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 SIX MONTHS ENDING
JUNE 30, 1925

AUGUST 24, 1925

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LIST OF PUBLICATIONS

PREPARED IN THE

MINING, METALLURGICAL AND CHEMICAL BRANCH
DOMINION BUREAU OF STATISTICS

(1) **Mineral Production (Mining and Metallurgy).**

General Reports—

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

Coal—

Annual Report of Coal Statistics for Canada.
Monthly Report of Coal and Coke Statistics for Canada.

In addition to the foregoing reports on mineral production a series of annual bulletins is in preparation each of which will contain statistics relative to a particular metal or non-metallic mineral or to a special section of the mineral industry, and the series when complete will cover every phase of mineral production in Canada.

(2) **Statistics of Manufactures, based chiefly on minerals.**

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

Annual—

Iron and Steel and Their Products: Pig Iron and Ferro-Alloys—Steel and Rolled Products—Castings and Forgings—Boilers and Engines—Agricultural Implements—Machinery—Automobiles—Auto Accessories—Bicycles—Railway Rolling Stock—Wire and Wire Goods—Sheet Metal Products—Hardware and Tools—Miscellaneous Iron and Steel Products.

Manufactures of Non-Ferrous Metals: Aluminium Ware—Brass and Copper Products—Lead, Tin and Zinc Products—Manufactures of the Precious Metals—Electrical Apparatus and Supplies—Miscellaneous Non-Ferrous Metal Products.

Manufactures of Non-Metallic Minerals: Aerated Waters—Asbestos and Allied Products—Cement Products and Sand-Lime Brick—Coke and By-Products—Glass (blown, cut, ornamental, etc.)—Illuminating and Fuel Gas—Monumental and Ornamental Stone—Petroleum Products—Miscellaneous Non-metallic Mineral Products, including (a) Artificial Abrasives, (b) Abrasive Products, (c) Artificial Graphite and Electrodes, (d) Fuel Briquettes, (e) Gypsum Products, (f) Mica Products.

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

Monthly—

Production of Iron and Steel in Canada.
Coke Statistics for Canada.

In addition to the foregoing printed summary reports, a series of bulletins is being prepared, each of which deals with a particular phase of manufacturing.

(3) **Special Reports.**

Report on the Consumption of Prepared Non-Metallic Minerals in Canada.
Report on the Consumption of Mine and Mill Materials in Canada.

PREFACE

Statistics on the mineral production of Canada are issued half-yearly by the Bureau. The present report covers the production of metals and non-metals during the first six months of the calendar year with comparative totals for the corresponding period in 1924. In addition, there are tables showing the Bureau's finally revised statistics by commodities for the calendar year 1924, and there are complete tables for the same year showing the production by provinces with comparative data for two preceding years.

In the preliminary report for the calendar year and in the finally revised report on the mineral production of Canada each year, the whole field of production is covered; in addition, there are, in the final report, many tables of a general character presenting statistics of capital, employment, prices, etc. But in the preliminary report for the six months' period, it is only possible to review the production of the metals and the non-metals owing to the fact that the structural materials industries which include the production of brick, lime, sand and gravel, cement and stone, are largely seasonal in their operation, and as a result a report covering the first six months of the calendar year, would only include two or three months of actual production.

In the preparation of this report the work was again greatly expedited by co-operation with the Ontario Department of Mines in the use of joint schedules for mine and smelter reports. The monthly statistics on coal were also collected jointly with four of the coal-producing provinces, namely: Nova Scotia, New Brunswick, Saskatchewan and Alberta.

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

The report has been prepared under the direction of Mr. S. J. Cook, B.A., A.I.C., F.C.I.C., Chief of the Mining, Metallurgical and Chemical Branch of the Bureau, by Mr. W. H. Losee, B.Sc., who directly supervised the work on the sections dealing with metals and metalliferous ores, and by Mr. B. R. Hayden, who devoted his attention more particularly to the non-metalliferous products.

R. H. COATS,
Dominion Statistician.

DOMINION BUREAU OF STATISTICS, OTTAWA.
August 24, 1925.

Mineral Production of Canada, January 1 to June 30, 1924 and 1925, also for Twelve Months Ending December 31, 1924

		1924 12 months		1924 Jan. 1 to June 30		1925 Jan. 1 to June 30	
		Quantity	Value	Quantity	Value	Quantity	Value
Metallic			$		$		
Arsenic (As_2O_3)	lb.	4,021,567	348,293	2,998,878	350,868	2,116,141	90,242
Bismuth	"	12,863	27,913	12,863	30,614	9,826	17,196
Cobalt	lb.	948,704	1,682,395	481,411	1,323,880	590,087	1,239,133
Copper	"	104,457,447	13,604,538	52,103,161	6,680,406	53,055,349	7,354,533
Gold	fine oz.	1,525,382	31,532,443	700,264	14,475,741	824,043	17,034,480
Iron, pig, from Canadian ore	tons	3,710	92,750	3,981	88,861	3,415	79,274
Iron ore sold for export	"	1,408	3,771	60	90	1,976	8,617
Lead	lb.	175,485,499	14,221,345	79,058,295	6,278,810	128,398,836	11,510,955
Manganese ore	tons	584	1,088	–	–	–	–
Molybdenite	lb.	18,739	9,370	–	–	–	–
Nickel	"	69,536,350	19,470,178	35,229,180	10,216,462	35,756,640	11,442,125
Osmium	"	–	–	152	15,200		
Palladium	crude oz.	8,923	811,993	1,795	148,985	821	80,706
Platinum	"	9,186	1,691,427	1,350	152,535		
Rhodium, iridium	oz.	593	51,120	211	21,100		
Silver	fine oz.	19,736,323	13,180,113	9,091,916	5,881,196	9,240,482	6,288,332
Zinc	lb.	98,909,077	6,274,791	29,414,000	1,832,198	55,257,772	4,002,872
Total		–	**102,406,528**	–	**47,496,946**	–	**59,148,465**
Non-metallic							
Actinolite	tons	90	1,225	50	625	30	375
Asbestos	"	225,744	6,710,830	104,872	3,192,132	120,800	3,962,304
Barytes	"	151	3,308	50	962	87	2,021
Bituminous sands	"	531	2,127	–	–	–	–
Coal	"	13,638,197	53,593,988	6,847,665	27,135,623	5,383,714	21,445,597
Feldspar	"	44,804	358,540	18,239	143,146	13,421	105,489
Fluorspar	"	76	1,343	1	22	–	–
Garnets	"	360	7,200	–	–	–	–
Graphite	"	1,334	76,117	662	39,718	1,077	63,843
Grindstones	"	2,691	130,824	497	18,318	*	*
Gypsum	"	646,016	2,208,108	236,592	954,153	234,705	906,052
Magnesite	"	3,873	101,356	2,385	67,926	1,785	49,557
Magnesium sulphate	"	–	–	100	5,000	–	–
Mica	"	4,091	357,272	1,711	168,454	1,370	115,576
Mineral water	gals.	209,353	15,421	109,683	12,108	92,095	11,473
Natural gas	M cu. ft.	14,881,336	5,708,636	8,700,970	3,748,509	8,331,104	3,354,672
Iron oxides	tons	7,266	91,160	2,385	67,926	3,285	38,769
Petroleum, crude	brls.	160,773	467,400	85,426	268,155	80,970	233,271
Phosphate	tons	–	–	–	–	16	189
Pyrites	"	23,552	95,620	6,811	28,629	1,666	10,220
Quartz	"	150,896	323,156	66,484	151,402	69,792	134,099
Salt	"	207,979	1,374,780	102,884	730,839	105,770	650,965
Sodium carbonate	"	510	5,173	321	4,715	557	6,700
Sodium sulphate	"	1,083	6,004	–	–	1,916	9,578
Talc and soapstone	"	11,332	154,480	5,228	70,798	7,056	98,477
Tripolite	"	33	838	28	838	–	–
Volcanic ash	"	245	1,103	98	441	–	–
Total		–	**71,796,009**	–	**36,810,439**	–	**31,199,233**
***Structural materials and clay products**							
Cement	brls.	7,498,634	13,398,411	–	–	–	–
Clay products—							
Brick—Soft mud process, Face	M	10,831	185,248	–	–	–	–
Brick—Soft mud process, Common	"	50,079	746,044	–	–	–	–
Stiff mud process (wire cut), Face	"	80,565	1,842,224	–	–	–	–
Stiff mud process (wire cut), Common	"	124,556	1,880,631	–	–	–	–
Dry press, Face	"	35,203	761,572	–	–	–	–
Dry press, Common	"	12,794	168,043	–	–	–	–
Fancy or ornamental brick	"	755	98,460	–	–	–	–
Sewer brick	"	2,690	40,775	–	–	–	–
Fire brick from domestic clay	"	4,327	209,256	–	–	–	–
Fire clay	ton	3,645	26,258	–	–	–	–
Fire clay blocks and shapes	"	–	54,273	–	–	–	–
Structural tile—Hollow blocks (including fire-proofing and load-bearing tile)	"	96,818	926,777	–	–	–	–
Roofing tile	No.	7,377	917	–	–	–	–
Floor tile (quarries)	sq. ft.	444,601	35,608	–	–	–	–
Drain tile	M	15,137	409,369	–	–	–	–
Sewer pipe (including copings, flue linings, etc.)	ton	76,355	1,594,280	–	–	–	–
Pottery, glazed or unglazed	"	–	238,342	–	–	–	–
Lime	bush.	9,137,009	3,178,541	–	–	–	–
Sand and gravel	ton	11,603,500	3,181,083	–	–	–	–
Stone	ton	4,767,899	6,407,757	–	–	–	–
Total		–	**35,380,869**	–	–	–	–
Grand total		–	**209,583,406**	–	**84,307,385**	–	**90,347,698**

* Data not available for the half-year.

DOMINION BUREAU OF STATISTICS
R. H. COATS, B.A., F.S.S., (Hon.,) F.R.S.C., Dominion Statistician

S. J. COOK, B.A., A.I.C., F.C.I.C., Chief of the Mining, Metallurgical and Chemical Branch

PRELIMINARY REPORT
ON THE
MINERAL PRODUCTION OF CANADA

DURING THE SIX MONTHS ENDING JUNE 30, 1925

General Review.

Outstanding advances among the metals, marked the mineral production records for Canada during the first half of 1925. Production of metals and non-metals reached a total value of $90,347,698 as compared with $84,307,385 in the first half of 1924, an increase of 7·16 per cent. Metals and non-metals produced during the calendar year 1924 were valued at $174,202,537; production during the first half of 1925 showed a sum equal to 51·86 per cent of this total.

Advances among the metals were general. Gold rose to a new record. Lead advanced 62·41 per cent over the high mark attained in the first half of 1924. Nickel production was well maintained. Copper was up a million pounds. Silver showed increased values. Zinc followed the trend in lead to almost double the output recorded in the first half of 1924. Cobalt production continued to improve.

Despite the loss due to the protracted strike in the Nova Scotia coal mines which reduced the output of coal in that province during the six months ending June to less than half the tonnage reported in the first six months of 1924, improved conditions throughout the rest of the non-metal mining field resulted in the production of non-metals during the half-year reaching a total value of $31,199,233 as compared with $36,844,286 in the first half of 1924; the loss in the value of coal output alone amounted to $5,723,873 while the decrease in the aggregate value of non-metals amounted to only $5,645,053.

Coal, gold, lead, nickel, copper, silver, zinc, asbestos, natural gas and cobalt, were in the order named, the principal products of the mineral industry in Canada during the period under review; production values for these commodities ranged from $21,445,597 for coal to $1,239,133 for cobalt and amounted in the aggregate to $87,635,003 or 96·99 per cent of the grand total for metals and non-metals. No other products in this class reached a value in excess of a million dollars during the half-year.

In the first half of 1924 a loss in coal production of more than 2 million tons was reported; in the first half of 1925 there was a further reduction of 1·46 million tons due to the great strike in the Nova Scotia coal mines which began early in March and continued beyond the end of the half-year.

Canada's production of coal totalled 5,383,714 tons valued at $21,445,597 as compared with 6,847,665 tons valued at $27,135,623 in the first half of 1924.

Nova Scotia output dropped to 1,202,185 tons valued at $5,114,988 as compared with 2,703,158 tons produced in the first six months of 1924 having a total value of $10,473,297. Only a slight loss in output was noted in New Brunswick. Saskatchewan also produced nearly as much as in the corresponding period last year. Alberta's production of 2,533,812 tons valued at $9,703,717 showed a decline from the 2,612,134 tons valued at $9,944,761 produced in the first half of 1924. British Columbia mined more coal in the first half of 1925 than during the first half of 1924; production amounted to 1,353,204 tons valued at $5,851,200.

Imports of coal into Canada were also less during the first half of 1925 than in the corresponding period of the preceding year. The tonnage of anthracite brought in was greater than the total for the first half of last year and was also higher than the average quantity imported during the first six months in each of the five preceding years. Bituminous coal importations during the period dropped to 4,566,058 tons from the total of 5,468,506 tons imported during the first half of 1924. The average imports of bituminous coal during these months over the period of five years, 1920-1924, amounted to 5,521,926 tons. Imports of coal into Canada from

the United Kingdom during the first six months of this year totalled 159,984 tons, or more than double the imports of 78,345 tons from that source in the first six months of 1924.

Based on figures of output, imports and exports, the computed amount of coal made available for consumption in Canada during the first half of 1925 was 11,689,998 tons as compared with a total of 13,864,087 tons made available for use in the half-year ending June, 1924. On the same basis, the total supply made available during the twelve months ending June 30, 1925, was 27,519,440 tons; at the end of June 30, 1924, the total for the twelve months was 33,876,975 tons.

Gold production reached a new record at 824,043 fine ounces which valued at the standard rate of $20·671834 per fine ounce was worth $17,034,480 as compared with 700,264 fine ounces worth $14,475,741 produced in the first half of 1924.

Ontario's gold fields continued to produce at a steadily increasing rate during the first six months of 1924; the total production from this source alone amounting to 701,714 fine ounces as compared with 571,418 ounces produced in the first half of 1924 and a total of 1,242,029 fine ounces during the calendar year 1924.

From the Porcupine field production amounted to 574,806 ounces or 81·96 per cent of the total for Ontario; Kirkland Lake Camp yielded 126,477 ounces or 18 per cent. The small balance of Ontario's production was derived from the other metal-mining industries.

British Columbia produced 112,444 fine ounces of gold valued at $2,324,424. Less amounts were recorded for Yukon, Manitoba, Quebec and Nova Scotia in the order named.

Rising to a total of 128,398,836 pounds, the production of lead in the first six months of 1925 reached a total value of $11,510,955 and marked an increase of 49,340,541 pounds in quantity and $5,232,145 in value above the total for the six months ending June, 1924. Most of the output was produced at Trail from Sullivan mine ore and from the silver-lead-zinc ores from smaller properties, but in addition to the Trail production, there was a considerable recovery of lead in United States smelters from the ores of the Premier mine and from the Mayo district in the Yukon. Ontario's production was largely derived from the mine of the Kingdon Mining, Smelting and Manufacturing Company at Galetta, but there was also some lead recovered from silver-lead-bismuth bullion exported. Lead ores and concentrates were exported from Notre-Dame des Anges and from the Tétreault mines in Quebec.

Including the nickel contained in matte made at Sudbury and small amounts of nickel contained in smelter products resulting from the treatment of cobalt ores, the production of nickel in Canada during the half-year ending June amounted to 35,756,640 pounds, which while slightly less than the production during the first six months of 1924, amounted to 51·4 per cent of the total for the calendar year. At 32 cents, the average New York price for 99 per cent virgin metal during the half-year, production was valued at $11,442,125.

Most of the matte made by the International Nickel Company at Copper Cliff was shipped to the refinery at Port Colborne but some was exported to Huntingdon, West Virginia, U.S.A., there to be manufactured directly into Monel metal. The Mond Nickel Company exported the matte produced at their Coniston smelter to Wales for refining. There has been no activity at the mines, smelter or refinery formerly operated by the British America Nickel Corporation since that organization went into liquidation in July, 1924.

Copper production, computed as the sum of the quantity of copper contained in matte made in the Sudbury area, the blister copper produced at the Granby smelter in British Columbia, and the recoverable copper ores exported, amounted to 53,055,349 pounds valued at $7,354,533. This marked an advance of 952,188 pounds in quantity and an increase of $674,127 in value in comparison with the totals for the first half of 1924. Apart from the fact that the present price of copper is considered to be too low, the copper industry in America was reported as being in excellent shape at the close of the half-year. The electrical and automobile trades continued to absorb large quantities of copper.

Better prices for silver prevailed during the half-year so that, with production slightly above the total for the first six months of 1924, the value of silver produced during the period reached a total of $6,288,332 as compared with $5,881,196 in the corresponding period of last year. About one-half of the total silver production was in the form of bullion; 29·6 per cent of the total was contained in blister copper and lead bullion, and 27·0 per cent represented the quantity estim-

ated as recoverable from ores, etc., exported. Ontario produced about one-half of the total Dominion output of silver during the period and British Columbia contributed most of the balance with Yukon, Quebec, Manitoba and Nova Scotia, in the order named, producing less amounts.

Zinc refined at Trail, B.C., with relatively small amounts of zinc estimated as recoverable from ores exported from British Columbia, Ontario and Quebec made up the total of 55,257,772 pounds produced from Canadian ores during the first half of this year. During the first six months of 1924, the zinc output amounted to only 29,414,000 pounds. Production values, based on the average price of zinc on the St. Louis market, reached a total of $4,002,872 this year as against $1,832,198 in the corresponding period of 1924.

Asbestos shipments totalling 120,800 tons worth $3,962,304 marked an advance over the 104,872 tons at $3,192,132 shipped during the first half of 1924. Interest in the asbestos industry centered in the proposed merger of the producing companies which was under consideration during the period. Most of the asbestos shipped during the half-year was exported from Canada.

For the first time in history, Alberta won first place among the provinces as a producer of natural gas with a production of 4,687,084 M cu. ft., displacing Ontario which had previously held the premier position; Ontario's output in the first half of the year was 3,257,429 M cu. ft. There was also a small production from New Brunswick wells. Production from all Canadian wells during the half-year amounted to 8,331,104 M cu. ft., valued at $3,354,672, a decrease of 4·25 per cent in value as compared with the totals for the half-year ending June 30, 1924.

Canada continues to be the main source of the world's supply of cobalt. Computed as the sum of the cobalt contained in metal, oxides, salts, ores, concentrates and residues marketed during the period, the production of cobalt in the first half of 1925 amounted to 590,087 pounds netting the producers $1,239,133. On the same basis production during the calendar year 1924, amounted to 948,704 pounds valued at $1,682,395.

Other metallic mineral products deserving of mention were white arsenic, of which more than 2 million pounds were made; bismuth, contained in silver-lead-bismuth bullion exported; small quantities of iron ore and of pig iron made from Canadian ore; and a recovery of precious metals belonging to the platinum group worth $80,706.

Non-metallic mineral products, other than those produced in sufficient quantity to place them among the 10 most important mineral products during the half-year, were barytes, feldspar, graphite, gypsum, magnesite, mica, mineral waters, iron oxide pigments, crude petroleum, pyrites, quartz, salt, sodium carbonate, sodium sulphate, talc and soapstone. Of these, there are a few which specially merit further attention.

Feldspar production amounted to 13,421 tons valued at $105,489 or about 26 per cent less than the output in the first half of 1924. Graphite on the other hand, rose more than 62 per cent above the total for the first half of 1924, and shipments totalled 1,077 tons valued at $63,843. Gypsum produced in slightly less amounts than in the corresponding period last year, totalled 234,705 tons worth $906,052 at the quarry. Magnesite production dropped about 25 per cent; shipments totalled 1,785 tons worth $49,557. Mica, too, was produced in less amount; the total for the half-year was 1,370 tons valued at $115,576. Slightly less crude petroleum was pumped from the wells in the period under review than during the first six months of 1924, but the decline in value was more pronounced amounting to about 13 per cent; the output amounted to 80,970 barrels valued at $233,271. Production of pyrites at 1,666 tons valued at $10,226 marked a decline in the output of more than 75 per cent, but slightly better prices were obtained for the product than in the preceding year. Quartz shipments showed improvement in quantity but a lower total value at 69,792 tons worth $134,099. Salt also showed a higher production figure but a lower sales value at 105,770 tons valued at $650,965. Talc and soapstone were produced in larger quantities, shipments amounting to 7,056 tons having been made at a value of $98,477.

Employment.—Returns on employment to the Bureau of Statistics from upwards of 200 mine operators, showed a gradual downward trend from June, 1924, until March, 1925; since then there has been a gradual improvement.

The index of employment in the mining industry (number employed by reporting firms on January 1, 1920 = 100), ranged from 97·1 in January, 1925, down to 93·1 in February and 92·9 in March, back to 94·2, 94·3 and 94·5 in April, May and June and reached 97·2 on the first of July.

In the general index of employment in all industries there was a continuous upward trend throughout the period from 83·9 in January, 1925, the index rose to 86·1 in February, 87·0 in March, 87·2 in April, reaching 90·8 in May and 94·5 in June. On July 1, the index stood at 96·8.

In the metal-mining field, employment which had declined steadily during the last half of 1924, showed a continuous improvement in the first half of 1925. Non-metal mines, other than coal, reported very considerably increased employment during April, May and June. Employment in the coal-mining industry, disrupted by the prolonged strike in Nova Scotia, dropped to the lowest level in many years, despite the fact that towards the close of the period there was some improvement in the western area.

Prices.—Prices of iron and its products and of non-ferrous metals showed a slightly downward trend during the first half of the year. Based on the average price of 1913 as 100, the index for iron and its products which stood at 158·4 in January, 1925, dropped in April to 155·6 and in May to 152·8 and closed the half-year at 151·7. Non-ferrous metal prices, for which the index was 107·7 in January, dropped during the next three months to 101·5. In May and June there was an upward tendency, the index standing at 103·1 at the end of June. Non-metallic mineral prices varied little; the index stood at 177·2 in January and after a slight decline recovered to 177·4 in June. That is to say, at the end of June, 1925, iron and steel prices were approximately 51·7 per cent higher than the average price prevailing in 1913; prices of non-ferrous metals were only 3·1 per cent higher than the 1913 average, and prices of non-metallics stood at a level of 77·4 per cent higher than the 1913 base.

Method of Computing Values.—For statistical and comparative purposes it has always been customary to determine the values of the metals on the basis of the quantities of metals recovered from Canadian ores smelted during the year either in Canada or abroad and to compute the value of this production in each case at the average price of the refined metal in a recognized market. Arsenic, chromite and manganese, formerly reported under non-metallics, have been transferred to the metallics' section; production of these commodities has been determined as in previous reports, i.e., the quantity given represents the total sales and the value shown is the income from these sales. A change was made last year in the method of computing cobalt production. Previous reports had shown as cobalt production the sum of cobalt contained in oxides precipitated in the smelters, and the cobalt content of ores, speiss and residues exported. The total production as thus computed was valued at the average New York price for metallic cobalt during the year. In this report the quantity given for cobalt represents the cobalt content of smelter products sold during the year with the net income to the smelters from such sales. Except for this change the method followed in this report corresponds exactly with that used in previous years. Quantities and values for non-metallic minerals (except coal), and structural materials and clay products represent sales in all cases. Coal data on the other hand show the quantity and value of the output during the year.

The table of metal prices shows the market quotations used in computing values in this report.

Summary.—Summing up, it is highly satisfactory to note the magnificent progress made particularly in Ontario and British Columbia in metal mining, which for Canada showed an advance of 23·56 per cent in the half-year, and to observe the generally prevailing upward trend throughout the list of non-metal mine products. The resumption of coal mining in Nova Scotia under conditions that promise improvement should stabilize progress in that province and do much to restore commercial and domestic prosperity.

Prospects of better agreement among the asbestos producers augur well for all concerned. New developments in the north-western gold fields of Quebec are attracting much interest. Research is adding to the wealth of opportunities for the development of Canada's mineral resources, and on every hand the prospects point to vigorous growth in the mining field.

Exchange Table—Showing the amount paid in Canadian dollars for one United States dollar by months, 1920-1925

Month	1920	1921	1922	1923	1924	1925
	$	$	$	$	$	$
January	1·1056	1·1437	1·0553	1·0067	1·0275	1·0026
February	1·1497	1·1362	1·0351	1·0119	1·0322	1·0014
March	1·1178	1·1337	1·0297	1·0208	1·0294	1·0013
April	1·1112	1·1216	1·0208	1·0203	1·0184	1·0005
May	1·1134	1·1164	1·0125	1·0222	1·0166	1·0000
June	1·1381	1·1294	1·0138	1·0231	1·0141	1·0000
July	1·1134	1·1328	1·0091	1·0263	1·0064	0·9995
August	1·1275	1·1168	1·0023	1·0244	1·0011	
September	1·1075	1·1106	·9998	1·0233	1·0078	
October	1·1016	1·0931	1·0011	1·0156	1·0016	
November	1·2131	1·0904	·9998	1·0181	1·0060	
December	1·1643	1·0687	·9966	1·0239	1·0015	
Average	**1·1227**	**1·1161**	**1·0145**	**1·0197**	**1·0131**	

Metal Prices, 1920-1925

Commodity	Market	Unit	1920	1921	1922	1923	1924	January 1 to June 30, 1925
			$	$	$	$	$	$
Antimony (ordinaries)	New York	pound	0·08490	0·04957	0·05471	0·07897	0·10836	0·16266
Arsenic, white	"	"	0·11	0·08850	0·08500	0·12050	0·09636	0·05500
Cobalt	"	"	2·50	3·00	3·25	2·85	2·75	2·75
Cobalt oxide	"	"	–	–	2·00	2·10	2·10	2·10
Copper	"	"	0·17456	0·12502	0·13382	0·14421	0·13024	0·13862
Lead	New York	"	0·07957	0·01545	0·05734	0·07267	0·08007	0·08804
"	Montreal*	"	0·08940	0·05742	0·06219	9·07179	0·08104	0·08965
Nickel	New York*	"	0·45	0·35	0·35	0·29353	0·28	0·32
Platinum	" *	ounce	110·9	75·033	97·618	116·537	118·817	118·186
Silver	" *	"	1·009	0·62654	0·67528	0·64873	0·66781	0·68052
Tin	"	pound	0·48273	0·28576	0·31831	0·41799	0·49674	0·54531
Zinc	St. Louis*	"	0·07671	0·04653	0·05716	0·06607	0·06344	0·07244

* Quotations used in this report in computing value of mineral production.

Comparative Table of Mineral Production of Canada, January 1 to June 30, 1924 and 1925

		Increase (+) or Decrease (−)		Increase (+) or Decrease (−)	
		Quantity	%	Value	%
METALLIC				$	
Arsenic	lb.	− 882,737	− 29·44	− 260,626	− 74·29
Bismuth	"	− 3,037	− 23·62	− 13·418	− 43·83
Cobalt	"	+ 108,676	+ 22·57	− 84,747	− 6·41
Copper	"	+ 952,188	+ 1·82	+ 674,127	+ 10·09
Gold	fine oz.	+ 123,779	+ 17·67	+ 2,558,739	+ 17·07
Iron, pig, from Canadian ore	tons	− 566	− 14·22	− 9,587	− 10·79
Iron ore sold for export	"	+ 1,916	–	+ 8,527	–
Lead	lb.	+49,340,511	+ 52·41	+ 5,232,145	+ 83·33
Nickel	"	+ 527,460	+ 1·49	+ 1,225,663	+ 11·99
Osmium	fine oz.				
Palladium	"	− 2,687	− 76·60	− 257,114	− 76·11
Platinum	"				
Rhodium, iridium	"				
Silver	"	+ 148,566	+ 1·63	+ 407,136	+ 0·92
Zinc	lb.	+25,843,772	+ 86·16	+ 2,170,674	+ 118·47
Total		–	–	**−11,651,519**	+ 24·53

Comparative Table of Mineral Production of Canada, January 1 to June 30, 1924 and 1925—*Concluded*

		Increase (+) or Decrease (−)		Increase (+) or Decrease (−)	
		Quantity	%	Value	%
Non-Metallic				$	
Actinolite	tons	− 20	− 40·00	− 250	− 40·00
Asbestos	"	+ 15,928	+ 15·19	+ 770,172	+ 24·13
Barytes	"	+ 37	+ 74·00	+ 1,059	+ 110·08
Coal	"	− 1,463,951	− 20·81	− 5,690,026	− 21·07
Feldspar	"	− 4,818	− 26·42	− 37,657	− 26·31
Fluorspar	"	− 1	−	− 22	−
Graphite	"	+ 415	+ 62·69	+ 24,125	+ 60·74
Gypsum	"	− 1,887	− 0·80	− 48,101	− 5·04
Magnesite	"	− 600	− 25·16	− 18,369	− 27·04
Magnesium sulphate	"	− 100	−	− 5,000	−
Mica	"	− 341	− 19·93	− 52,878	− 31·39
Mineral water	gal.	− 17,588	− 16·04	− 635	− 5·25
Natural gas	M cu. ft.	− 369,866	− 4·25	− 393,837	− 10·51
Oxides, iron	tons	+ 900	+ 37·73	− 29,157	− 42·93
Petroleum, crude	brls.	− 4,456	− 5·22	− 34,884	− 13·01
Phosphate		+ 16	−	+ 189	−
Pyrites	tons	− 5,145	− 75·54	− 18,403	− 64·28
Quartz	"	+ 3,308	+ 4·98	− 17,303	− 11·43
Salt	"	+ 2,886	+ 2·80	− 79,874	− 10·93
Sodium carbonate	"	+ 236	+ 73·52	+ 1,985	+ 42·10
Sodium sulphate	"	+ 1,918	−	+ 9,578	−
Talc	"	+ 1,828	+ 34·96	+ 27,679	+ 39·10
Tripolite	"	− 28	−	− 838	−
Volcanic ash	"	− 98	−	− 441	−
Total		−	−	**− 5,611,206**	− 15·32

Exports of Canadian Minerals—January 1 to June 30, 1924 and 1925

Products		1924		1925	
		Quantity	Value	Quantity	Value
Metallic			$		$
Arsenic, metallic	lb.	301,000	10,955	520,000	6,026
Arsenic, other than metallic	"	1,399,700	136,674	1,155,900	70,846
Cobalt, metallic	"	121,720	275,680	143,517	323,381
Cobalt alloys	"	781	3,630	16,601	39,609
Cobalt oxides and cobalt salts	"	230,006	414,960	345,092	622,521
Copper, fine, in ore, matte, etc	"	23,469,300	2,594,455	29,447,300	3,382,503
Copper, blister	"	23,899,000	3,013,292	23,824,300	3,179,102
Copper, pig	"	3,590,400	424,640	−	−
Gold bearing quartz, dust, nuggets, and bullion obtained from operators	tons	−	13,290,091	−	15,255,135
Iron ore	"	167	1,565	1,976	8,617
Lead, metallic, contained in ore, etc	lb.	1,168,000	73,007	25,326,800	1,709,400
Lead, in pig and block	"	49,253,900	3,133,515	73,396,600	5,280,253
Manganese ore	tons	221	1,980	336	13,247
Molybdenum	lb.	2,000	1,010	3,500	3,793
Nickel, fine, contained in ore, matte or speiss	"	16,922,700	2,398,922	19,722,300	3,387,825
Nickel, fine	"	13,161,400	2,681,491	9,706,400	2,091,186
Platinum concentrates	oz.	218	23,004	217	22,881
Silver contained in ore, concentrates, etc	"	1,959,612	1,218,385	1,029,572	1,254,569
Silver bullion	"	7,449,852	4,809,888	7,240,133	4,902,280
Zinc ore	tons	3,752	71,565	21,067	912,085
Zinc spelter	lb.	18,312,100	1,177,669	21,247,800	1,560,977
Non-Metallic					
Asbestos, crude	tons	56,820	3,258,267	60,723	3,665,351
Asbestos, sand and waste	"	39,416	508,897	53,157	693,925
Feldspar	"	17,313	125,048	13,641	97,878
Graphite or plumbago, crude or refined	"	564	31,473	1,239	64,385
Gypsum, crude	"	149,675	230,369	123,340	188,288
" ground or calcined	"	2,379	41,617	1,988	36,050
Magnesite, calcined	"	70	2,040	95	2,394
Mica, rough cobbed and thumb-trimmed	lb.	165,200	49,170	21,800	6,249
Mica, splittings	"	317,100	239,443	264,200	186,674
" scrap and waste	"	3,906,300	29,848	3,410,000	23,666
Mineral pigments, iron oxides, ochres, etc	tons	490	22,018	406	19,995
Pyrites (sulphur contained in)	"	219	1,081	13	150
Salt	"	639	4,014	1,085	10,127
Talc, refined	"	3,398	44,104	3,270	38,776

Value of Mineral Production (Metallic and Non-Metallic) in Canada, by Provinces, January 1 to June 30, 1925

—	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon
METALLIC	$	$	$	$	$	$	$	$	$
Arsenic	–	–	–	76,188	–	–	–	14,054	–
Bismuth	–	–	–	17,196	–	–	–	–	–
Cobalt	–	–	–	1,239,133	–	–	–	–	–
Copper	–	–	138,147	2,583,748	–	–	–	4,632,638	–
Gold	14,140	–	18,191	14,505,715	47,938	–	–	2,324,424	124,072
Iron, pig from Canadian ore	–	–	–	79,274	–	–	–	–	–
Iron ore sold for export	–	–	8,617	–	–	–	–	–	–
Lead	–	–	77,082	269,901	–	–	–	11,048,090	115,882
Nickel	–	–	–	11,442,125	–	–	–	–	–
Palladium	–	–	–	24,712	–	–	–	–	–
Platinum	–	–	–	25,494	–	–	–	–	–
Rhodium, osmium, iridium, ruthenium	–	–	–	30,500	–	–	–	–	–
Silver	24	–	51,573	3,112,111	187	–	–	2,728,009	396,428
Zinc	–	–	258,829	13,006	–	–	–	3,731,037	–
Total	**14,164**	**–**	**552,439**	**33,419,103**	**48,125**	**–**	**–**	**24,478,252**	**636,382**
NON-METALLIC									
Actinolite	–	–	–	375	–	–	–	–	–
Asbestos	–	–	3,962,304	–	–	–	–	–	–
Barytes	2,021	–	–	–	–	–	–	–	–
Coal	5,114,988	420,109	–	–	–	355,583	9,703,717	5,851,200	–
Feldspar	–	–	44,196	61,293	–	–	–	–	–
Graphite	–	–	1,983	61,860	–	–	–	–	–
Gypsum	329,317	125,806	–	220,370	230,559	–	–	–	–
Magnesite	–	–	49,557	–	–	–	–	–	–
Mica	–	–	59,171	56,405	–	–	–	–	–
Mineral water	–	–	976	10,497	–	–	–	–	–
Natural gas	–	76,634	–	1,742,724	30	–	1,535,284	–	–
Iron oxides	–	–	38,709	–	–	–	–	60	–
Petroleum, crude	–	9,347	–	222,979	–	–	945	–	–
Phosphate	–	–	189	–	–	–	–	–	–
Pyrites	–	–	71	3,360	–	–	–	6,795	–
Quartz	–	–	16,475	117,624	–	–	–	–	–
Salt	21,968	–	–	628,438	–	–	559	–	–
Sodium carbonate	–	–	–	–	–	–	–	6,700	–
Sodium sulphate	–	–	–	–	–	9,578	–	–	–
Talc	–	–	16,745	81,732	–	–	–	–	–
Total	**5,468,294**	**631,896**	**4,190,376**	**3,207,657**	**230,589**	**365,161**	**11,240,505**	**5,864,755**	**–**
STRUCTURAL MATERIALS AND CLAY PRODUCTS	Data not available for the six months period.								
Grand Total	**5,482,458**	**631,896**	**4,742,815**	**36,626,760**	**278,714**	**365,161**	**11,240,505**	**30,343,007**	**636,382**

Mineral Production of Canada by Provinces, 1922, 1923 and 1924

—	1922		1923		1924	
	Value of production	Per cent of total	Value of production	Per cent of total	Value of production	Per cent of total
	$		$		$	
Nova Scotia	25,923,499	14·12	29,648,893	13·85	23,820,352	11·37
New Brunswick	2,263,692	1·23	2,462,457	1·15	1,969,260	0·94
Quebec	17,617,939	9·57	20,308,763	9·49	19,136,504	9·13
Ontario	65,866,029	35·74	80,825,851	37·76	86,398,656	41·23
Manitoba	2,258,942	1·23	1,768,037	0·83	1,534,249	0·73
Saskatchewan	1,255,470	0·67	1,047,583	0·49	1,128,100	0·54
Alberta	27,872,136	15·13	31,287,536	14·60	22,344,940	10·66
British Columbia	39,423,962	21·39	43,757,388	20·44	52,298,533	21·95
Yukon	1,785,573	0·92	2,972,823	1·39	952,812	0·45
Total	**184,297,242**	**100·00**	**214,079,331**	**100·00**	**209,583,406**	**100·00**

Mineral Production of Nova Scotia, 1922, 1923 and 1924

	1922		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
METALLIC—						
Arsenic lb.	–	–	45,000	2,250	381,092	15,244
Gold fine oz.	*1,128	21,598	680	13,556	1,047	21,643
Manganese tons	73	2,044	200	1,400	–	–
Silver fine oz.	–	–	–	–	44	29
NON-METALLIC—						
Barytes tons	289	9,537	209	4,368	151	3,308
Coal "	5,569,072	24,629,921	6,597,838	28,170,458	5,557,441	22,280,554
Grindstones "	102	3,692	256	7,906	338	12,525
Gypsum "	332,401	580,148	341,705	747,934	441,752	915,845
Salt "	5,053	54,666	4,480	39,151	4,551	37,469
Tripolite "	219	5,781	130	3,250	33	838
STRUCTURAL MATERIALS AND CLAY PRODUCTS—						
Clay products	–	431,618	–	413,974	–	359,288
Lime bush.	–	–	42,370	7,199 ‡	78	936
Stone tons	87,955	119,492	138,682	177,090	67,535	111,824
Sand and gravel "	–	† 65,002	–	† 60,357	–	† 60,849
Total	–	**25,923,499**	–	**29,648,893**	–	**23,820,352**

*Includes 86 ounces silver, value $58 in 1922.
†Includes railway ballast from P.E.I., valued at $10,028 in 1922: $4,429 in 1923, and $11,490 in 1924.
‡Tons.

Mineral Production* of Quebec, 1922, 1923 and 1924

Product	1922		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
METALLIC—						
Chromite tons			3,558	52,650		
Copper lb.					1,893,008	246,546
Gold oz.			667	13,788	883	18,253
Iron ore, sold for export tons	526	1,410	69	186	1,408	3,771
Lead lb.			520,041	37,334	1,058,983	85,820
Molybdenite "					18,739	9,370
Silver oz.			33,006	21,412	83,814	55,972
Zinc lb.			366,240	24,197	2,909,008	184,547
NON-METALLIC—						
Asbestos tons	163,706	5,552,723	231,476	7,519,906	225,572	6,618,930
Chromite "	767	11,503	⊕		⊕	
Feldspar "	12,472	127,826	12,026	102,779	16,147	142,118
Graphite "	24	1,500	45	2,316	46	3,275
Magnesite "	2,849	76,294	4,801	134,382	3,873	101,356
Mica "	1,360	97,748	1,545	216,684	1,677	185,020
Mineral water gal.	12,161	3,602	5,421	2,408	7,683	2,288
Iron oxides tons	7,282	110,488	9,911	123,186	7,146	88,549
Phosphate "	131	1,320	30	600		
Pyrites "					4,032	10,619
Quartz "	10,994	53,023	13,376	68,936	17,893	87,267
Talc and soapstone "	150	4,950	590	19,993	449	20,273
STRUCTURAL MATERIALS—						
Cement brl.	2,660,935	5,907,300	3,173,993	6,347,986	2,758,316	4,796,959
Clay products		2,476,370		2,437,229		2,435,695
Kaolin tons	1,197	17,866	163	2,369		
Lime—						
Quicklime bush.	2,108,513	634,157	2,198,071	576,731	2,219,359	640,990
Hydrated lime tons	5,278	55,642	5,595	57,482	5,848	58,947
Sand and gravel "	905,161	156,940	1,055,817	206,175	2,197,145	414,428
Slate "	1,899	14,871	1,836	17,289		
Stone "	987,355	2,342,316	1,094,816	2,322,745	1,592,089	2,925,520
Total		**17,647,939**		**20,308,763**		**19,136,504**

*There is also in this Province an important production of aluminium from imported ores.
⊕Included in Metallics 1923 and 1924.

Mineral Production of New Brunswick, 1922, 1923 and 1924

Product		1922		1923		1924	
		Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$
METALLIC—							
Manganese ore	tons	.....	.....	.....	.....	584	4,088
NON-METALLIC—							
Coal	tons	287,513	1,107,643	276,617	1,196,772	217,121	932,185
Grindstones	"	903	40,050	1,758	72,177	2,113	99,299
Gypsum	"	82,462	517,668	104,740	564,680	80,738	476,804
Natural gas	M. cu.ft.	753,898	148,040	640,300	126,068	599,972	113,577
Petroleum	brl.	7,778	32,732	8,826	35,642	5,561	21,313
STRUCTURAL MATERIALS—							
Clay products	.....	.....	75,425	.....	62,587	.....	74,994
Lime	bush.	560,834	187,895	329,548	143,814	208,180	108,890
Sand and gravel	tons	448,322	49,509	608,528	94,634	141,897	23,999
Stone	"	12,027	104,730	22,448	166,083	19,229	114,111
Total	.....	.....	**2,263,692**	.....	**2,462,457**	.....	**1,969,260**

Mineral Production of Ontario, 1922, 1923 and 1924

Product		1922		1923		1924	
		Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$
METALLIC—							
Arsenic, white	lb.	.....	.....	5,158,617	582,785	3,745,225	313,281
Bismuth	"	.....	.....	.....	.....	12,863	27,913
Cobalt	"	569,960	1,852,370	888,061	2,530,974	918,704	1,042,395
Copper	"	10,913,636	1,461,477	31,656,800	4,565,227	37,113,193	4,833,622
Gold	oz.	1,000,340	20,678,862	971,704	20,086,904	1,241,728	25,668,795
Iron ore, sold for export	tons	.....	.....	5,358	18,878	.....	.....
Iron, pig, from Canadian ore (a)	"	8,095	178,980	20,739	432,298	3,696	92,400
Lead	lb.	2,890,397	180,216	4,401,494	315,083	5,055,368	409,687
Nickel	"	17,597,123	6,158,993	62,453,843	18,332,077	69,536,350	19,470,178
Platinum	oz.	458	44,709	1,210	141,010	9,181	1,090,858
Palladium	"	724	47,060	1,732	138,560	8,923	811,993
Rhodium, ruthenium, osmium, iridium	"	391	31,280	*304	45,000	593	51,120
Silver	oz.	10,811,903	7,300,305	10,540,943	6,838,226	11,272,567	7,527,933
NON-METALLIC—							
Actinolite	tons	50	575	53	583	00	1,225
Arsenious oxide	"	2,058	299,940	(b)	.....	(b)	.....
Asbestos	"	.....	.....	6	2,600	172	91,900
Barytes	"	.....	.....	200	4,180	.....	.....
Feldspar	"	15,255	120,576	17,199	134,822	28,657	216,422
Fluorspar	"	284	3,905	64	597	76	1,343
Garnets	"	.....	.....	1,250	100,000	360	7,200
Graphite	"	573	29,853	1,068	65,557	1,288	72,842
Gypsum	"	110,227	621,668	99,958	542,317	88,121	467,097
Mica	"	1,989	54,515	1,980	110,290	2,414	172,252
Mineral water	imp. gal.	209,072	10,528	227,030	14,047	201,670	13,133
Natural gas	M. cu. ft.	8,060,114	4,076,296	8,128,413	4,066,244	7,150,078	3,798,381
Peat	tons	3,000	14,500	.....	.....	.....	.....
Petroleum	brl.	164,732	526,316	159,400	478,149	154,368	441,952
Phosphate	tons	59	476	.....	.....	.....	.....
Pyrites	"	11,233	39,763	25,134	99,716	11,429	44,642
Quartz	"	81,528	118,054	225,110	483,285	111,645	192,855
Salt	"	176,741	1,573,057	197,917	1,674,365	203,428	1,337,311
Talc and soapstone	"	12,854	178,728	9,531	125,124	10,718	130,577
STRUCTURAL MATERIALS AND CLAY PRODUCTS—							
Cement	brl.	3,104,386	6,393,566	3,206,428	5,855,589	3,564,499	5,668,671
Clay products	.....	.....	6,944,218	.....	6,270,615	.....	5,089,299
Lime—							
Quicklime	bush.	3,939,954	1,311,563	4,816,421	1,373,823	4,391,050	1,401,545
Hydrated	tons	36,408	455,080	41,727	519,840	35,989	438,607
Sand and gravel	"	6,285,123	2,184,174	8,146,433	2,006,958	6,174,284	2,041,959
Stone	"	2,317,265	2,969,926	2,638,984	2,809,228	2,840,173	2,789,368
Total	.....	.....	**65,866,029**	.....	**89,825,851**	.....	**86,398,656**

(a) The total production of blast-furnace pig-iron in Ontario in 1922 was 293,662 tons valued at $6,493,513; in 1923 it was 674,428 tons valued at $15,995,496; and in 1924 it was 415,971 tons valued at $9,484,139.
*Rhodium and iridium.
(b) Included in metallics in 1923 and 1924.

Mineral Production of Manitoba, 1922, 1923 and 1924

Product	1922		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
METALLIC—						
Gold oz.	156	3,225	31	641	1,180	24,393
Silver "	20	14	5	3	140	93
NON-METALLIC—						
Gypsum tons	34,072	440,914	31,575	386,554	29,375	248,212
Natural gas M cu. ft.	200	60	200	60	200	60
STRUCTURAL MATERIALS AND CLAY PRODUCTS—						
Clay products		210,740		160,134		117,450
Lime bush	525,184	163,799	524,128	161,226	394,229	121,518
Stone tons	34,359	106,638	51,304	118,277	54,065	93,876
Other products—						
Cement		1,333,552		941,142		746,750
Sand and gravel						81,897
Total		**2,258,942**		**1,768,637**		**1,534,249**

Mineral Production of Saskatchewan, 1922, 1923 and 1924

Product	1922		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
NON-METALLIC—						
Coal tons	382,437	802,053	438,100	858,448	479,118	886,668
Sodium sulphate "	504	11,980	733	10,189	1,083	6,004
Volcanic ash "					245	1,103
STRUCTURAL MATERIALS AND CLAY PRODUCTS—						
Clay products		134,704		119,405		137,280
Sand and gravel tons	924,944	306,733	438,319	59,541	702,713	97,045
Total		**1,255,470**		**1,047,583**		**1,128,100**

Mineral Production of Alberta, 1922, 1923 and 1924

Product	1922		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
NON-METALLIC—						
Bituminous sands tons					531	2,127
Coal "	5,990,911	24,351,913	6,854,397	28,018,303	5,189,729	18,884,318
Natural gas M cu. ft.	5,867,459	1,622,105	7,191,670	1,692,246	7,131,086	1,796,618
Petroleum brl.	5,608	52,128	1,943	8,227	844	4,135
STRUCTURAL MATERIALS AND CLAY PRODUCTS—						
Clay products		700,063		590,565		540,477
Lime bush.	130,627	71,328	87,753	37,999	90,214	36,279
Stone tons	554	7,300			16,698	19,317
Other products—						
Cement		1,067,299		940,196		945,700
Sand and gravel						115,969
Total		**27,872,136**		**31,287,536**		**22,344,940**

Mineral Production of British Columbia, 1922, 1923 and 1924

Product		1922		1923		1924	
		Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$
METALLIC—							
Arsenic	lb.			1,217,970	41,780	495,250	19,768
Copper	"	31,936,182	4,273,700	55,224,737	7,963,959	65,451,246	8,524,370
Gold	oz.	207,370	4,286,718	200,140	4,137,261	245,719	5,079,462
Iron ore sold for export	tons	1,255	3,528	243	1,215		
Iron, pig, from Canadian ore	"					14	350
Lead	lb.	87,093,266	5,430,265	99,541,818	7,146,107	168,467,628	13,652,617
Platinum	oz.	12	1,154	7	816	5	560
Silver	"	7,150,937	4,828,384	6,113,327	3,965,899	8,153,003	5,444,657
Zinc	lb.	56,290,000	3,217,536	60,050,000	3,967,504	96,000,069	6,090,244
NON-METALLIC—							
Arsenic	tons	518	21,097	⊕		⊕	
Coal	"	2,927,033	14,622,317	2,823,306	13,813,520	2,193,667	10,801,998
Fluorspar	"	4,219	98,233	75	1,135		
Grindstones, pulpstones	"					240	19,000
Gypsum	"	100	500	323	1,615	30	150
Magnesium sulphate	"	1,021	24,017	121	6,580		
Natro-alunite)	"	50	2,500	15	750		
Oxides (iron)	"	3	120	513	6,450	120	2,620
Pyrites	"	6,908	34,540	3,457	13,304	8,091	40,459
Quartz	"	17,425	37,521	25,590	47,029	21,358	43,034
Sodium carbonate	"	202	3,027	265	3,975	510	5,173
Talc	"	191	4,780	245	5,390	165	3,630
STRUCTURAL MATERIALS AND CLAY PRODUCTS—							
Clay products			447,452		426,138		460,594
Lime—							
Quicklime	bush.	433,716	254,320	564,971	338,443	517,577	320,312
Hydrated	tons	2,909	30,321	4,410	50,051	4,157	50,517
Stone	"	197,570	324,591	165,100	249,866	178,225	353,741
Other products—							
Cement			1,477,341		1,568,601		1,240,331
Sand and gravel							344,937
Total			**39,423,962**		**43,757,388**		**52,298,533**

⊕ Included in metallics in 1923 and 1924.

Mineral Production of Yukon, 1922, 1923 and 1924

Product		1922		1923		1924	
		Quantity	Value	Quantity	Value	Quantity	Value
			$		$		$
METALLIC—							
Gold	oz.	54,456	1,125,705	60,144	1,243,287	34,825	719,897
Silver	"	663,493	447,997	1,914,438	1,241,953	226,755	151,429
Lead	lb.	3,323,508	207,221	6,771,113	486,098	903,520	73,221
NON-METALLIC—							
Coal	tons	465	4,650	313	1,485	1,121	8,265
Total			**1,785,573**		**2,972,823**		**952,812**

METALLICS

Antimony

No production of antimony has been reported this year but ores of antimony are known to occur in the provinces of Nova Scotia, New Brunswick, Quebec, British Columbia and in the Yukon Territory.

Arsenic

Production of arsenic during the first six months of 1925 amounted to 2,116,141 pounds (1,058 tons) valued at $90,242 as compared with 2,998,878 pounds (1,499·4 tons) valued at $350,868 during the same period last year. This total includes 835,586 pounds of arsenic estimated as recoverable from arsenical concentrates shipped by the Nickel Plate Mine at Hedley

B.C., to the smelter at Tacoma, Washington, and the Ontario production from the arsenical ores of Cobalt which amounted to 1,280,555 pounds shipped by the Deloro Smelting and Refining Co., Ltd., at Deloro, Ontario.

Exports of arsenic contained in concentrates, computed in terms of white arsenic, amounted to 520,000 pounds, and exports of white arsenic totalled 1,155,900 pounds. In comparison with the total for the first half of 1924 this marked an increase in the exports of arsenic concentrates but a slight decline from the total of white arsenic exported. Corresponding export figures for the first half of last year were 301,000 pounds of arsenic in concentrates and 1,399,700 pounds of white arsenic.

As the boll weevil, the enemy of the cotton crop, was not so active last season as in previous years, large stocks of calcium arsenate made in anticipation of a heavy demand were not required and the price of arsenic receded from 13·5 cents per pound in January, 1924, to 6·75 cents per pound at the close of the year when considerable stocks were being held by the producers. During the first half of 1925 prices declined to a slightly lower level, the average for the period being 5·5 cents per pound as compared with an average of 11·7 cents per pound for the first six months of 1924.

Bismuth

In the treatment of silver-cobalt ores, small quantities of bismuth are accumulated in a bullion with lead and silver. While the percentage of bismuth in the material treated is small, it has been found profitable to build up reserves of this bullion until a saleable product is obtained.

In 1924 sales of bismuth in this form amounted to 12,863 pounds valued at $16,079, and during the first half of 1925, sales of bismuth totalled 9,826 pounds, which at the average New York price of $1.75 per pound, was worth $17,196.

Chromite

Chromite is known to occur in the provinces of Quebec and British Columbia. During the war a considerable amount of chromite ore was mined in Quebec. Some shipments were reported in 1923 but there has been no production since.

Cobalt

For the past two decades Canada has been the main source of the world's supply of cobalt.

Ores, concentrates and residues from the Cobalt district of Ontario are shipped to the Deloro Smelting and Refining Co. at Deloro, Ontario, and to American and European smelters. Cobalt is marketed in the form of black cobalt oxide containing about 71 per cent cobalt, grey cobalt oxide containing about 76 per cent cobalt, various salts of cobalt, and as metal. Computed as the sum of the cobalt contained in metal, oxides, salts, ores, concentrates and residues marketed during the period the production of cobalt in the first half of 1925 amounted to 590,087 pounds netting the producers $1,239,133.

On the same basis production during the calendar year 1924 amounted to 948,704 pounds valued at $1,682,395.

NOTE.—A change was made in the report for 1924 in the method of computing cobalt production. In previous reports the cobalt was computed as the sum of cobalt contained in oxides precipitated in the smelters and the cobalt content of ores, speiss and residues exported. The total production as thus computed was valued at the average New York price for metallic cobalt during the year. In the last report issued by the Bureau and in this report the quantity given for cobalt represents the cobalt content of smelter products sold during the period with the net income to the smelters from such sales. This must be borne in mind in comparing production figures which are computed on the new basis for the first half of 1925 with those of the first half of 1924 which were compiled on the old method.

Copper

Copper production from Canadian ores during the first half of 1925 amounted to 53,055,349 pounds valued at $7,354,533 as compared with 52,103,161 pounds valued at $6,680,406 for the first six months of 1924. This was an increase in quantity of 952,188 pounds and in value of $674,127. New York prices for copper for the first six months of this year averaged 13·862 cents per pound ranging from the highest price, 14·709 cents quoted in January to 13·252 cents in April and 13·399 cents per pound in June.

Copper, in commercial quantities, occurs in Yukon Territory, British Columbia, Manitoba, Ontario and Quebec. No production of copper from the Yukon was reported during the half

year. In British Columbia, the production amounted to 33,419,694 pounds and included blister copper made at the Granby smelter, copper recovered from the ores shipped by the Britannia mine, the Belmont Surf Inlet mine and the Granby's Hidden Creek mine, to Tacoma, Washington, U.S.A., and the copper in the silver-lead ores exported. Large deposits occur in Manitoba but until better railway facilities are provided it is quite unlikely that there will be much activity in the production of this metal in that province. In Ontario, copper is obtained mainly from the nickel-copper mines of the Sudbury district where it is smelted to a matte. Some of this matte is exported to Wales, and some to the United States; the remainder is blown to converter copper at Port Colborne. In Quebec, there has been a small annual production of copper-bearing pyritic cinder for several years, this product remaining after the sulphur content has been removed in the process of acid manufacture. No shipments of this material have been reported during the past year and a half. Application of a newly-devised process for treating some of the copper ores of the province resulted in the shipment this year of copper concentrates by the Eustis Mining Company, amounting to 2,365 tons; these concentrates were exported for treatment.

Copper Production of Canada, January 1 to June 30, 1924-1925

Province	1924		1925	
	Output in lb. of copper	Value	Output in lb. of copper	Value
		$		$
British Columbia	33,051,941	4,237,754	33,419,694	4,632,638
Ontario	18,613,820	2,386,571	18,639,060	2,583,748
Quebec	437,400	56,081	996,586	138,147
Total	**52,103,161**	**6,680,406**	**53,055,340**	**7,354,533**

Gold

Further advances in gold production raised the total for the six months ending June to 824,043 ounces valued at $17,034,480 as compared with 700,264 ounces worth $14,475,741 produced during the first half of 1924.

Ontario mines were credited with 701,714 ounces valued at $14,505,715; British Columbia produced 112,444 ounces valued at $2,324,424; Yukon Territory production was determined as 6,002 ounces valued at $124,072; and 880 ounces worth $18,191 was obtained from Quebec ores exported during the period; Nova Scotia mines contributed 684 ounces valued at $14,140; and Manitoba produced 2,319 ounces valued at $47,938.

The production of gold, as thus computed, included gold obtained from Canadian gold ores and concentrates treated during the period either in Canada or in other countries, and also the gold obtained from Canadian ores treated essentially for other metals; in determining the values the standard rate of $20·671834 per fine ounce was used.

Production of Gold by Provinces, January 1 to June 30, 1924-1925

Province	1924		1925	
	Fine ounces	Value	Fine ounces	Value
		$		$
Ontario	571,418	11,812,258	701,714	14,505,715
British Columbia	118,841	2,456,661	112,444	2,324,424
Yukon	9,435	195,039	6,002	124,072
Manitoba	–	–	2,319	47,938
Quebec	–	–	880	18,191
Nova Scotia	200	4,134	684	14,140
Total	**700,264**	**14,475,741**	**824,043**	**17,034,480**

Iron Ore

Export shipments of Canadian iron ore during the six months ending June, 1925, amounted to 1,976 short tons having a declared value of $8,647. It is understood that these shipments were all made from Baie St. Paul in the province of Quebec. In addition to this, pig iron pro-

duced during the period from Canadian iron ores mined in other years amounted to about 3,415 short tons having a mill sales value of $79,274.

Increased shipments of iron ore were reported from the Wabana mines in Newfoundland, the total for the half-year reaching 383,684 short tons as compared with 219,117 tons during the same months last year. Of this quantity, shipments to the British Empire Steel Corporation plants at Sydney, N.S., totalled 104,740 tons, and the balance was shipped to European points.

Pig Iron

For the first half of 1925 the production of pig iron totalled 290,892 long tons as compared with 427,105 tons made during the corresponding period in 1924. This year's tonnage was composed of 252,470 tons of basic iron, 21,746 tons of foundry iron, and 16,676 tons of malleable iron. Of the total produced only 13 per cent was made for direct sale, the balance being made for the further use of the reporting firms. Blast furnaces were operated during the period by the Steel Co. of Canada at Hamilton, Ont., the Algoma Steel Corporation of Sault Ste. Marie, and by the British Empire Steel Corporation of Sydney, Nova Scotia.

Ferro-alloys produced amounted to 12,217 tons or 22 per cent under the 15,768 tons produced in the first half of 1924.

Production of Pig-iron, and Ferro-Alloys in Canada, January 1 to June 30, 1924 and 1925

(Tons of 2,240 lbs.)

	1924				1925			
	In blast furnace		In electric furnace	Total	In blast furnace		In electric furnace	Total
	For own use	For sale	For sale		For own use	For sale	For sale	
Pig Iron—								
Basic	288,090	4,930	–	293,020	252,126	344	–	252,470
Foundry	433	99,561	–	99,994	85	21,661	–	21,746
Malleable	15,369	18,722	–	34,091	–	16,676	–	16,676
Total Pig-Iron	**303,892**	**123,213**	–	**427,105**	**252,211**	**38,681**	–	**290,892**
Total Ferro-Alloys	–	–	**15,768**	**15,768**	–	–	**12,217**	**12,217**

Steel Ingots and Castings

During the first six months of 1925 the production of steel ingots and castings was 423,697 long tons, a slight drop from the 488,733 tons reported in the first half of 1924. This year the output was composed of 413,891 tons of steel ingots and 9,806 tons of steel castings, 2 per cent of the total being intended for direct sale. In the first half of 1924, the production amounted to 469,551 tons of steel ingots and 19,182 tons of steel castings, of which 4 per cent was intended for sale, the balance being used by the producers in further manufacturing processes.

Production of Steel Ingots and Castings in Canada, January 1 to June 30, 1924 and 1925

(Tons of 2,240 lbs.)

	1924			1925		
	For own use	For sale	Total production	For own use	For sale	Total production
Steel Ingots:—						
Open Hearth—Basic	468,599	–	468,599	411,711	–	411,711
Other	952	–	952	2,180	–	2,180
Total Steel Ingots	**469,551**	–	**469,551**	**413,891**	–	**413,891**
Steel Castings:—						
Open Hearth—Basic	940	13,395	14,335	797	4,173	4,970
Acid	–	782	782	–	–	–
Bessemer	27	778	805	30	710	740
Electric	131	3,129	3,260	13	4,083	4,096
Total Direct Steel Castings	**1,098**	**18,084**	**19,182**	**840**	**8,966**	**9,806**
Grand Totals	**470,649**	**18,084**	**488,733**	**414,731**	**8,966**	**423,697**

Lead

Lead produced in the six months under review totalled 128,398,836 pounds which at the average Montreal price of 8·965 cents per pound, was valued at $11,510,955. This output exceeded the production in the first half of 1924 by 49,340,541 pounds in quantity and $5,232,145 in value. The famous Sullivan mine in British Columbia which ships the major part of its ore and concentrates to the smelter of the Consolidated Mining and Smelting Co. at Trail, B.C., and exports the remainder, accounted for the greater part of this production. Shipments were also made to the Trail smelter from the various silver-lead-zinc properties in the Slocan area of British Columbia.

Lead ores from the Premier mine and silver-lead ores from the Yukon, were shipped to United States smelters for treatment.

The main source of Ontario's production is the lead property of the Kingdon Mining, Smelting and Manufacturing Company near Galetta, but there is also some lead recovered from the silver-lead-bismuth bullion exported by the south Ontario smelters from time to time. The Kingdon Mining, Smelting and Manufacturing Company recently completed arrangements for the development of more power at Chats Falls on the Ottawa river to be used in the further expansion of their mining and smelting operations.

Lead ores and concentrates are exported from the Notre Dame des Anges and from the Tetreault Mines in the province of Quebec to United States and European smelters.

Molybdenum

Molybdenum was known to exist in different sections of Canada but was not mined to any extent until the demand for war purposes led to the development of several properties. During the years 1919 to 1923, because of surplus war stocks, there was no production but during 1924 the Moss Mine, a producer during the war years, at Quyon, Que., raised 700 tons of ore, of this amount, 600 tons was put through the mill and the concentrates therefrom were shipped to the United States.

No production has been reported for the first half of 1925.

Nickel

Nickel production during the first half of 1925 was well maintained and reached a total of 35,756,640 pounds or 51·4 per cent of the total produced in the preceding calendar year. Production included nickel contained in matte made at Sudbury and small amounts of nickel contained in smelter products resulting from the treatment of silver-cobalt ores. Computed at 32 cents, the average New York price for virgin metal during the half year, production was valued at $11,442,125 as compared with 35,229,180 pounds produced during the first half of 1924 having a value of $10,216,462. Ore mined and raised during the half year totalled 633,646 tons all of which was shipped to the smelters. Furnace charges totalled 617,802 tons; matte production amounted to 33,704 tons containing 35,438,271 pounds of nickel and 18,442,650 pounds of copper. Most of the matte made by the International Nickel Company at Copper Cliff was shipped to the refinery at Port Colborne but some was exported to Huntingdon, West Virginia, U.S.A., there to be manufactured directly into Monel metal. The Mond Nickel Company exported the matte produced at their Coniston smelter to Wales for refining. There has been no activity at the mines, smelter, or refinery formerly operated by the British America Nickel Corporation since that organization went into liquidation, July, 1924.

Leading producers advanced the price of nickel ingots to 34 cents in June and 35 cents for shot, the price for electrolytical nickel remaining at 38 cents per pound. It is reported that demand for this metal has kept up very well this year.

Platinum

Platinum and other precious metals from Canadian ores are obtained as a refinery by-product in the treatment of the copper-nickel matte produced in the Sudbury area; some platinum is also recovered in placer operations in British Columbia. Including platinum, palladium, osmium, rhodium and iridium, production during the half-year amounted to 820·802 ounces which at the average New York price for each metal reached an aggregate value of $80,706.

Prices prevailing during the period for each metal were, per fine ounce: platinum, $118·186; palladium, $81; osmium, $100 to $104; rhodium, $85 to $90; while iridium varied in price from $325 per fine ounce in January to $375 and $400 per fine ounce in June.

Silver

Silver produced during the first six months of 1925 amounted to 9,240,482 fine ounces which at the average New York price for the period of 68·052 cents per ounce was valued at $6,288,332. In the first half of 1924 the average monthly price of silver was 64·686 cents per ounce.

Production during the period was made up as follows: (a) 4,009,142 fine ounces or 43·38 per cent in silver and gold bullion; (b) 2,738,383 fine ounces or 29·65 per cent contained in blister copper and lead bullion; and (c) 2,492,957 fine ounces or 26·97 per cent, estimated as recovered from ores, etc., exported. The corresponding figures for the first half of 1924 were: (a) 4,735,560 ounces or 52·1 per cent; (b) 2,194,547 ounces or 24·1 per cent; and (c) 2,161,809 ounces or 23·9 per cent. Through the co-operation of the producers in the Yukon, it has been found possible this year to obtain figures of mine production for that territory for the period under review.

An interesting report which has recently come to hand states that the Treadwell Yukon Company contemplates the construction underground, of a complete ore-dressing plant at its Keno Hill property, in order to circumvent the difficulties arising from the intense cold of the Yukon winters. Tests are now being made to determine the type of mill required.

Production of Silver in Canada, by Provinces, January 1 to June 30, 1924-1925

—	1924		1925	
	Quantity	Value	Quantity	Value
		$		$
Ontario	5,335,946	3,451,610	4,573,137	3,112,111
British Columbia	3,657,029	2,365,586	4,008,712	2,728,009
Yukon	76,391	49,414	582,537	396,428
Quebec	22,520	14,567	75,785	51,573
Manitoba	–	–	275	187
Nova Scotia	30	19	36	24
Canada	**9,091,916**	**5,881,196**	**9,240,482**	**6,288,332**

Zinc

Canadian zinc production figures include the refined zinc produced at Trail, B.C., and the recoverable zinc contained in ores exported. The production of zinc in Canada during the first half of this year was 55,257,772 pounds which, valued at the average price of 7·244 cents for zinc on the St. Louis market was worth $4,002,872 as compared with 29,414,000 pounds valued at $1,832,198 in the first half of 1924 when the average price was 6·229 cents per pound.

Trail production is increasing annually as facilities at this smelter for zinc refining are being enlarged. The famous Sullivan mine of East Kootenay, B.C., is largely responsible for the increased Canadian zinc production although larger tonnages of silver-lead-zinc ores are now being shipped from the different mines in the Kootenay district to Trail for treatment.

In eastern Canada the work done on selective flotation at the Ore Dressing Division of the Mines Branch at Ottawa has enabled the companies operating on the zinc-lead ores of the Tetreault Mines to increase their recovery of both zinc and lead and has led to the exportation of zinc concentrates from Quebec to Europe and the United States.

In Ontario, it is reported that the lead mine at Galetta has exported zinc concentrates which have been accumulating at that mine for some time.

NON-METALLICS

Abrasives

Grindstones.—Owing to the seasonal character of the work in connection with the production of grindstones, pulpstones and scythestones in Canada no data were collected for this industry during the first six months of the current year. The deposits operated are located at

Quarryville and Stonehaven, New Brunswick; Woodburn, Nova Scotia; and Haddington Islands, British Columbia. Production in 1924 totalled 2,691 tons valued at $130,824.

Tripolite.—There was no production of tripolite in Canada during the first six months of 1925. During the same period of the previous year, shipments amounting to 28 tons valued at $838 were made. The Canadian production of this commodity is derived from a deposit located at Silica Lake, Colchester County, Nova Scotia.

Tripolite is a silicious material closely related to quartz and is used for heat and sound insulation, as an absorbent, a filtering medium, a filler, a mild abrasive, a structural material, etc. The Canadian material is usually given a preliminary calcine in rotary furnaces, before shipment.

Volcanic Ash.—The deposit of volcanic ash near Waldeck, Saskatchewan (Township 16, range 12, west of the 3rd meridian) was not operated during the half-year. The production in the calendar year 1924 amounted to 245 tons. Volcanic ash is used as a base in the manufacture of cleansers.

Actinolite

Production of actinolite in Canada has been confined to Elzevir and Kaladar townships in Hastings and Addington counties, Ontario, the centre of the industry being at Actinolite. This material which is a calcium-magnesium-iron silicate, is used in the manufacture of coal-tar roofing compounds.

Shipments to the United States from milled stock on hand during the half-year amounted to 30 tons valued at $375 as compared with 50 tons worth $625 in same period of 1924.

Asbestos

Production of asbestos in Canada during the first six months of 1925 was slightly in advance of tonnage shipped during the corresponding period of the previous year. The average selling value was $32.80 an increase of $2.36 per ton.

Shipments amounted to 120,800 tons worth $3,962,304 as against 104,872 tons at $3,192,132 in the first half of 1924.

Asbestos rock mined during the period totalled 1,786,812 tons; the quantity milled was 1,360,043 tons or 76·1 per cent of the total.

Negotiations were carried on during the period to bring about a merger of the Quebec asbestos companies but as yet success has not been attained in this effort. Advantages claimed for the merger are that the existing competition among Canadian producers would be eliminated, so that marketing in foreign fields could then be carried on at a better profit.

Exports of Canadian asbestos totalled 113,800 tons consisting of 60,723 tons crude valued at $3,665,351, and 53,157 tons of sand and waste at $693,925.

Output, Sales and Stocks of Asbestos in Canada, January 1 to June 30, 1924 and 1925

Classification	1924				1925			
	Total output	Sold or shipped			Total output	Sold or shipped		
		Quantity	Total sales value at mill	Average value per ton		Quantity	Total sales value at mill	Average value per ton
	Tons	Tons	$	$ cts.	Tons	Tons	$	$ cts.
Crude No. 1	414	539	203,441	377 44	302	452	158,259	350 13
Crude No. 2	1,463	1,478	310,557	210 12	1,073	1,767	348,352	197 70
Fiberized crude	73	27	5,312	196 74	130	117	17,113	146 26
Spinning stocks	4,013	4,645	505,172	108 76	5,603	8,821	923,573	104 70
Shingle stocks	7,009	8,845	427,429	48 32	10,410	14,807	666,638	45 02
Mill Board stocks	9,309	9,412	304,721	32 38	6,555	7,262	217,274	29 92
Paper stocks	31,540	27,556	864,695	31 38	29,089	30,508	961,299	31 51
Paper fillers	34,683	30,791	436,957	14 19	37,519	34,467	523,618	15 19
By-products (asbestos sand, finish, floats)	22,560	21,579	133,848	6 20	20,117	22,599	145,178	6 42
Total	**111,064**	**104,872**	**3,192,132**	**30 44**	**110,798**	**120,800**	**3,962,304**	**32 80**

Average Price of Asbestos per short ton, f.o.b., Mines, Quebec, January 1 to June 30, 1924 and 1925

(From the *Engineering and Mining Journal-Press*)

—	1924	1925
	$	$
Crude No. 1	358	389
Crude No. 2	206	243
Spinning fibres	112	138
Magnesia and compressed sheet fibres	77	85
Shingle stock	61	55
Paper stock	36	37
Cement stock	22	20
Floats	9	10
Sand		7

Barytes

Sales of ground barytes during the half-year amounted to 87 tons evaluated at $2,021, as against 50 tons at $962 for the same period of 1924. These shipments were made from the deposit at Lake Ainslie, Inverness County, Nova Scotia.

Imports of barytes into Canada amounted to 1,036 tons worth $21,985 as compared with 1,008 tons valued at $20,349 in the first six months of 1924.

Bituminous Sands

Production of bituminous sands in Canada has not yet been established on a commercial scale; practically all material shipped to date has been used for demonstration and experimental purposes. Deposits are located in the Fort McMurray district of the province of Alberta. The Scientific and Industrial Research Council of Alberta, the McMurray Asphaltum and Oil, Limited, and the Federal Mines Department were actively engaged in research work in connection with these sands. Shipments to date have amounted to 531 tons valued at $2,127.

Coal

Except in Nova Scotia, where the output of coal dropped to a negligible quantity during the protracted strike which began on March 5, 1925, production of coal from Canadian mines was on a scale that compared favourably with the totals for the first half of 1924.

Industrial consumption of coal was less this year than in the first half of 1924 but the amount of anthracite made available for use in central Canada was 4 per cent higher than the average for the period in the five preceding years.

Imports of bituminous coal into the Quebec-Montreal-Kingston-Ottawa area exceeded the five-year average receipts; in the Toronto-Windsor area imports were less, both in anthracite and bituminous.

Nova Scotia's production of coal, most of which was mined prior to the strike, totalled only 1,202,185 short tons, valued at $5,114,988 as compared with 2,703,158 tons produced in the first six months of 1924, having a total value of $10,473,297. Employment, normally afforded to 12,000 or 13,000 miners, fell off until not more than about 2,000 men were to be found around the mines, and these were mostly office men engaged in maintenance work. Happily, as this is written, the strike has been discontinued and every effort is being made to restore the normal rate of output.

Only a slight loss in output was noted in the New Brunswick coal mining industry.

Saskatchewan, also, produced nearly as much as in the corresponding period last year.

Alberta's production of 2,533,812 tons valued at $9,703,717 showed a decline from the total of 2,612,134 tons valued at $9,944,761 produced in the first half of 1924. Anthracite mining, carried on at Banff for many years, has been discontinued. Bituminous and lignite coals share honours equally in the matter of tonnage, and there is also a production of from 200,000 tons to 300,000 tons of sub-bituminous grade each year.

British Columbia mined more coal in the first half of 1925 than during the first six months of 1924, producing 1,353,204 tons as compared with 1,197,085 tons in the half-year of 1924.

By classes, the output of coal in the period under review, included: bituminous, 3,787,639 tons; sub-bituminous, 215,609 tons; lignite, 1,380,466 tons.

In January, more than 30,000 men were employed in Canada's coal mines—about 17,000 in the West, and the balance in the East. In May, there were only about 14,000 employed; by the end of June, the number had risen to nearly 19,000.

Output and Value of Canadian Coal by Provinces and Grades, January 1 to June 30, 1924 and 1925

(Short tons)

Province	1924		1925	
	Output	Total value	Output	Total value
		$		$
Nova Scotia—				
Bituminous	2,703,158	10,473,297	1,202,185	5,114,988
New Brunswick—				
Bituminous	120,671	522,159	104,867	420,109
Saskatchewan—				
Lignite	214,617	391,405	189,640	355,583
Alberta—				
Bituminous	1,141,998	5,161,831	1,127,383	5,095,771
Sub-Bituminous	321,778	958,898	215,609	642,515
Lignite	1,148,358	3,824,032	1,190,820	3,965,431
Total for Alberta	2,612,134	9,944,761	2,533,812	9,703,717
British Columbia—				
Bituminous	1,197,085	5,804,001	1,353,204	5,851,200
Canada—				
Anthracite	–	–	–	–
Bituminous	5,162,912	21,961,288	3,787,639	16,482,068
Sub-Bituminous	321,778	958,898	215,609	642,515
Lignite	1,362,975	4,215,437	1,380,466	4,321,014
Total for Canada	**6,847,665**	**27,135,623**	**5,383,714**	**21,445,597**

Coal Made Available for Consumption in Canada, January 1 to June 30, 1924 and 1925

(Short tons)

Month	1924				1925			
	Output	Imports	Exports	Coal made available for use	Output	Imports	Exports	Coal made available for use
January	1,537,224	1,232,818	82,595	2,687,447	1,490,446	1,166,782	85,410	2,571,818
February	1,235,458	1,281,491	71,838	2,445,111	1,157,226	1,024,896	41,691	2,140,431
March	1,610,375	1,575,655	94,638	3,091,392	779,245	1,023,405	68,226	1,734,424
April	1,008,752	734,991	5,318	1,738,425	557,282	677,894	18,347	1,216,829
May	726,369	1,105,126	47,965	1,783,530	666,756	1,237,755	37,894	1,866,617
June	729,487	1,434,889	46,194	2,118,182	732,759	1,470,416	43,296	2,159,879
Total	**6,847,665**	**7,364,970**	**348,548**	**13,864,087**	**5,383,714**	**6,601,148**	**294,864**	**11,689,998**

Imports of Anthracite and Bituminous Coal into Canada from United States and Great Britain, January 1 to June 30, 1924 and 1925

(Short tons)

—	Five-year average for the month 1920-24	1924			1925		
		United States	Great Britain	Total	United States	Great Britain	Total
ANTHRACITE—							
January	330,776	342,197	1,839	344,036	331,900	24,272	356,172
February	311,632	281,210	6,002	287,212	335,130	5,665	340,795
March	419,446	389,137	1,153	390,290	313,626	4,841	318,467
April	266,405	226,650	2,426	229,076	184,909	330	185,239
May	315,801	276,148	13,899	290,047	366,957	59,939	426,896
June	378,974	330,390	25,413	355,803	347,586	59,935	407,521
Total	**2,032,034**	**1,845,732**	**50,732**	**1,896,464**	**1,880,108**	**154,982**	**2,035,090**
BITUMINOUS—							
January	919,715	870,651	18,131	888,782	810,610	–	810,610
February	826,025	985,933	8,346	994,279	684,074	27	684,101
March	1,109,346	1,185,365	–	1,185,365	704,938	–	704,938
April	616,445	505,832	83	505,915	492,655	–	492,655
May	824,838	815,079	–	815,079	810,859	–	810,859
June	1,225,557	1,076,240	2,846	1,079,086	1,057,893	5,002	1,062,895
Total	**5,521,926**	(a) **5,439,100**	(b) **29,406**	**5,468,506**	(c) **4,561,029**	(d) **5,029**	**4,566,058**

(a) Includes 10,310 tons lignite coal from United States.
(b) Includes 1,793 tons coal from other countries.
(c) Includes 10,439 tons lignite coal from United States.
(d) Includes 27 tons coal from other countries.

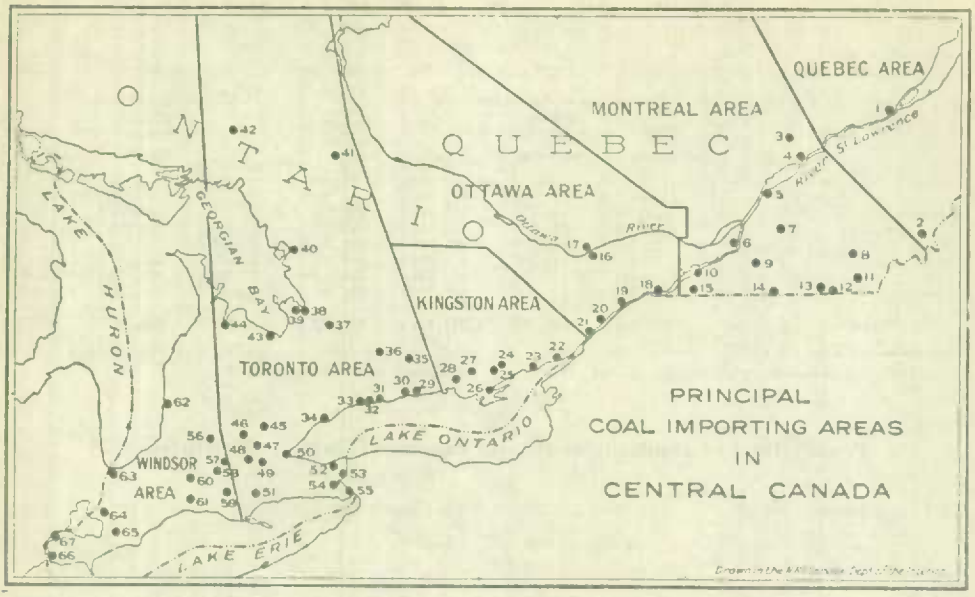
Exports of Canadian Coal by Provinces, January 1 to June 30, 1924 and 1925

(Short tons)

—	1924	1925
Nova Scotia	82,082	53,389
New Brunswick	21,231	21,138
Quebec	300	–
Ontario	–	–
Manitoba	1,513	1,123
Saskatchewan	1,155	1,552
Alberta	213	458
British Columbia	241,454	217,204
Yukon	.....	.....
Total	**348,548**	**294,864**

Imports of Coal into Central Canada by Principal Areas

Areas	Anthracite			Bituminous		
	(1) 6 months ending June 30, 1925	(2) Five year average for period 1920-24	(3) Per cent of (1) to (2)	(4) 6 months ending June 30, 1925	(5) Five year average for period 1920-24	(6) Per cent of (4) to (5)
Quebec	35,174	42,961	82	78,947	48,094	164
Montreal	605,229	477,461	127	736,647	427,995	172
Ottawa	132,599	142,743	93	382,058	341,435	112
Kingston	52,969	48,847	108	72,502	71,784	101
Toronto	959,450	989,753	97	1,886,359	2,356,951	80
Windsor	163,512	180,235	91	960,352	1,062,800	90
Total	**1,948,933**	**1,882,000**	**104**	**4,116,865**	**4,309,059**	**96**



Key to the Ports of Entry Shown on the Map

Quebec Area—
1 Quebec City..
2 Megantic

Montreal Area—
3 Shawinigan Falls
4 Three Rivers
5 Sorel
6 Montreal
7 St. Hyacinthe
8 Sherbrooke
9 St. John's
10 Valleyfield
11 Coaticook
12 Beebe Junction
13 Mansonville
14 St. Armand
15 Athelstan

Ottawa Area—
16 Ottawa
17 Hull
18 Cornwall
19 Morrisburg
20 Prescott
21 Brockville

Kingston Area—
22 Gananoque
23 Kingston
24 Napanee
25 Deseronto
26 Picton
27 Belleville
28 Trenton

Toronto Area—
29 Cobourg
30 Port Hope
31 Bowmanville
32 Oshawa
33 Whitby
34 Toronto
35 Peterboro
36 Lindsay
37 Orillia
38 Port McNicoll
39 Midland
40 Parry Sound
41 North Bay
42 Sudbury
43 Collingwood
44 Owen Sound
45 Guelph
46 Kitchener
47 Galt
48 Paris
49 Brantford
50 Hamilton
51 Simcoe
52 St. Catharines
53 Niagara Falls
54 Welland
55 Bridgeburg

Windsor Area—
56 Stratford
57 Woodstock
58 Ingersoll
59 Tillsonburg
60 London
61 St. Thomas
62 Goderich
63 Sarnia
64 Wallaceburg
65 Chatham
66 Amherstburg
67 Windsor

Coke

Increasing public interest in coke, particularly as a household fuel, has been noted in recent months, largely due to the work of the Dominion Fuel Board of which Dr. Camsell, deputy minister of mines, is chairman.

To promote further interest in this subject, the Bureau of Statistics inaugurated a monthly bulletin service on coke statistics, showing the production in Canada, the imports, exports and apparent consumption. Some of the principal items for the six months' period from these reports are shown in the table on the next page.

Coke Production in Canada, by Months, 1925

(Short tons)

Month	Bituminous coal used for coke making			Coke made	Disposition of coke by producers		
	Canadian	Imported	Total		Used in coke plant	Sold*	Total
January	45,689	110,478	156,167	101,132	19,313	92,070	111,383
February	46,289	110,554	156,843	102,686	19,452	90,385	109,837
March	76,184	139,177	215,361	138,783	22,141	120,738	142,879
April	75,873	129,861	205,734	131,484	22,522	105,983	128,505
May	44,481	154,754	199,235	130,068	22,729	102,125	124,854
June	19,565	141,650	161,215	109,694	19,999	84,760	104,759
Total	**308,081**	**786,474**	**1,094,555**	**713,847**	**126,156**	**596,061**	**722,217**

*Including deliveries to metallurgical works operated in conjunction with coking plants.

Production in Canada, Imports and Exports of Coke, by Provinces, 1925

(Short tons)

Province	Production		Imports		Exports		Apparent consumption	
	June	Six months ending June 30	June	Six months ending June 30	June	Six months ending June 30	June	Six months ending June 30
Nova Scotia, New Brunswick, and Quebec	38,495	235,720	5,305	23,811	371	991	43,429	258,540
Ontario	55,657	370,945	49,663	282,806	1,999	11,983	103,321	641,768
Manitoba, Saskatchewan, Alberta, and British Columbia	15,542	107,182	868	34,439	1,197	13,078	15,213	128,543
Canada	**109,694**	**713,847**	**55,836**	**341,056**	**3,567**	**26,052**	**161,963**	**1,028,851**

Feldspar

According to reports at hand, there was a considerable decline in the production of feldspar in Canada during the first six months of 1925. The total quarry output was 14,000 tons, and the shipments amounted to 13,421 tons valued at $105,489.

Grinding plants were operated by the Industrial Minerals Corporation at Toronto, and by the Frontenac Floor and Wall Tile Company at Kingston.

Exports during the period decreased approximately 4,700 tons, to a total of 13,641 tons appraised at $97,878.

Fluorspar

Although there was no fluorspar production reported for the first six months of 1925, the prospects of renewed activity in the industry are very bright. The Rock Candy mine and mill at Lynch Creek owned by the Consolidated Mining and Smelting Co. resumed operations during the first week of August and it is understood that the orders on hand will keep this plant operating for a considerable time.

Imports of fluorspar increased appreciably and amounted to 4,005 tons valued at $39,957 as compared with 817 tons worth $20,285 for the corresponding period of 1924. Customs records also showed a small importation of hydro-fluo-silicic acid.

Graphite

Production of graphite in Canada during the first six months of 1925, amounted to 1,077 tons valued at $63,843 as compared with 662 tons at $39,718 in 1924. The advance noted in the exportations of graphite in 1924 was continued during the first half of the current year; the records show 1,239 tons with a valuation of $64,385, shipped to foreign countries.

Gypsum

Gypsum rock quarried during the six months ending June 30, 1925, amounted to 255,215 tons, of which quantity 81,076 tons or 31·7 per cent was calcined. Shipments, valued at $906,052, were as follows: Nova Scotia, 151,924 tons; New Brunswick, 23,148 tons; Ontario, 41,769 tons; and Manitoba, 17,864 tons. Average values per ton received by operators, follow: lump, $1.40; crushed, $1.84; fine ground, $6.21; calcined, $8.52.

Imports of crude gypsum were recorded at 2,352 tons worth $36,808, while exports of Canadian gypsum totalled 125,328 tons consisting of 123,340 tons crude and 1,988 tons ground, having a total value of $224,338.

Shipments of Gypsum in Canada, January 1 to June 30, 1924 and 1925

	1924		1925	
	Tons	Value	Tons	Value
		$		$
Lump or mine run	44,812	80,767	44,908	62,719
Crushed	125,235	226,041	114,892	211,934
Fine ground	2,634	17,055	3,043	18,897
Calcined gypsum sold	21,261	212,777	31,299	194,693
Calcined gypsum used in the manufacture of gypsum products, such as wall plaster, alabastine, etc. (weight and value of gypsum content only)	42,650	417,513	40,563	417,809
Total sold or used	**236,592**	**954,153**	**234,705**	**906,052**

Iron Oxides

Iron oxides are marketed in two forms—crude and calcined. The crude oxide is dried before shipment—it is used in the purification of illuminating gas; the calcined product is ground, usually for consumption in the paint industry.

The total production of iron oxides in Canada during the half-year was 3,285 tons worth $38,769, as compared with 3,622 tons valued at $38,540 shipped in the corresponding period last year.

Magnesite

During the six months ending June, 1,785 tons of calcined and dead-burned magnesite were sold for $49,557; these figures showed a slight decline from the sales in the first half of last year when 2,385 tons valued at $67,926 were marketed. The International Magnesite Company and the Scottish Canadian Magnesite Company were the only producers. Exports of calcined magnesite for this period amounted to 95 tons valued at $2,394.

Magnesium Sulphate

The deposit of magnesium sulphate near Ashcroft, British Columbia, was not operated during the first six months of the current year. No shipments were made from this property in 1924 but 121 tons of refined magnesium sulphate were shipped in 1923.

Magnesium sulphate or epsom salts, amounting to 858 tons with a valuation of $20,766 was imported into Canada during the period under review.

Mica

The mica produced in Canada is phlogopite, also termed amber mica. This type of mica is very much in demand for use in the manufacture of electrical appliances as its strength and elasticity are superior to that of muscovite, and also because it withstands high temperatures without disintegrating. Canadian scrap mica is used principally in the manufacture of prepared roofings although the rubber and lubricant manufacturing industries also use appreciable quantities.

During the first six months of 1925, there was a falling-off in the production of mica in Canada, 1,370 tons valued at $115,576 were shipped, while in the first half of the previous year the amount and value were 1,711 tons at $168,454.

The Customs' records show exports of thumb-trimmed mica amounting to 109 tons appraised at $6,249; splittings, 1,321 tons at $186,674; and scrap, 1,705 tons at $23,666.

Production of Mica in Canada, January 1 to June 30, 1924 and 1925

Grade	1924			1925		
	Quantity	Value f. o. b. shipping point	Price per pound	Quantity	Value f. o. b. shipping point	Price per pound
	lb.	$	$	lb.	$	$
Rough cobbed	208,813	16,810	0·08	140,553	10,826	0·08
Thumb-trimmed	462,935	88,284	0·19	144,844	30,765	0·21
Splittings	66,006	48,536	0·74	85,569	61,253	0·72
Scrap	2,685,176	14,824	0·006	2,368,700	12,732	0·005
Total	**3,422,930**	**168,454**	**0·05**	**2,739,657**	**115,576**	**0·04**

Mineral Waters

Shipments of mineral waters during the half-year amounted to 92,095 gallons valued at $11,473. This production was almost entirely from Ontario springs and wells. In the first half of last year, shipments totalled 109,683 imperial gallons valued at $12,108.

Natural Gas

The total production of natural gas in Canada during the six months ending June 30, 1925, was 8,331,104 thousand cubic feet valued at $3,354,672; or an average of 40·3 cents a thousand cubic feet. For the first time in the history of Canada the position of leading producer was transferred from Ontario to the younger fields of Alberta. Alberta in its role of principal producer accounted for 4,687,084 thousand cubic feet; Ontario followed with 3,257,429 thousand cubic feet; and New Brunswick was third with 386,491 thousand cubic feet. Average prices received per thousand cubic feet were, by provinces: New Brunswick, 20 cents; Ontario, 53·5 cents and Alberta 32·7 cents.

The decrease in the Ontario production is attributable to the natural decline in rock pressure and also to the upward trend in prices. In Alberta, the activities in the Viking field have attracted considerable attention.

No further developments have been reported in connection with the establishment of plants in Canada to produce carbon black from natural gas.

Production of Natural Gas in Canada, by Provinces, January 1 to June 30, 1924 and 1925

Province	1924		1925	
	M cu. ft.	Value	M cu. ft.	Value
		$		$
New Brunswick	363,324	71,967	386,491	76,634
Ontario	4,387,681	2,621,221	3,257,429	1,742,724
Manitoba	100	30	100	30
Alberta	3,949,765	1,055,260	4,687,084	1,535,284
Total	**8,700,970**	**3,748,509**	**8,331,104**	**3,354,672**

Petroleum

Crude petroleum amounting to 80,970 barrels valued at $233,271 was produced in Canada during the half-year under review. In the corresponding period of 1924, the production was 85,426 barrels valued at $268,155.

Ontario producers received an average price of $2.87 a barrel; those in Alberta, $1.69; and in New Brunswick, $3.34.

The Romney well, in Romney township, on the shore of Lake Erie, was active throughout the period and produced about 900 barrels. Production from this well has been sufficient to encourage the drilling of a number of wells to penetrate the Trenton formation. In Alberta, drilling was continued in the Wainwright and the Coutts-Sweetgrass fields.

In compliance with the terms of "An Act respecting the payment of Bounties on Petroleum" as enacted on June 30, 1923, the payment of bounty to crude petroleum producers ceased on July 1, 1925.

Crude Petroleum Production in Canada, January 1 to June 30, 1924 and 1925

—	1924				1925			
	Quantity in barrels	Value less bounty	Bounty paid	Total value	Quantity in barrels	Value less bounty	Bounty paid	Total value
		$	$	$		$	$	$
New Brunswick	3,221	11,287	1,686	12,973	2,795	8,613	734	9,347
Ontario—								
Petrolia and Enniskillen	31,644	80,230	16,613	96,843	30,440	79,448	7,923	87,371
Oil Springs	22,272	56,473	11,693	68,166	21,412	55,885	5,627	61,512
Moore Township	3,285	8,454	1,724	10,178	2,179	5,687	576	6,263
Sarnia Township	1,606	4,158	843	5,001	1,307	3,411	379	3,790
Plympton Township	366	960	192	1,152	699	1,824	184	2,008
Bothwell	13,426	34,031	7,049	41,080	13,932	36,363	3,680	40,043
West Dover	2,252	5,658	1,182	6,840	1,519	3,965	399	4,364
Raleigh Township	351	910	185	1,095	596	1,556	156	1,712
Dutton	–	–	–	–	146	381	38	419
Onondaga	158	379	83	462	43	106	9	115
Moza Township	4,650	11,811	2,441	14,252	4,500	11,745	1,181	12,926
Romney Township	1,559	4,536	–	4,536	842	2,456	–	2,456
Total for Ontario	81,569	207,600	42,005	249,605	77,615	202,827	20,152	222,979
Alberta	636	5,577	–	5,577	560	945	–	945
Canada	**85,426**	**224,461**	**43,691**	**268,155**	**80,970**	**212,385**	**20,886**	**233,271**

Phosphate

The production of phosphate in Canada during the first six months of 1925 amounted to 16 tons valued at $189. This shipment was made from crude material taken from an old mine dump. Imports, principally Florida phosphate totalled 2,099 tons valued at $44,192.

Pyrites

Shipments of pyrites (iron and copper) during the half-year were reported at 1,666 tons worth $10,226. In the corresponding period of the previous year 6,811 tons at $28,629 were shipped. The sulphur content of the ores shipped this year was 43·3 per cent or 722 tons.

The Eustis Mining Company in Quebec, the Grasselli Chemical Company in Ontario and the Consolidated Mining and Smelting Company in British Columbia were the only firms operating during the six months.

Quartz

Shipments of quartz (silica) from Canadian quarries during the period under review totalled 69,792 tons with a valuation of $134,099. In the same period of the previous year 66,484 tons at $151,402, were shipped. Ontario sales accounted for 66,065 tons or 94·6 per cent of the total for Canada.

The quartz-crushing plant at St. Canut, Quebec, owned by the Messrs. Silico, Ltd., was operated for two months of the period. Quartz was also ground by the Industrial Minerals Corporation at their Ashbridges' Bay plant in Toronto.

In addition to the imports into Canada of silex or crystallized quartz, totalling 1,007 tons evaluated at $16,842, flint amounting to 1,631 tons at $16,783 was also received.

Salt

The output of salt in Canada during the first six months of 1925, was 107,268 tons. Although the shipments during the period were slightly greater than those recorded for the first half of 1924, the sales value declined $79,874 or 10·9 per cent. Sales amounted to 105,770 tons valued at $650,965.

Ontario contributed 102,924 tons; Nova Scotia, 2,736 tons; and Alberta, 110 tons. This Alberta shipment was made from the Fort McMurray district where development work in the salt industry has been carried on for a considerable time.

Importations of salt, all grades, into Canada were equal to 75·4 per cent of the total Canadian production; Customs' records show that 79,762 tons appraised at $441,578, were brought into Canada during the period under review.

Production of Salt in Canada, by Grades, January 1 to June 30, 1924 and 1925

Grade	1924			1925		
	Manufactured	Sold	Value of salt sold (not including packages)	Manufactured	Sold	Value of salt sold (not including packages)
	tons	tons	$	tons	tons	$
Table and dairy	20,964	20,877	365,152	22,131	21,716	314,797
Common fine	16,187	17,458	142,807	17,988	18,460	115,913
Common course	18,492	17,241	130,188	20,039	18,808	136,656
Land salt	3,071	3,002	15,472	1,746	1,688	6,888
Other grades	3,852	3,870	35,784	4,896	4,630	36,243
Brine for chemical works (Salt equivalent sold or used)	40,436	40,436	40,436	40,468	40,468	40,468
Total	**103,002**	**102,884**	**730,839**	**107,268**	**105,770**	**650,965**
Value of packages	–	–	277,801	–	–	270,996
Grand Total	**103,002**	**102,884**	**1,008,640**	**170,268**	**105,770**	**921,961**

Sodium Carbonate

A considerable increase in the shipments of sodium carbonate crystals was noted during the first six months of 1925. The sales for the period amounted to 557 tons worth $6,700 as against 321 tons at $4,715 in the corresponding six months of 1924.

Sodium carbonate is used in the manufacture of glass, soap and paper, for bleaching and washing linen, cotton, wool, etc., dyeing and printing fabrics, preventing the formation of boiler scale, and also to a small extent as a reagent in analytical chemistry.

The manufacture of soda ash from salt brine is carried on in Canada on a large scale by Brunner-Mond, Ltd., at Amherstburg, Ontario.

Sodium Sulphate

Production of sodium sulphate in Canada during the first six months of 1925 amounted to 1,916 tons valued at $9,578. These shipments were made from the deposits of natural sodium sulphate in the province of Saskatchewan.

Importations of salt cake totalled 15,097 tons at $206,395, an advance of 4,000 tons over those in the corresponding period of 1924. Soda, bisulphate of, or nitre cake, amounting to 13,421 tons, at $46,124, and glauber's salt to a total of 169 tons at $2,893 were also imported.

Talc and Soapstone

The appreciable improvement noted in the talc and soapstone industry in Canada in 1924 continued throughout the first six months of 1925. Shipments totalled 7,056 tons valued at $98,477; in the first half of 1924 the quantity shipped was 5,228 tons at $70,798.

Imports of talc and soapstone totalled 2,099 tons worth $44,192, and exports of refined talc stood at 3,270 tons with a valuation of $38,776.