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

PRELIMINARY REPORT

ON THE

# MINERAL PRODUCTION OF CANADA

DURING THE CALENDAR YEAR

1930

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



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# LIST OF PUBLICATIONS

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#### MINING. METALLURGICAL AND CHEMICAL BRANCH DOMINION REREAT OF STATISTICS

#### MINERAL PRODUCTION (Mining and Metallurgy).

General Reports

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

Monthly Report 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 11 chapters, each dealing with a particular branch of the industry. Statistics on production and trade in mineral products appear in detail in the appropriate chapters. A list of operating companies with their office and plant addresses is included. Fully indexed. Chapter titles are: Canada—The Provinces—The Gold Mining Industry—The Silver Mining Industry — The Nickel-Copper Industry — Miscellaneous Metal Mining Industries—The Non-Ferrous Smelting and Refining Industry— The Coal Mining, Coke, Natural Gas, Peat and Petroleum Industries-Non-Metal Mining Industries (Other than Fuels)—The Clay Products and Other Structural Materials Industries — Directory of Reporting Firms — Notes on the Methods

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Coal-

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

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

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

Annual Report on Coal Statistics for Canada.

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

Annual Bulletins

(a) MINERAL PRODUCTION-

Metals. - Arsenic-Cobalt-Copper-Gold-Lead-Nickel-Metals of the Platinum Group-Silver-Zinc-Miscellaneous Metals including Aluminium, Antimony,

Chromite, Iron ore, Manganese, Mercury, Molybdenum, Tin, Tungsten.

Non-Metals.— Abrasives—Asbestos—Coal—Feldspar—Gypsum—Iron Oxides—Mica—Natural Gas—Petroleum—Quartz—Salt—Tale and Soapstone—Miscellaneous Non-Metallic Minerals including Actinolite, Barytes, Fluorspar, Graphite, Magnesite, Magnesium Sulphate, Mineral Waters, Natro-Alunite, Peat, Magnesite, Magnesium Sulphate, Mineral Waters, Natro-Alunite, Peat, Phosphate, Pyrites, Sodium Carbonate, Sodium Sulphate.

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

Stone and Slate.

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

By Industries.-Gold Mining Industry including Alluvial Gold Mining, Auriferous Quartz Mining and Copper-Gold-Silver Mining—Silver Cobalt and Silver-Lead-Zinc Mining Industry—Nickel-Copper Industry—Miscellaneous Metal Mining Industries—The Non-Ferrous Smelting and Refining Industry—The Coal Mining, Coke, Natural Gas, Peat and Petroleum Industries—Non-Metal Mining Industries (Other than Fuels)-The Clay Products and Other Structural Materials Indus-

By Provinces. - Nova Scotia - New Brunswick - Quebec - Ontario - Manitoba-Saskatchewan - Alberta - British Columbia - Yukon.

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

#### PREFACE

The present statistical report includes the latest available figures on the mineral production of Canada for 1930, and imports and exports of the principal minerals and mineral products in that year. The compilation shows that the value of production was considerably less than in 1929 due to lower prices for the metals and to a falling off in demand for non-metallic minerals and structural materials. On the other hand programs of enlargements projected two or three years ago by some of the larger mining and smelting companies were brought to a successful completion during 1930 and Canada now stands well equipped to meet any normal increase in demand for the principal metals either in the raw, semi-manufactured or fully-manufactured state.

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; and with the provinces of Quebec, Ontario, and British Columbia in the collection of annual mineral production returns, thereby lessening the work of the mine operators in the matter of making returns and also tending to make the compilations more uniform as between the provinces and the Dominion. The Bureau desires to acknowledge its indebtedness to the provincial governments and to other Dominion departments for the valuable assistance rendered in connection with this report.

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

The report has been prepared under the direction of Mr. W. H. Losee, B.Sc., chief of the Mining, Metallurgical and Chemical Branch of the Bureau, by Mr. R. J. McDowall, B.Sc., who was assisted by Mr. B. R. Hayden of the mineral division staff.

R. H. COATS.

Dominion Statistician.

DOMINION BUREAU OF STATISTICS, OTTAWA, February 23, 1931.

	19	29	19	30	Per cent In or Decr	crease (+)
	Quantity	Value	Quantity	Value	Quantity	Value
MRTALLICS     Ib.	5,230,088 194,329 773,976 126	\$ 171,320 307,114 675,294	12.732	\$ 129,527 6,366 394,800	- 13.5	- \$ 24.4 - 41.5
Cobalt         lb           Copper         lb           Gold         fine oz.           Iron ore sold for export         tons           Lend         lb	929,415 248,120,760 1,928,308 2,748 326,522,566	1.801,915	694,163 303,356,644 2,107,073 412	1,144,007 37,990,226 43,557,063 1,239 13,109,451		- 36·6 - 12·5 + 9·2 - 83·1 - 20·6
Manganese ore tons Molybdenite lb, Nickel lb, Palladium, Rhodium, Iridium, etc. fine oz. Platinum fine oz. Silver fine oz. Zine lb.	16, 150 110, 275, 912 17, 318 12, 519 23, 143, 261 197, 267, 087	6,400 27,115,461 809,289 846,756 12,264,308 10,626,778	244 103,768,857 34,063 34,013 26,435,935	1,356 24,455,133 895,040 1,542,761 10,086,367 9,635,957	- 6·0 + 96·6 + 171·6 + 14·2 + 35·6	
Total	-	154, 454, 056	201.000,418	142,949,293		- 7.5
Nun-Metallics—Fuels Coal. tons Natural gas. M cu. ft. Peat tons Petroleum, crude bris.	17,496,557 28,378,462 2,607 1,117,368	63,065,170 9,977,124 13,339 3,731,764	14,878,728 29,104,570 2,847	53,287,813 9,635,704 10,932	- 15·0 + 2·5 + 9·2	- 15·6 - 3·5 - 18·1
Total	- 1,117,008	76,787,397	1,492,471	4,953,885 67,888,234	+ 33.5	+ 32.7
Actinolite tons Asbestos tons	306,055 105	375 13,172,581 2,341	242, 112 66	8,390,163 1,484	+ 13·3 - 20·9 - 37·2	+ 16·5 - 36·4 - 36·7
Barytes tons Beryl crystals lb. Bituminous sands tone Diatomite tons Feldspar tons Fluorspar tons Graphite tons Grindstones tons Grypsun tons Iron oxides tons Iron oxides tons	4,456 989 429 37,527	3.956 10,330 340.471	1.992 554 27.423	7,968 13,247 237,383	+ 101·4 + 29·1 - 27·0	+ 96·3 + 28·2 - 30·3
Fluorspar tons Graphite tons Grindstones tons Gypsum tons	17,870 1,461 1,947 1,211,689	268,120 103,174 106,354 3,345,690	1,610 850 1,040,883	1,240 100,322 57,799 2,772,584	+ 10·1 - 56·4 - 14·1	- 2.8 - 45.7 - 17.2 - 27.7
Iron oxides tons Magnesite tons Mauganese (bog) tons Mica tons	6,518 18,809 301 4,053	115,932 401,170 1,830 118,530	6,596 13,336 275 1,261	83,873 336,162 1,650 97,156	+ 1·1 - 29·1 - 8·7 - 68·9	- 31·6 - 9·8 - 18·1
Phosphate tons Quartz tons Salt tons Silim brief	321,905 1,185 265,949 330,264 3,951	16, 139, 5, 380 561, 527, 1, 578, 086, 173, 581	224.741 40 264.732 268.851	10.078 760 475,623 1,681.217 158,633	- 30·2 - 0·8 - 18·6	- 37·6 - 15·3 + 6·5
Iron oxides tons Magnesite tons Magnesite tons Magnesite tons Magnesite tons Mice tons Mice tons Mice tons Mice tons Mineral waters Imp gals Phosphate tons Salt tons Salt tons Silica brick M Soapstone tons Sodium carbonate tons Sodium sulphute tons Sulphur tons Tale tons Voleanie dust tons	5,018 42,781 15,509	47, 986 8, 100 64, 132 350, 843 181, 212	3,606 - 364 31,571 36,972 11,841	50, 168 4, 550 293, 847 308, 777 136, 048	- 8.8 - 39.5 + 529.1 - 13.6 - 23.7	- 8·7 + 4·5 - 43·9 + 358·3 - 12·0 - 25·0
	300	6,000	326	6.520	+ 8.7	+ 8.6
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS—Clay Products		21,073,959		15,227,689		- 27.8
Brick—Soft mud process [Face. M Common M Stiff mud process [Face. M (wire cut). Common M Dry press. Face. M Common M Common M M M M M M M M M M M M M M M M M M M	26,624 77,399 114,093 170,840 38,591	538,096 1,195,511 2,469,417 2,509,451 813,461	9,001 53,494 96,363 115,447 31,945	179,148 815,594 2,094,172 1,632,424 850,184	- 06.2 - 30.9 - 15.6 - 32.5 - 17.3	- 66 · 7 - 31 · 8 - 15 · 2 - 35 · 0 - 19 · 4
Sewer brick	26, 131 187 4, 765 97 5, 196	368,039 12,795 96,588 3,844 251,043	16, 920 339 994 9	208,495 27,648 18,692 297	- 35·3 + 81·2 - 79·1 - 27·1	- 43 · 4 + 116 · 0 - 80 · 7
Fireclay and other clay tons Fireclay blocks and shapes Hollow blocks tons	5,041 221,800 35,075	35, 226 130, 411 2, 214, 384 4, 628	3,790 2,870 169,055 3,056	177,608 25,974 147,309 1,716,170 376	- 43·1 - 23·6	- 53.2 - 26.3 + 12.9 - 22.5
Roofing tile No. Floor tile (quarries) sq. ft. Drain tile M Sewer pipe, copings, ftue linings, etc. tons Pottery, glazed or unglazed \$ Other clay products.	307,400 25,000	70,186 720,316 2,005,887 323,194 142,166	203,789	59,030 631,118 1,783,422 292,146 231,411	- 33·8 - 17·0	- 15.9 - 12.4 - 11.1 - 9.7 + 62.7
Total		13,904,643	-	10,697,218	-	23 -1
Other Structural Materials Cement. brls. Lime tons Sand and gravel tons Slate tons	12, 284, 081 674, 087 27, 846, 945	19,337,235 5,908,610 7,317,814	11, 032, 539 507, 855 29, 006, 338 150	17,818,451 4,164,251 7,302,424 3,000	- 10·2 - 24·7 + 4·1	- 7.9 - 29.6 - 0.2
Stone tons Total	9.622,424	12.066,532 44,636,191	9,878,106	12,419,903	2.6	+ 2.9
-	ted.	310,850,246		41,708,929 278,470,563		- 10.4

#### DOMINION BUREAU OF STATISTICS

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

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

#### PRELIMINARY REPORT

ON THE

# MINERAL PRODUCTION OF CANADA

DURING THE CALENDAR YEAR, 1930

Canada's mineral production amounted to \$278.470,563 in 1930. This is a decrease of 10·4 per cent from the 1929 record of \$310.850,246 but \$3,481,076 above 1928. More gold, copper, zinc, natural gas, petroleum, stone and sand and gravel were produced than ever before and the silver and lead output exceeded that of the previous year, but the production of coal, asbestos, gypsum, salt, clay products, cement and lime were all lower than in 1929.

Metals as a group totalled \$142,949,293 as compared with \$154,454,056 in 1929. This drop in value is accounted for by the drastic reduction in metal prices during the year. Silver touched an all time low; copper fell from 17.775 cents in January to 9.597 cents in October; lead averaged 3.927 cents per pound on the London market and the average quotation for zinc on the same market was 3.6 cents.

On account of the lower output of coal during 1930 the value of the fuels group at \$67,888,334 showed a decline of 11.6 per cent. Petroleum production however increased 33.5 per cent in quantity and 32.7 per cent in value over the previous year. Other non-metals, the principal items of which were asbestos, gypsum, salt, sulphur, quartz, and sodium sulphate, were valued at \$15,227,689, a decrease of 27.8 per cent from 1929.

Structural materials comprising coment, lime clay products, stone and sand and gravel were valued at \$52,405,247 as compared with \$58,534,834 in 1929.

The following table shows the value of production for metals, fuels, other non-metals, clay products and other structural materials in each of the past ten years.

Values of Mineral Production of Canada by Classes, 1921-1930

Year	Metallics	Coal, natural gas, peat and crude petroleum	Other non- metallics	Clay products and other structural materials	Total
	\$	\$	\$	\$	\$
1921 1922 1923 1924 1924 1925 1926 1927 1928 1929	115,237,581 113,561,030 132,012,454	71,990,674 78,465,622 59,770,024 57,354,055 68,743,933 71,426,516 74,413,160 76,787,397	10,986,120 13,471,110 12,025,985 14,497,746 16,496,211 17,559,730 18,826,692 21,073,959	39,534,741 37,751,381 35,380,889 37,649,231 39,959,398 44,809,419 49,737,181	171, 923, 342 184, 297, 242 214, 079, 331 209, 583, 406 226, 583, 333 240, 437, 123 247, 356, 695 274, 959, 487 310, 850, 246 278, 470, 563

Figures of total production, however, fail to convey a correct impression of the magnitude of the mining industry in this country. Among the basic industries of Canada mining stands third, being exceeded only by agriculture and forestry. In 1929 the latest year for which industrial statistics are complete, some \$870,000,000 was invested in this industry; more than 95,000 men were employed in operating the mines, smelters, oil and gas wells, brick plants and quarries, who received \$125,000,000 in salaries and wages, and these figures do not include the expenditure of the many prospecting and exploration companies. In addition to the mining of our known ore bodies, and the resulting metallurgical operations, prospecting in the outlying areas of the Dominion has been carried forward to a much greater degree than formerly. The development of the aeroplane has provided an agent of improved and rapid transportation in regions where the canoe, dog team and pack horse were the only other means available, while exploration and photography from the air are providing accurate knowledge and reliable maps of large areas that hitherto were almost entirely unexplored.

#### **Principal Minerals**

Canada's principal metals and minerals in order of their total values in 1930 were coal, gold, copper, nickel, cement, lead, stone, clay products, silver, zinc, natural gas, asbestos, sand and gravel, petroleum, lime, gypsum, platinum group metals and salt. These 18 mineral products represent over 98 per cent of the total value of production but many of the remaining items on the list, while not of immediate importance, have possibilities, and each year there is a changing in relative values among them as new uses are developed. For instance, the sodium sulphate of Saskatchewan, which for years was mined only in small quantities, new shows an increase in production due principally to the action of one of our chemical companies which transforms it into nitre cake for use in the smelting of our nickel-copper ores. Sulphur, formerly produced and sold in Canada only in the form of pyrites, is now being recovered from smelter gases to make sulphuric acid direct.

Coal.—Production of coal from Canadian mines in 1930 declined to a point 15 per cent below the 1929 level, and 9.4 per cent below the average for the past five years. Compared with the 1929 output losses were recorded in the five important producing provinces; the most serious declines were as follows: Nova Scotia, 11.4 per cent; Alberta, 19.5 per cent; and British Columbia, 16.4 per cent. Saskatchewan's output was only slightly below the previous year's record, while New Brunswick mines reported a falling off of 4.3 per cent in production. The Yukon total was higher than in 1929. Nova Scotia was the principal producing province, accounting for 42 per cent of the total output in 1930 and Alberta followed with 38.7 per cent. Canadian production during the year consisted of 10.824,291 tons of bituminous coal, 3.451.079 tons of lignite coal and 603.358 tons of sub-bituminous coal. Imports of coal totalled 17.620,074 tons including 4,256,090 tons of anthracite, 13,345,308 tons of bituminous and 18,676 tons of lignite. Anthracite imports consisted of 2,955,954 tons from the United States, 996,127 tons from Great Britain, 291,407 tons from Russia, 11,480 tons from Germany, and 1,122 tons from the French East Indies. Bituminous importations were obtained principally from the United States. The lignite coal imported was purchased from the United States. Exports of Canadian coal declined 26 per cent in 1930. Coal made available for consumption in Canada during 1930 totalled 31,874,290 tons as compared with 35.272,885 tons in the preceding year. The seasonal trend of employment in the Canadian coal mines was more pronounced than usual in 1930; during January 30,839 men were employed, a steady falling off was recorded during the following months and the low point for the year was reached in June when 24,693 men were on the mine pay rolls During December 30,558 men were employed in the industry.

Gold.—Canada produced more gold in 1930 than ever before, passing the 2,000,000 ounce mark for the first time. While the output from the Porcupine area was not as great as in 1929, the Kirkland Lake camp's production was far ahead of last year. In Porcupine preparations have been made for expansion, the Dome has a new mill in operation and the new mill at the McIntyre will be in operation early this year (1931). The Hollinger maintained a steady production and it is understood other producers in the camp are enlarging their development plans. At Kirkland Lake the increase of 22 per cent speaks for itself. British Columbia contributed

163,490 ounces to the 1930 total. This was recovered principally from the ores of the Premier, the Nickel Plate and the Pioneer, and from alluvial workings. Another important source is the base metal ores from which gold is recovered as a by-product. Quebec production shows a marked increase over last year due to the fact that Noranda, when the price of copper is low, is able to mine ore which carries high gold values. The Siscoe and Granada are other contributors and considerable interest is being presently displayed on other possibilities in this section of the province. Yukon placer output was only slightly under last year. One gold mine in Manitoba ran steadily and gold is also reported in the blister copper made at Flin Flon. As in other years Nova Scotia reported small shipments.

Copper.—Canada produced 22 per cent more copper than in 1929, but because of the marked reduction in average price when compared with 1929 the total value was under that of last year. The price of electrolytic copper in New York last January, February and March was 17.775 cents per pound; since then a steady decline in price has occurred reaching a new record low of 9.597 cents in October. November and December prices were slightly better. During the past two years Canada has made rapid strides in the matter of handling raw output. Refineries have been built and fabricating plants constructed that can supply a large part of the Canadian demand for this metal in its various forms and have a considerable quantity left over for export. In 1930 the various copper producing provinces contributed to the total production as follows:—Ontario, 42 per cent; British Columbia, 31 per cent; Quebec, 26 per cent; and Manitoba, about 1 per cent.

Nickel.—Canada's nickel output in 1930 was slightly under 1929. Since this metal has been changed to peace time uses the output is bound to follow the general industrial conditions and it naturally follows that nickel output would be less in 1930; the decline is remarkably small, however.

The International Nickel Company produce electrolytic nickel and nickel oxide at Port Colborne; some matte is shipped to Huntingdon for the manufacture of monel metal and some is exported to Clydach, Wales, for refining. The smelter matte from the Falconbridge mine is shipped to Norway.

Cement.—Cement production was less, totalling 11,032,539 barrels valued at \$17,818,451. Quebec and Ontario are the principal producers but more than a million dollars worth is produced annually in each of the three western provinces, Manitoba, Alberta, and British Columbia.

Lead.—Lead output at 333,067,797 pounds was greater than in 1929 and only 1·5 per cent under the record year of 1928. Over 95 per cent of Canada's lead is produced in British Columbia ores principally from the Sullivan mine. The Monarch mine at Field, B.C., operated by the Base Metals Corporation exported lead concentrates. In Nova Scotia, lead concentrates were produced from the ores of the Stirling mine but no shipments were made. The Tétreault mine in Quebec was not operating. Ontario's output was composed of the pig lead made at Galetta and the lead concentrates produced by the Treadwell Yukon Company in the Sudbury area. Production from the Mayo camp of the Yukon was about the same as last year.

Stone.—Products of the quarry are always in much demand and Canada has a variety to suit almost every purpose. Plants for the dressing of granite, marble, limestone and sandstone are to be found in various parts of the Dominion. In the realm of road-making nothing has yet been found that will take the place of crushed stone and the large railway companies are using crushed stone in place of sand and gravel for ballasting their road-beds. Stone production in 1930 totalled \$12,419,903, a considerable item in Canada's mineral production.

Clay Products.—Clay products production was lower than in 1929, due to a falling off in building construction. Brick and tile manufacturers are situated at strategic points in all the provinces so that any normal demand can be readily met.

Silver.—Silver output at 26,435,935 ounces was the largest of any year since 1915 and greater than 1929 by 14 per cent, despite the very drastic reduction in price. Production is noted from Nova Scotia where it is associated with gold bullion; from Quebec where it is

mined with copper and gold ores. In Ontario silver output amounted to 10,205,010 fine ounces as against 8,890,726 ounces in 1929. Manitoba's production, though not large, will increase when the large copper-zinc-silver mines come into full production. British Columbia's output was larger than last year by 17 per cent due in large part to the fact that in addition to the Sullivan and Premier, the former great silver producing properties of the province, the Prosperity and Porter-Idaho mines made substantial shipments to the smelters. Shipments from the Mayo camp in the Yukon territory were greater than in 1929.

Zinc.—Canada's output of zinc in 1930 established a new high record despite the average low price of 3.6 cents per pound on the London market on which basis the bulk of Canada's zinc is sold. In addition to the Sullivan production, considerable zinc was recovered by the re-treatment of slags which had been stored at Trail. The Monarch mine at Field, B.C., the Amulet mine in Quebec, the Treadwell Yukon in Ontario, all exported zinc concentrates. In Manitoba, the Hudson Bay Mining and Smelting Company commenced the production of refined zinc in the late autumn. This company along with the Consolidated Smelters at Trail are the only producers of refined zinc in Canada.

Natural Gas.—Natural gas output set up a new high record in 1930 when 29,104,570 thousand cubic feet were produced. Wells in Alberta accounted for more than 70 per cent of the total Canadian production. Increasing quantities of natural gas are being produced from the wet gas wells of the Turner Valley field, Alberta, and the problem of utilizing all this gas continues to be the subject of much study. During 1930 experimental work was done in connection with the storing of some of this gas in the exhausted sands of the Bow Island field.

Asbestos.—With the exception of coal, asbestos has been Canada's most valuable non-metallic mineral for some years. Competition from Africa and Russia, along with the general tie-up in business, affected the 1930 output seriously. Production amounted to 242,112 tons valued at \$8,390,163 as compared with 306,055 tons valued at \$13,172,581 in 1929, a decrease of 21 per cent in quantity and 36 per cent in value.

Sand and Gravel.—As with stone, sand and gravel constitutes one of the important Canadian mineral products. Its ready accessibility and the fact that the aggregate is in form for immediate use, gives it a wider range than stone for concrete construction, and for small concrete jobs that would not warrant the installation of an expensive quarrying and crushing plant, sand and gravel will be always used. The fact that gravel pits are to be found in so many convenient localities makes its use ideal for road construction where traffic is not too heavy. Sand is indispensible in all construction where line and cement are used and because of its common uses we are apt to overlook the important place it takes in our every day life.

Petroleum.—Petroleum production at 1,492,471 barrels valued at \$4,953,885 recorded an increase of 33·5 per cent in quantity and 32·7 per cent in value over the 1929 output. In 1930 Alberta well yielded 1,368,411 barrels. Ontario wells produced 117,302 barrels, and wells in New Brunswick 6,758 barrels.

Lime.—In conformity with the drop in other structural materials, lime production was lower than last year. Besides its use in the building trades, the consumption in chemical and other industrial enterprises is considerable, and an effort is being made this year by the Bureau to get a more complete survey of the consumption of this old and indispensable mineral product.

Gypsum.—Gypsum quarries are operated in Nova Scotia, New Brunswick, Ontario, Manitoba, and British Columbia. Nova Scotia is the principal producer and the bulk of the output in this province is exported to the United States. During the past few years much research work has been done on this mineral with very favourable results. As a fire resistant it has few competitors and in some of its manufactured forms it acts as a good insulator.

Salt.—Most of Canada's salt comes from wells in Ontario. Its markets are largely domestic and it also plays a large part in chemical manufacturing industries in the western part of the province. In Nova Scotia, the only other province producing salt at the present time, Malagash salt is recovered by mining methods.

#### Review by Areas

Nova Scotia.—Coal is Nova Scotia's principal mineral. In 1930 production reached 6,252,552 tons valued at \$24,518,860 as compared with 7,056,133 tons worth \$28,071,956 in 1929. In addition there are large commercial deposits of gypsum, the greater part of the annual output being exported to the United States. It is in this province that Malagash salt is mined; other non-metallies such as barytes, quartz, and diatomite are also produced. Production of these other non-metals was less than last year. Gold is produced in small amounts annually, output for the province being given at 1.272 fine ounces in 1930.

The Stirling mine, which has a complex ore of lead, zine and copper, was brought to the production stage during the year, the mill being operated from May until August. Underground exploration was continued at the Coxheath copper mine. The Torbanite Products, Limited, interested in the developments of the oil shale deposits in Pictou county were delayed in their development work by a fire which destroyed part of their plant.

A small experimental shipment of manganese ore was made from a property in Lunenburg county.

New Brunswick.—Coal, gypsum, natural gas, petroleum, grindstones and structural materials are produced in New Brunswick. Coal production totalled 209,311 tons valued at \$864,006 as against 218,706 tons valued at \$909,169 in 1929. Gypsum output was not as large as in 1929. Several carloads of manganese ore were shipped during the year to steel companies from a property situated in Albert county.

Quebec.—For many years the non-metallic minerals of Quebec constituted the principal mineral production of that province. Evidences of changes have been appearing during the last year or two and at the present time the metallic production represents 34 per cent of the total. At one time Quebec supplied most of the world's asbestos, but competition from Rhodesia and Russia, co-incident with the general commercial depression, affected the 1930 output seriously. There has been a steady annual output of feldspar and mica and other non-metallics including graphite, magnesite, iron oxides, mineral waters, phosphate, pyrites, quartz are also produced, in addition to cement, brick, and other clay products, lime, building stone, and sand and gravel.

Within the past two years Quebec has developed into a notable producer of copper and although confronted with drastically reduced prices for this metal, the Noranda Mines, Ltd.. was able to maintain continuous operation throughout the year. This company, essentially a copper producer, is fortunate in possessing copper ores which are almost unique in their high gold values which fact has a large bearing on low cost production. The Noranda Mines has a substantial interest in a new copper refinery at Montreal East which is expected to be in operation early in 1931. The Waite-Ackerman-Montgomery shipped ore to the Noranda smelter until May, 1930, and the Amulet ran their mill until November, shipping copper concentrate to Noranda and zinc concentrate abroad. The Siscoe gold mine operated continuously throughout the year and the Granada, another gold mine, came into production in June. At the O'Brien Cadillac gold property development was continued throughout the year.

Ontario.—Ontario, which produced 40.5 per cent of the total mineral production of the Dominion in 1930, continued to show progress in the face of adverse conditions. The gold camps reaped the benefits of the general fall in commodity prices and 1930 will stand out as an exceptional year in Canadian gold mining. Production from the Porcupine camp totalled 859.079 fine ounces as against the larger 1929 output of 932,732 fine ounces, the decrease being accounted for by the fact that the Dome mine did not produce during the first ten months of the year, except for a small amount from the clean-up of the mill which was destroyed by fire in October, 1929. A new mill erected by the Dome began

operations in November, 1930. An intensive geological study is being made at the Hollinger and production of gold was maintained steadily throughout the year. The new McIntyre mill, which will use flotation, is expected to be into production early in the spring of 1931. Kirkland Lake output of gold reached a grand total of 831,503 fine ounces, an increase of 22 per cent over 1929. The Lake Shore mine is now treating in the neighbourhood of 2,000 tons per day; the Teck Hughes has continued deep development; the Wright-Hargreaves improved its position and declared a dividend payable early in 1931. The Sylvanite paid its first dividend. The Howey mine in Red Lake came into production in March and has operated continuously since. Other sources of gold in Ontario are the nickel-copper mines and copper-zine mines of the Sudbury area. A new gold find was reported in the Metachewan district during the autumn, and one large Canadian mining company is doing intensive development work upon it. The quantity of copper produced in Ontario gained 44 per cent over last year and included the copper in blister made at Port Colborne, copper in nickelcopper matte exported by the nickel companies, the copper in concentrates exported by the copper-zinc-silver mines, and the small amount of copper contained in silver ores exported from the Cobalt camp. A copper refinery, the first in Ontario, was completed and put in operation in July at Copper Cliff. It has a rated capacity of 120,000 tons and in addition to refining converter copper made at Port Colborne by the International Nickel Company, also treated blister copper made at Anyox, B.C., by the Granby Consolidated.

Nickel production was only 6 per cent under 1929. Metallic nickel and nickel oxide are made at Port Colborne, Ontario, by the International Nickel Company which organization also exports nickel-copper matte to Huntington, West Virginia, to be made into monel metal, and to Clydach, Wales, for refining. The Falconbridge Nickel mines also shipped nickel-copper matte to their Norway refinery during the period, February to November. The Treadwell Yukon Company, operating in the Sudbury district, shipped lead, zine and copper

concentrates.

In the silver camps of Cobalt, South Lorraine and Gowganda several companies carried on in the face of the worst silver market experienced in years; despite the extremely low prices production was greater than in 1929.

Lead production in Ontario was less than last year.

Natural gas and petroleum production in Ontario was slightly lower than in 1929; the other non-metallics showed declines and the structural materials group reflected the depression in the building trades.

Manitoba.—For the first time in the history of mining in Canada, Manitoba is able to report a production of blister copper and refined zinc. The Hudson Bay Mining and Smelting Company, operating the Flin Flon mine, brought their smelter to production late in the fall and reported an output of these metals along with some gold and silver as by-products. At this writing blister copper is being shipped to the Canadian Refineries at Montreal and the zinc is being sent to British and various European ports. When the Sherritt-Gordon mine begins production concentrates from its mill will be treated at the Flin Flon smelter. Gold production in this province was principally from the Central Manitoba mine.

Saskatchewan.—In Saskatchewan, lignite coal production at 578,152 tons was slightly under that of 1929. Sodium sulphate output was considerably greater, due to the fact that a large chemical company at Copper Cliff is converting this material to sodium acid sulphate for use in the "tops and bottoms" separation process in nickel-copper smelting.

Alberta.—Coal production in Alberta followed a lower trend during 1930, although in October there was an increase in output, particularly in the lignite fields. This advance, however, was not continued during the closing months of the year. Substantial gains were recorded in the production of petroleum and natural gas during 1930.

The output of coal totalled 5,754,752 tons valued at \$18,513,620; in the previous year 7,150,693 tons worth \$22,928,182 were produced. Production during 1930 consisted of 2,278,467 tons of bituminous coal; 603,358 tons of sub-bituminous coal and 2,872,927 tons

of lignite coal.

The output of gas from Alberta wells amounted to 20,540,858 thousand cubic feet valued at \$4,806,125. The Turner Valley field continued to be the main source of supply for Calgary, where over 17,000 consumers were served.

Petroleum production reached a total of 1,368,411 barrels with a value of \$4,700,760 as compared with 988,675 barrels worth \$3,458,177 produced in 1929. The bringing in of some twenty-five new producing wells was indicative of the drilling activities in the Alberta fields during 1930. Output in 1930 averaged approximately 115,000 barrels per month.

British Columbia.—British Columbia is the great base metal producing province. The world-famous Sullivan mine produces large quantities of lead, zinc and silver; the Monarch mine at Field, another lead-zinc-silver mine, came into production late in 1929 but closed down in October, 1930, owing to the low prices obtainable for these metals. The Britannia mine on Howe Sound, the Hidden Creek on Portland Canal and the Copper Mountain mine near Princeton produce copper with some gold and silver. Copper Mountain ceased producing during the last two months of the year on account of the low price of copper. Other main precious metals producers are the Premier, Porter Idaho, Prosperity, Nickel Plate and Pioneer. Lead output from this province was greater than in 1929 and zinc production was greater than in any former year. Silver production established a record also. Gold output, both placer and lode, was greater than in 1929, and much interest is being taken in the possibility of enlarging some of the gold properties and in the development of likely prospects.

Among the features of the past year was the construction of the new slag-furning plant of the Consolidated Mining and Smelting Co. Ltd., which enables the recovery of zinc formerly wasted in the lead blast furnace slags; and the completion of the first unit of the fertilizer plant by the same company.

Coal production during the year was 16 per cent less than in 1929. The use of fuel oil for industrial and domestic purposes is having a serious effect on the coal mining industry and great efforts are now being put forth towards extending the use of British Columbia's coal in the pulverized form.

Yukon.—Yukon placer gold production was slightly less than in 1929. Silver output from the Mayo camp shows a gain and lead production was about the same as in the previous year. Production from this camp does not reflect the actual year's work. Owing to the early freeze-up silver produced in the latter part of the year is not shipped until the following season, so that the 1930 shipments include part of the 1929 production. The low price of silver and lead now prevailing will seriously affect the mines in this district which are so far removed from smelting facilities.

Mineral Production	of Canada b	y Provinces.	1928-1930
--------------------	-------------	--------------	-----------

Province	19	28	192	9	193	0
TTOVINCE	Value of production	Per cent of total	Value of production	Per cent of total	Value of production	Per cent of total
	\$		\$		\$	
Nova Scotia*,	30,524,392 2,198,919 37,037,420	11-10 0-80	2,439,072	9·94 0·79	26,771,300 2,270,812	9.6
Quebec Intario Manitoba	99,584,718 4,186,853	13 · 47 36 · 22 1 · 52	46,358,285 117,602,505 5,423,825	14-93 37-85 1-75		14 · · · · · · · · · · · · · · · · · · ·
Baskatchewan Alberta British Columbia	1,719,461 32,531,416 64,496,351	0 · 63 11 · 83 23 · 45	2,253,506 34,739,986 68,162,878	0.72 11.17 21.92	2,298,725 30,829,997 54,814,955	0 · ! 10 · !
Yukon	2,709,957	0.98	2,905,736	0 - 93	2,503,197	0.1
Total	274,989,487	100-00	310,850,246	100-00	278, 470, 563	100-

<sup>\*</sup> Includes small production from Prince Edward Island.

#### (Metal Prices, 1926-1930)

Metal	Market	Unit	1926	1927	1928	1929	1930
			\$	\$	\$	\$	\$
Cobalt Co	New York. New York. New York. New York. Montreal. New York. Montreal. Toronto. London. New York.	Pound Pound Pound Pound Pound Ounce Ounce Pound Pound Pound Pound	0·15988 0·0350 2·50 2·10 0·13795 0·1577 0·08417 0·08154 0·08274 0·06751 0·36 113·260 0·62107 0·63615 0·07337 0·08825 0·07410	0·12393 0·0383 2·50 0·12920 0·12920 0·1478 0·0675 0·0683 0·05256 0·36 84·636 0·56370 0·62747 0·06242 0·07710	0·10305 0·04 2·63 2·10 0·14570 0·16402 0·06305 0·06206 0·04576 0·36 78·58 0·58176 0·50472 0·06027 0·07144 0·05493	0·08956 0·04 2·52 2·10 0·18107 0·19978 0·06833 0·06678 0·06775 0·05054 0·35 67·655 0·52993 0·45155 0·06512 0·0687 0·0687 0·06512	0·07667 0·04 2·50 2·00 0·12982 0·1498 0·05517 0·05496 0·056 0·03927 0·36 45·358 0·3154 0·04550 0·05084

<sup>•</sup> For 1926 prices are for 99% grade; 1927-1930 quotations are for Straits.

#### Metal Prices by Months, 1929-1930

	C	opper (E	lectrolyti	e)			Pig I	Lead		
Month	(In e	York cents ound)		don sterling ng ton)	Mont (In e	ents	New (In e	ents	*Lor (In £ s per lor	terling
	1929	1930	1929	1930	1929	1930	1929	1930	1929	1930
January February March April May June July August September October November December	16.603 17.727 21.257 19.500 17.775 17.775 17.775 17.775 17.775 17.775 17.775	17.775 17.775 17.775 15.621 12.756 12.049 11.023 10.693 10.310 9.597 10.113 10.300	78 · 602 83 · 538 98 · 356 89 · 405 83 · 727 84 · 043 84 · 043 84 · 250 84 · 363 83 · 978 82 · 202 82 · 569	83 · 250 83 · 500 83 · 405 74 · 338 59 · 545 56 · 750 52 · 522 50 · 725 49 · 500 45 · 772 48 · 963 50 · 065	6-430 6-580 7-175 7-080 6-740 6-700 6-550 6-600 6-675 6-625 6-480 6-500	6-500 6-425 5-950 5-650 5-330 5-360 5-360 5-360 5-30 4-910 4-910	6.650 6.853 7.450 7.187 7.000 7.000 6.804 6.750 6.890 6.873 6.285 6.250	6·250 6·236 5·662 5·537 5·523 5·410 5·250 5·488 5·500 6·151 5·100	22 · 111 23 · 128 25 · 409 24 · 783 23 · 949 23 · 694 22 · 810 23 · 185 23 · 557 23 · 226 21 · 622 21 · 472	21·54/ 21·18/ 19·80/ 18·31/ 17·79/ 17·94/ 18·16/ 18·29/ 17·90/ 15·74/ 15·93/ 15·28/
Average	18-107	12.982	84-921	61-528	6-678	5-496	6.833	5.517	23 - 246	18-07

 $<sup>^{\</sup>circ}$  Computed at par (\$4.8666), the average London price of lead in 1929 was 0.05054 cents per pound; and in 1930 was 0.03927 cents per pound.

		Sil	ver				Zi	ne		
Month	(In cent	(In cents per oz .: (In pene		pence per os .: (In cer		Montreal (In cents per pound)		ouis its per nd)	*London (In £ sterlir per long ton	
	1929	1930	1929	1930	1929	1930	1929	1930	1929	1930
January February March April May June July August September October November December	57.019 56.210 56.346 55.668 54.125 52.415 52.510 52.579 51.579 51.042 49.913 49.615 48.475	45-000 43-193 41-654 42-428 40-736 34-595 34-346 35-192 36-315 35-846 35-908 32-635	26-257 25-904 26-900 25-738 25-084 24-258 24-289 24-288 23-708 23-042 22-690 22-258	20 · 896 20 · 008 19 · 298 19 · 554 18 · 850 16 · 049 15 · 928 16 · 283 16 · 738 16 · 563 16 · 625 15 · 201	7-29 7-30 7-37 7-23 7-05 7-00 6-94 6-85 6-74 6-50 6-15 6-00	5.950 5.825 5.550 5.340 5.070 4.990 4.880 4.880 4.480 4.600 4.570	6.350 6.350 6.350 6.658 6.658 6.706 6.700 6.709 6.740 6.242 5.666	5·229 5·180 4·934 4·843 4·641 4·441 4·350 4·360 4·270 4·059 4·266 4·099	26·196 26·247 27·050 26·759 26·727 26·216 25·332 24·896 24·208 22·927 20·851 20·103	19 · 63 19 · 20 18 · 30 17 · 81 16 · 63 16 · 42 16 · 17 15 · 95 15 · 77 14 · 44 14 · 70 13 · 76
Average	52-993	38 - 154	24 - 468	17-666	6-87	5.084	6.513	4-556	24-793	16 - 53

 $<sup>^{\</sup>circ}$  Computed at par (\$4.8666) the average London price of zinc in 1929 was 0.05386 cents per pound, and in 1930 was 0.03600 cents per pound.

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# Mineral Production in Canada, by Provinces, 1930

	Nova Scotia	New Bruns- wick	Quebec	Ontario	Manitoba	Saakat- chewan	Alberta	British Columbia	Yukon	Canada
METALLICS										
Arseniclb.		_		2,750,887 109,932	-		_	1,773,333 19,595	_	4,524,220 129,527
Bismuthlb.	-	_	-	12.732 6.366		_	-		-	12,732 6,366
Cadmiumlb.	-	_	-		_	_	-	394,800		304,800
Cobaltlb.	_	e-	_	694, 163 1, 144, 007	_	_		-	-	694, 163 1, 144, 007
Copperlb.	-		10, 425, 891	127,729,059 15,190,253	270.754	-	-	93,231,613 12,103,328	-	303,35 <b>6,644</b> 37,990,226
Goldfine oz.	1,272 26,294	-	141,743 2,930,088	1.736.855 35.903.978	28, 197 582, 884	-	-	163.490 3,379,638	35,516 734,181	2,107,073 43,557,063
Iron ore sold for export tons		-	412	_	-	-			-	412
Leadlb.	_	_	1.239	2,193.856	-	_				1,239 333,067,797
Manganese \$		_	-	116.031	-	-	-	12,650,351	343.069	13, 109, 451
oretons	60	240 1,296	-	_	-	_		_	-	244 1,356
Nickellb	2 _	_	-	103,768,857 24,455,133	-	-	-	-		103,768,857 24,455,133
Palladium, Rhodium,						74				
etcfine os.	_	_	_	34,040 894,511	_	_	-	23 529	-	34,063 895,040
Platinum fineos.	=	-	_	34,000 1,542,172		-	-	13 589	-	34,013 1,542,761
Silverfine oz.	67 26	-	571,603 218,089	10,205,010 3,893,619		-		11,836,632 4,516,149	1, 422, 837	26,435,935 10,086,367
Zinclb.	_	_	9,754,160 351,150		3,306,707	_	-	251,076,718 9,038,762		267, 665, 479 9, 635, 957
Total \$	26,380	1,296	13,921,457	83,383,006	-	-	-			142,949,293
Non-Metallics						ţa.				
Fuels	g 959 550	209,311				579 159	5 754 759	2,083,308	653	14,878,728
Coaltons	24,518,860	864,006		-				8,421,288	3,110	53, 287, 813
gas. M cu. ft.	-	661,975 325,749	-	7,901,137 4,503,650		-	20,540,858 4,806,125		-	29,104,570 9,635,704
Peattons	-	020,198	2,219 9,330	628 1,602	-	-	4,000,120	-	-	2,847 10,932
Petroleum		6,758	7,000	117,302		64	1,368,411			1,492,471
crudebrl.	-	17.379	-	235.740		**	4,700,760		50	4,953,885
Total\$	24,518,860	1,207,134	9,330	4,740,998	180	966,929	28,020,505	8,421,288	3, 110	67,888,334
Other non- metallics										
Actinolite. tons		100	-	34		**	-	-	-	34
Asbestostons		-	242,112	437	-		_	_		242,112
Barytestons	66		8,390,163		610	5 m	-	-	-	8,390,163 66
Bituminous tons	1,484		_		-	6r0	1,992			1,484
sandstons	-			10	-	_	7,968			7,968
Diatomite tons	7,960		17 101	16 140 0.799	-	pri 010	-	5,147		554 13,247 27,423
Feldspar tons	-	-	17, 101 131, 512		3,000		-	_	-	237,383
Fluorspar. tons			970	1,240		-		-	-	1.240
Graphitetons			13,780	86,542	-	-	-	-	-	1.610 100.322 850
Grindstones ton	110	35,689	-	04.046	-	-	-	350 22,000		57,799
Gypsumtons	949, 224	437,112	-	94,946 776,069	361,977	-		32, 129 248, 203	-	1,040,883 2,772.584 8 506
Iron oxides tons	440	-	6,590 83,753		_	-	-	120	-	6,596 83,873
Magnesitetons	-		13,336 336,162		-	510	_	-	-	13, 336 336, 162
Manganese tons (bog) \$	-	1,650	-		-	-	-	1	-	275 1,650
Micatons	-	-	62,882		-	-	-	1 -	-	1,261 97,156
22835-3										

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Mineral Production in Canada, by Provinces, 1930—(Continued)

	Nova Scotia	New Bruns- wick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Canada
Non-METABLICS —Con.						-				
Mineral water imp. gal	_	~	10,941 2,427	213,800 7,651	-	-	-	-	-	224,741
Phosphate.tons Pyrites (see	-	940	40 760	-	-	-	-	94		10,078 40 760
sulphur). Quartztons	8,057	70	42,947	207,231	-	-		6,497	_	264,732
Salttons	18,494 23,058 136,226		124,006	297,638 245,793 1,544,991	-		-	35,485	-	475,623 268,851 1,681,217
Sodium car- natetons	1112	948	_	-	-	-	-	364 4,550	-	364 4,550
Sodium sulphate.tons	-	-	1 1	-	_	31,571 293,847	***	-	-	31,571 293,847
Sulphurtons Tale and	-	010	12,653 93,038	7,275 73,835		-	-	17,044 141,904	-	36,972 308,777
soapstone.tons Volcanic	-	1 1	50, 168	11,664 133,213		-	00 00	177 2,835	-	186,216
dusttons Silica brick M	2,040	90 100	***	1,566	-	326 6.520	~	-	-	326 6,520 3,606
Total 8	78,259	474,451	9.288.651	80.374 3,139,275	364,977	310,367	7,968	460,243		158,633
					303,011		*,***	300,000		10,441,003
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS										
Clay Products Brick—Soft mud pro- cess—									H	
Face M	240 3,360 730	3,078	3,896	8,761 175,788 26,884	10,430	839	1,348	6,289		9,001 179,148 53,494
Stiff mud process (wire cut)—	9,718	46,625	44, 267	404,938	164,986	13,367	19,822	111,871	-	815,594
Face M 8 Common M 8	962 26,608 7,211 98,133	1,125 23,547 1,913 33,000	33,595 743,891 66,668 955,559	53,894 1,104,322 24,634 377,181	1,704 36,087	1,692 54,842 4,823 55,158	2,263 64,029 9,846 108,324	1,128 40,846 352 5,069	-	96,363 2,094,172 115,447 1,632,424
Face M Common M	-		2,660 67,291	24,346 483,671	-	282 9,057	3,751 61,618	906 34,549		31,945 656,184
Fancy or orna-			-	4,246 58,530	-	-	10,886 124,585	1,788 25,380	~	16, 920 208, 495
mental brick M		-	74 3,791	265 23,857	-	-	-		-	339
Bower brick M	-	80 100	-	912 15,883	-	-	-	82 2,809	97	27,648 994
Paving brick. M	-		-		_	_	-	9 297	the fee	18,692
Firebrick M		-	***	-	1	504 28,001	17 832	3,269 148,775	-	3,790 177,608
and other claytons	1,269 5,720	46 1,814		~		504 3,919	30 450	1.021 14.071	-	2,870 25,974
blocks and shapes \$ Hollow	525	552	_	-	-	118,122	-	28, 110	-	147,309
blockstons Roofing	9,378 107,998	700 8,888	39,289 481,968	90, 131 842, 497	1 335 17 754	7.566 60,214	12,823 111,808	8,433 85,043		169,655 1,716,170
tilesNo.	44	-	-	3,056 376	-	me de		-		3,058 376

# Mineral Production in Canada, by Provinces, 1930-(Concluded)

	Nova Scotia	New Bruns- wick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Canada
CLAY PRODUCTS —Con. Floor tiles										
(quarries)				203,050		739				203.789
84, 10,			-	58.854	_	176	~	-		59,030
Drain tile. M	111	5	724	18.367	310	25	58	1,164		20,764
Sewer pipe,	3,796	193	26,593	540,199	15,024	1,000	3,785	40,528	-	631,118
copings,										
flue li- nings, etc. \$	239, 475	_	260.981	830,968			335.033	116,965		1,783,422
Pottery,	208, 110		200,801	800, 800			000,000	110, 900		1,100,424
glazed or		21 015		00.204			107 400	400		000 140
unglazed, \$ Other clay	80	31,917	-	92,394	-	24	167,402	433	_	292,146
products. \$		100	711	227, 275	80	1,924	-	1,501		231,411
Total \$	495,333	146,536	2,585,652	5,236,733	233,851	345,780	997,686	656,247	110	10,697,218
Other Struc- tural Materials										
Cementbrls.	-	-	4,865,609	3,942,690	977.906	-	525, 289		-	11,032,539
T \$	21 114	10 001	7,031,529		2,268,742		1, 144, 160		84	17,818,451
Limetons	31,114 113,250	12,681 138,258	128.687 964.544	264,803 2,291,536	28,917 272,081	_	5,136 49,525	36,517 335,057	140	507,855 4,164,251
Sand and										
graveltons	312,833 133,525	528,760 46,539	6,032,105	12,678,928	304,999	3,487,833 685,649	1,623,214 388,417	2,666,120 790,178	_	29,008,338 7,302,424
Slatetons	100,020	70,000	1,400,104	u, 011, 500	- 001, 508	- 000	000,411	150	н	150
Same \$	163,354	92,369	3.946.531	5.178.010	129.608		7 000	3,000		3,000
Stonetons	292, 195	256.598	5.756, 108	4,769,269	873,412		7,903 21,736	360,331 450,585		9,878,106 12,419,903
Total., \$	538,970	441,395	15, 157, 315	16,388,192	3,719,234	685,649	1,603,838	3,173,436		41,708,029
							30,629,997			

# Monthly Production of Principal Minerals in Canada, 1930

	Asbestos	Cement	Clay Products	Coal	Copper	Feldspar	Gold	Gypsum
	tons	brls.	S	tons	lb.	tons	fine oz.	tons
January	17,117	269, 195	477,449	1.643.622	24, 936, 756	2,540	154.114	11,277
February	16,112	295,810	446,813	1,194,710	24, 226, 221	7,470	145, 436	11,410
March	19,559	448, 884	620, 421	1, 136, 765	28, 194, 655	1.195	163, 771	15.573
April	23,825	781.736	848,373	913,203	28,599,188	510	169, 166	51,936
May	23.045	1,206,554	1,139,373	1,124,545	27,481,810	810	168, 267	112,358
June	24,035	1,313,683	1,207,041	1,151,963	26,098,196	1,355	175,481	237,5)1
July	17,070]	1,504,508	1,208,069	1,058,424	26, 154, 536	1,973	170,264	148,941
August	18,353	1,466,953	1,176,351	1.111,675	26,088,577	1.660	169,621	144,813
September	20,746	1,402,769	1,089,795	1,252,665	28,011,321	1,990	177,839	98,012
October	26,322	1,180,205	1,075,405	1,659,431	23,680,686	2,380	186,370	104,846
November	18,448	709.671	912.813	1.348,306	21,736,050	2,200	197,186	80,712
December	17,480	452,571	495,315	1,283,629	22,148,648	3,340	229.558	23,494
Calendar Year	242, 112	11,032,539	10,697,218	14,878,728	303,356,644	27,423	2,107,073	1,040,883
	Lead	Lime	Natural Gas	Nickel	Petroleum	Salt	Silver	Zine
			Gas					
	lb.	tons	M cu. ft.	Ib.	brls.	tons	fine oz.	lb.
January	23,231,247	42,437	3.888.517	9,228,010	100.496	24.530	1,709,222	17, 754, 289
February	31,850,290	36, 118	3,178,862	7, 734, 229	89,961	20, 245	1,841,836	20,686,156
March	32,235,285	40,108	3.016.480	9,836,941	119.350	22,873	1.814.597	22,347,219
April	29,360,473	42,412	2,433,026	10, 190, 755	102.335	26, 792	2,568,017	20,180,602
May	26,625,102	47,664	2, 107, 299	9,538,891	106,339	26,534	2,185,482	19.896.561
June	28,891,665	43,587	1,394,570	8,584,699	121,403	25,510	3,104,405	22,506,558
July	26, 218, 993	44,694	1,304,168	9,379,712	122,862	25,677	1,999,136	19,936,626
August	25,540,314	39.786	1,492,073	9,088,052	136,056	24,201	2,036,001	26, 235, 267
September	27,003,314	39,274	1,659,559	10,243,381	139.947	22,813	2,643,850	25,786,983
October	26,092,115	39,460	2,257,457	7,460,314	171,352	23,582	1,968,736	25,092,277
November	23,414,573	40,000	2,841,803	7,090,217	160,726	22,785	2,361,778	23,833,659
December	32,594,426	52,315	3,620,765	5,393,656	186,898	13,309	2,202,875	23,409,282
Calendar Year.	333,067,797	507,855	29, 104, 570	103,768,857	*1,557,725	268, 851	26,435,935	267, 665, 479

<sup>\*</sup> Total output of wells. † Obtained by difference; actual December production 15,500 tons.  $22835-3\frac{1}{2}$ 

#### ABRASIVES

Diatomite.—Shipments of diatomite from Canadian deposits in 1930 amounted to 554 tons valued at \$13,247 as compared with 429 tons at \$10,330 shipped in 1929. Diatomite was produced in Nova Scotia, Ontario and British Columbia during 1930.

Grindstones, Pulpstones and Scythestones.—Production of grindstones, pulpstones and scythestones from Nova Scotia, New Brunswick and British Columbia quarries during 1930 totalled 850 tons with a value of \$57,799. In 1929, shipments amounted to 1,947 tons valued at \$106,354.

Volcanic Dust.—Volcanic dust is produced near Waldeck, Saskatchewan. Shipments amounted to 326 tons valued at \$6,520 as against 300 tons worth \$6,000 in 1929.

Imports into Canada and Exports of Abrasives, 1929 and 1930

	1	929	193	10
	Quantity	Value	Quantity	Value
MPORTS-		\$		
Abrasives—				
Artificial abrasives in bulk, crushed or ground, when imported for use in the manufacture of abrasive wheels and polishing compo-				
sition. Carborundum wheels or stones not further manufactured than	-	251,704	-	205,04
moulded or burned	-	219,475	-	57,73
Diamond dust or bort, and black diamond for borers.	-	2,727,285	-	1,440,87
Emery in bulk, crushed or ground Emery wheels and crborundum wheels, n.o.p.		54.433	-	37,35
Emery or carborundum, manufactures of, including carborundum		133,779	-	150,50
stones, n.o.p	-	99,036	-	127.79
Grindstones, not mounted, and not less than 36 inches in diameter.	-	424.613	-	229,43
Grindstones, n.o.p.  Pumice and pumice stone, lava and calcareous tufa, nor further		23,769	-	12, 13
manufactured than ground	_	35.955	_	36.08
Sand paper, glass, flint and emery paper or emery cloth	_	498.328	-	342.77
Iron sand or globules for polishing and sawing	-	41,934		41.75
Burrstones in blocks, rough or unmanufactured, not bound up or				
prepared for binding into millstones	-	-	-	-
Diatomaceous earth or infusorial earth (kieselguhr, ground or un- ground)	23,857	40,539	6.582	10 00
	20,001	40,039	0,082	12,00
Total	-	4,550,850	-	2,693,48
CX PORTS—				
Grindstones, manufactured		36.536		11.67
Stone for the manufacture of grindstones tons	64	154		11,07
	0.8	101		
Ahrasives—				
Natural, n.o.p	8,287	9,757	7,455	8,97
Artificial, crude, including carborundum cwt. Artificial, made up into wheels, stones, etc.	1,571,816	3,815,804	1,128,775	2,842,28
Attendest, made up into wheels, 800808, 610		53,666		36,48
Tetal		3,915,917	~	2,899,42

#### Actinolite

Actinolite is obtained from occurrences in Elzevir and Kaladar townships, Hastings and Addington counties, Ontario. During 1930 shipments to the United States totalled 34 tons worth \$437 as compared with 30 tons worth \$375 in 1929.

#### Antimony

Antimony ores occur in the provinces of Nova Scotia, New Brunswick, British Columbia, and in the Yukon Territory and antimony is sometimes recovered from the Cobalt ores of Ontario. No production is recorded for 1930.

Imports into Canada of antimony in 1930 amounted to 1,303,560 pounds valued at \$87,027 as against 1,746,525 pounds worth \$147,643 in 1929. Imports of antimony salts in 1930 totalled 21,146 pounds worth \$3,691 as against 59,049 pounds valued at \$8,822 during the previous year.

#### Arsenic

# Production in Canada, Imports and Exports of Arsenic, 1929 and 1930

	192	19	193	9
	Quantity	Value	Quantity	Value
Propuction—	lb.	. \$	lb.	\$
From arsenical concentrates and residues exported. White arsenic	1,531,218 3,698,870	17.314 154.006	1,773,540 2,750,680	19,599 109,928
Total	5,230,088	171,320	4,524,220	129,527
Imports—  White arsenic Sulphide of arsenic Arsenate of soda, Arsenate of lead Arsenate of lime	123,224 18,295 1,456 846,017 440,835	5.341 1.865 156 98.179 23.598	13,160 25,113 2,968 1,069,383 655,619	748 2,208 315 112,769 36,211
Total		129,139	-	152, 252
Exports - Arsenic, n.o.pTotal	3,167,300	123,398	2,335,600	86, 825

#### Asbestos

# Output and Shipments of Canadian Asbestos, 1929 and 1930

		19	)29			1930				
Classification	Total	So	ld or Shipp	ed	Total	8	Sold or Shi	pped		
	output	Quantity	Total sales value at mill	Average value per ton	output	Quantity	Total sales value at mill	A verage value per ton		
	Tons	Tons	- \$	\$ cts.	Tons	Tons	\$	\$ cts		
Crude No. 1. Crude No. 2. Other crudes Spinning stocks. Shingle stocks. Millboard and paper stocks. Fillers, floats and other short fibres	883 2,804 1,053 19,615 34,038 91,892 160,859		870,888 168,226 3,110,848	331 77 180 69 177 31 75 26	053 2,882 436 14,433 22,590 80,130 123,842	19,909	10,914 1,473,522 1,406,385 2,817,295	480 20 285 56 67 73 141 53 70 64 35 33 14 83		
Total	311,204	306, 055	13,172,581	43 04	211,966	242,112	8,399,163	34 65		
Sand and gravel	18,976	18,976	7,303	0 38	40,309	40,309	12,413	0 3:		

# Imports into Canada and Exports of Asbestos, 1929 and 1930

	19	129	1930		
IMPORTS— Asbestos in any form other than crude, and all manufactures of.	tons	8	tons	\$	
n.o.p. Asbestos packing	114	897, 229 116, 207	87	791,739 82,111	
Total	-	1,013,434	-	873,856	
Exposts— Asbestos, Asbestos, sand and waste Asbestos manufactures, including asbestos roofing.	143,725 148,305	10.127.208 2,507.474 113.952	104,262 131,238	6,441,939 2,011,318 199,783	
Total,	-	12,748,634	-	8,653,64	

#### Barytes

Shipments of barytes during 1930 amounted to 66 tons valued at \$1,484 as against 105 tons at \$2,341 in 1929. The deposit at Lake Ainslie, Inverness county, Nova Scotia, as in previous years was the source of the total output.

Barytes imports were recorded at 1,949 tons evaluated at \$35,945 in 1930; in the previous year 2,646 tons worth \$52,078 were imported.

#### Bismuth

No metallic bismuth was made in Canada in 1930 but a small amount was contained in silver-lead-bismuth bullion exported in 1930 for treatment in foreign smelters. During 1929 metallic bismuth was made by the Deloro Smelting and Refining Company at Deloro, Ontario, and by the Consolidated Mining and Smelting Company, Ltd., of Trail, B.C.

Imports of metallic bismuth into Canada during 1930 amounted to 2,273 pounds valued at \$2,330.

#### Bituminous Sands

Bituminous sands production from the Fort McMurray district, Alberta, during 1930 amounted to 1,992 tons valued at \$7,968 as compared with a total of 989 tons worth \$3,956 in 1929.

Importations of asphalt, sold, into Canada in 1930 were recorded at 42,796 tons appraised at \$650,837; asphalt, not solid, to the value of \$98,458 and asphaltum oil for paving purposes worth \$70,130 were also imported.

Cement

Production in Canada, Imports and Exports of Cement, 1929 and 1930

	19	29	193	30
	Barrels Value		Barrels	Value
		\$		\$
OUTPUT Total	12, 252, 203	-	11,790,409	
Sold or Used, by Provinces— Quebec. Ontario. Manitoba. Alberta. British Columbia.  Total.  Stocks, December 31.	5,169,408 4,624,712 1,000,258 808,796 680,907 12,284,681	7,120,374 8,608,246 2,350,606 1,770,786 1,487,223 19,337,235	4,865,609 3,942,690 977,906 525,280 721,045 11,632,539	7,031,529 5,779,404 2,268,742 1,144,160 1,594,616 17,818,451
Imports— Portland Manufactures	55,980	189.169 64.942	143,436	569,848 34,672
Total	-	254,111	-	604,528
Exports—Tetal	234,111	252,955	198,736	212,071
Apparent Consumption—Total	12,105,950	_	10,977,239	-

#### Chromite

There was no production of chromite in Canada in 1930. This material is known to occur in Quebec, British Columbia, and Ontario.

# Clay and Clay Products

Production of Clay Products from Domestic Clays in Canada, by Provinces, 1929 and 1930

Province	1929	1930
Delega Edward Taberd	\$	8
Prince Edward Island	 	
Nova Scotia	 653,157	495,33
New Brunswick	 160,006	146.53
QuebecQuebec	3.187,702	2.585.05
Ontario	 6 830 162	5, 236, 73
Manitoba	 362.240	233, 85
Saskatchewan	 502.522	
Alberta	 1 040 408	345,780
TAILUTE CONTRACTOR TO THE TERMINATE OF THE TRACTOR TO THE TERMINATE OF THE	 1,342,427	997,68
British Columbia	 866, 427	656, 24
Canada	 13,904,643	10,637,21

Production in Canada, Imports and Exports of Clay and Clay Products, 1929 and 1930

	19	29	193	10
Kind	Quantity	Total selling value	Quantity	Total selling value
BODUCTION (SALES)—		8		8
Brick: Soft mud process /Face M	26,624	538,096	9.001	179, 14
Common M	77,399	1,195,511	53,494	815.59
Stiff mud process (wire cut)/Face M	114,093	2,469,417	96,363	2.094,17
Dry press/Face	170.840	2,509,451	115,447	1,632,42
Dry press Face M	38,591	813,461	31,945	656, 18
Common	26, 131	368,039	16,920	208,49
Fancy or ornamental brick (including special shapes, embossed and enamelled hrick)	100	10 707		
embossed and enamelled hrick)	187	12,795	339	27,64
Sewer brick M Paving brick M	4,765	96,588	994	18,69
Paving brick M Firebrick from domestic clay M	5,196	3,844 251,043	3.790	29
Fireclay and other claytons	5.041	35, 226	2,870	177, 60
Fireclay blocks and shapes	0,041	130,411	2,010	25.97 147,30
Fireclay blocks and shapes. Structural tile: Hollow blocks (including fireproofing and		100,311		197.00
load bearing tile)	221.800	2.214.384	169.655	1,716,17
Roofing tile No	35.075	4,628	3.056	37
Roofing tile No. Floor tile (quarries) Sq. ft.	307,400	70,186	203,789	59.03
Drain tile. M Sewer pipe (including copings, flue linings, etc.)	25.000	720,316	20,764	631,11
Sewer pipe (including copings, flue linings, etc.)	***	2,005,887	-	1,783,43
Pottery, glazed or unglazed	***	323, 194	-	292.1
Other products	-	142,166		231,41
Total	-	13,994,643		10,697,21
APORTS-				
Building brick M	15,678	291,370	11.707	255.5
Building blocks	201010	222,847	41,701	131.50
Clays		2001001		,01,00
China ewt.	497.571	292,980	462, 245	278,75
Fire cwt.	1,521,282	322,508	1,147,387	240,29
Pipe	-	570	***	9.20
Zirconium silicate	04	8.223	-	6,09
Zirconium oxide	-	8,244	Ped Ped	5.76
Uther clavs	840	150,604	-	155,63
Drain tile, unglazed	010	2,809	-	2.0
Drain and sewer pipe. Insulators, electric, porcelain.	***	119,654		73.8
Insulators, electric, porcellain	-	556,535	249	355,0
Earthenware and chinaware. Brick, fire, other, valued at not less than \$100 per M, rectan-	ed	6,257,954	-	5,313,8
Brick, ure, other, valued at not less than \$100 per M, rectan-				
gular shaped: the dimensions of each not to exceed 125 cubic inches for use exclusively in the construction or				
repair of a furnace bile of		09 519		04.0
repair of a furnace, kiln, etc	-	93,513	-	64,0
repair of a furnace, kiln or other equipment of a manu-				
facturing establishment	put.	1,706,109		1,297.7
Firebrick, n.o.p.		76,963	-	53.6
Firebrick, chrome		101,302	- 1	73,7
Magnesite brick		256,635	-	270.1
Silica brick Paving brick M	-	330, 592		315.0
Paving brick M	5, 173	120,871	4.522	108.3
Other clay manufactures.	P4	1,239,183	~,000	1,186,1
Total		12,159,566	**	10,196,6
XPORTS—				
Building brick M	1.587	21,797	1,822	26, 1
Clay-	0,001		-10.00	20, 1
Unmanufactured ewt.	16,379	6,640	9,688	5,9
Manufactures.	,	54,397	4	36,6
Earthenware	est.	24,563	442	30.9
Porceluin insulators		268, 109	04	349.5
Total		375,506		449.1

Coal
Output and Value of Coal in Canada by Kinds and by Provinces, 1929 and 1930

Province	19	29	19	1930	
110/1000	Quantity	Value	Quantity	Value	
		\$		\$	
Nova Scotia (Bituminous)	7,056,133	28,071,956	6,252.552	24,518,860	
NEW BRUNSWICE (Bituminous)	218,706	909,169	209.311	864,006	
Saskatchewan (Lignite)	580, 189	993,226	578, 152	966,929	
Alberta— Bituminous Sub-bituminous Lignite	3,094,147 668,702 3,387,844	10,851,499 1,908,954 10,167,729	2,278,467 603,358 2,872,927	7,973,782 1,705,328 8,834,510	
Total	7, 150, 693	22,928,182	5,754,752	18,513,620	
British Columbia (Bituminous)	2,490,378	10,160,789	2,083,308	8,421,288	
YUKON (Bituminous)	458	1.848	653	3,110	
Canada— Bituminous Sub-bituminous Lignite	12,859,822 668,702 3,968,033	49,995,261 1,908,954 11,160,955	10,824,291 603,358 3,451,079	41,781,046 1,705,328 9,801,439	
Total	17,496,557	63,065,170	14,878,728	53, 287, 813	

# Shipments of Coal from Canadian Mines by Grades and Destinations, 1929 and 1930 (Short tons)

4.0		1929				1930				
Destination	Run- of- mine	Screened	Slack	Total	Run- of- mine	Screened	Slack	Total		
Prince Edward Island Nova Scotia New Brunswick Quebec Ontario Manitoba Saskatchewan Alberta British Columbia Yukon	3, 130 335, 851 214, 058 67, 591 703 158, 420 259, 860 261, 088 46, 451	77, 241 651, 042 150, 133 1, 137, 112 46, 330 426, 495 1, 032, 840 537, 838 724, 672 221		82,585 1,830,182 493,858 2,372,541 56,269 824,939 1,716,847 1,394,578 1,024,102 221	3,398 217,004 163,368 50,134 845 165,207 204,467 256,122 42,238 293	82,322 560,135 133,597 1,008,281 26,022 366,648 893,035 462,452 710,226	2.193 748,058 192,361 894,547 4.845 241,322 442,331 508,320 249,036	97.913 1,525.191 489.321 1,952.967 31.717 773.177 1.539.83 1,226.89 1,001,590		
Total domestic shipments.	1.347,152	4,783,924	3,669.056	9,800,132	1,103,076	4,242,718	3,283.013	8,628,80		
Railroads Ship's bunkers	4,029,986 253,946	817,399 111,476	363,604	5,210,989 365,422	3,021,954 243,738	765.565 82.433	313,648 895	4, 101, 167		
Total railroads and ship'e bunkers	4,283,932	928,875	363,604	5, 576, 411	3,265,692	847,998	314,543	4,428,23		
Newfoundland Other places Lost at sea		104,618 23,891 234,264 438 589	540	177, 974 23, 891 244, 720 438 569	10,647 2.080	74,234 26,456 204,724 4,318	64,869 57,637 3,416	149,750 26,450 264,441 7,739		
Total external shipments	29,508	363,780	54,304	447,592	12,727	309,732	125.922	448, 381		

Output, Exports, Interprovincial Shipments, Imports and Coal made Available for Consumption in Canada, by Provinces, 1930

(Short tons)

		Canadia	n Coal			Imported	Imported	Coal
Province	Output	Received from other provinces	Shipped to other provinces	Exported	Imported from U.S.A.	from Great Britain	from other countries	for con- sumption
Prince Edward Island Anthracite. Bituminous	pro-	87.913	4	_	8.033 4.408	1,496 1,876	_	9,529 93,997
Total	104	87,913		_	12,441	3, 172	-	103,526
Nova Scotta— Anthracite Bituminous	6,252,552		2,475,428	350, 134	30,086 18,018	29,859 19,557	14,340	74,285 3,464,545
Total	6,252,552	-	2,475,428	350, 154	48, 104	49,418	14,340	3,538,830
New Brunswick— Anthracite Bituminous	209,311	435,084	499	24,724	28,325 72,299	60,844	24,880	114,049 691,506
Total	209,311	435.084	499	24,724	100,624	60,879	24,880	805,555
QUEBEC— Anthracite Bituminous Sub-bituminous Lignite	1 1 1	1,952,930	1 1 1	200	754,897 1,111,811	903,928 124,931	263,667 33	1,922,492 3,189,505 32
Total		1,952,962	-	200	1,866.708	1,028,859	263,700	5,112,029
CENTRAL ONTARIO— Anthracite Bituminous Sub-bituminous	-	140 5,729 25,843		38 - 32	2,080,681 10,492,151			2,080,681 10,492,253 5,729 25,811
Lignite Total	-	31,712	-	70	12,572,832	_	-	12,604,474
Manifoba and Head of LAKES— Anthracite	-	87,548 73,271		433	53,564 1,488,336	-		53, 564 1, 575, 451 73, 271 610, 389
Lignite	•	612,358 773,177		2,402	1,541,900	-	100	2,312,675
Saskarchewan— Authracite	578, 152	127,788 62,493 1,101,598	227.147	16 6,059	367 1,816 736	-		367 129.588 62.493 1.447,280
Total,	578, 152	1,291,879	227, 147	6,075	2,919	0-1	-	1.639,728
ALBERTA— Bituminous Sub-bituminous Lignite	2,278,467 603,358 2,872,027	-	193,321	1,222	-	00 01 00	-	2,134,461 410,037 1,222,904
Total	5,754,752	35,979	2,023,359	1,321	1,351	010		3,767,402
British Columbia— Anthracite	2,083,308	41,597 51,796 136,149	3	218,826 20,740	-	-	1,122	1, 123 1, 803, 143 51, 796 133, 349
Total	2.083.308	229,543	111,815	239,566	26,820	-	1,122	1,989,411
YURON-Bituminous	653		-	00	7		-	660
Total	653	_	-		1			680
CANADA— Anthracite	10,824,291 603,358 3,451,079	193,32	193,321		-	146,199		4,256,990 23,575,109 603,358 3,439,733
Total	14,878,728	4,838,24	4,838,248	624,517	16, 173, 780	1,142,320	301,042	31,874,290

<sup>\*</sup>Consists of 291,407 tons from Russia, 11,480 tons from Germany, 1,122 tons from French East Indies. †Imported from Newfoundland.

Imports of Anthracite, Bituminous and Lignite Coal into Canada, by Months, 1929 and 1930 (Short tons)

Month		19	29			19	30	
	United States	Great Britain	Other countries	Total	United States	Great Britain	Other countries	Total
A NTH RACITE-								
January	253.773	20,281	2,672	276,726	331,283	16.046	_	317,32
February	303,992	9,932	2,432	316,356		29.097	7,136	
March	251,092	12,938	4,612	265,612		55.080		266,97
April	129,511	7,346	2,646			6,392	6,200	125,07
May	222,955	71,309	-	294,264		113,989	7,527	312,56
June	223,328	86,488	44 804	309,816		138.372	63,668	406,06
July	196,528	72,229	11,589	250,346		107,214	27,358	
August	215,892 303,470	103,403 97,489	29.861	349,156		121,561	52,999	
October	446.017	85.749	26,950 15,129	427,909 546,895	341,207 321,293	118,780	51,578	
November	323.035	92.657	14.791	430, 483	297,092	129,733 113,515	45,509	
December	303.450	69.637	6,734	379.821	248,398	46.348	34,848 7,056	
						20,040	1,830	341,00
Total	3,173,643	729,458	*117,416	4,019,917	2,955,954	996, 127	1304,809	4,256,99
Витимимоив-								
January	834,784	4,892	35	839,711	850.111	800	-	850,91
February	713,499	2,971	-	716,479		3,498	10	676,82
March	920,070	170	-	920,210		5	and the same	797,60
April	591.351	2,735		591,056		2.800	-	535,00
June	1,256.003	16,996 26,441	-	1,272,999		25,525	-	1,060,62
July	1.731.400	11.525		1,742,925		17,988 27,291	20	1,481,13
August	1,525,787	8,111		1,533,898		15.620	3	1,469,32
September	1,496,010	19.360	-	1,515,376		24 018	-	1,534.27
October	1,610,882	7,874	41	1,618,797		22,132	in	1,466,37
November	1,455,332	11,245	-	1,466,577	1.118.665	3,654	Ber .	1,122,31
December	916,722	3,048	-	919,770	915,459	2,868	-	918,32
Total	14,469,831	115,368	††76	14,585,275	13, 199, 076	146, 199	133	13,345,30
.IGNITE-								
January	1,680	-		1,680	2,593	-	-	2,59
February	2.747	-	-	2,747	2.311	-	***	2,31
March	1,258	-	-	1,258	806	***		80
April	1.030		- 1	1,630	383	**	-	38
June	571 252		- 1	571	383	-	-	38
July	38	_	~	252 38	294 989	-	-	29-
August	414		-	414	258	_	_	25
September	822		000	822	1.028		-	1,02
October	1,520	-	_	1,520	3,115		_	3,11
November	1,761	-	-	1,761	3,613	_	-	3.61
December	2,015	-	-	2,015	2,903	-	p.s.	2,900
Total					-			

Consists of 117,304 tons from Russia, 112 tons from Japan.
 Consists of 291,407 tons from Russia, 11,480 tons from Germany, 1,122 tons from French East Indies.
 Imported from Newfoundland.

# Coal Made Available for Consumption in Canada, 1929 and 1930 (Short tons)

1929						19	30	
Month	Output	Imports	Exports	Coal made available for use	Output	Imports	Exports	Coal mude available for use
January February March April May June July August September October November December	1,649,960 1,387,696 1,395,817 1,404,861 1,360,774 1,316,153 1,362,166 1,410,020 1,598,659	1,190,140 734,619 1,567,834 1,754,500 2,023,309 1,883,468 1,944,101 2,167,212 1,898,821 1,301,606	82,964 74,920 77,467	2,609,069 2,503,601 2,998,776 2,910,259 3,035,047 3,289,681 3,180,447 3,275,910 3,682,907 3,358,281 2,715,132	1,194,710 1,136,765 913,203 1,124,545 1,151,963 1,058,424 1,111,675 1,252,665 1,659,131 1,348,396 1,283,629	1,043,041 1,065,380 660,462 1,373,573 1,887,497 1,781,283 1,800,598 2,046,866 1,966,022 1,571,487	35,830	2,191,950 2,160,315 1,558,934 2,459,218 2,971,098 2,816,153 2,823,932 3,232,147 3,577,894 2,857,617 2,445,933

# Production in Canada and Exports of Cobalt, 1929 and 1930

	19	29	1930		
	Pounds	\$	Pounds	\$	
Production— Cobalt, computed as cobalt in metal, oxides sold, and in ores and residues exported	929,415	1,801,915	694,163	1,144,007	
Cobalt alloys, cobalt metallics, cobalt oxides, cobalt salts and cobalt ores		1,786,163		1,319,870	

#### Coke

Production in Canada, Imports, Exports and Apparent Consumption of Coke, by Provinces, 1929 and 1930

(Short tons)

	Year	Nova Scotia, New Brunswick and Quebec	Ontario	Manitoba, Saskatchewan, Alberta and British Columbia	Canada
Production	1929	850,452	1,624,884	202,245	2,677,581
	1930	674,621	1,489,415	189,990	2,354,026
Imports	1929	79,422	1,123,761	23,670	1,226,853
	1930	50,176	993,753	17,504	1,061,433
Exports	1929	834	2,010	22,364	25.208
	1930	1, 253	317	28,231	29,801
Apparent Consumption	1929	929,040	2,746,635	203,551	3,879,226
	1930	723,544	2,482,851	179,263	3,385,658

#### Coke Production in Canada by Months, 1930

(Short tons)

THE PERSON	Bituminous coal used for coke making				Disposition of coke by makers			
Month .	Can- adian	Im- ported	Total	Coke made	Used in Coke Plant	To Metal- lurgical works	ical other	Total
January. February March. April Msy June July August. September October November December.	68,225 72,740 66,692 54,613 50,417 57,355 57,748 54,946 60,134	236, 865 212, 915 236, 419 228, 780 235, 320 218, 056 190, 236 186, 384 177, 894 188, 780 189, 838 187, 865	295, 472 289, 933 268, 473 247, 591 244, 132 232, 840 248, 914 248, 518	181.186	24, 885 25, 386 24, 638 26, 484 23, 398 22, 198 23, 271 25, 951 26, 437 24, 916 27, 606	102,533 94,594 91,767 81,465 67,481 63,567 53,294 82,893 68,900 58,303	70,742 56,230 67,388 110,798 95,703	189,519 212,665

Copper

Production in Canada, Imports and Exports of Copper, 1929 and 1930

	19	29	19:	30
	Pounds	Value	Pounds	Value
Production—		\$		\$
By Provinces—				
(¿uebec	55,337,169	10,019,901	80,310,363	10,425,89
Ontario	88,879,853	14,622,572	127,729,059	15, 190, 25
ManitobaBritish Columbia		10 550 500	2.085,609	270,75
Dittion Countries	103,903,738	18,772,778	93,231,613	12,103,32
Total	248, 120, 760	43, 415, 251	303,356,644	37,990,22
By Sources—				
In blister copper produced	160, 190, 580	28,059,843	223,895,651	28,023,71
In ores exported and in copper sulphate produced	69,709,713	12,622,338	67,751,127	8,795,52
In nickel-copper matte exported	18,220,467	2,733,070	11,709,866	1,170,98
Total	248, 120, 769	43,415,251	303, 356, 614	37,990.22
				-
MPORTS—				
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	54.824 600	9,922,096	30,900,700	4,308,07
CODDET IN DRIES OF FORES. IN COLL OF OLDERWISE, IN JEROF he of not			0010001100	2,000,00
loss than 6 feet, unmanufactured.  Copper in blocks, pigs or ingots.	719,200	164,642	1,595,900	305,38
Copper, old and scrap	12.084,000 4.958,300	2,246,600 827,832	7,867,200 1,443,700	1,022,93 173,11
Copper, ore and concentrates Copper in strips, sheets or plates not polished or coated	7.003,000	044,00%	1,440,700	143, 11-
Copper in strips, sheets or plates not polished or coated	2,806,300	698,974	1,844,700	410,56
Copper tubing in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured.	0.000 700	man Ana		
Copper wire, plain, tinned or plated	2,662,706 937,858	721,369 267,464	1,895,872 722,729	442,84 178,29
Copper wire cloth, or woven wire of copper. Copper wire, single or several, covered with cotton, linen,	-	9,613	102,100	9.50
Copper wire, single or several, covered with cotton, linen, silk, rubber or other materials, including cable so				
covered		809.729		227 00
Copper, all other, manufactures of, n.o.p.  Anodes of nickel, zinc, copper, silver or gold	-	1.313.811	-	557,02 768,39
Anodes of nickel, zinc, copper, silver or gold	-	16,127	-	97-
Copper, sub-acetate of, or verdigris, dry. Copper, sulphate of (blue vitriol)	681	177	7,528	1,32
Copper, sulphate of, dehydrated, for agricultural or spray -	2,118,304	114,637	5,085,027	224,06
ing purposes	2.252.122	122,056	931,552	49.77
Copper rollers adapted for use in calico printing	-	37,664		81,400
Total	_	17, 272, 791	_	8,594,28
CXPORTS -				
Copper, fine, contained in ore, matte, regulus, etc	86,999,100	8,944,965	74,804,600	7, 236, 450
Copper blister	148, 278, 500	26,711,867	147,521,400	22,428,17
Copper, old and scrap	11,559,600	1,574,712	6,765,600	740,091
Copper in bars, rods, strips, sheets, plates and tubing	132.100	35,900	0.050.000	007.01
Copper wire and cable	102,100	119.030	6,959,200	827, 944 111, 678
Copper manufactures, n.o.p.	-	13,522	_	10, 191
Total	-	37,399,996	_	31,354,541
Copper coin, foreign	-	9,286	-	9,261

# Feldspar

# Production in Canada, Imports and Exports of Feldspar, 1929 and 1930

	1929	9	1930		
	Tons	Value	Tons	Value	
UCCTION—  juebec,  mutario.  fanitoba.	15,790 21,737	\$ 133.492 206,979	17,101 9,722 600	\$ 131,512 102,871 3,000	
tal	37,527	340, 471	27, 423	237,393	
	3,955 29,896	65,997 242,915	2,695 21,183	44,142 165,482	

#### Fluorspar

Fluorspar production from a deposit near Madoc, Ontario, during 1930 amounted to 80 tons valued at \$1,240. In 1929, shipments totalling 17,870 tons worth \$268,120 were made from Ontario and British Columbia deposits.

Imports of fluorspar in 1930 totalled 12,652 tons worth \$160.995 as compared with 12,092 tons worth \$159,798 in the preceding year. Hydrofluosilicic acid amounting to 5 tons valued at \$1,353 was also imported in 1930 as against 36 tons worth \$4,706 in 1929.

Gold

Production of Gold in Canada by Provinces and by Sources, 1929 and 1930

	193	29	193	0
Amazento	Fine ounces	Value	Fine ounces	Value
		8		1
Nova Scotta - In gold bullion	2,687	55,545	1,272	26,294
QUEBEC— In blister copper, in gold bullion and in ores exported,	90,798	1,876,961	141,743	2,930,088
Ontario— Porcupine area. Kirkland Lake area. Sudbury area. Miscellaneous including Northwestern Ontario.	932,732 679,504 8,907 1,124	19,281,281 14,046,594 184,124 23,235	859,079 831,503 23,803 22,470	17,758,738 17,188,692 492,052 464,496
Total	1,622,267	33,535,234	1,736,855	35,903,978
Mantroba- In gold bullion and in blister copper	22,455	464,186	28, 197	582,884
ALBERTA	5	103	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
BRITISH COLUMBIA— In alluvial gold. In gold bullion. In bluster copper In buse bullion and in ores exported.	5,158 17,609 18,405 113,032	106.625 364,011 380.465 2,336,579	7,448 29,784 25,806 100,452	153,964 615,690 533,457 2,076,527
Total	154.204	3, 187, 680	163,490	3,379,638
YUKON— In alluvial gold. In oree exported.	35,678 214	737,530 4,424	35,160 356	726, 822 7,359
Total	35,892	741.954	35,516	734, 181
Canada	1,928,308	39,861,663	2,107,673	43,557,063

Receipts at the Royal Mint, Ottawa, Canada, 1929 and 1930

		1929		1930			
Source	0	Precious me	tal content	C	Precious me	tal content	
	Gross Weight	Fine Gold	Fine Silver	Gross Weight	Fine Gold	Fine Silver	
	Oz.	Os.	Oz.	Og.	Os.	Os.	
Nova Scotia. New Brunswick. Quebec. Ontario. Manitoba. Saskatchewan. Alberta. British Columbia including Dominion of Canada Aesay Office, Vancouver. Yukon. Jewellery and scrap, various sources. Foreign.	2, 927 · 88 15, 383 · 37 412, 057 · 63 68, 923 · 47 5 · 68 67, 063 · 39 37 · 05 35, 130 · 59	25,309 · 123 5 · 229 54,085 · 088 32 · 273	131-67 842-65 54,067-83 2,948-32 0-37 7,851-37 7,569-50	1,382-63 26,264-37 908,209-45 36,373-08 - 115,567-29 2-72 34,004-48	16.118·436 - 94.623·462 2·283	1,936.81 86,418.76 1,841.39 	
Total	601,529-06	438,351-222	73,415-43	1,121,744.02	862,074-865	109,391-26	

# Gold Bullion Received at Dominion of Canada Assay Office, Vancouver, B.C., 1930

The Court of the California of				
	No. of deposits	Weight before melting and assaying	Weight after melting and assaying	Net value of deposits
Bar, nugget and dust, amalgam, etc.— British Columbia Yukon Territory Alaska Washington Alberta California Dental and jewelirey scrap.	538 290 - - - 746		71.157-44	\$ 1,278,657 694,449 57,792
Total	1,574	133,439-62	119,646-21	2,030,898

#### Imports into Canada and Exports of Gold, 1929 and 1930

	1929	1930
IMPORTS—	\$	\$
Coins and bullion— Coins, British, Canadian and foreign gold coins. Gold bullion in bars, blocks, ingots, drops, sheets or plates, unmanufactured	2,856,947 889,541	38,369,019 693,090
Total	3,746,488	39,062,109
Gold, other— Bullion or gold fringe Manufactures of gold and silver—	37,401	18,543
Leaf. Sweepings. Manufactures, n.o.p. Electroplated ware. Medials of gold, silver or copper and other metallic articles, actually bestowed as	124,296 564 78,939 1,410,202	106,116 1,000 66,669 1,014,645
trophies or prizes, and received and accepted as honorary distinctions, and cups or other metallic prizes won in bona fide competitions	24,016	24,558
Total	1,675,418	1,231,531
Exports— Coin and bullion— Gold coin— Canadian.	25	750
ForeignGold bullion—	29, 252, 140	18,004,160
Canadian Foreign	409,577	=
Total—Canadian Foreign	409,692 29,252,140	750 18,004,160
Total coin and fine gold bullion	29,661,742	18,004,910
Gold-bearing quartz, dust, nuggets and crude bullion obtained direct from mining operations	29.995.983	22,312,605
Sewellers' sweepings (gold, silver and platinum)	423.642	380,379
Total,	30,419,625	22,692,984

Graphite

Production, Imports and Exports of Graphite, 1929 and 1930

	1929		1930	
	Tons	Value	Tons	Value
		\$		\$
PRODUCTIONTotal	1,461	103,174	1,610	100,322
Imports— Crucibles, plumbago Plumbago, not ground or otherwise manufactured. Plumbago, ground and manufactures of, n.o.p.	-	66.833 6.546 82,391	er 	52,458 2,033 61,742
Total	-	155,770		t16,233
Exports— Graphite or plumbago, crude or refined	1,582	88,647	2,417	127,291

Gypsum

Production in Canada, Imports and Exports of Gypsum, 1929 and 1930

	1929		193	0
	Tons	Value	Tons	Value
Production— Crude—		\$		1
Lump or mine run. Crushed. Fine ground. Calcined.	44.848 964,875 2,201 199,765	90,071 1,147,289 17,271 2,091,065	56,694 831,490 2,276 150,423	122,963 991,148 18,355 1,640,118
Total	1,211,689	3,345,696	1,049,883	2,772,584
Imports— Gypsum, crude (sulphate of lime)	1,244 165 16,356	18,671 5,283 189,438	898 219 16,608	25,882 5,352 190,832
Total	17,765	213,392	17,725	222,066
Exports— Gypsum or plaster, crude	893,445 7,938	1,086,939 137,046	719,381 7,281	871,587 119,092
Total	961,383	1,223,985	726,662	990,659

#### Iron Ore, Pig Iron, Steel Ingots and Castings

Export shipments of titaniferous iron ore from the Baie St. Paul district, Quebec, during 1930 amounted to 412 tons worth \$1,239 as against 2,748 tons worth \$7,359 in 1929.

No other iron ore production was reported but imports into Canada totalled 1,485,429 short tons valued at \$3,324.190.

Shipments from Wabana mines, Newfoundland, while not included in the mineral production of Canada, are of interest because of the tonnage shipped to Nova Scotia. During 1930 shipments from Wabana mines totalled 1,319,315 tons valued at \$3,200,569. Of this amount 523,918 tons valued at \$1,262,642 were shipped to Canada; 54,623 tons worth \$152,734 were exported to the United States; and 740,774 tons worth \$1,785,193 were exported to Germany.

Production of Pig Iron and Ferro-Alloys in Canada, 1929 and 1930
(Tons of 2,240 lb.)

Item	192	9		1930		
	For own use	For sale	Total	For own use	For sale	Total
IN BLAST FURNACE— Basic Foundry Malleable	748,415 2,888 2,586	22,063 218,756 85,452	770,478 221,644 88,038	489,686 1,122	6,115 189,668 60,857	495,801 190,794 69,853
Total	753,889	326,271	1,080,160	490,808	256, 640	747,448
Ferro-alloys	-	89,116	89,116	_	66,494	66, 49

Production of Steel Ingots and Castings in Canada, 1929 and 1930
(Tons of 2,240 lb.)

	1	1929		1930			
	For own use	For sale	Total	For own use	For sale	Total	
TEEL INGOTS—							
Open-hearth—Basic	1,288,810	6,352	1,295,162	918,402	753	919, 15	
ElectricOther	. 14,444	1	14,444	30.041 8,234	der .	30,041 8,23	
Total steel ingots	1,303,254	6,352	1,309,606	956,677	753	957,43	
TEEL CASTINGS— Open-hearth—Basic		25,652	35,806	1,858	24,284	26,14	
Bessemer Electric	. 66	2, <b>524</b> 29,872	2,590 30,022	49 272	2,189 25,661	2,23 25,93	
Total direct steel castings	10,370	58,048	68,418	2,179	52,134	54,31	
Grand Total	1,313,624	64,400	1,378,624	958,856	52,887	1.011.74	

#### Iron Oxides

Iron oxides production from deposits in Quebec and British Columbia amounted to 6,596 tons worth \$83,873 in 1930 as compared with 6,518 tons worth \$115,932 shipped in 1929.

#### Kaolin

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

Lead

Production in Canada, Imports and Exports of Lead, 1929 and 1930

	193	29	193	30
	Pounds	Value	Pounds	Value
		8		- 8
PRODUCTION— Quebec Ontario. British Columbia. Yukon.	5,358,304 4,769,506 307,999,153 8,395,603	270,616 294,431 15,555,189 424,012	2,193,856 322,137,792 8,736,149	116,031 12,650,351 343,069
Total	326,522,566	16,544,248	333,067,797	18,109,451
IMPORTS — Old and scrup, pig and block Bars and sheets. Litharge. Acetate of lead. Nitrate of lead. Other manufactures Pipe lead Shots and bullets. Tea lead. Lead pigments— Dry white lead. White lead, ground in oil. Dry red lead and orange mineral.	1,173,481 242,802 5,592,209 1110,275 305,321 62,874 13,434 13,480 67,585 236,093 1,791,872	68,787 16,437 423,281 10,206 22,246 293,629 5,138 1,474 1,350 6,297 19,538 134,685	369,082 9,043 17,920 47,287 58,662	32,029 95,793 213,240 16,496 10,666 243,837 23,067 907 1,430 4,099 5,894 110,075
Total	-	1,003,048	-	756,933
Exports— Lead, contained in ore. Pig lead. Total.	15,976,800 228,374,100 214,350,900	1,047,441 10,053,402 11,100,843	205,432,600	1,258,272 7,015,308 8,273,580

Lime
Production in Canada, Imports and Exports of Lime, 1929 and 1930

	1929 Total		1930  Quicklime   Hydrated Lime			То	tal	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Tons	\$	Tons	\$	Tons	\$	Tons	8
Production— Nova Scotia. New Brunswick Quebec. Ontario. Manitoba Alberta. British Columbia.	32,246 7,681 39,591	3,364,411 361,104 79,569 510,592	216,095 22,406 5,123 27,104	106,730 107,113 878,330 1,727,700 155,711 49,330 251,479	2,574 10,912 48,708 6,511 13 9,413	6,520 31,145 86,214 563,836 116,370 195 83,578	12,681 128,687 264,803 28,917 5,136 36,517	113,250 138,258 964,544 2,201,536 272,081 49,525 335,057
Total	674,087	5,998,610	429,072	3,276,393	78,783	887,858	507,855	4,164,251
Imports—Total	4,448	49,395	~	-	-	-	2,096	28,107
Exports-Total	24,238	428,209	-	-	-	-	22,364	444,728

#### Magnesite

Production in Canada, Imports and Exports of Magnesite, 1929 and 1930

	195	9	1930	
	Tons	Value	Tons	Value
		8		\$
PRODUCTION—Calcined or clinkered—Total	18,809	491,170	13,336	336,163
Імроктв—				
Magnesia pipe covering		259.080	-	297,513
Magnesite	125	4.423		-
Magnesite, crude Magnesite, dead burat		-	260	5.187
Magnesite, dead ourat	-	~	267	7,741
Magnesite, firebrick	_	256.635	915	14,328 270,180
Total		520,138	-	594,949
Exrosrs— Magnesite, calcined— <b>Total</b>	5,270	125,613	1,851	48,536

<sup>•</sup> For 9 months ended Dec. 31, 1930.

#### Magnesium Sulphate

There has been no production of magnesium sulphate since 1923 when 121 tons were recovered from a deposit near Ashcroft, B.C. Importation of magnesium sulphate or epsom salts during 1930 reached a total of 2,566 tons valued at \$52,718; in 1929, 2,565 tons valued at \$53,481 were imported.

#### Manganese

Some activity was noticed in the production of manganese during 1930. Shipments for experimental purposes were made from a property in Lunenburg county, Nova Scotia, and from Birch Island, British Columbia. In addition some 240 tons of manganese ore were shipped to steel works from a mine in Albert county, New Brunswick.

#### Mercury

There is a small occurrence of cinnabar near Kamloops, British Columbia, but production has been very limited. During 1930 imports into Canada of mercury amounted to 105,755 pounds valued at \$153,837 as against 346,701 pounds worth \$748,048 in 1929.

#### Metals of the Platinum Group

Production of Platinum Group Metals, Canada, 1929 and 1930

	1929		1930	
	Platinum	Palladium, Rhodium, etc.	Platinum	Palladium, Rhodium, etc.
Produced from Canadian Ores. Oz. \$  Recovered from alluvial sands. Oz. \$	12,491 845,057 28 1,699	17,318 809,289	34,001 1,542,217 12 544	34,063 895,040
TotalOr.	12,519 846,756	17,318 809,289	34,013 1,542,761	34,063 895,040

#### Imports into Canada and Exports of Platinum, 1929 and 1930

	1929		1930			
	Oz.	Oz.	On.	Value	Oz.	Value
		\$		\$		
Imports— Platinum retorts. Platinum wire, and in bars, strips, etc. Platinum crucibles.	410	41,113 157,774 13,019	-	23, 135 87, 467 12, 249		
Total	60	211,906	-	122,851		
Exports—   Platinum, etc., contained in concentrates	2,798 112	220, 200 5, 319	19,835	1,610,945 15,653		
Total	400	225,519	-	1,626,598		

Mica

Production of Mica in Canada, 1929 and 1930

Grade	1929			1930		
	Quantity	Value, f.o.b. shipping point	Price per pound	Quantity	Value, f.o.b. shipping point	Price per pound
	Lb.	\$	\$	Lb.	\$	\$
Rough cobbed Thumb trimmed Splittings Scrap.	97,331 22,750 7,986,878	17, 131 13, 732 87, 686	0·18 0·60 0·01	44,330 10,146 77,530 2,391,022	1,140 8,445 35,601 51,970	0 · 28 0 · 83 0 · 46 0 · 02
Total	8,106,959	118,549	0-015	2,523,028	97,156	0.038

#### Imports into Canada and Exports of Mica, 1929 and 1930

	192	9	1930		
	Tons	Tons   Value Tons		Value	
		\$		8	
IMPORTS— Mica and manufactures of, n.o.p.—Total.	440	169,018	_	102,775	
Exports— Rough cobbed and thumb trimmed Mica splittings Mica, scrap and waste Mica, plate and manufactures of (micanite)	4,789	1,342 96,726 112,905 2,088	2 39 1,039	1,461 35,351 48,436 1,286	
Total	-	213,059	-	86,537	

#### Mineral Waters

Mineral springs and wells in Canada produced 224,741 imperial gallons valued at \$10,078 during 1930. In the preceding year the sales amounted to 321,905 imperial gallons worth \$16,139. Production was from Ontario and Quebec wells.

#### Molybdenum

No production of molybdenum was reported for 1930. In 1929 considerable work was done on a property in northwestern Quebec and 17 tons of molybdenite concentrates, averaging 85 per cent MoS<sub>2</sub> were produced, of which 9½ tons were shipped in that year.

#### Natural Gas

# Production in Canada and Imports of Natural Gas, 1929 and 1930

	1929		1930	
	M eu. ft.	Value	M cu. ft.	Value
Production-		\$		\$
New Brunswick Ontario Manitoba	678,456 8,586,475 600	333,002 4,959,695 180	861,975 7,901,137 800	325,749 4,503,650 180
Alberta	19.112,931	4,684,247	20,540,858	4,806,128
Total	28,378,462	9,977,124	29, 104, 570	9,635,704
IMPORTS — Gas for cooking, heating or illuminating, imported by pipe line— Total	132,942	85,338	151,671	96,763

#### Nickel

# Production in Canada, Imports and Exports of Nickel, 1929 and 1930

	19	029	19	30
	Quantity	Value	Quantity	Value
Production— Nickel in matte and speiss exported (a) Refined and electrolytic nickel produced. Nickel in oxidex and salts sold.	70,704.762 11,398.517	\$ 5,071,074 18,639,814 3,404,573	Lb. 41,959,927 57,478,651 4,330,279	7,552,574 15,485,381 1,417,178
Total  IMPORTS  Nickel, nickel silver and German silver in ingots or blocks, n.o.p. Nickel in bars and rods, strips, sheets and plates. Nickel silver and German silver, in bars, rods, strips, sheets, plates or anodes. Nickel chromium in bars or rods, etc. German, Novada and nickel silver, manufactures of, not plated Nickel-plated household hollow-ware. Nickel-plated ware, n.o.p.	31,006 1,243,865 258,445 71,938	8,492 388,296 94,827 72,790 606,236 94,796 3,224,828	37,462 1,120,122 180,122 44,344	9,250 347,461 69,664 44,434 471,036 18,401 2,261 2,004,398
Total nirkel and its products		4,480,265	-	2,966,905
Exports— Nickel, fine. Nickel contained in matte. Nickel in oxide  Total	68.408.200 29.630,700 11.600.900	17.544.513 4.501.389 3,489.782 25,535,684	43,122,500 44,890,400 3,733,000 91,745,900	11.262.512 8.142.794 1.100,018

<sup>(</sup>a) Nickel in matte and speiss exported valued at 18 cents per pound.

# Output from Nickel-Copper Mines and Smelters, 1928-1930

	Unit	1928	1929	1930
Ore mined Ore shipped Content of ores, etc., shipped— Copper. Nickel. Ore and concentrates treated at smelters. Matte produced. Content of matte— Copper. Niekel. Matto shipped to Canadian refineries Matte exported from Canadian smelters and refineries.	ton ton pound pound ton ton pound ton pound ton ton	1,457,910 1,457,910 67,485,937 100,420,842 1,476,704 91,313 59,408,538 86,788,538 66,463 39,310	1,991,910 1,991,910 103,457,449 128,901,304 2,033,457 132,030 92,630,143 116,190,232 115,599 25,086	2,127,043 2,115,139 142,048,534 122,195,531 2,357,154 166,703 141,600,753 122,224,692 137,364 34,550

#### Peat

Shipments of peat during 1930 totalled 2,847 tons valued at \$10,932, made up of 2,219 tons from Quebec and 628 tons from Ontario.

Petroleum

Production of Crude Petroleum in Canada, 1929 and 1930

	1929		193	0
	Barrels Total value Barrels			Total value
New Brunswick-Total	7,409	\$ 19,909	6,758	<b>\$</b> 17,379
Ontario— Petrolia and Eaniskillen Oil Springs Moore Township. Sarnia Township. Plympton Township. Bothwell West Dover Tilbury East. Onondiga Moza Township. Thamesville Dunwich.  Total for Ontario	56, 284 30, 789 1, 230 749 315 23, 236 715 139 311 6, 851 427 148	135, 140 76, 403 2, 973 1, 807 757 56, 026 1, 724 335 1, 192 16, 226 1, 029 358	55, 130 29, 160 1, 576 1, 576 1, 149 296 457 149 231 7, 166 447 365	109,750 60,038 3,135 2,285 589 42,115 909 296 762 14,252 889 726
ALBERTA—Total	992,000	3,476,620	1.368,411	4.700.760
Canada	1,120,693	3,790,497	1,492,171	4,953,885

THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	19	29	19	30
	Quantity	Value	Quantity	Value
Imports— Crude petroleum in the natural state, 0-7900 specific gravity		8		\$
or heavier at 60 degrees temperature, when imported by oil refiners to be refined in their own fuctories	1,060,000,971	48,154,347	1,012,029,544	38,241,27
line lighter than 0.8235 but not less than 0.775 specific gravity at 60 degrees	182,035	19,599	539,045	58,59
gravity or heavier at 60 degrees temperature	63,264,841	2,444,259	65,733,147	2,406,22
metals in their own concentrating establishmentsgal.  Petroleum, crude, not in its natural state, 0.725 specific gravity or heavier, but not heavier than 0.770 specific gravity, at	144.890	81,691	134,001	55,24
60 degrees temperature when imported by oil refiners to be refined in their own factoriesgal.	5,726,147	376,001	8,460,369	600,89
Kerosene, Fuel and Illuminating Oils				
Coal oil and kerosene, distilled, purified or refined, n.o.p gal.  Illuminating oils, composed wholly or in purt of the products of petroleum, coal, shale or lignite, costing more than 30 conts	4,508,255	398,010	4,911,647	360,518
per gallon gal. Conl oil and kerosene, distilled, known as "engine distillate," when 0.725 specific gravity and heavior, but not heavier	9,486	3,910	10,687	4,660
thun 0-770 specific gravity at 60 degrees temperaturegal. Fuel oil, ex-warehoused for slips' storesgal.	17,092 32,302,642	1.714 868,925	64,757 31,560,548	9,856 821,313
Lubricating Oils				
Lubricating oils, composed wholly or in part of petroleum, and costing less than 25 cents per gallon	7,369,099 10,035,095	1,289,594 4,155,353	8,018,755 8,261,051	1,477,630 3,540,113
GAROLINE AND OTHER OILS				
Gasoline under 0.725 specific gravity at 60 degrees temperature gal. Gasoline, 0.725 specific gravity and heavier, but not heavier	135,558,699	15,096,277	94,038,951	9,497,472
than 0.770 specific gravity at 60 degrees temperature. gal. Gasoline, antural casing head (from September, 1930). gal. Gasoline, n.o.p. gal. All other oils, n.o.p. gal.	39,551,756 41,115 194,794	4,702.487 5.322 137,337	49,953,335 8,923,792 10,530,479 308,019	5,712,502 775,243 1,129,284 131,324
OTHER PRODUCTS OF PETROLEUM	200,100	201,001	000,025	1011081
Grease, axle. lb. Paraffine wax lb. Parufline wax candles lb. Vaseline, and all similar preparations of petroleum for toilet,	7,010,528 3,299,236 393,158	383,513 135,169 85,543	5,341,098 3,494,085 383,033	288,994 126,770 79,766
Viseline, and all similar preparations of petroleum for toilet, medicinal or other purposes.  Petroleum, products of, n.o.p. gal.	1,828,536	250,753 297,126	1,667,160	230.800 251.743
Total	*	76,886,930	_	65,800,221
XPORTS-				
Oil, petroloum, crude. gal Oil, coal and kerosone, refined gal Oil, gasoline and maphtha gal Oil, mineral, n.o.p. gal	28,177,495 1,367,241 4,669,078 433,634	1,548,288 137,160 875,027 105,426	19,250,585 1,460,676 7,256,557 315,779	881,452 138,455 1,226,561 120,231
Wax, mineral	11,556	62,171 2,728,672	16,958	74,933

#### Phosphate

Imports of phosphate into Canada totalled 47,206 tons worth \$297,522 as against 18,192 tons worth \$114,741 in 1929. The Canadian production during 1930 was obtained from Quebec and amounted to 40 tons worth \$760. Some experimental shipments of phosphate were made by the Consolidated Mining and Smelting Company from a deposit near Fernic, B.C., during 1927, 1928 and 1929.

Pyrites\*

Production in Canada, Imports and Exports of Pyrites, 1929 and 1930

	1921	9	1930		
	Sulphur content	Value	Sulphur	Value	
	tons	8	tons	- 8	
Production— Quebec. Ontario. British Columbia.	9,926 4,579 28,276	73,119 51,516 226,208	12,653 7,275 17,044	93,038 73,835 141,904	
Total	42,781	350,843	36,972	308,777	
Imports— Brimstene, or sulphur, crude or in roll or flour	234,926	3,789,243	179,728	3,177,492	
Exports— Pyrites	31,987	246,771	26,592	159.866	

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

Quartz

Production in Canada and Imports of Quartz, 1929 and 1930

	1929		1030	
	Tons	Value	Tons	Value
	-	8		- 8
Production— Nova Scotis. Quelec. Ontario. Manitoba. British Columbia.	11,845 46,444 187,973 10,045 9,642	31,388 132,532 316,050 35,610 45,947	8,057 42,947 207,231 6,497	18,494 124,000 297,638 35,488
Total	265,949	561,527	264,732	475,62
Imports— Silex or crystallized quartz, ground or unground Flint	3,995 3,595	79,653 39,272	5,040 3,878	111,477 37,81
Total	7,590	118,925	8,918	149,284

Salt

Production of Salt in Canada, by Grades, 1929 and 1930

	1929			1930			
Grade	Manu- factured	Sold	Value of salt sold (not including packages)	Manu- factured	Sold	Value of salt sold (not including packages)	
Table and dairy. Common fine. Common course. Land salt. Other grades.	tons 54,618 49,538 50,399 1,407 5,875	tons 54.138 49.869 50.383 1.919 5.628	\$ 785,559 235,335 322,600 7,209 58,607	tons 49,050 51,443 44,560 281 7,557	tons 49,467 52,604 44,074 281 7,688	\$ 868,396 289,594 325,844 1,414 80,025	
Brine for chemical works (salt equivalent sold or used)	168,327	168.327	168,776	114,737	114,737	115,944	
Total	330,164	339,264	1,578,086	267,628	268,831	1,681,217	
Value of packages	-		543,022	-	-	499,740	
Total	330, 164	330, 264	2,121,108	267,628	268,851	2,180.957	

#### Imports into Canada and Exports of Salt, 1929 and 1930

	192	9	1930		
	Tons	Value	Tons	Value	
IMPORTS		\$		- 3	
Salt, for use of the sea or gulf fisheries. Salt, in bulk, n.o.p. Salt, n.o.p., in bugs, barrels, etc.	82,530 54,997 38,794	370,211 208,130 342,302	56.134 40,909 31,273	195,760 169,948 273,448	
Salt, table, made by an admixture of other ingredients, when containing not less than 90 per cent of pure salt	245	16.177	69	21,74	
Total	176,566	936,820	128,385	669,90	
Exports— Total	9,359	70,763	8,758	74,397	

#### Sand-Lime Brick

Preliminary figures on the production of sand-lime brick in Canada give the total as 52,301 thousand valued at \$559,838 as compared with 78,361 thousand worth \$953,726 in 1929. The active plants were located in Quebec, Ontario and Manitoba.

Because of its association with other building materials, data regarding the production of sand-lime brick are included in this report. Statistics relating to sand-lime brick are not included in the totals for structural materials industries as both the sand and lime used have been so recorded; production of sand-lime brick is regarded as a manufacturing operation and therefore is shown in the report on the Manufacture of the Non-Metallic Minerals, issued annually by the Burcau.

#### Sand and Gravel

Sand and gravel production in Canada during 1930 totalled 29,006,338 tons with a valuation of \$7,302,424 as compared with 27,846,945 tons valued at \$7,317,814 shipped in 1929.

Imports of sand and gravel into Canada during 1930 amounted to 185,362 tons worth \$167.642, while silica sand imported for the manufacture of glass and carborundum and for use in foundries amounted to 164,349 tons valued at \$352,796. Corresponding data in 1929 showed 269,426 tons worth \$216.918 and silica sand 233,963 tons at \$490,558. Exports of sand and gravel in 1930 totalled 2,589,431 tons appraised at \$468,380 as against a total of 1,903,312 tons worth \$441,798 exported in 1929.

Silver
Production, Imports and Exports of Silver, 1929 and 1930

	192	9	193	80
	Quantity	Value	Quantity	Value
	fine oss.	\$	fine ozs.	\$
Nova Scotia— In gold bullion—Total	132	70	67	26
Quebec— In gold ores, in blister copper and in copper and silver-lead-sinc ores exported—Total	813,831	431,269	521,603	218,089
Ontario— In silver bullion and nuggets. In gold bullion In matte, blister copper and in silver cres, concentrates and residues exported.	7,345,561 256,885 1,288,280	3,892,633 136,131 682,698	8.159,811 299,536 1,745,663	3,113,294 114,285 686,040
Total	8,890,726	4,711,462	10,205,010	3,893,619
MANITOBA— In gold bullion and in blister copper—Total	2,644	1, (01	93,428	35,647
BRITISH COLUMBIA— In alluvial gold. In gold bullion In blister copper. In base bullion and in ores exported.	1,160 1,363 667,052 9,486,833	615 722 353,491 5.027,357	1,676 2,465 1,101,066 10,731,425	640 940 420,101 4,094,468
Total	10,156,408	5,382,185	11,836,632	4,516,149
YUKON— In alluvial gold	8,028 3,271,502	4,254 1,733,667	7,911 3,721,284	3,018 1,419,819
Total	3,279,530	1,737,921	3,729,195	1,422,837
Canada	23, 143, 261	12, 264, 30%	26, 435, 935	10,086,367
IMPORTS  Silver in burs, etc., unmanufactured. Silver manufactures of n.o.p., and articles consisting wholly or in part of sterling or other silver.  Silver coin.	-	958,312 400,125		610,634 199,128
Tetal		1,358,437		809,757
Exports—Silver contained in orc, concentrates, etc	7,058,275 14,879,770	3,736,204 8,022,917	8,473,189 15,778,755	3,401,340 6,180,412
Total.	21,938,945	11,759,121	24, 251, 944	9,581,752
Silver coin, Foreign	***	2,603,704	-	2,417,822 30

#### Slate

State shipments during 1930 amounted to 150 tons valued at \$3,000. This production was obtained from a deposit in the Victoria Mining Division of British Columbia.

Imports into Canada during the year under review were, roofing slate 4,349 squares valued at \$59,411; slate pencils valued at \$6.506; school writing slates worth \$91,355; slate mantles and other manufactures of slates valued at \$48,706.

#### Sodium Carbonate

The output of sodium carbonate crystals in 1930 amounted to 364 tons worth \$4,550 as compared with shipments of 600 tons at \$8,100 in the preceding year.

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

#### Sodium Sulphate

Shipments of natural sodium sulphate from deposits in Saskatchewan during 1930 amounted to 31,571 tons valued at \$293,847 as against 5,018 tons worth \$64,112 in 1929. The large increase was due in the main part to the demand for this material by a Canadian chemical company for the manufacture of nitre cake at Coppercliff, Ontario, to be used in the smelting of nickel-copper ores.

Stone
Production in Canada, Imports and Exports of Stone, 1929 and 1930

	19	29	19	30
	Tona	Value	Tons	Value
Production—		\$		\$
Nova Scotia New Brunswick Quebec Ontario Manitoba Alberta British Columbia	264,706 27,352 3,464,471 5,239,672 192,109 5,183 408,931	376,222 204,970 5,317,850 4,736,263 895,017 24,546 511,655	163,354 92,369 3,946,531 5,178,010 129,608 7,903 360,331	292, 194 256, 596 5, 758, 104 4, 769, 266 873, 415 21, 736 450, 586
Canada	9,622,424	12,066,532	9,878,106	12,419,90
MFORTS— Building stone, other than marble or granite, sawn on more than				
two sides, but not sawn on more than four sides	471	6,285	139	2,02
further manufactured than sawn on four sides	1,826	77,685	1,492	78,90
sawn or chiselled. Flugstone and building stone, other than marble or granite sawn on		372,049	-	309,93
not more than two sides.  Granite, sawn only.  Grunite, manufactures of, n.o.p	-	233,084 22,799 44,857	-	107,78
Grunite monuments Grunite, rough, not hammered or chiselled		137,359 67,597	-	42,15 132,62 78,28
Paving blocks. Marble, rough, not hammered or chiselled.	-	237,680	-	2.87 243,62
Marble, sawn or sand rubbed, not polished Marble, manufactures of, n.o.p. Refuse stone. Manufactures of stone, n.o.p.	645,768	267,497 187,717 405,077 76,384	303,462	264,869 170,00 233,189 65,30
Total	-	2,136,050	-	1,740,55
Created stone  Crushed stone  Granite and marble, unwrought  Freestone, limestone, and other building stone, unwrought  Dressed stone	116,950 2,467 661	200,000 23,189 8,867 5,065	136.837 1.768 2,149	235,40 21,91 15,82 4,11
Total	-	237, 121	49	277,26

#### Production of Stone in Canada by Kinds and by Provinces, 1930

- 2	Gra	nite	Lime	stone	Marl	ole	Sands	one
	Tons	\$	Tons	\$	Tons	\$	Tons	\$
Nova Scotia Now Brunswick Quebec Ontario Manitoba Alberta British Columbia	56,540 46,518 640,044 926,889	141.672	35,710 2,995,652	78,360 2,822,975 3,744,570 863,834	8,356 755 196	698,592 9,578 5,282	31,972 10,141 302,479 9,330 - 117 2,630	154,878 36,566 215,524 54,131 4,500 23,043
Total for Canada	1,939,868	3,510,769	7,572,262	7,707,040	9,307	713,452	356,669	488,442

# Tale and Soapstone

Production in Canada, Imports and Exports of Tale and Soapstone, 1929 and 1930

	19:	29	1930		
	Tons	Value	Tons	Value	
Production— Scapstone Talo	15,509	\$ 47,986 181,212	11,841	\$ 50,168 136,048	
Total		229, 198	-	186,216	
Imports— Tale or scapstone, ground or unground—Total	3,516	109,675	4,799	85,779	
Exports— Tale—Total.	11,399	139,096	8,512	98,853	

Zinc

Production in Canada, Imports and Exports of Zinc, 1929 and 1930

	193	29	193	0	
	Pounds	Value	Pounds	Value	
		\$		\$	
RODUCTION—	80 000 440	5 000 Bod	0 854 400	200 400	
Quebec	19,653,440	1,058,731	9.754, 160	381, 150	
Ontario	5,516,806	297,190	3,527,894 3,306,707	127,004	
Manitoba. British Columbia.	172,096,841	9,270,857		119,041	
Divisu Common	110,000,041	81910.001	201,010,110	9,038,762	
Total	197, 267, 087	19,626,778	267,665,479	9,635,957	
PORTS—					
Zine dust	483, 192	38,891	506, 670	37,853	
Zinc in blocks, pigs and sheets	10,631,343	787, 432	8,613,826	534.595	
Zine spelter	2,658,483	165,566	1,860,276	90,270	
line white	19,052,472	1,248,668		895,580	
inc, sulphate and chloride of	3, 123, 840	125,742	2,685,186	96,242	
inc, manufactures of, n.o.p	-	167,795	~	161,583	
topone	19,408,436	852,079	16,051,513	722.341	
Total	-	3,386,173	_	2,528,464	
DRTH-					
Zine in ore	25,738,900	1,415,725	46,964,100	1.014.915	
Line scrap, dross and ashes	7,638,200	262,719		92,651	
ne spelter	135,085,700	7,031,645		5,146,215	
Wa 6-1		0 848 808		0.070.004	
Total	-	8,710,089	-	6, 253, 781	



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The Fertilizer Trade in Canada, July 1, 1928—June 30, 1929.