>	<b>-</b>	<b>23,313,763</b>
Copper coin, foreign.....	-	22,866	-	1,932
Copper coin, Canadian.....	-	340	-	43

## Chromite

Relatively few tons of chromite are produced from the Thetford-Black Lake area of the Eastern Townships of Quebec. Production totalled 46 tons worth \$723 in 1934.

Considerable exploratory work has been done on a chromite deposit near Obonga Lake, 25 miles south of Collins Station on the Canadian National Railway, northwest Ontario, and according to press reports the ore is to be treated at Niagara Falls, New York.

Chromite consumption is increasing, due to the development of high-grade alloy steels, the growing use of chromite refractories, and the wider use of chromium-plating in the automobile industry.

## Gold

Canadian producers of primary gold, in common with those of other countries, have benefited greatly since 1931 from the pronounced increase in the price of this precious metal. The more outstanding events associated with this rise include the suspension of specie payments by Great Britain on September 21st, 1931; the direct control and licensing of Canadian gold exports by the Canadian government, the purchase by the Canadian government of all new gold bullion produced in the Dominion with the payment to the mines of equalization exchange; the departure of the United States from the gold standard on April 19th, 1933 and the announcement on January 31, 1934, by President Roosevelt, that thereafter the United States Treasury would purchase gold from any quarter at not less than \$35.00 per fine ounce and would be empowered by United States Congress to offer, if necessary, up to \$41.34 an ounce. Legislation passed by the Canadian government on June 15, 1934, provides for a levy of 25 per cent on the premium value of gold deposited for sale at the Mint produced from ore mined in Canada. It is provided, however, that the tax shall not operate to reduce the amount received by the depositor for gold below \$30.00 per ounce; deductions for income tax are allowed. Newly developed properties as well as those mines, which, because of low-grade ores have not until recently been operated on a profitable basis are exempted from this levy.

As a result of the price now prevailing, the increase in the search for and the exploration and development of auriferous properties are unprecedented. Prospecting activities were intensified in the older fields and the search was extended to new areas. This resulted, in the east, in a greatly stimulated development of the gold deposits of Nova Scotia where development work is being carried on throughout the length of the gold producing belt extending through Guysboro, Halifax, Lunenburg, Hants, Queens and Yarmouth counties.

In 1934, Quebec had nine producing gold mines. Granada, Beattie, O'Brien, Siscoe, Bussière, Green-Stabell, Sullivan, Perron and McWatters and to these should be added the Noranda, which property, although primarily a copper mine, is the third largest gold producer in Canada. Prospecting was active in what might now be termed the older areas as well as in new territory. The Lamaque mine and the Canadian-Malartic are building mills and the construction of a mill at the Arntfield has been announced. The Chibougamau area which for some years has been studied for its mineral possibilities was the scene of much activity. Recent diamond drilling here has resulted in the first extensive underground work in the district.

Ontario mines continue to yield nearly three quarters of the total gold production of the Dominion. The mining of lower grade ore at some of the older properties has resulted in a reduction in quantity output from these sources. This, however, has been compensated for by the coming into production of new mines. During the year the Hollinger Consolidated did some intensive development work on a promising property in Hislop township and also completed and put into operation a mill on the Young-Davidson property in the Matachewan area. Important reserves of gold ore were reported as proven at the Little Long Lac mine in the Thunder Bay District and milling was commenced during December 1934. In the Patricia district new mills were completed or placed in operation by Casey Summit, Pickle Crow, J. M. Consolidated and Central Patricia. Other new mills reaching production in 1934 included those of the North Shore Gold mines near Schreiber, the Matachewan Consolidated, in Matachewan, and the Munro-Croesus in the Beatty-Munro area. Shipments of auriferous ores were reported from the Cameron Island mine, on Shoal Lake, the Moffatt Hall and Bidgood mines, in the Kirkland Lake area, and the Dik Dik in the Thunder Bay district.

Mining activities in Manitoba were of a corresponding intensity. Mining and milling were continuous at the Central Manitoba and San-Antonio. Milling operations were resumed by Diana Gold Mines. The mill at Island Lake commenced production. Important development work was completed at Gunnar Gold, Forty-four, God's Lake, Smelter Gold and Gabrielle Mines. Towards the end of the year the efforts of the operators, in the newer areas, were concentrated on the movement of supplies into their properties.



Activity in gold mining in British Columbia, as in most other provinces, was the most important feature of the industry in 1934. Prospecting and exploration greatly increased and were prevalent in nearly all the gold bearing districts of the province. Important development work was conducted on the better known properties in the Cariboo, Bridge River, Nelson and Omineca districts. The Pioneer and Bralorne, in the Bridge River area, are two new outstanding properties and two new mills, the Minto and the Wayside, have been brought into production in this district. The Premier in the Portland Canal has been able to maintain a very substantial production due to the increased price of gold. In the Nelson area and at the Ymir and Sheep Creek Camps, many old properties have taken on a new lease of life. The policy inaugurated by the Consolidated Mining and Smelting Company, whereby lessees were allowed to work their abandoned properties at Rossland, resulted in this old camp contributing a substantial share to the provincial output of gold in 1934.

Placer production from the Yukon was about the same as in the preceding year and the indications are that considerable activity will be experienced in lode gold development in 1935.

### Production of Gold in Canada by Provinces and by Sources, 1933 and 1934

	1933		1934	
	Fine ounces	Value \$	Fine ounces	Value \$
<b>NOVA SCOTIA—</b>				
In gold bullion and concentrates exported.....	1,382	28,568	3,525	72,868
<b>QUEBEC—</b>				
In blister copper and in gold bullion and ores exported.....	382,886	7,914,956	390,075	8,063,566
<b>ONTARIO—</b>				
(a) Porcupine area (In gold bullion).....	1,046,091	21,624,620	949,695	19,831,937
(a) Kirkland Lake area (In gold bullion).....	1,007,036	20,817,281	989,044	20,445,354
Miscellaneous, including Matachewan, Sudbury and North-western Ontario.....	102,392	2,116,630	167,242	3,457,199
Total.....	2,155,519	44,558,531	2,105,981	43,534,490
<b>MANITOBA—</b>				
In gold bullion and in blister copper.....	125,310	2,590,388	98,804	2,036,258
<b>SASKATCHEWAN in copper gold ores.....</b>	5,400	111,628	39,133	808,950
<b>ALBERTA.....</b>	324	6,698	348	7,194
<b>BRITISH COLUMBIA—</b>				
In alluvial gold.....	19,142	395,700	20,145	416,434
In gold bullion.....	122,293	2,528,021	148,439	3,068,505
In blister copper.....	8,667	179,163	6,063	125,334
In base bullion and in matte and ores exported.....	88,893	1,837,581	118,668	2,453,085
Total.....	238,995	4,940,465	293,315	6,063,359
<b>YUKON—</b>				
In alluvial gold.....	39,174	809,798	38,703	800,062
In ores shipped.....	319	6,594	96	1,985
Total.....	39,493	816,392	38,799	802,047
<b>Total at standard price of gold.....</b>	<b>2,949,309</b>	<b>60,967,626</b>	<b>2,969,680</b>	<b>61,388,732</b>
Estimated exchange equalization on gold produced.....	-	23,382,611	-	41,065,228
<b>Total value in Canadian funds.....</b>	<b>-</b>	<b>84,350,237</b>	<b>-</b>	<b>102,453,960</b>

(a) Includes small amount of gold contained in slags, etc.

## Imports into Canada and Exports of Gold, 1933 and 1934

	1933	1934
	\$	\$
<b>IMPORTS—</b>		
Coin and bullion—		
Coins, British, Canadian and foreign gold coins.....	810,562	708,010
Gold bullion in bars, blocks, ingots, drops, sheets or plates, unmanufactured.....	35,316	56,343
<b>Total</b> .....	<b>845,878</b>	<b>764,353</b>
Gold, other—		
Bullion or gold fringe.....	4,554	8,456
Manufactures of gold and silver—		
Leaf.....	52,790	61,908
Sweepings.....	4,119	140
Manufactures, n.o.p.....	17,729	23,860
Electroplated ware.....	260,176	384,400
Gold, unmanufactured, for commercial purposes, from April 1, 1933.....	168,382	157,691
<b>Total</b> .....	<b>507,750</b>	<b>636,455</b>
<b>EXPORTS—</b>		
Coin and bullion—		
Gold coin—		
Canadian.....	10	—
Foreign.....	5,963,887	83,484
Gold bullion—		
Canadian.....	56,002,261	91,015,001
Foreign.....	877	—
<b>Total—Canadian</b> .....	<b>56,002,271</b>	<b>91,015,001</b>
<b>Foreign</b> .....	<b>5,964,764</b>	<b>83,484</b>
<b>Total coin and fine gold bullion</b> .....	<b>61,967,035</b>	<b>91,098,485</b>
Gold-bearing quartz, dust, nuggets and crude bullion obtained direct from mining operations.....	2,269,650	3,997,992
Jewellers' sweepings (gold, silver and platinum).....	502,506	520,067
<b>Total</b> .....	<b>2,802,156</b>	<b>4,518,059</b>

## Pig Iron, Steel Ingots and Castings

Production of pig iron and primary steels in Canada during 1934 showed an improvement for the second year in succession with a gain over 1933 of 79 per cent for pig iron and 85 per cent for steel. In 1933 the increase in pig iron was 58 per cent and in steel, 21 per cent, as compared with 1932.

Pig iron output, as in other years, was largely confined to the basic grade for steel making purposes but compared with 1933 the foundry and malleable grades showed a gain of 149 per cent as against an increase of 65 per cent in the basic grade. Production has been adversely affected by comparatively low scrap prices and by the substitution of steel stampings, forgings, etc., for pig iron. The iron furnaces in blast in January represented 17 per cent of the total Canadian capacity but the percentage dropped to 11 in February and remained at that figure until May when it advanced to 37. A change in June caused a decline to 26 per cent, but in July there was a gain to 34 per cent which was maintained until October when the year's high of 45 per cent was reached. For the remainder of the year only 34 per cent of capacity was in blast.

About 97 per cent of Canada's primary steel production in 1934 consisted of steel ingots for further processing by the producers, the balance of nearly 3 per cent being direct steel castings. Support for steel making during the year under review came largely from the improvement in the automotive trade, and the continued activity in the mining field. Although construction increased 29 per cent, most of the permits were for small buildings, resulting in an increased sale of builders' supplies but making little change in the demand for structural steel.

### Production of Pig Iron and Ferro-Alloys in Canada, 1933 and 1934

(Tons of 2,240 pounds)

Item	1933			1934		
	For own use	For sale	Total	For own use	For sale	Total
<b>IN BLAST FURNACE—</b>						
Basic.....	176,784	12,644	189,428	301,416	11,215	312,631
Foundry.....	-	22,333	22,333	49	50,874	50,923
Malleable.....	-	15,558	15,558	-	43,441	43,441
<b>Total.....</b>	<b>176,784</b>	<b>50,533</b>	<b>227,317</b>	<b>301,465</b>	<b>105,530</b>	<b>406,995</b>
<b>Ferro-alloys.....</b>	<b>-</b>	<b>30,133</b>	<b>30,133</b>	<b>-</b>	<b>33,085</b>	<b>33,085</b>

### Production of Steel Ingots and Castings in Canada, 1933 and 1934

(Tons of 2,240 pounds)

Item	1933			1934		
	For own use	For sale	Total	For own use	For sale	Total
<b>STEEL INGOTS—</b>						
Open hearth—Basic.....	378,549	117	378,666	715,201	162	715,363
Acid.....	-	-	-	-	-	-
Electric.....	15,393	-	15,393	23,067	-	23,067
Other.....	-	-	-	-	-	-
<b>Total Steel Ingots.....</b>	<b>393,942</b>	<b>117</b>	<b>394,059</b>	<b>738,268</b>	<b>162</b>	<b>738,430</b>
<b>STEEL CASTINGS—</b>						
Open hearth—Basic.....	355	4,662	5,017	1,191	5,248	6,439
Acid.....	-	-	-	-	-	-
Bessemer.....	8	280	288	-	488	488
Electric.....	342	10,273	10,615	734	12,979	13,713
<b>Total Direct Steel Castings.....</b>	<b>705</b>	<b>15,215</b>	<b>15,920</b>	<b>1,925</b>	<b>18,715</b>	<b>20,640</b>
<b>Grand Total.....</b>	<b>394,647</b>	<b>15,332</b>	<b>409,979</b>	<b>740,193</b>	<b>18,877</b>	<b>759,070</b>

### Lead

British Columbia produces over 99 per cent of the total Canadian output of lead and the famous Sullivan Mine at Kimberley, B.C., owned and operated by the Consolidated Mining & Smelting Company Limited, is one of the outstanding silver-lead-zinc deposits of the world. Ore from this mine is concentrated at Chapman Camp, about two miles from Kimberley, and the concentrates are shipped to Trail for treatment. During the year, the Monarch mine at Field, B.C. exported a high grade lead concentrate to Belgium. Lead also occurs with the gold-silver ore of the Premier Mine and with the ores of the Britannia Mine. Silver lead concentrates were exported from the Mayo district of the Yukon though at a reduced rate.

The average price of lead in Canadian funds, based on the London market, was 2·4364 cents per pound, as against 2·3916 cents in 1933. During the first few months of the year, the price ranged between 2·55 and 2·65 cents per pound, but in December the average quotation had fallen to 2·2504 cents.

## Production in Canada, Imports and Exports of Lead, 1933 and 1934

	1933		1934	
	Pounds	Value	Pounds	Value
		\$		\$
<b>PRODUCTION—</b>				
Ontario.....	29,910	692	21,558	525
British Columbia.....	263,345,776	6,298,178	344,465,155	8,392,549
Yukon.....	3,099,505	74,128	1,783,349	43,450
<b>Total.....</b>	<b>266,475,191</b>	<b>6,372,998</b>	<b>346,270,062</b>	<b>8,436,524</b>
<b>IMPORTS—</b>				
Old and scrap, pig and block.....	15,038	1,148	102,294	3,921
Bars and sheets.....	88,007	3,820	59,877	2,500
Litharge.....	1,885,300	100,816	1,689,100	91,975
Acetate of lead.....	102,747	7,897	151,635	11,890
Nitrate of lead.....	40,385	2,120	243,110	12,504
Other manufactures.....	-	63,723	-	78,064
Pipe lead.....	10,686	658	7,254	336
Shots and bullets.....	5,327	340	14,187	939
Tea lead.....	200	12	-	-
Lead arsenate.....	498,673	44,256	450,748	37,788
Lead tetraethyl, compounds of.....	1,571,775	1,212,990	1,821,083	1,053,503
Lead pigments—				
Dry white lead.....	8,880	599	152,409	9,827
White lead, ground in oil.....	21,250	2,540	16,258	1,706
Dry red lead and orange mineral.....	611,696	32,596	544,597	32,397
<b>Total.....</b>	<b>-</b>	<b>1,473,515</b>	<b>-</b>	<b>1,337,320</b>
<b>EXPORTS—</b>				
Lead, contained in ore.....	7,600,000	267,805	23,644,800	509,506
Pig lead.....	284,329,400	4,922,514	283,159,000	5,238,203
<b>Total.....</b>	<b>291,929,400</b>	<b>5,190,319</b>	<b>306,803,800</b>	<b>5,747,709</b>

## Manganese

No Canadian manganese ores have been mined or sold in Canada since 1931. Manganese ores which have been mined in Eastern Canada are pyrolusite, manganite, psilomelane and bog manganese. These, with the exception of bog manganese, were mostly ores with a high manganese content and fairly free from deleterious constituents. The world's chief sources of manganese are Russia, Southern and Central India, Brazil, the Gold Coast of Africa, Union of South Africa, Egypt and Czechoslovakia. A large part of the consumption is in the manufacture of manganese-iron alloys (spiegeleisen and ferro-manganese) which are used in the production of special steels.

## Molybdenite

No molybdenite ores or concentrates were produced in Canada in 1934. The mineral occurs in Nova Scotia, Quebec, Ontario, Manitoba and British Columbia, and deposits in Ontario and Quebec have yielded commercial outputs during past years. The Moss mine at Quyon, Quebec, was one of the more important producers. During 1934 molybdenite ore was mined and concentrated at a property located in Bagot township, Renfrew county, Ontario. However, no shipments were reported. Development work was also conducted on a molybdenite deposit situated in Abitibi county, Quebec. The molybdenum metal is used in the manufacture of special steels and its use in cast iron is being extended.

## Nickel

The 1934 Canadian production of nickel was the greatest on record, surpassing 1929, the previous high year, by 17 per cent. During the year the number of converters at the International Nickel's Copper Cliff smelter was increased from eight to twelve. This, with the additions which have been made to other smelter units, will enlarge the company's plant considerably. This company separates a large part of the nickel from the copper at Copper Cliff.

Ontario, sending the crude metal to Port Colborne, Ontario, for refining. The nickel-copper matte exported is treated in British or foreign plants. Falconbridge Nickel Mines continued to ship copper-nickel matte to Norway for refining. During the summer, as a result of magneto-metric surveys, the existence of considerable bodies of ore were indicated at the B.C. Nickel Mines, and these are now being tested by drilling and underground development.

### Production in Canada, Imports and Exports of Nickel, 1933 and 1934

	1933		1934	
	Quantity	Value	Quantity	Value
	Lb.	\$	Lb.	\$
<b>PRODUCTION—</b>				
Nickel in matte and speiss exported .....				
Refined and electrolytic nickel produced .....				
Nickel in oxides and salts sold .....				
	<b>83,264,658</b>	<b>20,130,480</b>	<b>128,687,340</b>	<b>32,139,423</b>
<b>IMPORTS—</b>				
Nickel, nickel silver and German silver in ingots or block, n.o.p. ....	686,777	193,299	2,646	771
Nickel in bars and rods, strips, sheets and plates .....	203,217	95,189	591,466	197,230
Nickel silver and German silver in bars, rods, strips, sheets, plates or anodes .....	51,742	17,012	48,359	14,187
Nickel chromium in bars or rods, etc .....	50,841	45,210	48,413	45,114
German, Nevada and nickel silver, manufactures of, not plated .....	-	127,076	-	140,682
Nickel-plated household hollow-ware .....	-	1,900	-	9,075
Nickel kitchenware .....	-	1,365	-	872
Nickel-plated ware, n.o.p. ....	-	569,862	-	753,421
<b>Total nickel and its products .....</b>		<b>1,051,913</b>		<b>1,161,352</b>
<b>EXPORTS—</b>				
<b>Total .....</b>	<b>88,082,100</b>	<b>22,785,968</b>	<b>118,152,100</b>	<b>28,913,230</b>

### Output from Nickel-Copper Mines and Smelters, 1932-1934

	Unit	1932	1933	1934
Ore mined .....	ton	826,041	1,613,956	2,989,988
Ore shipped .....	ton	790,614	1,533,887	2,903,310
Content of ores, etc., shipped—				
Copper .....	pound	92,144,051	125,742,427	222,582,827
Nickel .....	pound	39,001,127	81,078,021	156,800,025
Ore and concentrates treated at smelters .....	ton	793,552	1,523,814	2,896,359
Matte produced at smelters .....	ton	41,600	82,128	161,177
Content of matte—				
Copper .....	pound	32,353,240	51,963,731	105,033,979
Nickel .....	pound	33,871,440	73,420,514	143,160,079
Matte shipped to Canadian refineries .....	ton	6,651	42,209	71,345
Matte exported from Canadian smelters and refineries .....	ton	21,778	43,315	46,755

### Platinum Group Metals

Metals of the platinum group, produced from Canadian sources, include platinum, palladium, rhodium, iridium, etc., and nearly all the Canadian output is recovered in refining nickel-copper matte from the Sudbury district of Ontario. A minor amount of stream platinum is yielded by British Columbia placers and platinum and palladium are sometimes obtained in small quantities in the smelting operations at Trail, B.C. Russia, Colombia and South Africa are also important producers of these metals. Residues obtained in the metallurgical treatment of the nickel-copper matte are refined by the International Nickel Co., Ltd., at their refinery at Acton, England. This refinery has a capacity of 300,000 ounces per year of platinum group metals.

## Production of Platinum Group Metals, Canada, 1933 and 1934

		1933		1934	
		Platinum	Palladium, Rhodium, etc.	Platinum	Palladium, Rhodium, etc.
Produced from Canadian ores.....	Oz.	24,746	31,009	116,177	83,932
	\$	856,190	645,044	4,488,712	1,699,282
Recovered from alluvial sands.....	Oz.	40	-	53	-
	\$	1,400	-	2,051	-
<b>Total.....</b>	<b>Oz.</b>	<b>24,786</b>	<b>31,009</b>	<b>116,230</b>	<b>83,932</b>
	<b>\$</b>	<b>857,590</b>	<b>645,044</b>	<b>4,490,763</b>	<b>1,699,282</b>

## Imports into Canada and Exports of Platinum, 1933 and 1934

	1933		1934	
	Oz.	Value	Oz.	Value
		\$		\$
<b>IMPORTS—</b>				
Platinum retorts, pans, condensers, tubing and pipe.....	-	11,809	-	1,029
Platinum wire and bars, strips, sheets or plates, also platinum, palladium, iridium, osmium, ruthenium and rhodium in lumps, ingots, powder, sponge or scrap.....	-	49,136	-	51,530
Platinum crucibles.....	-	13,029	-	11,464
<b>Total.....</b>	<b>-</b>	<b>73,974</b>	<b>-</b>	<b>64,023</b>
<b>EXPORTS—</b>				
Platinum, etc., contained in concentrates or other forms.....	29,228	1,168,565	133,072	5,186,469
Platinum, old and scrap.....	189	5,439	410	12,202
<b>Total.....</b>	<b>-</b>	<b>1,174,004</b>	<b>-</b>	<b>5,198,691</b>

## Radium-Uranium

Satisfactory progress was made during the year at the property of the Eldorado Gold Mines Ltd., Great Bear Lake, Northwest Territories, and at the refinery at Port Hope, Ontario. According to a report received by the Mines Branch, Ottawa,—“The 1934 production of pitchblende ore comprised 63 tons of table concentrates, 7 tons of picked, high-grade ore, and 7 tons of low-grade flotation concentrates, all shipped out by water from Great Bear Lake late in the year. The remaining 2 tons were sent out in small lots by airplane during the season.

“During 1934, the refinery of Eldorado Gold Mines Limited, at Port Hope, Ontario, received the 79 tons reported above and 4 tons of picked ore which had been shipped from Great Bear Lake in 1933 but had been delayed in transit, making a total received during the year of 83 tons. Sampling at the refinery has indicated an inclusive radium content for this total of from 8 to 9 grams of radium, or an average of approximately 1 gram to 10 tons.”

In addition to the output of radium, the production of uranium salts is an important part of the refinery operations.

## Selenium

Selenium is obtained as a by-product in copper refining and was produced for the first time in Canada in 1931 by the Ontario Refining Co. Ltd. at Copper Cliff, Ontario. It is also produced by the Canadian Copper Refiners, Ltd. The chief use of selenium is in the glass industry where it is employed as a decolorizer and in the manufacture of ruby glass. It has also been used successfully in the compounding of rubber, as it increases considerably the resistance of rubber to abrasion. Statistics of production are not available for publication.

## Silver

The Sullivan silver-lead-zinc mine in British Columbia is the largest producer of silver in Canada. This mine, together with the Premier, establishes British Columbia as Canada's principal silver producing province. For many years several properties situated in the Cobalt, Gowganda, and South Lorraine areas of Ontario contributed the major proportion of the metal but during recent times the principal producers in Ontario have been limited to the O'Brien mine at Cobalt and the Miller-Lake-O'Brien at Gowganda. A substantial amount is contributed annually as a by-product in the treatment of nickel-copper ores. Gold ores supply a measurable quantity also. During 1934 silver-lead ores were exported from the Mayo district of the Yukon, though to a lesser degree. The silver-radium ores of the Great Bear Lake area in the Northwest Territories are now contributing annually to Canada's total output.

The price of silver showed considerable improvement during the year, rising from an average of 37.8328 cents in 1933 to 47.4609 cents in 1934. Any improvement in the price of this metal is of material assistance to the operators of base metal properties.

## Production, Imports and Exports of Silver, 1933 and 1934

	1933		1934	
	Quantity fine oz.	Value \$	Quantity fine oz.	Value \$
<b>NOVA SCOTIA—</b>				
In gold bullion and concentrates exported— <b>Total</b> .....	104	39	321	152
<b>QUEBEC—</b>				
In gold ores, in blister copper and in copper ores exported— <b>Total</b> .....	471,419	178,351	470,252	223,186
<b>ONTARIO—</b>				
In silver bullion and nuggets.....	2,762,748	1,045,225	2,681,104	1,272,476
In gold bullion.....	404,744	153,120	413,456	196,230
In blister copper produced; and in ores, concentrates, residues and matte exported or treated in smelters outside the province.....	1,368,188	517,624	2,226,260	1,056,803
<b>Total</b> .....	4,535,680	1,715,975	5,320,820	2,525,509
<b>MANITOPA—</b>				
In gold bullion and in blister copper— <b>Total</b> .....	1,101,578	416,758	810,725	384,777
<b>SASKATCHEWAN—</b>				
In copper-gold ores— <b>Total</b> .....	114,604	43,358	536,336	254,550
<b>ALBERTA—Total</b> .....	32	12	31	15
<b>BRITISH COLUMBIA—</b>				
In alluvial gold.....	4,307	1,629	4,533	2,151
In gold bullion.....	26,579	10,056	30,862	14,647
In blister copper.....	346,120	130,947	344,425	163,467
In base bullion and in ores exported.....	6,300,051	2,406,185	8,360,469	3,972,226
<b>Total</b> .....	6,737,057	2,548,817	8,749,289	4,152,491
<b>YUKON AND NORTHWEST TERRITORIES—</b>				
In alluvial gold.....	8,814	3,335	8,708	4,133
In ores exported or shipped to Canadian smelters.....	2,218,662	839,382	544,879	258,605
<b>Total</b> .....	2,227,476	842,717	553,587	262,738
<b>Canada</b> .....	15,187,950	5,746,027	16,441,361	7,803,218
<b>IMPORTS—</b>				
Silver in bars, etc., unmanufactured.....	-	674,138	-	2,193,201
Silver, manufactures of n.o.p., and articles consisting wholly or in part of sterling or other silverware.....	-	73,666	-	67,425
Silver and other coin, except gold.....	-	12	-	-
<b>Total</b> .....	-	747,816	-	2,260,626
<b>EXPORTS—</b>				
Silver contained in ore, concentrates, etc.....	3,362,354	1,093,464	1,745,152	714,444
Silver bullion.....	10,738,729	3,759,387	10,664,182	4,933,690
<b>Total</b> .....	14,101,083	4,852,851	12,409,334	5,648,134
Silver coin, Foreign.....	-	275,007	-	615,665
“ “ Canadian.....	-	62,943	-	30,250

### Tellurium

Tellurium is now being produced at Copper Cliff, Ontario, as a by-product in the refining of the nickel-copper ores. No statistics of production are available for publication.

### Titanium Ore

Shipments of titanium ore in Canada during 1934 totalled 2,023 tons valued at \$14,161. No production of this ore was reported in 1933. The 1934 output, as for some years past, came from deposits located near Baie St. Paul, Quebec. The entire production during the last calendar year was exported to the United States. The utilization of titanium white by the Canadian paint industry is increasing, consumption in 1933 amounting to 1,061,249 pounds with a value of \$128,969 as compared with 745,207 pounds at \$89,761 in 1931.

### Zinc

Refined zinc is produced at Trail, B.C., and at Flin Flon, Manitoba. A high grade zinc concentrate is exported to Belgium by the Base Metals Mining Corporation which operates the Monarch mine, at Field, B.C. Zinc concentrates were also exported by the Britannia mine on Howe Sound, British Columbia. The price of zinc on the basis of the London market and converted to Canadian funds averaged 3.0436 cents per pound in 1934 as compared with 3.2105 cents per pound in 1933.

#### Production in Canada, Imports and Exports of Zinc, 1933 and 1934

	1933		1934	
	Pounds	Value	Pounds	Value
<b>PRODUCTION—</b>		\$		\$
Manitoba .....	43,516,037	1,397,082	29,656,368	902,621
Saskatchewan .....	2,789,683	89,583	19,770,912	601,748
British Columbia .....	152,826,264	4,906,487	249,152,301	7,583,199
<b>Total .....</b>	<b>199,131,984</b>	<b>6,393,152</b>	<b>298,579,581</b>	<b>9,087,568</b>
<b>IMPORTS—</b>				
Zinc dust .....	841,400	47,826	1,067,300	61,135
Zinc in blocks, pigs, bars and rods, and zinc plates, n.o.p. ....	16,400	1,074	18,300	1,282
Zinc in sheets and strips and zinc plates for marine boilers .....	3,969,100	273,439	3,964,900	260,449
Zinc spelter .....	162,300	4,921	3,100	200
Zinc white .....	9,864,697	428,201	11,754,090	520,911
Zinc sulphate .....	433,604	7,902	1,844,821	27,091
Zinc, chloride of .....	1,018,954	30,971	1,462,592	41,712
Zinc, manufactures of, n.o.p. ....	-	72,400	-	82,883
Lithopone .....	11,387,460	406,508	14,530,612	510,558
<b>Total .....</b>	<b>-</b>	<b>1,273,431</b>	<b>-</b>	<b>1,506,221</b>
<b>EXPORTS—</b>				
Zinc, contained in ore. (This item shows the weight and value of zinc and not the gross weight of ore) .....	8,325,600	135,249	39,043,400	654,835
Zinc scrap, dross and ashes .....	8,302,100	47,060	4,200,600	48,539
Zinc spelter .....	173,453,400	4,900,705	237,894,400	6,990,893
<b>Total .....</b>	<b>-</b>	<b>5,173,014</b>	<b>-</b>	<b>7,694,267</b>

### FUELS

#### Coal

Canada's coal output in 1934 amounted to 13,795,649 tons; this represented an advance of 15.9 per cent over the 1933 total of 11,903,344 tons. Mines in Nova Scotia produced 6,340,790 tons or 39 per cent above the preceding year's output. New Brunswick's production was at approximately the same rate as in 1933 and amounted to 314,681 tons. Manitoba produced 3,037 tons in 1934. A slight decline was recorded in Saskatchewan's output as compared with 1933; the totals were 903,776 tons and 927,649 tons, respectively. Alberta's output reached a total of 4,748,074 tons; in the preceding year 4,718,788 tons were mined. An advance of 7.4 per cent was shown in British Columbia's production of coal during the year. The Yukon output in 1934 was 638 tons.



Corresponding with the increase in the Canadian coal production in 1934, there was a considerable advance in the tonnage of Canadian coal moved under federal government assistance. During 1934, approximately 2,368,800 tons were moved under the government assisted rates as compared with 1,932,711 tons in 1933 and 1,124,788 tons in 1932.

Imports of coal into Canada during the year totalled 13,813,657 tons, a 20.5 per cent increase over the tonnage imported a year ago. Anthracite importations in 1934 consisted of 1,804,127 tons from the United States, 1,643,516 tons from Great Britain, 72,103 tons from Germany, 17,557 tons from Belgium and 6 tons from Newfoundland. Receipts of bituminous coal totalled 10,273,557 tons, made up of 9,943,162 tons from the United States, 329,726 tons from Great Britain and minor tonnages from Japan, Norway, Germany, Newfoundland and Sweden.

### Output and Value of Coal in Canada, by Kinds and by Provinces, 1933 and 1934

(Short tons)

Province	1933		1934	
	Quantity	Value	Quantity	Value
NOVA SCOTIA (Bituminous)	4,557,590	15,969,793	6,340,790	21,858,442
NEW BRUNSWICK (Bituminous)	312,303	1,041,744	314,681	1,021,878
MANITOWA (Lignite)	3,880	9,214	3,037	7,097
SASKATCHEWAN (Lignite)	927,049	1,285,996	903,776	1,234,389
ALBERTA—				
Bituminous	1,726,256	5,435,056	1,915,420	6,114,998
Sub-bituminous	554,118	1,274,017	537,438	1,250,935
Lignite	2,438,414	5,597,585	2,295,216	5,175,352
Total	4,718,788	12,307,258	4,748,074	12,547,285
BRITISH COLUMBIA (Bituminous)	1,382,272	5,306,287	1,484,653	5,250,945
YUKON (Bituminous)	862	3,670	638	2,217
CANADA—				
Bituminous	7,979,283	27,757,150	10,056,182	34,248,480
Sub-bituminous	554,118	1,274,017	537,438	1,250,935
Lignite	3,369,943	6,892,795	3,292,020	6,419,838
Total	11,903,344	35,923,962	13,785,640	41,922,253

### Shipments of Coal from Canadian Mines, by Grades and Destinations, 1933 and 1934

(short tons)

Destination	1933				1934			
	Run-of-mine	Screened	Slack	Total	Run-of-mine	Screened	Slack	Total
Prince Edward Island	4,320	59,873	8,533	63,726	5,748	59,660	10,303	75,720
Nova Scotia	110,012	291,891	477,892	882,828	124,338	418,400	625,507	1,168,251
New Brunswick	126,697	110,157	217,649	454,503	136,349	117,475	249,677	503,591
Quebec	58,128	1,070,384	870,473	1,998,985	121,495	1,308,453	1,453,944	2,883,992
Ontario	482	34,361	12,328	47,171	5,273	62,033	11,605	78,911
Manitoba	102,051	350,789	452,540	905,383	72,310	479,215	321,634	873,159
Saskatchewan	280,407	826,470	448,060	1,554,937	234,644	1,008,815	222,228	1,465,687
Alberta	196,888	422,186	471,682	1,090,756	185,440	654,509	218,591	1,058,540
British Columbia	19,362	584,767	132,987	737,116	18,100	405,197	137,618	650,915
Yukon	—	328	—	328	—	191	—	191
Northwest Territories	—	—	—	—	—	31	—	31
Total domestic shipments	898,386	3,745,209	3,092,154	7,735,743	903,697	4,604,394	3,251,107	8,759,198
Railroads	2,002,784	523,616	110,859	2,637,259	2,475,265	616,299	85,398	3,176,962
Ships' bunkers	102,043	71,804	—	233,847	234,025	105,470	330	340,725
Total railroads and ships' bunkers	2,104,827	595,420	110,859	2,871,106	2,710,190	721,769	85,728	3,517,687
United States	1,515	18,097	58,131	77,743	2,687	25,068	49,530	77,283
Alaska	—	14,249	—	14,249	—	15,290	—	15,290
Newfoundland	9,940	61,045	1,359	72,341	3,862	115,697	120	119,679
Other countries	—	995	—	995	442	2,725	—	3,167
Total external shipments	11,455	94,386	59,490	165,331	6,991	158,778	49,650	215,419
Total	3,071,662	4,435,015	3,262,503	10,772,189	3,620,878	5,484,941	3,386,485	12,492,364

### Output, Exports, Interprovincial Shipments, Imports and Coal made Available for Consumption in Canada, by Provinces, 1934

(Short tons)

Province	Canadian coal				Imported from U.S.A.	Imported from Great Britain	Imported from Germany	Imported from other countries	Coal available for consumption
	Output	Received from other provinces	Shipped to other provinces	Ex-ported					
<b>PRINCE EDWARD ISLAND—</b>									
Anthracite	—	—	—	—	1,153	9,557	—	—	10,710
Bituminous	—	75,720	—	—	99	1,992	—	24	77,835
Total	—	75,720	—	—	1,252	11,549	—	24	88,545
<b>NOVA SCOTIA—</b>									
Anthracite	—	—	—	—	11,677	54,962	—	—	66,639
Bituminous	6,340,790	165	3,332,547	169,972	678	51,719	—	—	2,890,833
Total	6,340,790	165	3,332,547	169,972	12,355	106,681	—	—	2,957,472
<b>NEW BRUNSWICK—</b>									
Anthracite	—	—	—	—	22,616	79,134	—	—	101,750
Bituminous	314,681	364,938	13,766	42,128	23,020	12,789	—	—	659,534
Total	314,681	364,938	13,766	42,128	45,636	91,923	—	—	761,284
<b>QUEBEC—</b>									
Anthracite	—	—	—	—	408,915	1,467,416	72,103	17,563	1,965,997
Bituminous	—	2,883,892	—	50	659,566	263,357	50	295	3,807,110
Total	—	2,883,892	—	50	1,068,481	1,730,773	72,153	17,858	5,773,107
<b>CENTRAL ONTARIO—</b>									
Anthracite	—	—	—	—	1,345,740	32,165	—	—	1,377,911
Bituminous	—	26,162	—	1	8,509,228	—	—	—	8,535,389
Sub-bituminous	—	20,357	—	—	—	—	—	—	20,357
Lignite	—	32,392	—	—	—	—	—	—	32,392
Total	—	78,911	—	1	9,854,974	32,165	—	—	9,966,049
<b>MANITOBA AND HEAD OF LAKES—</b>									
Anthracite	—	—	—	—	14,020	—	—	—	14,020
Bituminous	—	213,054	—	51	744,390	1,506	—	—	958,899
Sub-bituminous	—	70,980	—	—	—	—	—	—	70,980
Lignite	3,037	586,088	—	1,383	253	—	—	—	587,995
Total	3,037	870,122	—	1,434	758,663	1,506	—	—	1,631,894
<b>SASKATCHEWAN—</b>									
Anthracite	—	—	—	—	—	—	—	—	—
Bituminous	—	74,451	—	29	1,123	112	—	—	75,657
Sub-bituminous	—	14,165	—	—	—	—	—	—	14,165
Lignite	903,776	912,535	380,978	3,925	42	—	—	—	1,431,450
Total	903,776	1,001,151	380,978	3,954	1,165	112	—	—	1,521,272
<b>ALBERTA—</b>									
Anthracite	—	—	—	—	—	—	—	—	—
Bituminous	1,915,420	10,616	227,146	349	1,302	—	—	—	1,699,843
Sub-bituminous	537,438	—	132,672	—	—	—	—	—	404,766
Lignite	2,295,216	—	1,203,936	1,014	10	—	—	—	1,090,276
Total	4,748,074	10,616	1,563,754	1,363	1,312	—	—	—	3,194,885
<b>BRITISH COLUMBIA—</b>									
Anthracite	—	—	—	—	—	282	—	—	282
Bituminous	1,484,653	42,899	118,438	82,290	1,928	42	—	300	1,329,094
Sub-bituminous	—	27,170	—	—	—	—	—	—	27,170
Lignite	—	53,899	—	5,127	2,486	—	—	—	51,258
Total	1,484,653	123,968	118,438	87,417	4,414	324	—	300	1,407,804
<b>YUKON—</b>									
Bituminous	638	—	—	16	37	—	—	—	659
Total	638	—	—	16	37	—	—	—	659
<b>CANADA—</b>									
Anthracite	—	—	—	—	1,804,127	1,643,516	72,103	(a) 17,563	3,537,309
Bituminous	10,056,182	3,691,897	3,691,897	294,896	9,941,371	331,517	50	(b) 619	20,044,853
Sub-bituminous	537,438	132,672	132,672	—	—	—	—	—	537,438
Lignite	3,202,029	1,584,914	1,584,914	11,449	2,791	—	—	—	3,193,371
Total	13,795,649	5,409,483	5,409,483	306,335	11,748,289	1,975,033	72,153	18,182	27,302,971

(a) Includes 6 tons imported from Newfoundland and 17,557 tons from Belgium.

(b) Includes 24 tons imported from Newfoundland, 300 tons from Japan, 280 tons from Norway, and 15 tons from Sweden.

\* Shipments to any point in Ontario from western mines.

### Imports of Anthracite, Bituminous and Lignite Coal into Canada, by Months, 1933 and 1934

(Short tons)

Month	1933				1934			
	United States	Great Britain	Other countries	Total	United States	Great Britain	Other countries	Total
<b>ANTHRACITE—</b>								
January	122,618	17,870	—	140,288	171,847	10,067	—	181,914
February	128,049	47,285	—	175,334	129,584	35,889	—	165,473
March	107,369	28,458	—	135,827	195,997	20,061	—	216,058
April	63,617	87,083	—	150,700	79,512	5,811	—	85,323
May	41,926	230,126	6	272,058	158,027	302,019	—	460,046
June	90,920	198,356	—	289,276	161,399	213,083	—	374,482
July	162,911	177,974	—	340,885	129,071	199,947	6	329,024
August	146,498	171,398	—	317,896	104,813	195,218	5,937	305,968
September	208,318	171,679	2	379,999	165,164	213,490	17,802	396,456
October	118,841	202,838	—	321,679	168,243	204,762	18,364	391,369
November	132,507	225,048	—	357,555	185,382	228,357	36,327	450,066
December	106,255	47,861	—	154,116	152,488	14,812	11,200	178,500
<b>Total</b>	<b>1,429,829</b>	<b>1,695,776</b>	(a) <b>8</b>	<b>3,035,613</b>	<b>1,804,127</b>	<b>1,643,516</b>	(c) <b>89,666</b>	<b>3,537,309</b>
<b>BITUMINOUS—</b>								
January	325,915	19,615	—	345,530	355,091	4,217	—	359,308
February	267,342	12,105	—	279,447	248,826	5,606	—	254,432
March	354,970	7,085	—	362,055	477,452	13,406	—	490,858
April	269,381	12,209	144	281,734	359,757	6,092	—	365,849
May	636,997	29,780	—	666,777	1,035,287	52,921	—	1,088,208
June	807,728	24,264	—	831,992	1,131,576	24,269	—	1,155,845
July	876,832	21,238	—	898,070	1,189,098	27,045	50	1,216,163
August	951,582	30,251	—	981,833	1,126,836	29,268	300	1,156,404
September	1,053,338	30,488	—	1,083,826	1,151,831	45,407	—	1,197,230
October	830,264	52,693	—	882,957	1,112,112	57,004	—	1,169,116
November	984,111	79,259	—	1,063,370	1,157,957	57,461	319	1,215,737
December	730,991	19,074	—	750,065	595,689	8,821	—	604,407
<b>Total</b>	<b>8,089,451</b>	<b>338,061</b>	(b) <b>144</b>	<b>8,427,656</b>	<b>9,911,311</b>	<b>331,517</b>	(d) <b>669</b>	<b>10,273,557</b>
<b>LIGNITE—</b>								
January	388	—	—	388	596	—	—	596
February	491	—	—	491	144	—	—	144
March	26	—	—	26	135	—	—	135
April	11	—	—	11	100	—	—	100
May	—	—	—	—	14	—	—	14
June	45	—	—	45	48	—	—	48
July	54	—	—	54	—	—	—	—
August	21	—	—	21	97	—	—	97
September	235	—	—	235	173	—	—	173
October	291	—	—	291	248	—	—	248
November	642	—	—	642	308	—	—	308
December	503	—	—	503	778	—	—	778
<b>Total</b>	<b>2,707</b>	—	—	<b>2,707</b>	<b>2,791</b>	—	—	<b>2,791</b>

(a) Includes 6 tons imported from China and 2 tons from Alaska.

(b) Imported from Germany.

(c) Includes 72,103 tons imported from Germany, 17,557 tons from Belgium and 6 tons from Newfoundland.

(d) Includes 50 tons imported from Germany, 24 tons from Newfoundland, 300 tons from Japan, 280 tons from Norway and 15 tons from Sweden.

### Coal Made Available for Consumption in Canada, 1933 and 1934

(Short tons)

Month	1933				1934			
	Output	Imports	Exports	Coal made available for use	Output	Imports	Exports	Coal made available for use
January	1,038,843	486,206	37,971	1,487,078	1,290,338	541,818	17,956	1,814,200
February	1,049,837	455,272	22,413	1,482,756	1,009,864	420,049	26,015	1,403,808
March	825,023	497,908	22,531	1,300,400	1,031,366	707,051	19,397	1,719,020
April	670,633	432,445	8,363	1,094,715	814,578	451,362	8,134	1,257,806
May	677,859	938,835	15,008	1,601,686	1,004,944	1,548,268	23,763	2,529,449
June	698,951	1,121,313	12,155	1,809,109	982,918	1,532,375	22,370	2,492,923
July	675,264	1,230,009	18,894	1,895,379	991,071	1,545,787	20,884	2,515,974
August	894,837	1,299,750	21,635	2,172,952	1,096,879	1,462,469	26,213	2,533,135
September	1,140,978	1,464,060	19,049	2,585,988	1,304,950	1,593,859	20,719	2,878,090
October	1,579,351	1,204,927	23,258	2,761,020	1,560,610	1,560,763	45,320	3,070,553
November	1,346,878	1,421,567	26,135	2,742,310	1,425,044	1,666,171	29,634	3,061,581
December	1,304,830	904,684	31,821	2,177,693	1,283,087	783,685	45,930	2,020,842
<b>Total</b>	<b>11,903,344</b>	<b>11,465,976</b>	<b>259,233</b>	<b>23,110,087</b>	<b>13,785,649</b>	<b>13,813,657</b>	<b>306,335</b>	<b>27,302,971</b>

## Coke

## Coke Statistics for Canada, by Months, 1934

(Short tons)

Months	Bituminous Coal used in coke making			Coke made	Disposition of Coke by makers				Total
	Canadian	Imported	Total		Used		Sold		
					In coke or gas plants	In makers' smelters	For domestic use	For other uses	
January	83,033	188,891	271,924	194,957	23,163	44,571	183,295	32,698	283,727
February	56,277	178,158	234,435	169,134	18,841	27,471	171,618	25,367	243,207
March	62,155	204,270	266,431	191,848	20,771	30,853	136,472	23,724	211,820
April	59,487	195,860	255,347	185,465	19,435	42,887	93,837	23,420	179,579
May	60,733	193,921	254,654	185,171	19,736	42,331	36,845	33,437	132,349
June	60,410	186,733	247,143	179,305	18,312	38,118	38,734	22,999	118,163
July	60,082	192,265	252,347	183,487	15,888	33,092	50,288	19,701	118,969
August	66,977	194,150	261,127	189,206	17,309	35,306	63,420	22,581	138,616
September	78,121	183,248	261,369	188,375	19,281	39,434	59,739	20,247	138,701
October	88,241	192,362	280,603	204,143	19,883	41,734	109,526	24,093	200,226
November	88,965	187,824	276,789	198,861	18,931	49,939	100,381	21,877	191,128
December	89,843	183,993	273,836	196,805	21,013	44,689	140,822	21,708	228,223
<b>Total</b>	<b>854,324</b>	<b>2,281,681</b>	<b>3,136,005</b>	<b>2,266,757</b>	<b>232,563</b>	<b>475,416</b>	<b>1,184,977</b>	<b>291,842</b>	<b>2,184,798</b>

## Production in Canada, Imports and Exports of Coke, by Provinces, 1933 and 1934

(Short tons)

Year	Nova Scotia, New Brunswick and Quebec	Ontario	Manitoba, Saskatchewan, Alberta and British Columbia	Canada
Production	1933 445,755 1934 654,435	1,153,509 1,411,516	172,900 200,806	1,772,164 2,266,757
Imports	1933 19,286 1934 36,002	615,818 881,235	8,971 12,984	644,075 930,221
Exports	1933 388 1934 775	- 54	4,816 6,547	5,199 7,376
Apparent consumption	1933 464,658 1934 689,662	1,769,327 2,292,697	177,055 207,243	2,411,040 3,189,602

## Natural Gas

Natural gas production in Canada during 1934 declined to 21,948,855 thousand cubic feet from the 1933 output of 23,138,103 thousand cubic feet. Alberta's production totalled 14,000,000 thousand cubic feet in 1934 or 8.8 per cent below the 1933 total. Ontario wells produced 7,327,474 thousand cubic feet as compared with 7,166,659 thousand cubic feet, a year ago. New Brunswick produced 607,000 thousand cubic feet. The first commercial production of natural gas in Saskatchewan was reported in 1934 with the distribution of gas from the Lloydminster well.

## Production in Canada and Imports of Natural Gas, 1933 and 1934

	1933		1934	
	M cu. ft.	Value	M cu. ft.	Value
<b>PRODUCTION—</b>		\$		\$
New Brunswick.....	618,033	302,706	607,000	297,000
Ontario.....	7,166,659	4,523,085	7,327,474	4,390,484
Manitoba.....	600	180	600	180
Saskatchewan.....	-	-	13,781	4,823
Alberta.....	15,352,811	3,886,263	14,000,000	3,720,586
<b>Total.....</b>	<b>23,138,103</b>	<b>8,712,234</b>	<b>21,948,855</b>	<b>8,419,073</b>
<b>IMPORTS—</b>				
Gas for cooking, heating or illuminating, imported by pipe line—				
<b>Total.....</b>	<b>190,854</b>	<b>73,425</b>	<b>107,171</b>	<b>69,734</b>

## Peat

The production of peat, for use as fuel in Canada, amounted to 563 tons in 1934; in the preceding year 1,131 tons were produced. The 1934 production was obtained from bogs at Alfred, Chesterville and Morewood, Ontario.

## Petroleum

The Canadian production of crude petroleum increased 23.8 per cent in 1934 to 1,417,368 barrels from the 1933 total of 1,145,333 barrels. New Brunswick, Ontario and Alberta operators reported increased outputs during the year. Production from the wells at Fort Norman, Northwest Territories, amounted to 4,438 barrels in 1934.

The completion of a second absorption plant, in the Turner Vidley field, Alberta, in September was an important feature of the year.

## Production of Crude Petroleum in Canada, 1933 and 1934

Province	1933		1934	
	Barrels	Value	Barrels	Value
		\$		\$
<b>NEW BRUNSWICK.....</b>	<b>8,835</b>	<b>18,111</b>	<b>11,545</b>	<b>23,300</b>
<b>ONTARIO—</b>				
Petrolia and Enniskillen.....	57,298	106,527	55,024	117,413
Oil Springs.....	31,343	61,396	29,863	65,084
Moore Township.....	2,192	4,075	2,063	6,221
Sarna Township.....	2,181	4,054	3,244	6,811
Plympton Township.....	211	392	202	424
Bothwell Township.....	22,935	42,633	32,133	67,463
West Dover.....	763	1,334	558	1,171
Onondaga.....	946	1,798	601	1,311
Mosa Township.....	8,168	15,183	9,031	18,961
Brooke.....	-	-	1,536	3,225
Dunwich.....	346	643	283	594
Raleigh.....	239	444	264	554
Thamesville.....	847	1,674	614	1,269
Dawn and Euphemia.....	8,589	13,433	4,169	8,753
<b>Total for Ontario.....</b>	<b>136,058</b>	<b>253,486</b>	<b>141,385</b>	<b>299,874</b>
<b>ALBERTA—</b>				
Turner Valley.....	968,055	2,816,061	1,227,486	3,181,503
Red Coulee—Kebo.....	23,305	23,747	20,325	20,784
Wainwright—Skiff.....	4,472	4,349	12,189	10,833
<b>Total for Alberta.....</b>	<b>995,832</b>	<b>2,844,157</b>	<b>1,260,000</b>	<b>3,213,120</b>
<b>NORTHWEST TERRITORIES.....</b>	<b>4,608</b>	<b>23,087</b>	<b>4,438</b>	<b>22,188</b>
<b>Canada.....</b>	<b>1,145,333</b>	<b>3,138,791</b>	<b>1,417,368</b>	<b>3,558,482</b>

## Imports into Canada and Exports of Petroleum and Its Products, 1933 and 1934

	1933		1934	
	Quantity	Value	Quantity	Value
		\$		\$
<b>IMPORTS—</b>				
Asphaltum solid.....cwt.	89,238	106,586	100,305	114,951
Asphaltum not solid.....gal.	-	10,312	98,657	11,030
Asphaltum oil for paving purposes only.....gal.	-	1,458	14,619	1,832
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.	954,392,366	20,290,580	1,072,327,425	31,907,176
Crude petroleum, gas oils other than naphtha, benzine and gasoline lighter than 0.8235 but not less than 0.775 specific gravity at 60 degrees.....gal.	60,331	3,773	181,278	9,740
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.	43,271,325	1,445,467	32,959,499	1,149,341
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.	95,421	47,948	77,126	85,364
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.	25,636,911	1,031,971	1,782,276	98,920
<b>KEROSENE, FUEL AND ILLUMINATING OILS</b>				
Coal oil and kerosene lighter than .8235 specific gravity at 60 degrees temperature, n.o.p.....gal.	1,569,384	116,657	1,985,739	142,025
Illuminating oils, composed wholly or in part of the products of petroleum, coal, shale or lignite, costing more than 30 cents per gallon.....gal.	3,658	1,585	1,062	345
Engine distillate lighter than 0.8235 specific gravity at 60 degrees temperature.....gal.	64,626	6,880	132,795	12,946
Fuel oil, ex-warehoused for ships' stores.....gal.	26,896,996	723,863	23,481,946	589,843
<b>LUBRICATING OILS</b>				
Lubricating oils, composed wholly or in part of petroleum, and costing less than 25 cents per gallon.....gal.	6,208,152	1,160,093	6,872,364	1,047,882
Lubricating oils, n.o.p.....gal.	3,660,582	1,464,241	3,648,060	1,345,094
<b>GASOLINE AND OTHER OILS</b>				
Natural casinghead, compression or absorption gasoline lighter than 0.6690 specific gravity at 60 degrees temperature, when imported by distillers of petroleum for blending with other gasoline distilled in Canada.....gal.	39,688,271	2,545,302	48,376,014	2,593,460
Gasoline lighter than 0.8235 specific gravity at 60 degrees temperature.....gal.	17,122,366	1,446,766	13,205,856	1,248,497
All other oils, n.o.p.....gal.	305,985	90,768	580,667	117,509
<b>OTHER PRODUCTS OF PETROLEUM</b>				
Grease, axle.....lb.	2,417,038	130,792	3,374,842	169,183
Paraffine wax.....lb.	1,760,621	60,955	6,063,528	208,741
Paraffine wax candles.....lb.	165,491	32,174	140,075	28,647
Vaseline, and all similar preparations of petroleum for toilet, medicinal or other purposes.....	-	214,539	-	241,003
Naphtha and products of petroleum, n.o.p., lighter than 0.8235 specific gravity at 60 degrees temperature.....gal.	1,244,930	113,627	1,868,361	142,927
<b>Total</b> .....	-	<b>31,046,337</b>	-	<b>41,326,516</b>
<b>EXPORTS—</b>				
Oil, petroleum, crude.....gal.	10,658,848	394,727	5,438	497
Oil, coal and kerosene, refined.....gal.	996,468	179,986	782,350	78,618
Oil, gasoline and naphtha.....gal.	4,042,959	627,851	4,757,175	528,197
Oil, mineral, n.o.p.....gal.	12,939,982	537,776	12,994,817	585,785
Wax, mineral.....cwt.	2,498	6,955	2,633	10,219
<b>Total</b> .....	-	<b>1,747,295</b>	-	<b>1,203,316</b>

## NON-METALLICS (except Fuels)

## Abrasives

**Corundum.**—Corundum is found in Canada in the northern part of Hastings and Renfrew counties of Ontario. No production has been reported for several years.

**Grindstones, Pulpstones and Scythestones.**—Quarries for the production of these products are located at Shediac and Stonehaven, New Brunswick; Pictou county, Nova Scotia, and at Gabriola Island, British Columbia. Crude blocks produced from Quarry Island, Nova Scotia, are shipped to the Stonehaven dressing works to be made into grindstones. Grindstones, scythestones and pulpstones are made at Stonehaven, New Brunswick, from local stone. Pulpstones were produced in British Columbia during 1934 from local stone. Total production of all classes totalled 887 tons valued at \$46,478.

**Volcanic Dust.**—Volcanic dust shipments were made from Williams Lake, B.C., in 1934 while a relatively small quantity of the material was produced in Saskatchewan. Total production in the Dominion for the year amounted to 31 tons valued at \$620.

**Diatomite.**—Diatomite is produced at Little River and New Annan, Nova Scotia, the Muskoka district of Ontario, and at Quesnel, B.C. Total output amounted to 1,370 tons valued at \$54,750.

## Imports into Canada and Exports of Abrasives, 1933 and 1934

	1933		1934	
	Quantity	Value	Quantity	Value
		\$		\$
<b>IMPORTS—</b>				
<b>Abrasives—</b>				
Artificial abrasives in bulk, crushed or ground, when imported for use in the manufacture of abrasive wheels and polishing composition.....	-	194,818	-	306,377
Diamond dust or bort and black diamonds for borers.....	-	354,999	-	1,395,404
Emery in bulk, crushed or ground.....	-	26,371	-	40,709
Grinding wheels.....	-	47,965	-	103,630
Grinding stones or blocks.....	-	5,141	-	10,366
Grindstones not mounted and not less than 3/8" in diameter.....	-	76,615	-	140,327
Grindstones, n.o.p.....	-	2,516	-	4,491
Pumice and pumice stone, lava and calcareous tufa, not further manufactured than ground.....	-	18,113	-	25,142
Sandpaper, glass, flint and emery paper or emery cloth.....	-	81,559	-	92,046
Manufactures of emery or of artificial abrasives, n.o.p.....	-	24,717	-	38,342
Diatomaceous earth or infusorial earth (Kiesulgubhr) ground or unground..... rwt.	44,120	71,166	24,832	39,315
Iron sand or globules or iron shot and dry putty for polishing or sawing.....	-	7,063	-	-
<b>Total.....</b>	-	<b>910,843</b>	-	<b>2,196,149</b>
<b>EXPORTS—</b>				
<b>Grindstones, manufactured.....</b>	-	<b>2,840</b>	-	<b>4,947</b>
<b>Abrasives—</b>				
Natural, n.o.p..... cwt.	36,096	43,906	26,434	33,512
Artificial, crude, including carborundum..... cwt.	628,958	2,121,681	1,267,651	3,869,613
Artificial, made up into wheels, stones, etc.....	-	35,933	-	43,838
<b>Total.....</b>	-	<b>2,204,360</b>	-	<b>3,951,910</b>

## Asbestos

Canadian asbestos is all produced in the Eastern Townships of the province of Quebec. Output in 1934 was 1.5 per cent less than in the preceding year. A change in the system of mining during 1933, by one of the large operators, from the open pit to the block-caving method has resulted in a substantial saving in mining costs. Considerable research work on asbestos has been carried on at the National Research Laboratories, Ottawa, and the specifications for a standard testing machine, as developed by the National Research Council, has been accepted by the asbestos producers.

## Sales of Asbestos in Canada, 1933 and 1934

Grades	1933			1934		
	Shipments and sales		Average value per ton	Shipments and sales		Average value per ton
	Tons	Value		Tons	Value	
		\$	\$		\$	\$
Crudes.....	1,306	341,734	261.66	1,663	409,853	246.45
Fibres.....	82,605	3,843,887	46.53	77,465	3,456,309	44.62
Shorts.....	74,456	1,025,556	13.77	76,852	1,070,074	13.92
<b>Total</b> .....	<b>158,367</b>	<b>5,211,177</b>	<b>32.90</b>	<b>155,960</b>	<b>4,936,326</b>	<b>31.65</b>
Sands, gravel and stone (waste rock only).....	6,445	3,215	0.50	4,672	3,480	0.74
<b>Total</b> .....	<b>164,812</b>	<b>5,214,392</b>	-	<b>160,632</b>	<b>4,939,806</b>	-

Quantity of rock mined during 1933=1,566,919 tons; during 1934=2,320,750 tons.  
Quantity of rock milled during 1933=1,329,814 tons; during 1934=1,953,129 tons.  
Quantity of tailings retreated during 1933=521,930 tons; during 1934=none.

## Imports into Canada and Exports of Asbestos, 1933 and 1934

	1933		1934	
	tons	\$	tons	\$
<b>IMPORTS—</b>				
Asbestos brake and clutch lining.....	-	165,994	-	218,052
Asbestos in any form other than crude, and all manufactures of, n.o.p.....	-	233,966	-	408,020
Asbestos packing.....	79	54,148	83	64,713
<b>Total</b> .....	-	<b>454,108</b>	-	<b>690,785</b>
<b>EXPORTS—</b>				
Asbestos.....	78,701	3,998,377	83,267	4,029,191
Asbestos, sand and waste.....	70,296	991,417	74,977	1,100,305
Asbestos manufactures, including asbestos roofing.....	-	73,044	-	140,826
<b>Total</b> .....	-	<b>5,062,838</b>	-	<b>5,270,322</b>

## Barite

There has been no important production of barite in Canada for some time. For a number of years a small amount was produced from a deposit at Lake Ainslie, Nova Scotia, but this operation has now been abandoned. Other Canadian deposits are located in Ontario in the Thunder Bay district, near Night Hawk Lake, in the Porcupine district, and in North Burgess and Yarrow Townships, Lanark county.

## Bituminous Sands

Bituminous sands occur in the Fort McMurray district of Alberta and investigations leading to the utilization of this material have been carried on for some years. Experiments have followed three main channels—(1) the use as a bituminous binder in road construction; (2) the use of separated bitumen as a source of gasoline, lubricants, etc., and (3) its use for the production of certain of the higher priced classes of asphaltic materials. Production in 1934 totalled 862 tons valued at \$3,449.

## Feldspar

Ontario and Quebec are the principal sources of Canadian feldspar. Production in 1934 showed considerable improvement over the preceding year. Exports were larger also. A considerable part of the Canadian output is now ground in Canada, the product being used in the manufacture of glass, enamels, electrical porcelain and vitrified ware. It also enters into the manufacture of floor and wall tile, and in the finely ground form, as an ingredient in scouring soaps.



### Production in Canada, Imports and Exports of Feldspar, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTION—				
Quebec.....	6,183	59,283	9,207	78,850
Ontario.....	4,387	45,350	6,335	55,353
Manitoba.....	88	484	1,793	9,768
<b>Total</b> .....	<b>10,658</b>	<b>105,117</b>	<b>17,335</b>	<b>140,975</b>
IMPORTS— <b>Total</b> .....	<b>569</b>	<b>7,976</b>	<b>1,639</b>	<b>15,245</b>
EXPORTS— <b>Total</b> .....	<b>3,596</b>	<b>23,076</b>	<b>10,532</b>	<b>65,158</b>

### Fluorspar

Fluorspar production in Canada in 1934 totalled 150 tons valued at \$2,100; this came entirely from Hastings county, Ontario. Fluorspar also occurs at the Rock Candy Mine situated north of Grand Forks, British Columbia. This mine is owned by the Consolidated Mining and Smelting Co. Ltd., and supplies fluorspar necessary for their metallurgical operations at Trail.

Imports of fluorspar into Canada during 1934 amounted to 7,220 tons valued at \$56,628; as against 2,219 tons valued at \$21,165 in 1933.

### Graphite

With the exception of a small production from Quebec the major output of graphite in Canada came from the Black Donald mine in Renfrew county, Ontario, which is said to be one of the largest graphite deposits in the world. Some of the more important graphite producing countries are Germany, Korea, Austria, Madagascar, Ceylon, Italy and Mexico.

### Production, Imports and Exports of Graphite, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTION..... <b>Total</b>	-	<b>18,367</b>	-	<b>71,424</b>
IMPORTS—				
Crucibles, plumbago.....	-	20,521	-	36,363
Plumbago, not ground or otherwise manufactured.....	-	4,729	-	2,989
Plumbago, ground, and manufactures of, n.o.p.....	-	60,003	-	103,652
<b>Total</b> .....	-	<b>100,253</b>	-	<b>143,004</b>
EXPORTS—				
Graphite or plumbago, crude or refined.....	<b>967</b>	<b>40,115</b>	<b>1,935</b>	<b>90,179</b>

### Gypsum

Gypsum is mined in Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia. Production in 1934 showed a considerable improvement over 1933. Because it can be transported by water, crude gypsum from Nova Scotia is able to compete with foreign gypsum on the eastern seaboard. For this reason large quantities are exported annually from this province.

Gypsum products are placed on the market in many different forms, some of which are hard-wall plaster, wood fibre plaster, beam and column fireproofing, roof and partition tile, wallboard, and in other forms for insulating and fire resisting purposes.

## Production in Canada, Imports and Exports of Gypsum, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
<b>PRODUCTION—</b>		\$		\$
Crude—				
(1) Lump or mine run.....	36,439	43,002	33,143	41,415
Crushed.....	298,579	329,410	369,675	474,046
Fine ground.....	1,030	6,067	652	3,494
(2) Calcined.....	46,688	297,334	57,724	345,249
<b>Total.....</b>	<b>382,736</b>	<b>675,822</b>	<b>461,194</b>	<b>864,204</b>
<b>IMPORTS—</b>				
Gypsum, crude (sulphate of lime).....	18	524	18	320
Plaster of Paris or gypsum ground, not calcined.....	136	4,251	173	4,938
Plaster of Paris or gypsum calcined and prepared wall plaster.....	615	16,745	551	15,890
<b>Total.....</b>	<b>769</b>	<b>21,520</b>	<b>742</b>	<b>21,148</b>
<b>EXPORTS—</b>				
Gypsum or plaster, crude.....	287,305	344,085	354,978	413,961
Plaster of Paris, ground, and prepared wall plaster.....	633	13,999	712	16,078
<b>Total.....</b>	<b>287,938</b>	<b>358,084</b>	<b>355,690</b>	<b>430,039</b>

(1) Includes some anhydrite produced in Nova Scotia.

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

## Iron Oxides

Canadian iron oxides are marketed in two forms, crude and calcined. Crude oxides are dried before shipment for use in the purification or illuminating gas while the calcined product is ground usually for consumption as a pigment in the paint industry. Shipments of iron oxides including both the crude and calcined totalled 4,919 tons valued at \$65,966.

Quebec has been the principal producer of iron oxides, though a small annual production has been reported from British Columbia where it is used for purifying illuminating gas. In Nova Scotia there are various beds of ochres and umbers which have been worked to a small extent in the past.

Imports of ochrey earths, oxides, etc., totalled 1,028 tons valued at \$39,380 as compared with 1,078 tons worth \$35,595 in 1933.

## Magnesitic-Dolomite

Canada does not produce any pure magnesite but for some time a magnesitic-dolomite has been mined at Kilmar, Argenteuil county, Quebec, which, after treatment, has been found very satisfactory for furnace linings in metallurgical plants. It is also used for the construction of floors and for floor tiles.

## Production in Canada, Imports and Exports, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
<b>PRODUCTION—</b>		\$		\$
Calcined or clinkered— <b>Total.....</b>	—	<b>360,128</b>	—	<b>382,927</b>
<b>IMPORTS—</b>				
Magnesia pipe covering.....	—	35,062	—	45,759
Magnesite, crude rock.....	—	—	—	35
Magnesite, dead burned, sintered, caustic, calcined or plastic magnesia.....	1,403	43,220	472	26,740
Brick, fire, magnesite.....	—	246,855	—	396,664
<b>Total.....</b>	—	<b>325,146</b>	—	<b>469,198</b>
<b>EXPORTS—</b>				
Magnesite, calcined, dead burned, etc.....	2,320	63,056	1,997	56,670

### Magnesium-Sulphate

Natural magnesium sulphate is produced from a deposit at Basque, British Columbia. Output in 1934 totalled 42 tons valued at \$1,100. The crude material is treated in an experimental mill at Ashcroft, where three grades of crystals are obtained ready for the market. Imports of magnesium sulphate or Epsom salts totalled 2,300 tons valued at \$48,459 in 1934. The tanning industry consumes the greater portion of the imports; about 20 per cent goes to the drug trade.

### Mica

In 1934 mica was produced in Quebec, Ontario and British Columbia, with the greater part of the Dominion's output coming, as in former years, from the first two named provinces. An interesting feature of mica movements during the last calendar year and in 1933 was the pronounced upward trend of Canadian exports to the United Kingdom. For some years amber mica from Madagascar was a serious competitor of the Canadian product but it is believed production from this source has lessened with the resulting increase in Canadian output. Ground amber mica is produced by one company in Quebec, and the total British Columbia production is in the form of ground muscovite.

#### Production of Mica in Canada, 1933 and 1934

Grade	1933			1934		
	Quantity	Value, f.o.b. shipping point	Price per pound	Quantity	Value, f.o.b. shipping point	Price per pound
	Lb.	\$	\$	Lb.	\$	\$
Knife trimmed.....	8,591	3,923	0.46	61,003	25,628	0.42
Thumb trimmed.....	51,881	8,397	0.16	90,726	27,360	0.30
Splittings.....	74,550	27,446	0.37	75,050	33,120	0.44
Scrap.....	1,753,375	9,518	0.005	1,766,031	10,449	0.006
Rough cobbed.....	-	-	-	2,459	514	0.21
<b>Total.....</b>	<b>1,888,297</b>	<b>49,284</b>	<b>-</b>	<b>1,995,269</b>	<b>97,071</b>	<b>-</b>

#### Imports into Canada and Exports of Mica, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
<b>Imports—</b>		\$		\$
Mica and manufactures of, n.o.p.—Total.....	-	33,506	-	62,650
<b>Exports—</b>				
Rough cobbed and thumb trimmed.....	26	6,445	95	60,574
Mica splittings.....	38	29,479	44	38,602
Mica, scrap and waste.....	1,076	9,560	840	7,736
Mica, plate, and manufactures of (micanite).....	-	729	-	1,890
<b>Total.....</b>	<b>-</b>	<b>46,213</b>	<b>-</b>	<b>117,802</b>

### Mineral Waters

Sales of natural mineral waters in Canada during 1934 totalled 97,340 imperial gallons valued at \$18,013 as compared with 38,818 imperial gallons valued at \$5,441 in 1933. These shipments were made from mineral springs located in Ontario and Quebec.

Imports of natural mineral waters, not in bottles, during 1934 amounted to 30 gallons valued at \$24. Mineral and aerated waters, n.o.p., imported during 1934 totalled \$86,808. Exports of mineral and aerated waters amounted in value to \$5,322.

### Phosphate

Phosphate in the form of apatite, mined in the vicinity of Buckingham, Quebec in 1934 totalled 81 tons valued at \$683. In 1933 production amounted to 2,214 tons valued at \$5,475, which included outputs from both Quebec and British Columbia sources.

Imported rock phosphate is used in the manufacture of superphosphates by Canadian fertilizer manufacturers. The Consolidated Mining and Smelting Co. Ltd., Trail, B.C., have investigated the possibilities of the utilization of a rock phosphate from the Crow's Nest District of British Columbia for the manufacture of superphosphate. At the present time, however, their supply of this raw material is imported from the States of Idaho and Montana, directly south of the International boundary. Imports of phosphate rock (fertilizer) totalled 31,775 tons valued at \$165,240 as against 18,351 tons valued at \$74,527 in 1933.

### Pyrites (Sulphur)

Sulphur is produced in Canada from pyrites and in the form of sulphuric acid from waste smelter gases. Production in these forms totalled 51,537 tons, of which 5,501 tons were contained in pyrites and 45,805 tons in sulphuric acid. No pyrites is being directly mined as such at the present time, but pyrites concentrates which are separated from copper sulphides at Eustis and the Aldermac mines, Quebec, and at the Britannia mine, British Columbia, are sold to Canadian and foreign consumers. Part of the concentrate from the Britannia mine is exported to the Tacoma smelter for use as a fluxing material. Sulphuric acid is made from waste smelter gases at the Trail and Copper Cliff smelters. Elemental sulphur is also being recovered from smelter gases at Trail.

#### Production in Canada, Imports and Exports of Pyrites, 1933 and 1934

	1933		1934	
	Sulphur content	Value	Sulphur content	Value
	tons	\$	tons	\$
<b>*PRODUCTION—</b>				
Quebec .....	19,167	146,261	4,908	50,398
Ontario .....	8,196	81,960	14,598	145,980
British Columbia .....	30,010	282,078	32,031	319,124
<b>Total</b> .....	<b>57,373</b>	<b>510,299</b>	<b>51,537</b>	<b>515,502</b>
<b>IMPORTS—</b>				
Brimstone, or sulphur, crude or in roll or flour .....	140,810	2,529,920	157,697	2,589,311
<b>EXPORTS—</b>				
Pyrites (Sulphur content) .....	15,347	121,280	9,821	94,623

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

### Quartz

Figures on the Canadian production of quartz include silica used by smelters for fluxing purposes, in the manufacture of scouring compounds, for glass manufacturing, moulding, brick-making, and for artificial abrasive manufacture. The price range per ton varies greatly, depending on the purity of the product, which in turn depends on the purpose for which it is to be used. Several modern plants are now in operation in Eastern Canada for the production of ground and crushed silica products.

## Production in Canada and Imports of Quartz (includes natural silica sand) 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
<b>PRODUCTION—</b>		\$		\$
Nova Scotia.....	1,017	1,447	7,292	12,107
Quebec.....	28,294	109,533	56,838	228,787
Ontario.....	66,562	86,146	89,167	133,069
Manitoba.....	7,736	23,507	931	3,031
Saskatchewan.....	59,506	59,506	93,000	93,000
British Columbia.....	22,668	17,681	24,817	19,878
<b>Total</b> .....	<b>185,783</b>	<b>297,820</b>	<b>272,075</b>	<b>489,872</b>
<b>IMPORTS—</b>				
Silex or crystallized quartz, ground or unground.....	4,370	82,823	2,323	53,430
Flint and ground flint stones.....	2,277	26,615	2,340	28,427
<b>Total</b> .....	<b>6,647</b>	<b>109,438</b>	<b>4,663</b>	<b>81,857</b>

## Salt

Salt is produced in widely different sections of Canada. At the Malagash mine in Nova Scotia it is produced by direct mining, and in Ontario, Manitoba and Saskatchewan, it is extracted by evaporation from a brine solution. Very little of the Canadian salt production is exported, it is sold in Canada for fish curing, meat curing, dairy purposes, and as table salt. A considerable proportion of the total Canadian production is used by chemical companies in the Amherstburg district of Ontario in the manufacture of various sodium products.

## Production of Salt in Canada, by Grades, 1933 and 1934

Grade	1933			1934		
	Manu- factured	Sold	Value of salt sold (Not includ- ing con- tainers)	Manu- factured	Sold	Value of salt sold (Not includ- ing con- tainers)
	Tons	Tons	\$	Tons	Tons	\$
Table, dairy and pressed blocks.....	63,894	61,231	1,120,698	71,249	69,779	1,098,817
Common, fine.....	67,414	63,786	395,609	66,194	67,777	384,873
Common coarse.....	18,472	18,117	179,891	20,224	20,488	185,926
Land salt.....	493	305	954	403	402	1,320
Other grades.....	34,396	31,935	137,984	41,835	39,175	159,885
Brine for chemical works (Salt equivalent sold or used).....	104,740	104,740	104,740	124,132	124,132	124,132
<b>Total</b> .....	<b>289,409</b>	<b>280,114</b>	<b>1,939,873</b>	<b>324,037</b>	<b>321,753</b>	<b>1,951,933</b>
Value of containers.....			591,182			603,360
<b>Grand total</b> .....	<b>289,409</b>	<b>280,114</b>	<b>2,531,055</b>	<b>324,037</b>	<b>321,753</b>	<b>2,558,322</b>

## Imports into Canada and Exports of Salt, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
<b>IMPORTS—</b>		\$		\$
Salt, for use of the sea or gulf fisheries.....	54,439	184,279	57,272	173,023
Salt, in bulk, n.o.p.....	51,486	222,062	42,256	160,049
Salt, n.o.p., in bags, barrels, etc.....	29,558	240,657	37,471	234,120
Salt, table, made by an admixture of other ingredients, when con- taining not less than 90 per cent of pure salt.....	137	4,220	1,795	11,941
<b>Total</b> .....	<b>135,620</b>	<b>651,217</b>	<b>138,794</b>	<b>586,083</b>
<b>EXPORTS—</b>				
<b>Total</b> .....	<b>5,335</b>	<b>13,461</b>	<b>6,597</b>	<b>48,697</b>

### Sodium Carbonate

Sodium carbonate production totalled 244 tons valued at \$1,920 during 1934, as compared with 559 tons worth \$5,773 in the preceding year and came entirely from deposits located on or near the line of the Pacific and Great Eastern Railway in British Columbia.

### Sodium Sulphate

Natural sodium sulphate occurs in large deposits in Western Canada. In 1934 and for some years past, the entire Canadian production came from Saskatchewan. The value of sales in 1934 totalled 65,392 tons valued at \$590,325. Production in 1933 was valued at \$485,416.

Paper pulp manufacturers afford a considerable market for this material and another valuable outlet is its use in the metallurgical treatment of the nickel-copper ores of Ontario.

Imports of salt cake in 1934 totalled 10,577 tons valued at \$123,980 as against 2,595 tons worth \$34,371 in 1933; nitre cake imports totalled 1,896 tons worth \$20,282 as compared with 574 tons worth \$15,989 during the preceding twelve months, and Glauber's salt imports amounted to 633 tons valued at \$8,853 as compared with 895 tons valued at \$13,237 during the corresponding period of 1933.

### Talc and Soapstone

Canadian talc, which is of a high standard quality, finds a market not only in Canada but in the United States and Europe. Output is principally from the Madoc area, Hastings county, Ontario, where two mines have been in operation for a number of years. In British Columbia there is a small production of ground grey talc of roofing grade.

Soapstone is produced from deposits located in Beauce county, Quebec. Practically all of the sawn blocks and bricks used in the kraft-pulp mills in Eastern Canada are supplied from this district. Soapstone monuments, stoves and mantels are also manufactured.

### Production in Canada, Imports and Exports of Talc and Soapstone, 1933 and 1934

	1933		1934	
	Tons	Value	Tons	Value
<b>PRODUCTION—</b>		\$		\$
Soapstone.....	—	43,503	—	44,297
Talc.....	15,181	143,156	13,959	136,480
<b>Total</b> .....	—	<b>186,749</b>	—	<b>180,777</b>
<b>IMPORTS—</b>				
Talc or soapstone, ground or unground— <b>Total</b> .....	<b>2,149</b>	<b>48,650</b>	<b>2,897</b>	<b>44,965</b>
<b>EXPORTS—</b>				
Talc— <b>Total</b> .....	<b>10,725</b>	<b>116,950</b>	<b>9,386</b>	<b>103,631</b>

## Structural Materials and Clay Products

Production of the materials in this group showed a considerable improvement over 1933. Sales of Portland cement increased 25 per cent; the value of brick and tile was 16 per cent higher, stone production was greater and sand and gravel marked an increase. Building construction was at a low ebb at the beginning of the year, however, the later improvement in general economic conditions was reflected in building permits, as according to MacLean Building Review, contracts awarded in 1934 totalled \$125,811,500 as compared with \$97,289,800 in 1933.

## Cement

The industry consumed 806,546 tons of limestone and 19,172 tons of gypsum, from which was manufactured 3,484,233 barrels of cement. At the close of 1934 the plants had on hand 1,562,501 barrels of cement which was nearly 300,000 barrels less than the quantity on hand at the beginning of the year.

## Production in Canada, Imports and Exports of Cement, 1933 and 1934

	1933		1934	
	Barrels	Value \$	Barrels	Value \$
<b>OUTPUT—Total</b> .....	<b>2,410,518</b>	—	<b>3,484,233</b>	—
<b>SALES—</b>				
Quebec.....	1,517,555	2,128,900	1,613,641	2,294,847
Ontario.....	1,065,845	1,587,812	1,702,128	2,403,590
Manitoba.....	129,540	295,351	181,166	411,247
Alberta.....	149,206	209,530	163,946	326,253
British Columbia.....	115,286	225,342	122,345	232,009
<b>Total</b> .....	<b>3,007,432</b>	<b>4,536,935</b>	<b>3,783,226</b>	<b>5,667,946</b>
Stocks, December 31.....	1,830,928	—	1,562,501	—
<b>IMPORTS—</b>				
Portland.....	19,119	37,768	14,341	45,548
Manufactures.....	—	4,971	—	4,167
<b>Total</b> .....	—	<b>42,739</b>	—	<b>49,715</b>
<b>EXPORTS—Total</b> .....	<b>52,531</b>	<b>47,369</b>	<b>70,046</b>	<b>55,181</b>
<b>APPARENT CONSUMPTION—Total</b> .....	<b>2,974,020</b>	—	<b>3,727,521</b>	—

## Clay Products

## Production in Canada, Imports and Exports of Clay and Clay Products, 1933 and 1934

Kind	1933		1934		
	Quantity	Total selling value	Quantity	Total selling value	
		\$		\$	
<b>PRODUCTION (SALES)—</b>					
Brick: Soft mud process (Face.....	M	2,482	41,737	5,980	99,257
{Common.....	M	12,389	156,760	12,912	167,589
Stiff mud process (wire cut) (Face.....	M	19,602	412,367	22,627	467,093
{Common.....	M	23,894	356,498	28,703	405,349
Dry press (Face.....	M	4,544	101,252	5,621	124,335
{Common.....	M	3,916	44,377	5,069	62,048
Fancy or ornamental brick (including special shapes, embossed and enamelled brick).....	M	630	7,824	14	835
Sewer brick.....	M	243	3,693	307	5,992
Paving brick.....	M	1	42	-	-
Firebrick from domestic clay.....	M	1,547	73,226	1,948	92,458
Fireclay.....	tons	1,421	11,273	787	10,674
Bentonite.....	tons	55	1,363	63	1,578
Kaolin.....	tons	-	-	48	504
Fireclay blocks and shapes.....	-	-	80,625	-	80,112
Structural tile: Hollow blocks (including fireproofing and load-bearing tile).....	tons	26,747	160,059	30,674	243,027
Roofing tile.....	no.	20,469	1,136	44,115	1,852
Floor tile (quarries).....	sq. ft.	91,495	14,297	87,004	18,886
Drain tile.....	M	10,057	222,829	6,757	219,369
Sewer pipe (including copings, flue linings, etc.).....	-	-	354,458	-	387,738
Pottery, glazed or unglazed.....	-	-	202,590	-	224,295
Other products.....	-	-	16,510	-	10,987
<b>Total.....</b>	-	-	<b>2,262,835</b>	-	<b>2,623,978</b>
<b>IMPORTS—</b>					
Building brick.....	-	-	3,975	-	16,673
Building blocks.....	-	-	2,682	-	1,794
Clays.....	-	-	-	-	-
China.....	cwt.	509,008	210,067	654,990	250,705
Fire.....	cwt.	793,894	101,616	909,972	139,317
Pipe.....	-	-	1,222	-	77
Zirconium silicate.....	-	-	687	-	2,029
Zirconium oxide.....	-	-	6,751	-	7,827
Other clays.....	-	-	192,401	-	196,294
Drain tile, unglazed.....	-	-	231	-	251
Drain and sewer pipe.....	-	-	10,294	-	9,790
Insulators, electric, porcelain.....	-	-	55,960	-	62,510
Earthenware and chinaware.....	-	-	2,858,562	-	3,054,124
Brick, fire, other, valued at not less than \$100 per M, rectangular shaped; the dimensions of each not to exceed 125 cubic inches, for use exclusively in the construction or repair of a furnace, kiln, etc.....	-	-	68,725	-	86,039
Brick, fire, n.o.p., for use exclusively in the construction or repair of a furnace, kiln or other equipment of a manufacturing establishment.....	-	-	379,952	-	667,471
Firebrick, n.o.p.....	-	-	34,489	-	47,517
Firebrick, chrome.....	-	-	38,431	-	39,184
Magnesite brick.....	-	-	246,855	-	396,664
Silica brick.....	-	-	147,901	-	210,190
Paving brick.....	-	-	4,866	-	12,035
Other clay manufactures.....	-	-	524,732	-	625,390
<b>Total.....</b>	-	-	<b>4,890,699</b>	-	<b>5,825,896</b>
<b>EXPORTS—</b>					
Building Brick.....	M	383	6,789	549	10,287
Clay—	-	-	-	-	-
Unmanufactured.....	cwt.	9,769	1,522	7,619	1,668
Manufactures.....	-	-	11,016	-	14,900
Earthenware.....	-	-	26,965	-	33,762
Porcelain insulators.....	-	-	95,260	-	125,742
<b>Total.....</b>	-	-	<b>141,552</b>	-	<b>186,359</b>



## Production in Canada, Imports and Exports of Lime, 1933 and 1934

	Total 1933		1934				Total 1934	
			Quicklime		Hydrated lime			
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
<b>PRODUCTION—</b>								
Nova Scotia.....	3,914	30,160	8,298	63,630	622	4,324	8,920	67,954
New Brunswick.....	16,849	134,786	8,949	70,132	6,803	50,277	15,752	126,409
Quebec.....	110,334	647,558	84,856	514,848	23,584	126,981	108,440	641,829
Ontario.....	146,193	1,227,197	168,215	1,284,418	22,280	249,026	190,495	1,533,444
Manitoba.....	18,032	167,640	12,988	100,958	3,580	62,650	16,568	163,608
Alberta.....	7,501	62,037	7,300	64,143	155	1,554	7,455	65,697
British Columbia.....	20,717	162,928	16,721	135,528	2,966	18,328	19,687	153,856
<b>Total.....</b>	<b>323,540</b>	<b>2,432,366</b>	<b>307,327</b>	<b>2,239,657</b>	<b>59,990</b>	<b>513,140</b>	<b>367,317</b>	<b>2,752,207</b>
<b>IMPORTS—Total.....</b>	<b>272</b>	<b>4,444</b>	—	—	—	—	<b>272</b>	<b>5,118</b>
<b>EXPORTS—Total.....</b>	<b>19,389</b>	<b>192,029</b>	—	—	—	—	<b>19,675</b>	<b>151,983</b>

## Stone

Shipments of stone from Canadian quarries during 1934 totalled 3,661,800 tons valued at \$3,801,090, an increase of 25 per cent in quantity and 27 per cent in value over the preceding year.

The tonnage of limestone shipments in 1934 constituted 92 per cent of the total Canadian stone production and the quarrying of this particular rock occurred in every province of the Dominion with the exception of Prince Edward Island and Saskatchewan.

A new development during the year was the production at Thorold, Ontario, for the first time in Canada, of rock wool. This material is manufactured from an argillaceous-dolomite found in quantity in that neighbourhood. It is used principally as a thermal insulator; it is also used for sound insulation and as an acoustical material.

## Production of Stone in Canada, by Kinds and by Provinces, 1934

	Granite		Limestone		Marble		Sandstone	
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
Nova Scotia.....	425	17,300	105,620	135,962	—	—	11,929	16,385
New Brunswick.....	6,280	80,284	33,551	85,029	—	—	1,578	5,948
Quebec.....	66,991	485,793	976,077	892,495	9,302	47,503	64,069	61,125
Ontario.....	72,630	103,227	2,056,788	1,533,287	990	7,192	10,104	28,459
Manitoba.....	213	2,702	42,226	80,155	—	—	—	—
Alberta.....	—	—	2,747	8,104	—	—	—	—
British Columbia.....	55,672	73,439	144,608	127,701	—	—	—	—
<b>Total for Canada.....</b>	<b>202,211</b>	<b>771,745</b>	<b>3,361,617</b>	<b>2,862,733</b>	<b>10,292</b>	<b>54,695</b>	<b>87,680</b>	<b>111,917</b>

## Production in Canada, Imports and Exports of Stone, 1933 and 1934

	1933		1934	
	Tons	Value \$	Tons	Value \$
<b>PRODUCTION—</b>				
Nova Scotia.....	41,449	96,629	117,974	169,647
New Brunswick.....	16,714	131,370	41,409	180,261
Quebec.....	1,342,493	1,448,740	1,118,439	1,486,918
Ontario.....	1,253,906	983,268	2,140,512	1,672,165
Manitoba.....	33,190	74,227	42,439	82,857
Alberta.....	1,550	8,817	2,747	8,104
British Columbia.....	250,272	253,525	200,280	201,140
<b>Canada.....</b>	<b>2,939,574</b>	<b>2,996,576</b>	<b>3,661,800</b>	<b>3,901,690</b>
<b>IMPORTS—</b>				
Building stone, other than marble or granite, sawn on more than two sides, but not sawn on more than four sides.....	4	200	-	-
Building stone other than marble or granite, planed, turned, cut or further manufactured than sawn on four sides.....	-	-	1	122
Flagstone, sandstone, and all building stone, not hammered, sawn or chiselled.....	-	8,947	-	16,879
Flagstone and building stone, other than marble or granite, sawn on not more than two sides.....	-	729	-	2,748
Granite, sawn only.....	-	5,366	-	4,961
Granite, manufactures of, n.o.p.....	-	8,495	-	8,212
Granite monuments.....	-	28,916	-	19,036
Granite, rough, not hammered or chiselled.....	-	48,928	-	65,925
Paving blocks.....	-	25	-	-
Marble, rough, not hammered or chiselled.....	-	7,063	-	3,144
Marble, sawn or sand rubbed, not polished.....	-	10,474	-	11,322
Marble, not further manufactured than sawn for tombstones.....	-	16,695	-	15,078
Marble, manufactures of, n.o.p.....	-	18,526	-	8,440
Refuse stone.....	41,277	35,773	364,088	200,398
Slate—including roofing, pencils, writing, mantels and manufactures of, n.o.p.....	-	30,567	-	40,966
Manufactures of stone, n.o.p.....	-	15,531	-	22,136
<b>Total.....</b>	<b>-</b>	<b>236,235</b>	<b>-</b>	<b>419,367</b>
<b>EXPORTS—</b>				
Crushed stone.....	40,343	76,162	52,273	94,794
Granite and marble, unwrought.....	964	12,997	1,153	9,766
Freestone, limestone, and other building stone, unwrought.....	113	1,480	-	-
Dressed stone.....	-	701	-	409
<b>Total.....</b>	<b>-</b>	<b>91,340</b>	<b>-</b>	<b>104,969</b>

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