CANADA.

DEPARTMENT OF MINES

Hon. SIR JAMES A. LOUGHEED, MINISTER; CHARLES CAMSELL, ACTING DEPUTY MINISTER

MINES BRANCH

EUGENE HAANEL, PH.D., DIRECTOR

THE

PRODUCTION OF COAL AND COKE

IN

CANADA

During the Calendar Year

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Chief of the Division of Mineral Resources and Statistics



OTTAWA THOMAS MULVEY PRINTER TO THE KING'S MOST EXCELLENT MAJESTY 1921

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COKE

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COAL.

The term "production" in the text and tables of this report is used to represent the tonnage of coal actually sold, or used, by the producer, as distinguished from the term "output," which is applied to the total coal extracted from the mine, and which includes, in some cases, coal lost or unsaleable or coal carried into stock on hand at the end of the year.

The production of coal during 1919 was 13,681,218 short tons (12,215,373 long tons), valued at \$54,413,349, or an average of \$3.98 per ton, as compared with a production in 1918 of 14,977,926 short tons (13,373,148 long tons), valued at \$55,192,896, or an average of \$3.68 per ton, a decrease in production in 1919 of 1,296,708 tons, or $8 \cdot 6$ per cent.

The average number of men employed during 1919 was 27,198, and total wages paid \$34,826,363, as compared with an average of 25,419 men employed in 1918, and \$32,899,501 paid in wages.

The values of the production in 1917, 1918 and 1919 have for all provinces been furnished directly by the operators. In 1916 and previous year, however, complete returns of values were not received from all operators, and the values placed upon the coal production in the provinces of Nova Scotia and British Columbia were partially estimated, or assumed.

In 1886 Canada's consumption of coal was 3,480,111 tons, of which 46 per cent was obtained from Canadian coal mines and 54 per cent imported chiefly from the United States. The annual consumption per head of population was about three-quarters of a ton.

In 1919 the consumption of coal was 28,863,017 tons, in 1918 it was 34,771,-832 tons, and in 1917, 33,123,785 tons. The percentage of the total derived from Canadian mines in 1919 was 40 and the percentage imported, 60. The consumption per capita during 1918 was over 4 tons, with a smaller rate of consumption in 1919. During the 33 years that have elapsed since 1886 Canada's coal consumption has increased practically tenfold in total tonnage and over 5 times in rate per head of population. But throughout this period the ratio of domestic to imported coal in the annual consumption has varied within quite narrow limits. The year of maximum proportion of contribution from Canadian sources was in 1903, when Canadian coal formed over 52 per cent of the total; the lowest proportion was in 1917, when only $37 \cdot 2$ per cent of the consumption originated in Canada. Throughout this period, too, exports of Canadian coal have not averaged more than 10 per cent of the quantity imported

During the past three years the actual coal shortage in central Canada due to conditions created by the war, and the threats of serious and dire consequences that might readily ensue, were that shortage to become acute, have served to draw public attention very strongly to a situation which the public records have shown to exist for many years. The fuel shortage has not only resulted in the imposition of abnormally high and possibly unjustifiable prices but has actually restricted in many instances industrial activity.

There is no actual shortage of coal resources in either the United States or in Canada, at least in so far as bituminous coal is concerned, so that the problem involved relates primarily to questions of production and distribution.

The Canadian coal-fields are situated in the extreme east and in the western provinces, while the great central provinces of Ontario and Quebec, the chief

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centres of population, are more exists, and, presumably, more economically supplied with coal from the nearer coal-fields of Pennsylvania and Ohio. Further, there is no anthracite coal in eastern Canada, which has grown dependent upon the anthracite output of Pennsylvania for that most desirable of the domestic fuels, since anthracite is not only the chief domestic or house fuel in Ontario, and Quebec, but is imported even into Nova Scotia coal districts, and has been largely used also in Manitoba and Saskatchewan.

In round numbers, Canada produced during 1919 about 13.5 million tons of coal, of which 2 million tons were exported, and imported 12.3 million tons of bituminous coal and 5 million tons of anthracite. During the previous year, 1918, we produced in round numbers 15 million tons, exported 8 million tons, and imported 16.8 million tons of bituminous coal, and 4.8 million tons of anthracite; thus, both production and imports were considerably reduced in 1919. Such a condition of international trade and dependence upon foreign supply attracted little attention during normal times.

Under the stress of war conditions when it became apparent that production would not meet demand action was taken both in the United States and in Canada to place the entire fuel situation under Government control. The regime of Canadian fuel control extended from June 11, 1917, to March 5, 1920.

In commenting on the policy of the United States with respect to the exportation of anthracite coal, the Fuel Controller, Mr. C. A. Magrath states.—¹

"The Government (of the United States) has on different occasions appointed Committees to investigate the operations of these (anthracite mining) companies, and inquired into their methods of mining and their manner of conducting their business generally. But as far as the Fuel Controller is aware, nothing has ever developed in these investigations, which would indicate any desire on the part of the United States Administration to prohibit the exportation of anthracite. During the crisis just past, Canada was treated almost, if not absolutely, as an integral part of the union. Of course, it is within the realm of possibility that at some future date the United States might desire to retain their whole supplies of anthracite for the use of their own people. In such an eventuality, Canada would no doubt be given several years notice within which to arrange for replacing such supplies as are then being imported."

With **re**spect to coal trade generally he states:—²

"The coal operators both in the East and the West should be encouraged as far as possible to make the most of the domestic markets and thereby decrease the amount of foreign coal imported.

"Under ideal conditions, however, there is a large market in Canada which Canadian producers have been unable to enter, owing to its distance from the coal fields, and this market, has, therefore, been supplied with foreign coal. To what extent this home market can in the future be served by the Canadian product is a problem that requires careful consideration."

The Fuel Controller's report constitutes a detailed and comprehensive analysis of the Canadian fuel situation.

Province	Average No. of men	Wages Paid	. Productio		Per cent	
	Employed	mages raiu	Short tons	Value	Average Per Ton	of total Quantity
Nova Scotia New Brunswick Saskatchewan Alberta British Columbia Yukon Territory	$10,978 \\ 565 \\ 487 \\ 9,343 \\ 5,813 \\ 12$	\$ 13,970,149 503,268 467,436 11,414,755 8,465,255 5,500	5,720,373 179,108 380,169 4,964,535 2,435,933 1,100	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	\$ 3 · 859 4 · 422 2 · 158 3 · 685 5 · 098 4 · 000	41.81 1.31 2.78 36.29 17.80
Total	27,198	34,826,363	13,681,218	54,413,349	3.977	100.0

Production of Coal by Provinces, 1919

¹Final Report of the Fuel Controller, March, 1919-p. 41.

²Final Report of the Fuel Controller, March, 1919-p. 37.

	Average		Produ	Per cent		
Province	No. of Men Employed	Wages Paid	Short Tons	Value	Average Per Ton	
Nova Scotia New Brunswick Saskatchewan Alberta British Columbia Yukon Territory	4,982	\$ 13,069,322 631,323 423,392 11,382,406 7,384,358 8,700	$5,818,562\\268,212\\346,847\\5,972,816\\2,568,589\\2,900$	$\begin{array}{r} \$ \\ 21,095,470 \\ 1,331,710 \\ 722,148 \\ 20,537,287 \\ 11,494,681 \\ 11,600 \end{array}$	$ \begin{array}{c} \$ \\ 3 \cdot 63 \\ 4 \cdot 97 \\ 2 \cdot 08 \\ 3 \cdot 44 \\ 4 \cdot 47 \\ 4 \cdot 00 \end{array} $	$38.85 \\ 1.79 \\ 2.31 \\ 39.88 \\ 17.15 \\ 0.02$
Total	25,419	32,899,501	14,977,926	55, 192, 896	3.68	100.00

Production of Coal by Provinces, 1918

Comparison of Production, 1917 with 1918, and 1918 with 1919

	(i) Increase, or (d) Decrease						
Province	Years 1917 and 1918	Years 1918 and 1919					
Nova Scotia New Brunswick Saskatchewan. Alberta British Columbia Yukon Territory Total for Canada	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$					

The total production in 1919 included 111,324 tons of anthracite, or less than 1 per cent of the total; 10,642,902 tons of bituminous, or $77\cdot 8$ per cent of the total, and 2,926,992 tons of lignite, or $21\cdot 4$ per cent of the total.

The total production in 1918 included: 115,405 tons of anthracite, or less than 1 per cent of the total; 11,636,190 tons of bituminous, or 78 per cent of the total, and 3,226,331 tons of lignite, or over 21 per cent of the total.

The consumption of coal during the year included approximately 5,063,999 tons of anthracite, 20,872,026 tons of bituminous, and 2,926,992 tons of lignite.

The consumption of coal during 1918 included: 4,900,565 tons of anthracite, 26,644,936 tons of bituminous, and 3,226,331 tons of lignite.

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Production and Distribution of Coal Mined, by Provinces, 1919

	Nova Scotia	New Bruns- wick	Sas- katche- wan	Alberta	Yukon	British Colum- bia	Total		
Sold in Canada Sold for export to U.S Sold for export to other coun-	4,274,874 12,119	8,504	80	121,264		$1,168,122 \\ 852,704$	994,671		
tries	584,614				•••••		584,614		
Total sales	4,871,607	171,779	354,399	4,577,236	1,100	2,020,826	11,996,947		
Used by producers in making coke, steel, brick, etc Used by producers for col-	222,269		6,715	3,818		163,116	395,918		
liery consumption and by workmen	626,497	7,329	19,055	(a)383,481	•••••	251,991	1,288,35		
Total used	848,766	7,329	25,770	387,299		415, 107	1,684,271		
Production*	5,720,373	179,108	380,169	4,964,535	1,100	2,435,933	13,681,218		
Difference in stocks	+41,574	-879	+45	-51,742	·····	-23,535	-34,53		
Losses due to breakage or other causes	42,727	. 209	3,903	91,475	. 100	295,560	433,97		
Total Output	5,804,674	178,438	384,117	5,004,268	1,200	2,707,958	14,080,65		

(In short tons.)

*Production is obtained by adding coal sold and coal used. (a) Includes coal used in manufacture of briquettes.

Production and Distribution of Coal Mined, by Provinces, 1918

(In short tons.)

·····							
	Nova Scotia	New Bruns- wick	Saskatch- ewan	Alberta	Yukon	British Columbia	Total
Sold in Canada Sold for export to U.S Sold for export to other coun-	4,208,825 317,103		324,661		2,900		11,209,184 1,354,694
tries	212,882			· · · · · · · · · · · · ·		65,427	278,309
Total sales	4,738,810	259,043	324,661	5,495,234	2,900	2,021,539	12,842,187
Used by producers in making coke, steel, brick, etc Used by producers for colliery	277,881	••••••	2,702	108,864	, 	- 309,657	699,104
consumption and by work- men	801,871	9,169	19,484	368,718	·····	237,393	1,436,635
Total used	1,079,752	9,169	22,186	477, 582		547,050	2,135,739
Production*	5,818,562	268,212	346,847	5,972,816	2,900	2,568,589	14,977,926
Difference in stocks	-32,811	-2,481	+19	+10,333		+24,528	-412
Losses due to breakage or other causes	50,619	854	2,122	143,294	· · · · · · · · · · · · · · · · · · ·	285,982	482,871
Total output	5,836,370	266,585	. 348,988	6,126,443	2,900	2,879,099	15,460,385
	•						

*Production is obtained by adding coal sold and coal used.

NEN 2 -	1914 ,	1915	1916	1917
Sold in Canada Sold for export to United States Other countries	$10,359,390 \\ 1,181,536 \\ 239,927$	$9,826,712 \\ 1,330,718 \\ 297,343$	1,451,075	1,301,881
Total sales Used by producers for the manufacture of coke for colliery consumption, and by	11,780,853 591,331	11,454,773 701,975	804,814	690,573
workmen	1,265,345			
Production	13,637,529	13,267,023	14,483,395	14,046,759
Difference in stocks Loss due to washing, breakage, or other causes	83,123 434,337	-99,294 312,467	-53,527 385,835	
Total output	13,988,743	13,480,196	14,815,703	14,435,361

Distribution of Coal Mined during the Years 1914-15-16-17

(In short tons.)

A record of the monthly production of coal by provinces is given in the following tables:—

In Nova Scotia, New Brunswick, British Columbia, and the Yukon this production is all bituminous coal; that of Saskatchewan is all lignite, while the production in Alberta includes the three classes, semi-anthracite, bituminous and lignite. A record of the monthly production of these three classes of coal in Alberta will be found in the section of this report dealing with that province.

Monthly Production of Coal by Provinces, 1919

(In short tons.)

Months	Nova Scotia	New Bruns- wick	Saskat- chewan		Alberta	·	British Columbia	Total
January February March April May June June July August September October November December Total	$\begin{array}{r} 405,112\\ 420,460\\ 454,398\\ 451,127\\ 433,890\end{array}$	$\begin{array}{c} 16,262\\ 14,529\\ 13,339\\ 12,011\\ 13,627\\ 14,249\\ 15,691\\ 13,821\\ 13,821\\ 17,376\\ 16,026\\ \end{array}$	$\begin{array}{c} 23,937\\ 26,164\\ 16,001\\ 18,588\\ 20,337\\ 20,971\\ 26,900\\ 35,327\\ 48,153\\ 55,367\\ 60,390\\ \end{array}$	$\begin{array}{c} 11, 645\\ 13, 414\\ 13, 679\\ 76\\ 39\\ 750\\ 2, 611\\ 12, 278\\ 14, 673\\ 13, 907\\ 15, 522\\ \hline \end{array}$	$\begin{array}{c} 265, 431\\ 278, 377\\ 214, 830\\ 169, 549\\ 4, 328\\ 7, 226\\ 33, 006\\ 208, 657\\ 279, 096\\ 284, 578\\ 278, 402\\ \end{array}$	$\begin{array}{c} 147,545\\ 210,994\\ 96,615\\ 95,439\\ 37,794\\ 55,826\\ 117,630\\ 286,584\\ 390,475\end{array}$	$185,072\\212,646\\185,444\\182,661\\127,710\\154,859\\168,660\\213,780\\252,794\\256,413\\255,694$	1,291,606 1,055,004 1,157,054 994,306 929,451 637,725 721,283 849,335 1,260,156 1,572,357 1,568,593 1,624,818 *13,681,218

*Includes 1,100 tons produced in the Yukon District, during third quarter. (a) Anthracite. (b) Bituminous. (c) Lignite.

Statistics of the annual production of coal from 1881 to date are given in the following table.

The total production of coal in Canada from 1785 to 1919 has been 297,-158,478 tons; of this amount Nova Scotia is credited with 177,539,045 tons, or 59.7 per cent of the total; British Columbia, 62,900,741 tons, or 21.17 per cent; Alberta, 51,072,492 tons, or 17.20 per cent; Saskatchewan, 3,906,587 tons, or 1.31 per cent; New Brunswick, 1,603,448 tons, or 0.5 per cent, and the Yukon Territory, 136,165 tons, or 0.05 per cent.

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Year	Short tons	Value	Average per ton		Short tons	Value	Average per ton
1785–1880 1881		\$28,190,518 2,688,621	\$ 1.72 1.75	1901 1902		\$12,699,243 15,210,877	\$ 1.96 2.04
1882 1883 1884	1,818,684	3,248,446 3,109,635 3,593,831	$1.76 \\ 1.71 \\ 1.81$	1903 1904 1905	7,960,364 8,254,595	15,942,833 16,592,231 17,520,263	2.00 2.01 2.02
1885 1886 1887	1,920,977 2,116,653	3,417,807 3,739,840 4,388,206	$1.78 \\ 1.77 \\ 1.81$	1906 1907 1908		$19,732,019 \\ 24,381,842 \\ 25,194,573$	$2 \cdot 02$ 2 \cdot 32 2 \cdot 31
1888 1889 1890	2,602,552 2,658,303	4,674,140 4,894,287 5,676,247	1.80 1.84 1.84	1909 1910 1911		24,781,236 30,909,779 26,467,646	2·36 2·39 2·34
1891 1892 1893	3,577,749 3,287,745	7,019,425 6,363,757 7,359,080	$ \begin{array}{r} 1 \cdot 96 \\ 1 \cdot 94 \\ 1 \cdot 95 \end{array} $	1912 1913 1914	14,512,829 15,012,178	36,019,044 37,334,940 33,471,801	2·48 2·49 2·45
1894 1895	3,847,070 3,478,344	7,429,468 6,739,153	$ \begin{array}{r} 1.93 \\ 1.94 \\ 1.93 \end{array} $	1915 1916	13,267,023 14,483,395 14,046,759	32,111,182 38,817,481 43,199,831	$2 \cdot 42$ $2 \cdot 68$ $3 \cdot 08$
1896 1897 1898	3,786,107 4,173,108	$\begin{array}{c c}7,226,462\\.7,303,597\\8,224,288\\10,283,497\end{array}$	$ \begin{array}{r} 1.93 \\ 1.93 \\ 1.97 \\ 2.09 \end{array} $	1917 1918 1919	14,040,735 14,977,926 13,681,218	43,199,831 55,192,896 54,413,349	3.68
1899 1900	4,925,051 5,777,319	10,285,457	2.09 2.38	Grand total	297,158,478	709,305,549	2.39

Exports of Canadian Coal.

Statistics of the exports of coal according to the Trade records are given in the following tables. The exports of Canadian coal in 1919 were 2,070,050 tons, valued at \$12,438,885, or an average of \$6.01 per ton, as compared with exports in 1918 of 1,817,195 tons, valued at \$9,405,423, or an average of \$5.18 per ton. Besides Canadian coal exported there is also a small export of coal not the produce of Canada.

Annual Exports of Coal

(In short tons.)

Calendar year	Produce of Canada	Not the produce of Canada	Calendar year	Produce of Canada	Not the produce of Canada
1908 1909 1910 1911 1912 1913	2,377,049 1,500,639 2,127,133	$\begin{array}{c} 102,071\\ 161,098\\ 159,859\\ 133,943\\ 46,706\\ 66,566\end{array}$	1914 1915 1916 1917 1918 1919	$1,766,543 \\ 2,135,359 \\ 1,733,156 \\ 1,817,195$	$\begin{array}{c} 83,137\\ 59,690\\ 62,783\\ 47,328\\ 67,486\\ 56,988\end{array}$

Imports of Coal

The total imports of coal of all classes in 1919 "entered for consumption" as per the published Trade reports were 17,308,837 tons, valued at \$61,160,799, as compared with total imports in 1918 of 21,678,587 tons, valued at \$71,650,584.

Imports of coal into Canada are subdivided into four classes as follows: anthracite, egg, grate, stove, and nut; anthracite: rice, barley and buckwheat; bituminous, round and run-of-mine; and bituminous slack such as will pass through a three-quarter-inch screen.

The imports of anthracite in 1919 included: 4,758,419 tons of egg, grate, stove and nut, valued at \$30,948,590, or an average of \$6.50 per ton, and 194,256

tons of rice, barley and buckwheat, valued at \$647,104, or an average of \$3.33 per ton, as compared with total imports in 1918 of 4,785,160 tons, valued at \$26,007,888, or an average of \$5.44 per ton. The imports of bituminous coal of all classes in 1919 were: 12,356,162 tons, valued at \$29,565,105, as against imports in 1918 of 16,893,427 tons, valued at \$45,642,696. The decrease in bituminous imports in 1919 as compared with 1918 was thus 4,537,265 tons, or 27 per cent.

The bituminous imports in 1919 included: bituminous round, and run-ofmine, 10,127,965 tons, valued at \$24,750,717, or an average of \$2.44 per ton, and bituminous slack, 2,228,197 tons, valued at \$4,814,388, or an average of \$2.16 per ton. The value of the imports during 1918 of bituminous, round and run-of-mine coal averaged \$2.73 per ton, and of bituminous slack, \$2.58 per ton.

The record of the exports of bituminous coal to Canada, as published in the Reports of Trade and Navigation at Washington, differs in some years considerably from the Canadian record, in partial explanation of which it should be noted that the Canadian record represents coal "entered for home consumption." This entry may be deferred several months from the actual time of import, thus causing a difference in the monthly and yearly record.

Furthermore it is understood that the United States record includes a certain amount of coal used for bunkering lake steamers which would not be included as an import into Canada. The United States record shows exports of bituminous coal to Canada during the twelve months ending December 1919, of 11,950,277 short tons, as against 18,134,328 tons in 1918, 18,118,879 tons in 1917, 13,260,181 tons in 1916, 9,356,889 tons in 1915, 10,271,409 tons in 1914, and 15,115,733 tons in 1913.

\ Calendar year	Bituminous round and run of the mine (a)			e coal and e dust (b)	Bituminous slack such as will pass through . ³ / ₄ screen (c)		
	Short tons	Value	Short tons	Value	Short tons	Value	
1907	$\begin{array}{c} 6,370,152\\ 6,025,574\\ 5,025,063\\ 5,906,466\\ 8,905,815\\ 8,491,840\\ 10,743,473\\ 7,776,415\\ 6,106,794\\ 9,504,552\\ 12,407,486\\ 13,656,360\\ 10,127,965 \end{array}$	$\begin{array}{c} \$\\ 13,232,445\\ 12,516,748\\ 11,455,818\\ 11,919,341\\ 18,407,603\\ 16,846,727\\ 21,756,658\\ 14,954,321\\ 7,564,369\\ 12,368,679\\ 33,712,894\\ 37,291,057\\ 24,750,717\\ \end{array}$	3, 141, 873 3, 160, 110 3, 017, 844 3, 266, 235 4, 020, 577 4, 184, 017 4, 642, 057 4, 435, 010 4, 072, 192 4, 570, 815 5, 320, 198 4, 785, 160 4, 952, 675	$\begin{array}{c} \$\\ 14,506,129\\ 14,478,536\\ 13,906,152\\ 14,735,062\\ 18,794,192\\ 20,080,388\\ 22,034,839\\ 21,241,924\\ 18,753,980\\ 22,216,363\\ 28,109,586\\ 26,007,888\\ 31,595,694 \end{array}$	$\begin{array}{c} 1,139,256\\ 1,111,811\\ 1,230,017\\ 1,365,281\\ 1,632,500\\ 1,919,953\\ 2,816,423\\ 2,509,632\\ 2,286,916\\ 3,505,236\\ 3,129,776\\ 3,237,067\\ 2,228,197\end{array}$	$\begin{array}{c} 8\\ 1,121,949\\ 1,355,677\\ 1,469,889\\ 2,090,796\\ 2,550,922\\ 4,157,622\\ 3,605,253\\ 2,027,256\\ 3,704,624\\ 8,739,877\\ -8,351,639\\ 4,814,388\end{array}$	

Annual Imports of Coal, "Entered for Consumption"

(a) Duty, 53 cents per ton.(c) Duty, 14 cents per ton.

(b) Coal, anthracite and anthracite coal dust, duty free.

The following tables show the monthly imports of bituminous and anthracite coal since 1915.

The United States record of monthly exports to Canada is also included for comparison.

Monthly Imports of Bituminous Coal into Canada,* "Entered for Consumption"

(In short tons.)

'	1915	1916	1917	1918	191 9	1920
January	547,772	1,124,918	1,031,719	1,134,493	1,458,240	790.42
February	653,016	942,811	760,545	1,460,391	1,064,710	671,21
March	547,756	918,206	1,114,958	1,175,076	922,608	1,180,67
April	417,133	727,467	1,331,449	986,052	562,853	753,55
May June	481,908 $661,569$	894,505 1,239,882	893,055 1,260,652	1,541,537 1,442,412	960,491 733,550	885,12 924,13
July	. 752, 229	1.096.718	1,581,361	1.670.806	1,283,902	1, 103, 81
August	846,162	1,188,822	1,890,923	1,670,397	1,291,041	1,665,17
September	680,151	1,287,554	1,567,773	1,604,802	1,203,977	
October	900,450	1,314,286	1,582,797	1,545,320	1,355,577	
November December	967,791 937,773	1,156,239 1,118,380	$1,273,498 \\ 1,248,532$	1,439,535 1,222,606	892,248 626,965	
Total	8,393,710	13,009,788	15,537,262	16,893,427	12,356,162	

*Compiled from the Monthly Reports on Trade of Canada, Ottawa.

Monthly Imports of Anthracite Coal into Canada,* "Entered for Consumption"

(In short tons.)

- ····				· · ·		
	1915	1916	1917	1918	1919	1920
Januar y. February. March. April. May. June. June. July August. September.	, 213, 797 175, 813 361, 195 477, 522 415, 344 341, 380 346, 689	$\begin{array}{c} 295,578\\ 340,347\\ 381,032\\ 194,402\\ 372,264\\ 513,528\\ 513,858\\ 429,609\\ 433,203 \end{array}$	$\begin{array}{c} 300, 836\\ 277, 179\\ 436, 567\\ 318, 782\\ 347, 390\\ 551, 105\\ 559, 994\\ 665, 071\\ 533, 203\\ \end{array}$	$\begin{array}{c} 279, 688\\ 246, 960\\ 424, 030\\ 362, 291\\ 465, 561\\ 401, 450\\ 382, 207\\ 461, 651\\ 479, 284 \end{array}$	399,676 347,866 170,754 209,958 461,701 431,874 534,488 592,550 563,306	335,908 296,736 439,334 260,122 329,684 473,829 561,567 591,932
October November December	415,929	385,953 383,103 327,848	570,771 413,200 346,100	511,214 364,605 406,219	443,638 379,430 417,434	· · · · · · · · · · · · · · · · · · ·
Total	4,072,192	4,570,815	5,320,198	4,785,160	4,952,675	

*Compiled from the Monthly Reports on Trade of Canada, Ottawa.

Monthly Exports of Bituminous Coal from the United States to Canada*

— — · · ·	1915	1916	1917	1918	1919	1920
January February	$\begin{array}{r} 338,905\\ 306,203\\ 426,970\\ 660,253\\ 978,028\\ 1,138,383\\ 1,060,717\\ 1,058,176\\ 1,224,880\end{array}$	$\begin{array}{r} 600, 616\\ 605, 684\\ 611, 640\\ 740, 865\\ 1, 467, 229\\ 1, 476, 453\\ 1, 457, 326\\ 1, 708, 697\\ 1, 519, 550\\ 1, 196, 122\\ 1, 023, 924\\ 852, 076\\ \hline 13, 260, 182\\ \end{array}$	$\begin{array}{r} 654,350\\ 646,008\\ 884,498\\ 1,022,171\\ 1,569,297\\ 2,017,989\\ 1,555,972\\ 2,715,628\\ 1,739,580\\ 2,416,800\\ 1,504,946\\ 1,391,640\\ \hline 18,118,879 \\ \end{array}$	$\begin{array}{r} 510,022\\647,855\\951,196\\1,273,972\\1,978,799\\2,019,816\\2,098,600\\2,194,099\\2,038,673\\1,859,456\\1,550,245\\1,011,595\\1,011,595\end{array}$	$\begin{array}{r} 861,023\\ 500,000\\ 395,229\\ 562,173\\ 1,218,589\\ 1,602,430\\ 1,498,681\\ 1,498,208\\ 1,581,406\\ 1,622,438\\ 377,038\\ 233,062\\ \hline 11,950,277\end{array}$	512,858 606,222 716,391 940,460 802,427 1,337,019 1,886,889 2,091,047 1,965,514

(In short tons.)

Monthly Exports of Anthracite Coal from the United States to Canada*

(In short tons.)

	1915	1916	1917	1918 (a)	1919 (a)	1920 (a)
January February March April May June July August September October November December	461,976 394,502 299,837 328,516 310,400 380,417-	$\begin{array}{c} 288,521\\ 324,354\\ 337,814\\ 237,201\\ 495,609\\ 567,764\\ 432,376\\ 430,379\\ 391,873\\ 374,665\\ 349,053\\ 326,776\end{array}$	$\begin{array}{c} 327,838\\ 285,135\\ 408,337\\ 656,731\\ 480,633\\ 677,350\\ 437,493\\ 760,253\\ 501,899,\\ 535,715\\ 329,259\\ 606,663\end{array}$	$\begin{array}{c} 270,239\\ 254,597\\ 445,041\\ 381,764\\ 476,123\\ 424,203\\ 443,002\\ 457,177\\ 495,840\\ 510,753\\ 482,013\\ 327,056\end{array}$	$\begin{array}{c} 412,999\\ ,\ 241,940\\ 131,942\\ 319,413\\ 446,652\\ 531,233\\ 546,171\\ 565,845\\ 548,557\\ 435,791\\ 359,205\\ 380,850\end{array}$	342,797 305,052 470,044 389,361 310,461 573,385 738,186 622,302 364,262 497,718
Total	3,852,810	4,556,374	6,007,306	4,967,808	4,976,598	· · · · · · · · · · · · · · · · · · ·

*Compiled from the Monthly Summary of Foreign Commerce of the United States, Washington, D.C. (a) Total exports. Exports to Canada not separately stated, but will exceed 95 per cent of total exports.

Consumption of Coal

The total consumption of coal in Canada estimated on the basis of production, imports and exports was in 1919, 28,863,017 tons, which included 11,611,168 tons of Canadian coal and 17,251,849 tons of imported coal.

Consumption of Coal, 1915-16-17-18-19

(In short tons.)

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Production Exports of Canada	13,267,023 1,766,543		14,046,759 1,733,156		
Home consumption of Canadian coal	11,500,480	12,348,036	12,313,603	`13, 160, 731	11,611,168
Imports Exports not produce of Canada	12,465,902 59,690	$\frac{17,580,603}{62,783}$	20,857,460 47,328	21,678,587 67, 4 86	17,308,83 56,988
Canadian consumption of imported coal	12,406,212	17,517,820	20,810,132	21,611,101	17,251,849
Total consumption of coal in Canada	23,906,692	29,865,856	33, 123, 735	34,771,832	28,863,017

Annual Consumption of 'Coal

(In short tons.)

Calendar Year	Canad	ian 🔨	Import	ted ·	Total	Per
Calendar Tear	Short tons	%	Short tons	%	TOPHI	capit
886 887		45.9 45.7	1,884,161	$54 \cdot 1 \\ 54 \cdot 3$	3,480,111	0.7
388	1,848,365 2,013,925	37.8	2,192,260 3,314,353	62.2	4,040,625 5,328,278	$0.8 \\ 1.1$
889	1,992,988	44.4	2,490,931	55.6	4,483,919	0.9
390	2,360,196 2,606,490	$47.8 \\ 46.7$	2,581,187	$52 \cdot 2 \\ 53 \cdot 3$	4,941,383	1.0
391	2,464,012	40.7	2,980,222 3,082,429	55.6	5,586,712 5,546,441	$\begin{vmatrix} 1 & 1 \\ 1 & 1 & 1 \end{vmatrix}$
93	2,823,187	47.6	3,110,462	52.4	5,933,649	1.1
94	2,743,376	48.5	2,917,818	51.5	5,661,194	1.1
95 96	2,467,109 2,639,055	$45 \cdot 7 \\ 45 \cdot 1$	2,933,752 3,206,456	$54 \cdot 3 \\ 54 \cdot 9$	5,400,861 5,845,511	$1 \cdot 0$ 1 · 1
97	2,799,977	47.3	3,124,485	52.7	5,924,462	1.1
98	3,023,079	48.0	3,274,981	52.0	6,298,060	1.2
99'.`	3,631,882 3,989,542	$47.0 \\ 47.8$	4,092,361	$53 \cdot 0 \\ 52 \cdot 2$	7,724,243	1.4
00	4,912,664	50.5	$4,361,563 \\4,810,213$	49.5	8,351,105 9,722,877	1.8
02	5,376,413	51.0	5,165,938	49.0	10,542,351	1.e
03	6,005,735	$52 \cdot 2$	5,491,870	47.8	11,507,605	2.0
04	6,697,183 $\cdot 7,032,661$	$49 \cdot 2 \\ 48 \cdot 9$	6,909,651 7,343,880	$50\cdot 8$ $51\cdot 1$	13,606,834 14,376,541	$2 \cdot 3 \\ 2 \cdot 3$
26	7,927,560	51.7	7,398,906	48.3	15,326,466	2.4
)7	8,617,352	45.0	10,549,503	55.0	19,166,855	2.9
08	$9,156,478 \\ 8,913,376$	$47.3 \\ 47.9$	10,195,424 9,711,826	$52.7 \\ 52.1$	19,351,902 18,625,202	2·8 2·6
)9	10,532,103	50.2	10,438,123	49.8	20,970,226	2.9
11	9,822,749	40.5	14,424,949	59.5	24, 247, 698	3.3
12	$12,385,696 \\ 13,450,158$	$46.0 \\ 42.6$	14,549,104	$54.0 \\ 57.4$	26,934,800	3×5 4×0
3	12,214,403	42.0	18,132,387 14,637,920	54 5	31,582,545 26,852,323	4·0 3·3
15	11,500,480	48.1	12,406,212	51.9	23,906,692	3.0
16.:,	12,348,036	41.3	17,517,820	58.7	29,865,856	. 3.6
17 18	12,313,603 13,160,731	$37 \cdot 2 \\ 37 \cdot 8$	20,810,132 21,611,101	$62 \cdot 8 \\ 62 \cdot 2$	$33,123,735 \\ 34,771,832$	3·9
19	11,611,168	$\frac{37.8}{40.2}$	17,251,849	59.8	$\cdot 28,863,017$	÷••

In connexion with the records of consumption it may be of interest to record the very large percentage of Canadian coal consumption used by railway locomotives. During the twelve months ending June 30, 1919, the tonnage of coal used by locomotives amounted to 9,141,023.

The quantity of coal consumed by railway locomotives in recent years, as compiled from "Railway Statistics," published by the Department of Railways, and Canals, is as follows:—

Annual Consumption of Coal by Railway Locomotives

(In short tons.)

	Year ending June 30	•		`	Anthracite	Bituminous	Total
1912 1913 1914	· · · · · · · · · · · · · · · · · · ·			• • • • •	6,444 5,374 4,662 5,271	6,769,903 7,732,938 9,040,963 8,268,186 6,672,845	6,776,34 7,738,31 9,045,62 8,273,45
1910 1917 1918	۴ ۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · ·		$3,691 \\ 4,899 \\ 4,900 \\ 3,283 \\ 4,430$	6,673,845 8,672,455 9,783,524 9,836,623 9,136,593	6,677,53 8,677,34 9,788,49 9,839,90 9,141,02

Nova Scotia

The production of coal in Nova Scotia in 1919 was 5,720,373 tons, as compared with a production in 1918 of 5,818,562 tons, showing a decrease of 98,189 tons, or 1.7 per cent.

The total sales of coal during 1919 were 4,871,607 tons, of which 4,274,874 tons were sold for consumption in Canada, 12,119 tons for export to the United States, 584,614 tons for export to Newfoundland and other countries.

The total quantity used by producers under colliery boilers, in coke ovens, and in steel plants was 848,766 tons, including 222,269 tons used in making coke, and for other commercial purposes, and 626,497 tons used in the operation of collieries, or by workmen.

A considerable tonnage of coal reported as sold for consumption in Canada is also used in the manufacture of coke, the total coal charged to coke ovens in the province during the year being 699,696 tons.

The Dominion Coal Company has for many years been the principal operator, the total production of this firm's collieries at Cape Breton and at Springhill being 3,837,787 tons, or over 67 per cent of the province's production, and equivalent to over 28 per cent of the total Canadian production. The Nova Scotia Steel and Coal Company produced 590,323 tons, the Acadia Coal Company 456,269 tons, the Inverness Railway and Coal Company 158,271 tons, the Maritime Coal, Railway and Power Company 185,296 tons, and the Intercolonial Coal Mining Company 207,650 tons.

Nova Scotia was the first province in Canada in which coal was mined and up to date has produced more coal than all the other provinces combined. The annual production reached a maximum in 1913, with a total of 7,980,073 tons. During the past three years, however, the production has fallen off nearly 30 per cent. As the war proceeded the loss of experienced miners through enlistment became heavy. The output was reduced and increasing demands for coal for local consumption and for bunkering overseas shipping soon absorbed the available coal that formerly went to the Montreal market.

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For a number of years Nova Scotia mines, chiefly those of Cape Breton, had been shipping from 2,000,000 to 2,500,000 tons of coal to Montreal, and other Quebec markets, via the St. Lawrence. During the twelve months ending September, 1919, 386,022 tons of Nova Scotia coal were marketed in Quebec province, as against 150,582 tons in 1918; 339,374 tons in 1917; 1,114,337 tons in 1916, and 2,048,222 tons in 1915.

The quantity of coal marketed within the province increased from 2,467,000 tons in 1914 to 3,226,000 tons in 1917, but has fallen again to 2,814,000 tons in 1919.

The present distribution also shows a larger quantity of coal marketed in New Brunswick and in Newfoundland than before the war. The exports to the United States, which reached 596,000 tons in 1915, have fallen to 85,000 tons in 1919, whilst during the latter year 72,000 tons were shipped to European markets.

Coal Production by Companies, in Nova Scotia, 1919 (In short tons.)

· · · · · · · · · · · · · · · · · · ·	,	hort tons.)		<u>`</u>				- 1	
			Used	÷		Sto	eks		x
	Total Sales	For Coke ¹	Colliery Consump- tion	Workmen	Production ²	Jan. 1	Dec. 31	Losses ³	`Output
Inverness County— Inverness Ry. and Coal Co Port Hood Collieries, Ltd. St. Rose Mine (G. W. Evans). Chimney Corner Mine (S. J. Doucet). Anglo Coal Co., Ltd.	31,643 204 796		28,818 2,193 97 403	7,349 820 92 461	$158,271 \\ 34,656 \\ 393 \\ 796 \\ 23,783$	4, 548 58 33	691 13 7 2,238	581 	154, 34,
	177,666		31, 511	8,722	217,899	4,639	2,949	581	216,
Cape Breton County— Indian Cove Coal Co., Ltd Dominion Coal Co., Ltd Nova Scotia Steel and Coal Co., Ltd Bras d'Or Coal Co., Ltd	3,018,990 341,196	26,179 193,306	872 291,824 32,774 997	3,660 63,336 23,047 703	$\begin{array}{r} 22,977\\ 3,400,329\\ 590,323\\ 47,052\end{array}$	11,664 645 769	50,308 6,637	19,181 20,766	22, 3,458, 617, 46,
	3,423,983	219,485	326,467	90,746	4,060,681	13,078	56,945	39,947	4, 144,
Pictou County— Acadia Coal Co., Ltd Milford Mining Co Greenwood Coal Co., Ltd Intercolonial Coal Mining Co., Ltd Lanark Engineering Co	20,642 42,737 174,686	2,784	24,270 2,772 2,985 22,697 1,663	18,199 794 7,483 203	456,269 23,414 46,516 207,650 20,628	243 84 584	179 63 600	· · · · · · · · · · · · · · · · · · ·	456, 23, 46, 207, 20,
	670,627	2,784	54,387	26,679	754,477	911	842		754,
Cumberland County— Central Coal Co. Maritime Coal, Ry. and Power Co., Ltd Twin Seam Coal Co., Ltd Dominion Coal Co., Ltd. (Springhill) Minudie Coal Co., Ltd.	361,966 36,914	· · · · · · · · · · · · · · · · · · ·	$\begin{array}{r} 210 \\ 4,555 \\ 240 \\ 63,212 \\ 1,600 \\ 300 \end{array}$	4,606 200 12,280 120	$\begin{array}{c} 2,087\\ 185,296\\ 6,471\\ 437,458\\ 38,514\\ 8,445\end{array}$	14 4,270 2,948	648 6,134	1	2, 182, 6, - 440, 39, 8,
The Emmerson Coal Co., Ltd The Sterling Coal Co. Fundy Mining Co. Royal Coal Co., Ltd Export Coal Co., Ltd	6,834 651 405		212	120 223	7,269 651 405				7,
	- 599,331		70,541	17,444	687,316	7,316	6,782	2,199	688
Total	4,871,607	222,269	482,906	143, 591	5,720,373	25,944	67,518	42,727	5,804,

¹Includes also coal used by producers for steel making losses are not furnished by all producers.

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Coal Production by Companies, in Nova Scotia, 1918

(In short tons.)

			Used			Sto	ocks	-	
	Total Sales		Colliery Consump- tion	Workmen	Production ²	Jan. 1	Dec. 31	Losses ³	Outpût
Inverness County— Inverness Ry. and Coal Co Port Hood Collieries, Ltd St. Rose Mine (G. W. Evans). Chimney Corner Mine (S. J. Doucet).	4,031		36,723 454 107	7,615 201 20	229,379 4,686 344 503	596	250 29		229,033 4,715 344 586
Cape Breton County-	189,792	·	37,284	7,836	234,912	596	279	83	234,678
Indian Cove Coal Co., Ltd Dominion Coal Co., Ltd Nova Scotia Steel and Coal Co., Ltd Bras d'Or Coal Co., Ltd	05 585	275,336	$71 \\ 318,306 \\ 129,167 \\ 1,107$	83 66,136 30,078 835	$\begin{array}{r}12,254\\3,663,020\\530,162\\56,367\end{array}$	26,952 1,620 447	11,664 645	16,633 33,106	$\begin{array}{r} 12,254\\ 3,664,366\\ 562,297\\ 55,915\end{array}$
Pictou Countu-	3,440,684	275,336	448,651	97,132	4,261,803	29,019	12,309	49,739	4,294,832
Acadia Coal Co., Ltd Milford Mining Co Greenwood Coal Co., Ltd Intercolonial Coal Mining Co., Ltd.	17 055	2,545	35,030 1,903 2,664 23,439	14,821 438 1,162 7,697	318,414 19,396 56,517 198,872	7,828 307 1,423	243 	169	$\begin{array}{r} 310,829 \\ 19,565 \\ 56,295 \\ 198,032 \end{array}$
Cumberland County-	503,500	2,545	63,036	24,118	593,199	9,558	911	169	584,721
Central Coal Co Maritime Coal, Ry. and Power Co., Ltd Twin Seam Coal Co., Ltd Dominion Coal Co., Ltd. (Springhill) Minudie Coal Co., Ltd Stratheona Coal Mine (A. W. Pugsley) The Sterling Coal Co. Fundy Mining Co Royal Coal Co., Ltd Fenwick Coal Co., Ltd Fenwick Coal Co., Ltd	6,021 339,568 21,109 19,153 17,495 6,743 3,815 1,613 17,489		1,799	14 4,822 112 13,120 392 305 262 208 120	$\begin{array}{c} 1,358\\ 204,054\\ 6,371\\ 420,138\\ 25,698\\ 20,665\\ 18,223\\ 7,096\\ 4,023\\ 1,613\\ 19,409\\ \end{array}$	· · · · · · · · · · · · · · · · · · ·	42	624 	$\begin{array}{r} 1,376\\ 204,054\\ 6,372\\ 413,190\\ 26,087\\ 20,665\\ 18,222\\ 7,128\\ 4,023\\ 1,613\\ 19,409\end{array}$
·	604,834	· · · · · · · · · · · · · · · · · · ·	104,459	19,355	728,648	10,142	3,005	628	722,139
Total	4,738,810	277,881	653,430	148,441	5,818,562	49,315	16,504	50,619	5,836,370

¹Includes also coal used by producers for steel making and other purposes. losses are not furnished by all producers. ¹Production is obtained by adding sales and coal used. ³Complete records of

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Output,	Sales,	Colliery	Consumption,	and	Production	of Coal i	in Nova
		•	Scotia			, ¹	· · ·

1		. <u></u> .				:
Calendar Year	Output	Sold or used	Colliery con- sumption	Production*	Price per ton of	Value of production
	, c	Tons of 2,	000 pounds	• .	2,240 lbs.	
1785 to 1873	$\begin{array}{c} 977, 446\\ 874, 905\\ 794, 804\\ 848, 396\\ 863, 075, 882, 863\\ 1, 156, 635\\ 1, 259, 183\\ 1, 503, 259, 708\\ 1, 503, 259, 708\\ 1, 554, 0111\\ 1, 514, 470\\ 1, 682, 924\\ 1, 871, 330\\ 1, 989, 263\\ 2, 222, 081\\ 2, 290, 158\\ 2, 175, 913\\ 2, 429, 807\\ 2, 520, 707\\ 2, 537, 706\\ 2, 020, 835\\ 2, 584, 175\\ 5, 202, 538\\ 5, 841, 429\\ 5, 747, 823\\ 5, 821, 622\\ 6, 546, 191\\ 6, 468, 563\\ 6, 805, 489\\ 5, 718, 871\\ 6, 515, 162\\ 7, 125, 551\\ 7, 834, 724\\ 8, 135, 104\\ 7, 448, 042\\ 7, 513, 739\\ 6, 911, 995\\ 6, 345, 335\\ 5, 804, 674\\ \end{array}$	$\begin{array}{c} 839,022\\791,610\\710,312\\769,513\\776,732\\771,259\\1,069,218\\1,159,216\\1,400,200\\1,453,226\\1,413,048\\1,405,051\\1,702,046\\1,702,046\\1,702,046\\1,702,046\\1,702,046\\1,702,046\\1,702,046\\1,702,046\\1,702,046\\2,214,848\\2,308,231\\2,000,2447\\2,200,032\\2,002,447\\2,200,032\\2,002,447\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,247\\2,200,032\\2,003,270\\$	$\begin{array}{c} 133,932\\ 139,003\\ 127,443\\ 110,702\\ 99,262\\ 94,961\\ 108,451\\ 120,834\\ 124,747\\ 125,383\\ 130,781\\ 142,939\\ 159,512\\ 156,550\\ 176,336\\ 177,107\\ 180,589\\ 195,981\\ 106,103\\ 230,076\\ 219,751\\ 216,875\\ 216,132\\ 203,522\\ 187,510\\ 198,755\\ 264,051\\ 337,606\\ 424,702\\ 539,731\\ 498,292\\ 479,107\\ 516,198\\ 489,727\\ 645,690\\ 585,177\\ 607,461\\ 646,340\\ 731,315\\ 723,067\\ 733,814\\ 644,597\\ 675,701\\ 727,602\\ 2801,871\\ 626,497\\ \hline\end{array}$	$\begin{array}{c} 8,053,670\\972,964\\930,613\\837,765\\880,215\\875,994\\866,220\\1,177,669\\1,280,050\\1,524,947\\1,578,609\\1,643,829\\1,543,829\\1,547,990\\1,643,829\\1,543,829\\1,547,990\\1,698,018\\1,858,566\\1,942,231\\1,918,827\\2,181,033\\2,267,919\\3,159,389\\2,444,924\\2,527,982\\2,225,145\\2,508,579\\2,493,554\\2,563,180\\3,148,822\\3,623,536\\4,158,008\\5,161,316\\5,653,338\\5,596,241\\2,663,130\\6,652,539\\5,652,089\\6,431,142\\2,652,539\\5,652,089\\6,431,142\\7,783,888\\7,980,073\\7,370,924\\7,463,370\\6,912,140\\6,327,061\\5,818,562\\5,720,373\\177,539,045\end{array}$	$ \begin{array}{c} \$ & {\rm cts.} \\ 1 & 75 \\ 2 & 200 \\ 2 & 00 \\ 2 & 00 \\ 2 & 00 \\ 2 & 00 \\ 2 & 00 \\ 2 & 25 \\ 2 & 25 \\ 2 & 25 \\ 2 & 25 \\ 2 & 50 \\ 2 & 50 \\ 2 & 50 \\ 3 & 00 \\ 3 & 44 \\ 4 & 32 \\ \hline \end{array} \right. $	$\begin{array}{c} \$ \\ 12,583,860 \\ 1,520,240 \\ 1,454,084 \\ 1,308,991 \\ 1,375,339 \\ 1,368,741 \\ 1,353,469 \\ 1,840,108 \\ 2,000,079 \\ 2,382,730 \\ 2,466,576 \\ 2,412,233 \\ 2,418,735 \\ 2,653,152 \\ 2,904,057 \\ 3,034,735 \\ 2,908,167 \\ 3,407,864 \\ 3,543,624 \\ 3,374,046 \\ 3,820,194 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,949,970 \\ 3,948,476 \\ 1,354,643 \\ 12,919,705 \\ 14,071,379 \\ 17,374,750 \\ 10,737 \\ 21,095,470 \\ 22,078,726 \\ 364,047,589 \\ 364,047,589 \\ 364,047,589 \\ 3664,047,589 \\ 3$

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*This production is obtained by adding sales and colliery consumption.

- · · ·	Cumberland		Pictou		Cape Breton		Other Counties		Total	
Calendar Year	Raised	Sold*	Raised	Sold*	Raised	Sold*	Raised	Sold*	Raised	Sold*
1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1919.	$\begin{array}{c} 659,734\\ 534,047\\ 662,157\\ 494,919\\ 350,363\\ 538,296\\ 716,914\\ 675,544\\ 702,496\\ 736,794\\ 685,517\\ 711,164\\ 722,139\\ 688,981\\ \end{array}$	$\begin{array}{c} 566,308\\ 445,288\\ 530,648\\ 403,371\\ 288,706\\ 436,125\\ 595,138\\ 553,845\\ 572,765\\ 572,765\\ 572,765\\ 620,667\\ 578,914\\ 603,633\\ 604,834\\ 599,331 \end{array}$	$\begin{array}{c} 769, 496\\ 840, 533\\ 849, 802\\ 748, 860\\ 714, 846\\ 833, 956\\ 765, 678\\ 817, 177\\ 681, 356\\ 581, 226\\ 612, 611\\ 725, 992\\ 584, 721\\ 754, 408 \end{array}$	$\begin{array}{c} 657,310\\729,043\\678,025\\599,743\\588,678\\691,852\\641,890\\694,659\\571,063\\508,145\\528,480\\635,523\\506,045\\673,411\end{array}$	$\begin{array}{c} 4,804,407\\ 4,698,147\\ 4,840,653\\ 4,081,333\\ 5,035,800\\ 5,405,355\\ 6,039,296\\ 6,313,275\\ 5,767,566\\ 5,920,670\\ 5,317,756\\ 4,680,650\\ 4,294,832\\ 4,144,495\end{array}$	$\begin{array}{r} 4,221,293\\ 4,346,180\\ 4,267,346\\ 3,723,135\\ 4,571,347\\ 4,917,902\\ 5,530,765\\ 5,709,995\\ 5,266,733\\ 5,486,292\\ 4,874,793\\ 4,176,581\\ 3,716,020\\ 3,643,468\end{array}$	$\begin{array}{c} 312,554\\ 395,836\\ 452,877\\ 398,759\\ 414,153\\ 347,944\\ 312,836\\ 329,108\\ 296,624\\ 275,049\\ 296,111\\ 227,529\\ 234,678\\ 216,790\\ \end{array}$	$\begin{array}{c} 259, 396\\ 343, 895\\ 375, 742\\ 340, 663\\ 374, 950\\ 312, 201\\ 284, 780\\ 298, 507\\ 226, 549\\ 203, 669\\ 254, 252\\ 183, 752\\ 189, 792\\ 177, 666\end{array}$	$\begin{array}{c} 6,546,191\\ 6,468,563\\ 6,805,489\\ 5,718,871\\ 6,515,162\\ 7,125,551\\ 7,834,724\\ 8,135,104\\ 7,448,042\\ 7,513,739\\ 6,911,995\\ 6,345,335\\ 5,836,370\\ 5,804,674 \end{array}$	$\begin{array}{c} 5,704,307\\ 5,864,406\\ 5,851,761\\ 5,066,912\\ 5,823,681\\ 6,358,080\\ 7,052,573\\ 7,257,006\\ 6,637,110\\ 6,818,773\\ 6,236,439\\ 5,599,489\\ 5,016,691\\ 5,093,870\end{array}$

Coal Trade by Counties in Nova Scotia, Calendar Years since 1906

(In short tons.)

*Sales include coal used for making coke and steel.

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					Fiscal yea	r ending	September 30) .		,	· . ·	
	1914		1915		- 1916		1917		1918 /		1919	
Markets	Short tons	Per cent	Short tons	Per cent	Short tons	Per cent	Short tons	Per cent	Short tons	Per cent	Short tons	Per cent,
Nova Scotia— Transported by land "sea	2,099,186 368,551	30-40 5-34	1,976,943 392,340	30∙65 6∙08	2,673,866 491,591	$40\cdot23\7\cdot40$	$2,707,719\ 518,763$	47.01 9.01	2,579,188 510,846	49+91 9+89	2,299,147 515,097	46.03 10.31
Total Nova Scotia	2,467,737	35.74	2,369,283	36.73	3,165,457	47.63	3,226,482	5 6.02	3,090,034	59-80	2,814,244	56.34
New Brunswick Prince Edward Island Quebec Newfoundland United States St. Pierre Bunker coal For time chartered boats	2,667,372 252,660 336,741 9,673 278,645	$ \begin{array}{r} 11.04\\ 1.55\\ 38.63\\ 3.66\\ 4.88\\ 0.14\\ 4.04\\ 0.30\\ \end{array} $	$\begin{array}{r} 675, 693\\ 93, 171\\ 2,048,222\\ 233,735\\ 596,606\\ 11,729\\ 383,273\\ 18,968\end{array}$	$\begin{array}{c} 10.48 \\ 1.45 \\ 31.76 \\ 3.63 \\ 9.25 \\ 0.18 \\ 5.94 \\ 0.29 \end{array}$	$\begin{array}{r} 865,238\\92,876\\1,114,337\\281,259\\509,773\\6,485\\604,601\end{array}$	$13.02 \\ 1.40 \\ 16.77 \\ 4.23 \\ 7.67 \\ 0.10 \\ 9.10 $	$\begin{array}{r} 994,741 \\ 115,548 \\ 339,374 \\ 264,914 \\ 383,152 \\ 6,768 \\ 428,929 \end{array}$	$\begin{array}{c} 17 \cdot 27 \\ 2 \cdot 01 \\ 5 \cdot 89 \\ 4 \cdot 60 \\ 6 \cdot 65 \\ 0 \cdot 11 \\ 7 \cdot 45 \end{array}$	$\begin{array}{r} 988,521\\ 87,431\\ 150,583\\ 245,487\\ 301,370\\ 6,043\\ 289,351\end{array}$	$ \begin{array}{r} 19 \cdot 13 \\ 1 \cdot 69 \\ 2 \cdot 92 \\ 4 \cdot 75 \\ 5 \cdot 83 \\ 0 \cdot 12 \\ 5 \cdot 60 \\ \end{array} $	846,532 87,865 386,022 304,897 84,910 16,117 375,642	$ \begin{array}{r} 16.95\\ 1.76\\ 7.73\\ 6.10\\ 1.70\\ 0.32\\ 7.53\\ \dots \dots n \end{array} $
Loss at sea		0.02	9,427	0·15 0·14	392 5,338	0.08	335		8,283	0·16	6,429 72,148	0.13 1.44
Total	6,904,352	100.00	6,448,856	100.00	6,645,756	100.00.	5,760,243	100-00	5,167,103	100.00	4,994,806	100.00

Distribution of Coal Sold by Nova Scotia Producers

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Number and Classes of Workmen in the Coal Mines of Nova Scotia. Year ended September 30, 1919

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Average	•	Ave	rage Daily F	orce		Trans-		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Company	days pit worked per	Surface			Colliery	Colliery	portation, Upkeep and		
2,149 5,691 2,874 10,714 2,896,571 2,211 - 12,925 816	Nova Scotia Steel and Coal Co Bras d'Or Coal Company. Anglo Coal Co. Inverness Railway and Coal Company Port Hood Collieries. S. J. Doucet (Chimney Corner). E. L. Thorne (Trustee) St. Rose Acadia Coal Company. Intercolonial Coal Mining Co. Greenwood Coal Company. Alexander Sutherland (Milford). Cumberland Railway and Coal Co Maritime Coal, Railway and Power Co Minudie Coal Co Twin Seam Coal Co Eastern Coal Co Sterling Coal Co Fenwick Coal Co Fenwick Coal Co.	$\begin{array}{c} 22\\ 18\\ 20\\ 23.5\\ 17.8\\ 20\\ 13.5\\ 10\\ 21\\ 25\\ 24.3\\ 23.3\\ 15.2\\ 20\\ 6.5\\ 18\\ 12.5\\ 6\\ 23\\ 4.6\\ \end{array}$	307 19 8 16 115 19 4 1 1 240 213 91 16 5 5 10 12 40 2 4	808 19 6 34 260 30 2 2 408 161 26 7 344 234 65 8 4 10 13 9 1 5	$\begin{array}{c} 492\\ 52\\ 27\\ 16\\ 180\\ 23\\ 3\\ 2\\ 506\\ 159\\ 66\\ 24\\ 237\\ 145\\ 35\\ 6\\ 6\\ 25\\ 24\\ 20\\ 8\\ 7\end{array}$	$\begin{array}{c} 1,607\\ 90\\ 41\\ 66\\ 555\\ 72\\ 9\\ 5\\ 1,154\\ 437\\ 120\\ 39\\ 794\\ 470\\ 116\\ 19\\ 15\\ 45\\ 49\\ 69\\ 11\\ 16\\ \end{array}$	$\begin{array}{c} 424,250\\ 19,450\\ 9,840\\ 18,612\\ 118,550\\ 17,300\\ 1,450\\ 600\\ 290,810\\ 131,100\\ 28,134\\ 10,450\\ 231,530\\ 132,032\\ 21,158\\ 4,560\\ 1,170\\ 9,720\\ 7,350\\ 4,965\\ 3,035\\ 885\end{array}$	$ \begin{array}{c} 105 \\ 2 \\ 3 \\ 4 \\ 160 \\ 8 \\ 1 \\ 61 \\ 36 \\ 4 \\ 2 \\ 13 \\ 10 \\ 14 \\ 3 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 2 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	$1,712 \\92 \\44 \\70 \\715 \\80 \\10 \\5 \\1,215 \\473 \\124 \\41 \\807 \\480 \\130 \\22 \\17 \\46 \\50 \\75 \\12 \\18 \\18 \\18 \\19 \\19 \\19 \\19 \\19 \\19 \\19 \\19 \\19 \\19$	49 6 1 3 6

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New Brunswick

The production of coal in New Brunswick in 1919 was 179,108 tons, as against 268,212 tons in 1918, showing a decrease of 89,104 tons, or 33 per cent.

Through the courtesy of the operators the department is permitted to publish a record of the production from individual properties, as shown in the accompanying tables:—

Production of Coal in New Brunswick, 1919

(In short tons.)

	Time in operation	Total sales	*Total for colliery use	Total production
Avon Coal Co., Ltd., Newcastle Creek Coakley, Jer., Minto Grand Lake Coal Co., Ltd., Minto King, G. H., Chipman Minto Coal Co., Ltd., Minto Northfield Coal Co., Ltd., Minto Ridge Coal Co., Ltd., Newcastle Bridge Rothwell Coal Co., Ltd., Rothwell Sheffield Coal Co., Ltd., Minto Taylor, A. D., Minto Welton Harvey, Minto Welton Harvey, Minto	5 mos. 26 days. 290 days. 4 mos. 304 days. 8 mos. 233 days. 12 mos.	$\begin{array}{c} 16, 143\\ 612\\ 744\\ 9, 688\\ 91, 299\\ 1, 261\\ 5, 392\\ 6, 255\\ 15, 266\\ 9, 453\\ 14, 001\\ 1, 665\end{array}$	263 2,518	$17,28\\611\\74\\9,95\\93,81\\1,26\\5,80\\6,93\\16,81\\10,01\\14,00\\1,87$
Total New Brunswick		171,779	7,329	179,10

*Includes consumption under boilers, etc., and coal used by workmen.

Production of Coal in New Brunswick, 1918

(In short tons.)

· · · · · · · · · · · · · · · · · · ·				`
· · · · · · · · · · · · · · · · · · ·	Days in operation	Total sales	*Total for colliery use	Total production
Avon Coal Co., Ltd., Newcastle Creek Coakley, Jer., Minto Dean Coal Co., Adamsville Grand Lake Coal Co., Ltd., Minto Kelley Coal Co., Ltd., Minto Minto Coal Co., Ltd., Minto Northfield Coal Co., Ltd., Minto Ridge Coal Co., Ltd., Newcastle Bridge Robinson, A. G., Salmon Harbour. Rothwell Coal Co., Ltd., Minto Sheffield Coal Co., Ltd., Minto Smith & Merrithew, Ltd., Minto Welton Harvey, Minto	10 mos. 4 mos. 289 156 12 mos. 310 12 mos. 305 147 10 mos. 12 mos.	$\begin{array}{c} 13,635\\ 1,720\\ 477\\ 12,991\\ 1,302\\ 15,994\\ 124,531\\ 3,886\\ 1,857\\ 162\\ 29,997\\ 6,534\\ 4,457\\ 39,922\\ 1,578\end{array}$	$1,589 /72 \\ 200 \\ 105 \\ 223 \\ 2,615 \\ 80 \\ / 655 \\ 28 \\ 2,674 \\ 694 \\ \\ 234$	$\begin{array}{c} 1,72\\ 54\\ 13,19\\ 1,40\\ 16,21\\ 127,14\\ 3,96\\ 2,51\\ 10\\ 32,67\\ 7,22\\ 4,45\\ 52\\ 4,45\\ 52\\ 4,45\\ 52\\ 52\\ 52\\ 52\\ 52\\ 52\\ 52\\ 52\\ 52\\ 5$
Total New Brunswick		259,043	9,169	268,21

Includes consumption under boilers, etc., and coal used by workmen.

Calendar Year	Short tons	Value	Average per ton	Calendar Year	Short tons	Value	Average per ton
1887	$\begin{array}{c} 10,040\\ 5,730\\ 5,673\\ 7,110\\ 5,422\\ 6,768\\ 6,200\\ 6,469\\ 9,500\\ 7,500\\ 6,000\\ 6,160\\ 10,528\\ 10,000\\ 17,630\\ 18,795\\ 16,000\\ \end{array}$	\$ 23,607 11,733 13,850 11,733 13,850 11,030 9,837 9,837 10,264 14;250 9,000 9,240 11,250 9,000 9,240 15,792 15,000 51,857 39,680 40,000	 cts. 2 35 1 93 2 07 1 95 2 03 1 39 1 59 1 59 1 50 1 50 1 50 1 50 1 50 2 94 2 11 2 50 	1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. Total	49,029 55,455 55,781 44,780 70,311 98,049 127,391 143,540 189,095 268,212 179,108	\$ 18,224 58,800 68,152 77,814 135,000 98,496 110,910 111,562 89,560 708,010 1,331,710 709,012 386,016 708,010 1,331,710 794,761	\$ ets 2 00 2 00 2 22 2 22 2 22 2 25 2 20 2 00 2 00 2 00 2 37 4 497 4 42

Annual Production of Coal in New Brunswick

The coal-producing areas include the Grand Lake coal-fields in Queens and Sunbury counties, and the Beersville area in Kent county. In the Grand Lake area the coal seams, which vary in thickness from 20 to 32 inches, are found at a depth of from 30 to 60 feet below the surface.

Saskatchewan

The coal deposits of Saskatchewan furnish coal of the lignite variety only, and the production in 1919 from 64 collieries was 380,169 tons, valued at 820,-522, as compared with 346,847 tons, valued at 722,148 in 1918, an increase of 33,322 tons, or 9.6 per cent.

The 1919 production included 354,399 tons of coal sold and 25,770 tons used by producers for colliery consumption, by workmen, or in brick-making.

The output of coal comes chiefly from the vicinity of Estevan, located on the Souris river, near the southeastern corner of the province. Coal deposits exist for 75 or 100 miles in a northwest-southeast direction along the Souris river, on Big Muddy creek, draining Willowbunch lake and on the south branch of the Saskatchewan river, about 100 miles southwest of Saskatoon. The annual production and the production by the principal operators in 1919 and 1918' is shown in the following tables:—

Production of Coal in Saskatchewan in 1919, by Principal Operators

' Name of Company	Time in operation	Total sales	Total for colliery use*	Total production
Anderson, Niels, Estevan Bienfait Commercial Co., Ltd., Bienfait Crescent Collieries, Ltd Eideness Bros., Gladmar. Estevan Coal and Brick Co., Ltd., Estevan. Heuvel, Henry V., Hart. Inter-Provincial Coal Co., Ltd., Roche Percée Dempsey, Wm., Shaunavon McNeil & Brooks, Estevan. Manitoba and Saskatchewan Coal Co., Ltd., Estevan Nicholson, H., Estevan. Salaba, Jas. Shand Coal, Brick and Power Co., Ltd., Shand Siddall, Edwin Western Dominion Collicries, Ltd., Taylorton Hamilton, H. A.	12 mos. 12 mos. 7 mos. 5 mos. 7 mos. 2 mos. 2 mos. 2 mos. 201 days 259 days 12 mos. 12 mos. 12 mos. 12 mos. 10 mos. 213 days	$\begin{array}{c} 1,615\\ 40,079\\ 65,992\\ 11,944\\ 1,812\\ 10,450\\ 1,168\\ 2,315\\ 3,180\\ 1,456\\ 61,183\\ 7,000\\ 4,419\\ 1,945\\ 1,945\\ 1,016\\ 109,910\\ 1,340\\ 8,118\\ \end{array}$	630 152 36 5,959 124 30 2,340 5,577	$\begin{array}{c} 1, 615\\ 41, 740\\ 68, 479\\ 12, 574\\ 1, 812\\ 10, 602\\ 1, 168\\ 2, 351\\ 3, 180\\ 1, 456\\ 67, 142\\ 7, 124\\ 4, 419\\ 1, 977\\ 21, 795\\ 1, 016\\ 115, 487\\ 1, 340\\ 14, 892\\ \end{array}$
Total Saskatchewan		354,399	25,770	380,169

(In short tons.)

*Includes consumption under boilers, etc., and coal used by workmen.

Production of Coal in Saskatchewan in 1918, by Principal Operators

(In short tons.)

Name of Operator	Days in operation	Total sales	Total 。 for colliery use*	Total production
Anderson, Niels, Estevan Bienfait Commercial Co., Ltd., Bienfait Eideness Bros., Gladmar Estevan Coal and Brick Co., Ltd., Estevan Heuvel, Henry V., Hart Inter-Provincial Coal Co., Ltd., Roche Percée Lilja & Dempsey, Shaunavon. MoNeil & Rooks, Estevan. Manitoba & Saskatchewan Coal Co., Ltd., Estevan. Nicholson, H., Estevan. Saskatchewan Colliery Co., Ltd., Roche Percée Saskatchewan Colliery Co., Ltd., Roche Percée Saskatchewan Collieries, Ltd., Roy Percée Wilson, Alex., Taylorton. All other operators (51).	282 244 172 281 12 mos. 297 257 227 213 12 mos. 6 mos. 6 mos. 235 3 mos.	$\begin{array}{c} 1,041\\ 18,421\\ 63,473\\ 1,285\\ 7,040\\ 1,521\\ 4,407\\ 2,261\\ 1,174\\ 69,628\\ 2,282\\ 3,660\\ 2,500\\ 2,500\\ 30,409\\ 98,448\\ 1,364\\ 15,747\end{array}$		$\begin{array}{c} 1,041\\ 19,261\\ 65,922\\ 1,285\\ 10,954\\ 1,521\\ 4,437\\ 2,261\\ 1,249\\ 75,369\\ 2,382\\ 3,660\\ 2,822\\ 3,660\\ 2,600\\ 32,609\\ 104,834\\ 1,389\\ 16,123\end{array}$
Total Saskatchewan		324,661	22,186	346,847

*Includes consumption under boilers, etc., and coal used by workmen.

Calendar Year	Short tons	Value	Average per ton	Calendar Year	Short tons	Value	Average per ton
· ·		\$. \$ cts.			\$	\$ ets.
1887. 1890. 1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1898. 1898. 1900. 1901. 1902. 1903. 1904. 1905.	200 5,400 8,325 (b) 15,051 15,769 16,706 25,000 25,000 40,500 40,500 45,000 70,400 116,703	800 200 9,325 12,485 15,153 31,538 25,059 37,500 37,500 37,500 60,750 72,000 112,640 169,618 187,021 152,334	$\begin{array}{c} 2 & 00 \\ 1 & 00 \\ \dots & 1 & 73 \\ 1 & 50 \\ 1 & 01 \\ 2 & 00 \\ 1 & 50 \\ 1 & 50 \\ 1 & 50 \\ 1 & 50 \\ 1 & 50 \\ 1 & 50 \\ 1 & 50 \\ 1 & 52 \\ 1 & 45 \\ 1 & 50 \\ 1 & 42 \\ \end{array}$	1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 Total	$\begin{array}{c} 151,232\\ 150,556\\ 102,125\\ 124,156\\ 206,779\\ 225,342\\ 212,897\\ 232,299\\ 240,197\\ 232,299\\ 240,197\\ 281,300\\ 355,445\\ 346,847\\ 380,169\\ \end{array}$	$\begin{array}{c} 164, 146\\ 252, 437\\ 253, 790\\ 296, 339\\ 293, 923\\ 347, 248\\ 368, 135\\ 358, 192\\ 374, 245\\ 358, 192\\ 374, 245\\ 365, 246\\ 441, 836\\ 662, 451\\ 722, 148\\ 820, 522\\ \hline 6, 682, 081\\ \end{array}$	$\begin{array}{c} 1 & 51 \\ 1 & 67 \\ 1 & 69 \\ 1 & 54 \\ 1 & 62 \\ 1 & 68 \\ 1 & 63 \\ 1 & 63 \\ 1 & 61 \\ 1 & 52 \\ 1 & 57 \\ 1 & 86 \\ 2 & 08 \\ 2 & 158 \\ \end{array}$

Annual Production of Coal in Saskatchewan

(a) From Turtle Mountain district, Manitoba.

(b) Including a small quantity from the Turtle Mountain district, Manitoba.

Lignite Utilization Board of Canada.—During 1919 the Board continued the experimental investigations on the carbonizing and briquetting of Saskatchewan lignites and before the end of the year were sufficiently satisfied with the commercial feasibility of the project to prepare designs for a commercial plant and to arrange for the placing of contracts for a part of the equipment.

On September 1, 1920, the Board issued a special report to the Western Boards of Trade on the progress that had been made in its operations which included the following:—

EXPERIMENTAL PROGRAMME.

"As previously announced the Board determined practically at the inception of its work to await the outcome of its experimental programme before committing itself to the investment of large sums of money in capital equipment which might afterwards prove unsuitable for the purpose intended. Having adopted this point of view it became increasingly evident during the summer of 1919 that the Board's future work and indeed the successful solution of the whole problem of the commercial briquetting of lignites, were absolutely dependent upon the result of the experimental programme prosecuted in Ottawa during the months of June, July, August and September, 1919. At the same time the Board wishes to record its great appreciation of the co-operation and assistance of the Mines Branch, Department of Mines.

"It was clearly seen that the two most important items of research facing the Board were those of (a) carbonizing and (b) briquetting.

"(a) Carbonizing:—As mentioned in the previous report, the Board was forced reluctantly to the opinion that no commercial carbonization of lignite had ever been undertaken and thereupon set itself to devise a type of apparatus that would carbonize lignite under commercial conditions. This was successfully accomplished and during the months of July, August, September and October, experimental runs were made on the carbonizer in Ottawa. The net result of the experiments was that the board became convinced that the problem had practically been solved. This fact enabled the chairman to announce at the public meeting of the Board held in Winnipeg in October, 1919, that the board had decided to proceed with the erection of its main plant. Patents have been applied for on the design of the carbonizer in Canada, United States, Italy and Australia, and the Board believes that with the passage of time the carbonizer will prove a great value to the lignite industry in general.

"(b) Briquetting.—The difficulties confronting the Board on the question of briquetting were not so large as those of carbonizing, and yet the economic aspects were serious. It became apparent that the published results of briquetting experiments conducted by other investigators on anthracite were not at all applicable to the briquetting of carbonized lignite. As an example of this fact it may be noted that to produce a good briquette from carbonized lignite requires almost double the quantity of binder necessary to make a correspondingly good briquette from anthracite fines. This condition made it essential that the Board should know beyond peradventure the minimum amount of binder necessary to produce the first quality briquette in order to judge of the future cost of such a product. Owing to the almost complete absence of native binding material in the West and to their consequent high cost when imported, it became essential to cut down to the utmost the quantity of binder used.

Coal tar pitches. Hard wood tar pitches. Lignite tars. Sulphite liquor pitches. Asphalts. Petroleum pitches. Cement. Resins. Starches. Flour and flour screenings. Water glass. Waste straw jelly, etc.

"Fairly satisfactory briquettes have been made with almost all of the above and very good briquettes with some of them. In addition all sorts of combinations of the foregoing materials have been tried and as a result the Board feels after consideration of all factors that for the present the best briquette will be a straight coal tar pitch briquette or one made by substituting flour screenings for some of the coal tar pitch.

"The question of smokiness has been one of the important considerations of the Board, and the conclusion has been reached that in the meantime it is better to get a good briquette (physically) on the market than to delay the consummation of the Board's work by a further experimental programme on secondary heat treatments of coking devices. In any event the substitution of some parts of flour for coal tar pitch has a marked effect in reducing the total quantity of smoke. The Board also feels that it is better to get any reasonable lignite briquette on the market at the very earliest moment and afterwards attempt to improve its quality as regards smokiness.

The foregoing brief analysis of experimental programme will indicate to the reader the net result as far as the two principal objectives are concerned.

SITE.

"When the decision had been reached to proceed with the erection of its main plant the Board set itself to choose a satisfactory site, and made a careful examination of all features affecting the situation. As a result the Board decided to place the plant at a point about midway between the mines of the Mani toba and Saskatchewan Coal Company and of the Western Dominion Collieries. The advantages of such a position were:—

"i. An assured supply of raw material suitable for the Board's needs irrespective of weather corditions.

ii. An ample supply of water suitable for the Board's purposes.

"After a long series of negotiations an agreement has been drawn up between the two mining companies and the Board by which the interests of the public are fully protected.

GENERAL PROGRAMME.

"The design of the plant was next completed, and competitive tenders called for, for its erection. The contract was awarded to Messrs. Smith Bros. & Wilson of Regina, and in spite of many adverse circumstances, good progress has been made. Owing, however, to extremely slow deliveries of material the Board wishes to record the fact that it will be quite impossible to have briquettes on the market by October, 1920. As an example of the difficulties the Board is facing, we have been in receipt of quotations for the supply of material with deliveries of from 12 to 32 weeks. This unprecedented situation has been the determining factor in the serious delay of the Board's programme.

PRESENT SITUATION.

"" "To date the Board has let contracts for the supply of all buildings and equipment, with the exception of water supply and drainage, carbonizers, piping and housing. Plans and specifications for the water supply and drainage are now ready and bids are to be returned to the Board on or before September 14th. Plans and specifications for the carbonizers will be ready to distribute to the public on September 13th. The piping layouts are being prepared at the present time in the Board's offices. Housing plans were deferred for some little time awaiting the settlement of the financial side of the question. The whole question of housing seems, however, to be now arranged, and the drawings and specifications are being duried to completion."

Alberta

Coal production in this province includes a small tonnage of semi-anthracite from the Bankhead mine at Banff, bituminous coals of excellent quality as well as a considerable tonnage of lignite coal.

In 1919 bituminous coal contributed $46 \cdot 5$ per cent of the total production, ignite $51 \cdot 3$ per cent, and semi-anthracite $2 \cdot 2$ per cent.

The total production of coal in Alberta in 1919 was 4,964,535 tons, valued at \$18,294,495, or an average of \$3.69 per ton, as compared with a production of 5,972,816 tons, valued at \$20,537,287, or an average of \$3.44 per ton in 1918.

There are many small operators in the province, the number reporting production in 1919 being 255. In 1919 there were 60 companies reporting a production in excess of 10,000 tons, and the aggregate production by these firms was 93.6 per cent of the total for the province. Thirteen mines reported a production exceeding 100,000 tons each, the largest operators being the West Canadian Collieries, Limited, with 537,271 tons from Bellevue and Greenhill collieries; the Canadian Pacific Railway, with a total of 397,487 tons from Bankhead, Lethbridge, and Taber; the North American Collieries, Limited, with 401,632 tons from Lovettville, Coalhurst, Evansburg, Dodds, and Drumheller; the Brazeau Collieries, Limited, with 282,544 tons from Nordegg; the Hillcrest Collieries, Limited, with 239,305 tons, and the Canmore Coal Company, with 201,748 tons.

Of the total production 4,577,236 tons were reported as sales, including 4,455,972 tons sold for consumption in Canada; 121,264 tons sold for export to the United States; 387,299 tons were used by producers, including coal charged to coke ovens, used for colliery operations, used for manufacture of briquettes, and used by workmen.

Alberta reached its highest production in 1918. The falling off of over 1,000,000 tons in 1919 is ascribed by the Chief Inspector of Mines for the province, in part to the accumulation at the end of 1918 of unusually large stocks in the hands of the trade or consumers. It will be noted also that less coal was shipped to points outside the province during the year 1919 than during the previous year. That portion of central Canada comprising the provinces of Saskatchewan, Manitoba, and Ontario west of the head of the Lakes, has been supplied annually with from 2,000,000 to 2,500,000 tons of coal imported from the United States. Restrictions on this supply during 1918 necessitated a larger consumption within the territory of Alberta coal. No doubt an effort will be made on the part of the Alberta producers to secure and retain an increasing proportion of this market. The maximum monthly production in Alberta shows a capacity of the mines of this province with present equipment, to produce at the rate of from 9,000,000 to 10,000,000 tons per annum.

The monthly production of anthracite, bituminous, and lignite coal during 1919, and the production of each of the larger collieries during 1919 and 1918 are shown in the following tables:—

Monthly Production of Coal in Alberta, 1919 (In short tons.)

District	Operators reporting.	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Year
BanffAnthracite	1	12,730	11,645	13,414	13,679	76	39	750	2,611	12,278	14,673	13,907	15,522	111,324
CrowsnestBituminous Canmore	6 2 3 2 8 1	$137,959 \\ 22,997 \\ 38,974 \\ 23,589 \\ 42,832 \\ 16,557 \\ \end{array}$	$130,329 \\ 22,313 \\ 33,509 \\ 21,735 \\ 40,268 \\ 17,277$	$143,143\\24,032\\38,717\\21,245\\39,747\\11,493$	$99,868 \\ 20,051 \\ 30,116 \\ 20,959 \\ 30,712 \\ 13,124$	94,337 13,738 28,218 3,321 21,181 - 8,754	829 950 1,952 108 307 182	1,2599002,767621,959279	$\begin{array}{c} 11,336\\ 4,943\\ 2,807\\ 62\\ 13,114\\ 744\end{array}$	$108,145 \\ 19,893 \\ 31,584 \\ 2,287 \\ 37,806 \\ 8,942$	- 152,480 - 24,618 34,781 9,534 44,992 12,691	25,45130,77822,40945,00811,527	146,445 21,922 34,770 20,357 43,514 11,394	1,175,535201,808308,973145,668361,440112,964
Total Bituminous	22	282,908	265,431	278,377	214,830	169,549	4,328	7,226	33,006	208,657	279,096	284,578	278,402	2,306,388
Pincher Creek. Lignita Magrath. " Magrath. " Milk River. " Bow Island. " Medicine Hat. " Milk River. " Bow Island. " Medicine Hat. " Aldersyde. " High River. " Drumheller. " Brooks. " Hanna. " Lacombe. " Trochu. " Three Hills. " Carbon. " Battle River. " Clover Bar. " Clover Bar. " Wabamun. " Pembina. " Penbina. "		$\begin{array}{c} 346\\ 53,498\\ 198\\ 444\\ 5,527\\ 406\\ 858\\ 628\\ 5,75\\ 732\\ 732\\ 732\\ 732\\ 732\\ 732\\ 732\\ 732$	$\begin{array}{c} 236\\ 29,815\\ 97\\ 265\\ 3,387\\ 252\\ 888\\ 376\\ 618\\ 1,411\\ 1,921\\ 618\\ 1,416\\ 1,048\\ 1,456\\ 999\\ 271\\ 1,952\\ 5,387\\ 5,208\\ 19,784\\ 9,177\\ 1,403\\ 20,545\\ 6,038\\ 255\\ 6,038\\ 255\\ \end{array}$	$\begin{array}{c} 113\\ 257\\ 5,728\\ 459\\ 823\\ 533\\ 32\\ 52,891\\ 2,642\\ 776\\ 2,360\\ 1,280\\ 1,280\\ 1,386\\ 2,794\\ 359\\ 1,471\\ 6,330\\ 5,116\\ 26,071\\ 9,624\\ 942\\ 24,529\\ 703\\ 4,862\\ \ldots\end{array}$	141 333 26 0 1,881 2,549 9,196 3,461 245 8,821 1,871 7,503	$\begin{array}{c} 132\\ 325\\ 249\\\\ 15, 142\\ .26\\ 667\\ 183\\ 293\\ 499\\ 30\\ 10\\ 1, 886\\ 3, 399\\ 1, 092\\ 1, 092\\ .267\\ 5, 633\\ 1, 340\\\\ 9, 061\\\\ \end{array}$	$\begin{array}{c} 253\\ 441\\ 188\\ 245\\ 5,716\\ 4,539\\ 8,835\\ 182\\\\ 2,395\\ 4,694\\\\ \end{array}$	$\begin{array}{c} 295\\ 913\\ 367\\ 173\\ 392\\ 1,218\\ 190\\ 717\\ 1,000\\ 314\\ 22\\ 6,416\\ 4,399\\ 10,639\\ 4,213\\ 6,397\\ \dots\\ 6,397\\ \dots\\ \end{array}$	$\begin{array}{c} 1,130\\ 424\\ 3\\ 43,438\\ 2,609\\ 406\\ 818\\ 243\\ 7111\\ 1,605\\ 209\\ 222\\ 6,710\\ 4,775\\ 18,675\\ 1,739\\ 1,7$	$\begin{array}{c} 548\\ 2,532\\ 941\\ 33\\ 121,023\\ 3,754\\ 896\\ 1,738\\ 629\\ 7422\\ 2,282\\ 274\\ 107\\ 6,878\\ 7,706\\ 28,976\\ 7,371\\ 335\\ 6,381\\ 3,965\\ 10,224\\ \cdots \end{array}$	$\begin{array}{c} 1,727\\ 4,622\\ 1,816\\ 1,718\\ 3,925\\ 514\\ 1,080\\ 9,826\\ 10,024\\ 40,352\\ 13,096\\ 1,102\\ -22,851\\ 4,719\\ 15,044\\ \cdots\end{array}$	$\begin{array}{c} 100\\ 153,745\\ 5,405\\ 1,484\\ 4,046\\ 3,172\\ 2,710\\ 4,916\\ 609\\ 2,234\\ 12,765\\ 18,822\\ 45,864\\ 18,234\\ 2,566\\ 26,916\\ 3,995\\ 14,245\\ \ldots \end{array}$	$\begin{array}{r} 22,651\\ 50,822\\ 19,209\\ 2,049\\ 30,410\\ 4,714\\ 14,334\\ \ldots\end{array}$	$\begin{array}{c} 3,742\\ 11,509\\ 83,410\\ 95,011\\ 292,007\\ 93,811\\ 9,855\\ 175,741\\ 32,973\end{array}$
Total Lignite				·			-	- <u> </u>						4,964,535
Grand Total	.1 25	5 500,048	424,621	1 502,785	325,124	H 265,064	42,10	05,802	. 100,241	1 001,013	1 001,21			,,

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Monthly Production of Coal in Alberta, 1918 (In short tons.)

District	Operators reporting.	Jan.	Feb.	March	April	Мау	June	July	August	Sept.	Oct.	Nov.	Dec.	Year
BanffAnthracite	1	11,358	11,722	12,533	12,773	10,927	8,732	9,932	9,006	8, 61 1	8,211	4,947	6,653	115,405
CrowsnestBituminous Canmore	5 1 3 2 6 1	$128,554 \\ 23,969 \\ 28,354 \\ 23,950 \\ 21,543 \\ 13,817$	123,229 23,697 24,903 22,851 16,661 13,080	136,751 23,521 23,407 28,603 19,334 13,203	148,16626,21932,44530,59521,26212,256	22,705 35,597 27,655 21,813	24,464 32,779 19,332 24,362	$147,071 \\ 25,477 \\ 36,080 \\ 20,100 \\ 29,033 \\ 11,585$	22,953 41,790 22,754 33,613	133,943 23,981 37,502 25,713 34,228 8,849	24,758 38,533 26,750 39,437	21,472 17,585 15,670 21,066	$121,636 \\ 11,529 \\ 24,103 \\ 21,032 \\ 30,043 \\ 11,069$	$1,595,662 \\ 274,745 \\ 373,078 \\ 285,005 \\ 312,395 \\ 137,042$
Total Bituminous	18	240, 187	224,421	244,819	270,943	260,778	260,689	269,346	270,137	264,216	263,845	189,134	219,412	2,977,927
Pincher CreekLigniteLethbridge"Magrath"Milk River"Taber."Taber."Medicine Hat"Medicine Hat"Aldersyde"High River."Drumheller."Big Valley."Brooks."Hanna."Carbon"Tochu."Carbon"Colver Bar."Clover Bar."Cardiff"Cardiff"Total Lignite"	$\begin{array}{c} 8\\ 8\\ 3\\ 3\\ 7\\ 12\\ 14\\ 6\\ 9\\ 4\\ 28\\ 4\\ 4\\ 7\\ 7\\ 20\\ 6\\ 8\\ 15\\ 7\\ 7\\ 3\\ 3\\ 9\\ 9\\ 9\\ 9\\ 4\\ 3\\ 3\\ 1\\ -\\ 242 \end{array}$	$\begin{array}{c} 449\\ 81,012\\ 89\\ 617\\ 20,898\\ 605\\ 2,534\\ 703\\ 76\\ 89,388\\ 4,238\\ 1,053\\ 3,234\\ 2,595\\ 3,250\\ 3,250\\ 3,250\\ 3,250\\ 3,250\\ 3,250\\ 10,688\\ 13,974\\ 42,576\\ 17,845\\ 2,226\\ 13,727\\ 38,165\\ 2,226\\ 13,727\\ 35,8894 \end{array}$	$\begin{array}{c} 478\\ 76,923\\ 566\\ 18,947\\ 531\\ 1,027\\ 611\\ 655\\ 14,192\\ 3,542\\ 979\\ 2,811\\ 2,065\\ 2,813\\ 3,311\\ 612\\ 2,382\\ 8,651\\ 7,524\\ 30,008\\ 13,556\\ 2,835\\ 27,094\\ 2,331\\ 8,629\\ 232,595\end{array}$	$\begin{array}{c} 281\\ 71,001\\ 24\\ 387^7\\ 7,097\\ 391\\ 424\\ 552\\ 50\\ 28,793\\ 3,105\\ 777\\ 1,957\\ 1,599\\ 831\\ 1,076\\ 295\\ 725\\ 3,712\\ 4,038\\ 16,396\\ 7,402\\ 1,185\\ 13,603\\ 1,370\\ 2,828\\ 169,899\\ 169,899\end{array}$	$\begin{array}{c} 205\\ 59,894\\ 7\\ 246\\ 1,852\\ 308\\ 164\\ 262\\ 24\\ 7,749\\ 1,198\\ 231\\ 526\\ 288\\ 328\\ 395\\ 1211\\ 37\\ 1,647\\ 2,256\\ 7,642\\ 4,894\\ 7902\\ 1,902\\ 103,115\\ \end{array}$	$\begin{array}{c} 186\\ 55,814\\ 13\\ 321\\ 5,228\\ 438\\ 208\\ 359\\ 19\\ 38,445\\ 1,977\\ 472\\ 1,184\\ 497\\ 302\\ 1,326\\ 333\\ 35\\ 1,476\\ 2,431\\ 9,875\\ 4,618\\ 871\\ 13,252\\ 530\\ 6,896\\ 147,106\\ \end{array}$	$\begin{array}{c} 60,903\\ 6\\ 364\\ 11,578\\ 331\\ 5522\\ 186\\ -25\\ 93,705\\ 2,331\\ 466\\ 1,407\\ 209\\ 659\\ 2,163\\ 446\\ 455\\ 1,866\\ 2,783\\ 18,777\\ 7,155\\ 919\\ 17,131\\ 1,253\\ 8,444\\ -444\\ $	$\begin{array}{r} 357\\ 66,100\\ 25\\ 379\\ 15,825\\ 362\\ 1,350\\ 463\\ 20\\ 119,753\\ 2,208\\ 1,016\\ 1,623\\ 304\\ 816\\ 2,711\\ ,445\\ 25\\ 2,509\\ 3,769\\ 20,220\\ 8,215\\ 1,098\\ 6,561\\ 271,504\\ \end{array}$	$\begin{array}{c} 301\\ 70,933\\ 28\\ 402\\ 17,512\\ 357\\ 1,662\\ 370\\ 7\\ 123,987\\ 2,170\\ 471\\ 1,074\\ 455\\ 1,006\\ 2,435\\ 351\\ 1,006\\ 2,435\\ 351\\ 1,006\\ 2,435\\ 351\\ 1,006\\ 13,647\\ 17,702\\ 4,047\\ 1,266\\ 13,145\\ 1,330\\ 10,390\\ 279,231\\ \end{array}$	$\begin{array}{c} 291\\ 64,523\\ 92\\ 6600\\ 16,950\\ 505\\ 1,941\\ 679\\ 29\\ 99,772\\ 2,296\\ 1,274\\ 1,37\\ 1,39\\ 1,959\\ 3455\\ 137\\ 3,048\\ 5,001\\ 19,947\\ 1,684\\ 10,231\\ 64,766\\ \end{array}$	$\begin{array}{c} 110\\ 838\\ 18,366\\ 1,143\\ 3,269\\ 1,350\\ 1,350\\ 2,269\\ 4,801\\ 1,533\\ 1,541\\ 2,366\\ 6,400\\ 2,844\\ 9,924\\ 2,140\\ 2,844\\ 9,924\\ 1,671\\ 14,176\\ \end{array}$	$\begin{array}{c} 588\\ 55,165\\ 151\\ 950\\ 011,206\\ 1,119\\ 1,688\\ 1,268\\ 1,268\\ 1,336\\ 5,087\\ 1,336\\ 5,087\\ 1,336\\ 5,087\\ 1,336\\ 2,394\\ 6,028\\ 2,776\\ 666\\ 2,394\\ 6,028\\ 7,866\\ 25,597\\ 10,977\\ 1,557\\ 17,440\\ 2,639\\ 10,314\\ 250,291\\ \end{array}$	$\begin{array}{c} 494\\ 72,702\\ 141\\ 74,702\\ 643\\ 2,221\\ 782\\ 67\\ 85,117\\ 3,776\\ 1,138\\ 3,300\\ 1,297\\ 1,909\\ 1,760\\ 353\\ 1,982\\ 7,628\\ 5,770\\ 25,077\\ 10,158\\ 2,342\\ 28,226\\ 2,342\\ 7,651\\ 284,746\\ \end{array}$	$\begin{array}{r} 4,369\\ 808,231\\ 748\\ 6,378\\ 162,589\\ 6,733\\ 17,010\\ 7,585\\ 610\\ 855,240\\ 34,477\\ 11,482\\ 29,166\\ 13,135\\ 16,862\\ 25,786\\ 51,152\\ 11,126\\ 54,579\\ 67,699\\ 256,661\\ 105,721\\ 19,279\\ 238,156\\ 18,961\\ 101,749\\ 2,879,484\end{array}$
Grand total	261	610,439	468,738	427,251	386,831	418,811	503, 312	550,782	558,374	537;593	555,502	444,372	510,811	5,972,816

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Production of Coal in Alberta, in 1919, by Principal Collieries.

Name of Company, and Mine address	Time in operation	Total sales	Total colliery consump- tion	Total production
Alberta Block Coal Co., Ltd., Drumheller	183 days	77,386	4,155 2,927	81,541 57,676
Alberta Coal Mining Co., Ltd., (The) Cardiff Atlas Coal Co., Ltd., Drumheller	175 " 180 "	47,198	3,655	50,853
Banner Coal Co. Cardiff	8 mos.	$47,198 \\ 40,782$	1,430	42,212
Bellevue Collieries, Ltd., Bellevue	126 days	11,857	1,366	13,223
Big Valley Coal Co., Big Valley	311 "	30,661	645	31,306 282,544
Brazeau Collieries, Ltd., Nordegg	216 " 89 "	$276,698 \\ 12,815$	$5,846 \\ 404$	13,219
Brookdale Collieries, Ltd., Lovettville Bush Mine Coal Co., Beverly	223 "	48,441	1,230	49,671
Cadomin Coal Co., Ltd., Coalspur	225 "	157,850	1,165	159,015
Canada West Coal Co., Ltd., Taber	143 "	39,833	12,492	52,325
Canadian Pacific Railway—		19,156	(a) 92,168	111,324
Bankhead Mine	196 days	241,454	43,716	285,170
Canmore Coal Co. Ltd., Canmore	210 "	184,728	17,020	201,748
Cardiff Collieries, Ltd., Cardiff Chinook Coal Co., Ltd., Commerce	$200\frac{1}{2}$ "	70,802	5,051	75,853 78,243
Chinook Coal Co., Ltd., Commerce	$203'' \\ 272\frac{1}{3}''$	61,253 11,844	16,990	11,844
City of Lethbridge Coal Mine, Lethbridge	7 mos.	13,583	1,984	15,567
Clover Bar. Coal Mine Co., Ltd., Clover Bar Dawson Coal Co., Ltd. (The) Edmonton	177 days	14,883		14,883
Dinant Coal Co. Ltd. Dinant	260 · "	22,626	968	23,594
Dobell Coal Co., Ltd., (The) Tofield Drumheller Land Co., (The) Drumheller	313 " 178 "	$39,657 \\ 29,587$	36 2,880	39,693 32,467
Edmonton Collieries, Ltd., Edmonton	178 249 "	18,216	2,880	18,216
Ellis Coal Co., Ltd., Three Hills	242, "	16,613	2,032	18,645
Federal Coals Ltd., Lethbridge	270 "	22,511	1,356	23,867
Fraser-McKay Collieries, Ltd., Clover Bar	290	21,753	$285 \\ 6,989$	22,038
Great West Coal Co., Ltd., (The) Clover Bar	$265\frac{1}{2}$ " 157 "	86,927 33,153	· 941	34,094
Great West Coal Co., (Star Mine), Aerial	9 mos.	15,309		15,839
Hamilton Coal Co., Wayne Hillcrest Collieries, Ltd., Hillcrest	222 days	226,463	$^{/530}_{12,842}$	239,305
Humberstone Coal Co., Beverly	194 "	57,201	5,932	$\begin{array}{r} 63,133\\ 40,084 \end{array}$
Hy-Grade Coal Co., Drumheller	219 " 180 "	39,858 158,240	$\begin{array}{c} 226 \\ 15,432 \end{array}$	173,672
International Coal & Coke Co., Ltd., Coleman Jasper Park Collieries, Ltd., Jasper	158 "	41,106	3,702	44,808
Jewell Collieries. Ltd., Wayne	134 "	20,256	528	20,784
Lakeside Coals, Ltd., Wabamun	216 "	31,328	1,589	32,917 23,680
Marcus Collieries, Ltd., Clover Bar	265 "	21,996	1,684	25,000
man	212 "	202,521	8,357	210,878
McPook P I Edmonton	222 "	17,539	1,688	19,227
Midland Collieries, Ltd., Midlandvale	163 "	58,800	4,625	63,425 112,964
Mountain Park Coal Co., Ltd., Mountain Park Newcastle Coal Co., Ltd., Drumheller	410	$103,848 \\ 47,805$	9,116 1,245	49,050
North American Collieries, Ltd.—	120	1,000		
Pacific Pass, Lovettville	217를 "	72,008	8,130	80,138
Pembina, Evansburgh	250 "	98,275	7,921	106,196
Regal, Dodds.	9 mos. 119 days	13,413 32,953	3,154	36,107
Monarch, Drumheller Lethbridge, Coalhurst (Kipp)	187 ""	150,849	14,929	165,778
Oliphant-Munson Collieries, Ltd., Oliphant Mines.		88,703	985	89,688 11,200
Ottewell Coal Co., Ltd., Clover Bar Premier Coal Co. Ltd., Drumheller	280 days 5 mos.	11,000	200	24,857
Redcliff Brick and Coal Co., Redcliff	180 days	15,674	·	15,674
Regal Collieries, Ltd., Taber		22,992	3,536	26,528
Regal Collieries, Ltd., Taber Rock Springs Coal and Brick Co., Ltd., Elcan	174 "	13,283	1,943 1,946	15,226 77,893
Rosedale Coal and Clay Products Co., Ltd., Elcan.	166 ". 151 "	75,947	4,624	79,824
Rose Deer Coal Mining Co., Ltd., Wayne Round Hill Collieries, Ltd., Roundhill	243 "	20,350	175	20,525
Saunders Creek Collieries, Ltd., Saunders	264 "	20,330	1,004	21,334
Scranton Coal Co., Drumheller	165 "	44,074	2,467	46,541, 17,396
Spicer Coal Co., Ltd., Dinant	171 " 249 "	16,950 52,763	446 800	53,563
Tofield Coal Co., Ltd., Tofield Twin City Coal Co., Ltd., Edmonton South	174 "	30,819	5,072	35,891
West Canadian Collieries:				
Bellevue	2091 "	290,094	12,690 5,672	302,784
Greenhill	$201\frac{1}{2}$ " 131 "	228,815 57,432	4,260	61,692
Western Gem Mining Co., Ltd., Drumheller	181 "	47,421	1,500	48,921
Yellowhead Coal Co., Ltd., Coalspur	7 mos.	15,288	1,078	16,366
at the second	·····	4;268,038	378,497	4,646,535
Total (60) All other operators (195)		309,198	8,802	318,000
			t	A 004 808
Total, Alberta		4,577,236	387,299	4,964,535

(a) Includes coal used in the manufacture of briquettes, a large portion having been lifted from waste hear

Production of Coal in Alberta, in 1918, by Principal Collieries

· (In short tons)

Name of Company, and Mine address	Days	Total	Total	Total
Name of Company, and Mine address	in operation	sales	colliery con- sumption*	production
· · · ·		4		
Alberta Block Coal Co., Ltd., Drumheller	215	83,243	4,473	87,716
Alberta Coal Mining Co., Ltd., (The) Cardifi Atlas Coal Mining Co., Ltd., Drumheller	242	, 68, 599	3,600	72,199
Atlas Coal Mining Co., Ltd., Drumheller	195 285	42,526	2,974	45,500 30,604
Big Valley Collieries, Big Valley Banner Coal Co., Ltd., Cardiff	12mos.	$30,004 \\ 53,515$	600 2,125	55,640
Blue Diamond Coal Co., Ltd., Brule Mines	288	184,989	3,750	188,739
Brazeau Collieries, Ltd., Nordegg	277,	350,192	6,024	356,216
Bush Mine Coal Co., Beverly Cadomin Coal Co., Ltd., Coalspur	255	26,244	1,124	27,368
Canada West Coal Co., Ltd., Taber	$293 \\ 245$	119,269 86,118	1,320 17,311	120,589 103,429
Canadian Pacific Railway:		00,110	1,011	100,120
Bankhead Mine	304	31,101	(a) 84, 304	115,405
Galt No. 3, Lethbridge	298	91,783	14,580	106,363
Galt No. 6; Lethbridge Canmore Coal Co., Ltd., Canmore	303 288	230,945 258,339	24,035 16,406	254,980 274,745
Cardiff Cohieries, Ltd., Cardiff	226	102,306	8,011	110,317
Chinook Coal Co., Ltd., Commerce	295	85,653	19,701	105,354
Chinook Coal Co., Ltd., Commerce City of Lethbridge Coal Mine, Lethbridge	2773	12,573		12,573
Clover Bar Coal Co., Ltd., Clover Bar	220	13,715	2,257	15,972 18,629
Dawson Coal Co., Ltd., (The) Edmonton Dobell Coal Co., Ltd., (The) Tofield Drumheller Land Co., (The) Drumheller	$253 \\ 283$	$16,609 \\ 30,802$	2,020 960	31,762
Drumheller Land Co., (The) Drumheller	224	45,179	2,880	48,059
Ellis Coal Co., Ltd., Three Hills	197	20,094	1,891	21,985
Edmonton Collieries, Ltd., Clover Bar	280	11,825	927	12,752
Federal Coals, Limited, Lethbridge	$275 \\ 141$	27,316 37,138	$1,298 \\ 7,305$	28,614 44,443
Franco-Canadian Collieries, Ltd., Frank Fraser-MacKay Collieries, Ltd., Clover Bar	247	13,541	105	13,646
Great West Coal Co., Ltd., (The) Clover Bar	255	66,311	5,319	71,630
Great West Coal Co., Ltd., Aerial, (Star mine) Hamilton Coal Co., Ltd., Wayne Hillcrest Collieries, Ltd., Hillcrest	220	45,274	1,083	46,357
Hamilton Coal Co., Ltd., Wayne	290	15,000 240,658	$\begin{array}{r} 270\\ 12,762 \end{array}$	15,270 253,420
Humberstone Coal Co., Beverly	290	85,212	9,730	94,942
Humberstone Coal Co., Beverly International Coal and Coke Co., Ltd., Coleman	300	178,767	(b) 73,642	252,409
Jasper Park Collieries:—	0.00	07 000	F 004	#0 600
Jasper Mine Miette Mine	269 205	67,338 23,493	5,284	72,622
Keith and Fulton Coal Co., Clover Bar	171	10,848		10,848
Lakeside Coals Limited, Wabamun	218	17,959	980	18,939
McGillivray Ck. Coal and Coke Co., Ltd., Coleman.	296	268,154	9,246	277,400 22,097
McPeak, P. J., Ltd., Edmonton Midland Collieries, Ltd., Midlandvale	257 219	$19,919 \\ 73,123$	2,178 4,800	77,923
Mountain Park Coal Co., Ltd., Mountain Park	293	126, 549	10,493	137,042
Newcastle Coal Co., Ltd., Drumheiler	185	52,417	1,640	54,057
North American Collieries, Ltd.:-	004	79 007	S 0.001	01 050
Pacific Pass Colliery, Lovettville Pembina Colliery, Evansburgh	$\begin{array}{c} 264 \\ 230 \end{array}$	$73,067 \\ 94,558$	8,891 7,191	81,958 101,749
Regal Colliery, Dodds	125	10,200	10	10,210
Monarch Colliery, Drumheller	184	38,295	5,547	43,842
Lethbridge Colliery, Coalhurst (Kipp)	298	230,959	19,469	250,428 67,590
Oliphant-Munson Collieries, Ltd., Oliphant Mines	268 208	66,147 13,835	1,443	14,340
Peerless Coal Co., Ltd., Wayne Premier Coal Co., Ltd., Drumheller	165	34,130	. 505	34,637
Redeliff Brick and Coal Co., Ltd., Redeliff	231	14,574	· · · · · · · · · · · · · · ·	14,574
Regal Collieries, Limited, Taber Rock Springs Coal and Brick Co., Ltd., Elcan	277	21,814	2,766	24,580
	235	20,760 104,770	2,273 1,673	23,033 106,443
Rosedale Coal and Clay Products Co., Ltd., Rosedale Rose Deer Coal Mfg. Co., Ltd., Wayne	177	89,972	5,004	94.976
Round Hill Collieries, Ltd., Roundhill	249	16,160	429	16, 589
Scranton Coal Co., Ltd., Drumheller	196	24,614	2,027	26,641
Spicer Coal Co., Ltd., (The) Dinant Saunders Creek Domestic & Steam Coal Co., Saunders	230	13,984 15,995	695 466	14,679 16,461
Sturgeon Consolidated Collieries Ltd Namao	2554	15,907	400	16.327
Tofield Coal Co., Ltd., Tofield	269	32, 544	1,400	33,944 39,413
Tofield Coal Co., Ltd., Tofield Trusts and Guarantee Co., Ltd., Diamond City Mine	12mos.	33,663	1,400 5,750	39,413
Twin City Coal Co., Ltd., Edmonton South	263	49,876	6,939	56,815
Carried forward				
,	1	1	1	
(a) Includes IF 109 med in melting by methods (01	102 4000 -6	hain attan an	1.1 and 1 005

(a) Includes 55,402 used in making briquettes. There were 99,103 tons of briquettes sold, and 1,095 tons used in colliery consumption and sold to workmen. (b) Including 53,402 tons used in manufacturing coke.

Production of Coal in Alberta in 1918, by Principal Collieries—Concluded.

Name of Company, and Mine address	Days in operation	Total sales	Total colliery con- sumption*	Total production
West Canadian Collieries:—' Bellevue Greenhill Western Commercial Co., Ltd., Wayne Western Gem Mfg. Co., Ltd., Drumheller Yellowhead Coal Co., Ltd., Coalspur Total (61)	$\underbrace{\begin{array}{c} 221\\ 278\\ \hline \\ \end{array}}_{\ldots\ldots\ldots}$	419,963 327,579 87,401 48,122 37,984 5,301,513	$ \begin{array}{r} 14,899 \\ 5,549 \\ 4,983 \\ 4,538 \\ 2,424 \\ \hline 473,357 \\ 4,225 \\ \end{array} $, 434,862 333,128 92,384 52,660 40,408 5,774,870 197,946
All other Operators (200) Total, Alberta		193,721 5,495,234	477,582	5,972,810

*Included consumption under boilers, etc., and coal used by workmen.

Annual Production of Coal in Alberta

Calendar Year	Short Tons	Value	Average per ton	Calendar Year	Short	Value	Average per ton
1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1898 1899 1899 1899 1900 1901 1902	$\begin{array}{c} 74,152\\ 115,124\\ 97,364\\ 128,753\\ 174,131\\ 178,970\\ 230,070\\ 184,940\\ 169,885\\ 209,162\\ 242,163\\ 315,088\\ 309,600\\ 311,450\\ 340,275\end{array}$	$\begin{array}{c} \$\\81,112\\157,577\\183,354\\179,640\\198,208\\437,243\\460,605\\586,260\\473,827\\382,526\\581,832\\630,408\\787,720\\774,000\\774,000\\778,625\\850,687\\960,601\\\end{array}$	\$ 1.88 2.13 1.59 1.85 1.54 2.57 2.55 2.56 2.25 2.78 2.60 2.50 2.50 2.50 2.50 2.50 2.38	1903	$\begin{array}{c} 661, 732\\ 931, 917\\ 1, 246, 360\\ 1, 591, 579\\ 1, 985, 661\\ 1, 994, 741\\ 2, 894, 469\\ 1, 511, 036\\ 3, 240, 577\\ 4, 014, 755\\ 3, 683, 015\\ 3, 300, 818\\ 4, 559, 054\\ 4, 736, 368\\ 5, 972, 816\\ 4, 964, 535\\ \end{array}$	14,153,685	$\begin{array}{c} \$ \\ 2 \cdot 25 \\ 2 \cdot 12 \\ 2 \cdot 14 \\ 2 \cdot 10 \\ 2 \cdot 41 \\ 2 \cdot 45 \\ 2 \cdot 43 \\ 2 \cdot 53 \\ 2 \cdot 50 \\ 2 \cdot 59 \\ 2 \cdot 54 \\ 2 \cdot 46 \\ 2 \cdot 50 \\ 2 \cdot 59 \\ 2 \cdot 54 \\ 2 \cdot 44 \\ 3 \cdot 68 \\ 3 \cdot 68 \end{array}$

Disposition of the Total Output of Coal, Briquettes and Coke of Alberta-Calendar Year 1919

			Sold for C	consumption	ı in			-	Used						Total output
	Alberta	British Columbia	Saskat- chewan	Manitoba	Ontario	United States	Total Sales	Making Bri- quettes	Making Coke	Under Colliery Boilers	Put to Stock	Put to Waste	Lifted from Stock	Traste	for year including put to stock and waste but not lifted from stock or waste
Domestic Bituminous Anthracite	1,219,070 1,763,178 8,862	-57,267	865,698 245,714 3,917	42,547	248 60		2,395,290 2,223,175 19,245	27,950		162,364 92,095 25,377	17,664 6,898 364	57,105 8,517 12,842	11,067 4,844 162	54	2,611,009 2,325,787 85,616
Total	2,991,110	95,461	1,115,329	314,290	308	121,212	4,637,710	27,950	.	279,836	24,926	78,464	16,073	10,401	5,022,412
Briquett es. Coke	47,856 129	4,122 113	12,287 63	5,671 263		70	70,006 568			33	454		460 568		70,033

'From Annual Report of the Mines Branch of the Province of Alberta.)

The bituminous coal shown in these tables as being sold for consumption in Alberta includes coal sold to railway companies for the use of locomotives, a considerable percentage of which was probably used in other provinces.

Disposition of the Total Output of Coal, Briquettes and Coke of Alberta-Calendar Year 1918

(From Annual Report of the Mines Branch of the Province of Alberta.)

	Alberta	British Columbia	Saskatche- wan	Manitoba	Ontario	United States	Total Sales	Making Briquettes	Making Coke	Under Colliery Boilers	Lifted from Stock	Slack put on Waste Heap	Total output for year including slack
Domestic Bituminous Anthracite	1,205,419 2,219,794 14,941	26,849 69,163 5,177	1,091,544 273,195 7,700	387,728 120,132 3,308	444 185	3,154 130,082 40	2,715,138 2,812,551 31,166	55,402	53,462	194,148 109,668 28,837	8.778	129,577 15,431 16,147	3,035,061 2,982,334 131,225
Total	3,440,154	101,189	1,372,439	511,168	629	133,276	5,558,855	55,402	53,462	332,653	12,907	161,155	6,148,620
Briquettes Coke	71,519 232	4,368 31,225	16,060 232	7,710 870		102	99,657 32,661			26	·····	In stock 787 197	100,470 32,858

The bituminous coal shown in these tables as being sold for consumption in Alberta includes coal sold to railway companies for the use of locomotives, a considerable percentage of which was probably used in other provinces.

The production of coal in British Columbia in 1919 was 2,435,933 tons, as compared with 2,568,589 tons in 1918, a decrease of 132,656 tons, or $5 \cdot 2$ per cent.

Of the total production in 1919, 2,020,826 tons were reported as sales, including 1,168,122 tons sold for consumption in Canada; 852,704 tons sold for export to the United States; 415,107 tons were used by producers, including 163,116 tons for making coke and 251,991 tons for the operation of collieries and by workmen.

The production and distribution of the collieries on Vancouver island, of the Crowsnest district, and of the interior at Nicola and Princeton, are shown separately in the following tables.

The three largest operators in the province were: the Crowsnest Pass Coal Company, with a total production of 541,312 tons; the Canadian Collieries (Dunsmuir), Limited, with 758,641 tons; and the Canadian Western Fuel Company, with 643,520 tons. These three companies contributed $79\cdot8$ per cent of the province's production.

Coal production in British Columbia reached a maximum in 1910, with a total of 3,330,745 tons. In the following year the production fell to 2,542,532 tons and the average production during the past nine years has been slightly less—2,532,000 tons. Previous to 1895 practically 80 per cent of the coal production was sold for export. The development of metallurgical and industrial activity, however, during the following fifteen years, greatly increased the home consumption, while the actual tonnage sold for export has not shown any marked change during thirty years.

Coal Production by Districts in British Columbia, 1919

(In short tons)

Coal	Vancouver Island	Nicola and Princeton	Crowsnest and East Kootenay	Total
Sold for consumption in Canada	427,103	145,583 7,068	73,305 418,533 nil	1,168,122 852,704
Total sales Used for making coke Used for colliery consumption, etc	62,353	152,651 13,421	491,838 100,763 52,487	2,020,826 163,116 251,991
Production Per cent Output.	66.7	166,072 6·8 168,993	26.5	2,435,933 100.00 2,707,958

Coal Production by Districts in British Columbia, 1918

(In short tons) ,

				•
Coal	Vancouver Island	Nicola and Princeton	Crowsnest and East Kootenay	Total
Sold for consumption in Canada Sold for export to United States Sold for export to other countries	446,468	167,819 13,234	86,796 383,284	1,113,126 842,986 65,427
Total sales Used for making coke Used for colliery consumption, etc	44,993	181,053 16,780	470,080 264,664 65,841	2,021,539 309,657 237,393
Production	1,570,171	197,833	800,585	2,568,589
Per cent	61-1	7.7	31.2	100.0

Coal Production by Collieries in British Columbia, 1919

(In short tons

· · · ·		Sc	ld		U	sed	· ·		Sto	ocks	
Colliery	In Canada	To United States	To other coun- tries	Total	Making coke	Under colliery boilers, etc.	Production	Lost in washing, etc.	First of year	Last of year	Output
 Harwood No. 1 Mine Reserve and Wakesiah. East Wellington No. 1 (Jingle Pot) Wellington Extension Mine, Ladysmith Comox Mines, Cumberland South Wellington Mines Granby Grant Michel Corbin Middlesboro. Inland (Coal Hill) Princeton Ashman Merritt 	$\begin{array}{c} 175,926\\ 46,695\\ 34,852\\ 186,268\\ 313,554\\ 40,610\\ 24,421\\ 10,976\\ 15,616\\ 28,950\\ 28,739\\ 81,236\\ 41,470\\ 15,625\\ 4,403\\ 2,200\\ \end{array}$	2,035		$\begin{array}{c} 179,853\\ 279,243\\ 72,442\\ 35,610\\ 257,399\\ 438,092\\ 64,560\\ 27,431\\ 22,706\\ 101,489\\ 291,922\\ 98,427\\ 81,236\\ 41,470\\ 17,660\\ 9,436\\ 2,200\\ 650\\ \hline 2,020,826\\ \end{array}$	261 26,674 35,418 76,080 24,683 	$\begin{array}{c} 31,976\\ 62,041\\ 18,965\\ 6,587\\ 21,888\\ 14,327\\ 18,753\\ 10,022\\ 1,525\\ 16,043\\ 31,095\\ 5,349\\ 5,753\\ 1,679\\ 5,940\\ \dots\\ 48\\ \dots\\ 251,991\\ \end{array}$	$\begin{array}{c} 211,829\\ 340,284\\ 91,407\\ 42,197\\ 279,548\\ 479,093\\ 83,313\\ 72,871\\ 24,2871\\ 193,612\\ 347,700\\ 103,776\\ 86,989\\ 43,149\\ 23,600\\ 9,436\\ 2,248\\ 650\\ \hline 2,435,933\\ \end{array}$	32,328 28,390 6,611 70,357 130,892 11,061 11,307 1,536 1,800 1,278 295,560	175 100 95		$\begin{array}{c} 260,954\\ 357,506\\ 94,986\\ 42,197\\ 348,569\\ 618,459\\ 618,459\\ 618,459\\ 22,938\\ 25,777\\ 193,612\\ 342,935\\ 87,289\\ 86,854\\ 44,949\\ 24,856\\ 9,436\\ 2,248\\ 650\\ \hline 2,707,958\\ \end{array}$

 1. Canadian Western Fuel Company.
 6

 2. British Columbia Coal Mining Co.
 7

 3. Canadian Collieries (Dunsmuir), Ltd.
 8

 4. Pacific Coast Coal Mines, Ltd.
 9

 5. Granby Consolidated Mg., S., & Power Co., Ltd.

- Nanoose Collieries, Ltd.
 Crow's Nest Coal Co., Ltd.
 Corbin Coal and Coke Co., Ltd.
 Middlesboro Collieries, Ltd.

Fleming Coal Co., Ltd.
 Princeton Coal and Land Co., Ltd.
 Coalmont Collieries, Ltd.
 Telkwa Collieries Co.
 Merritt Collieries, Ltd.

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Coal Production by Collieries in British Columbia, 1918

(In short tons)

		So	ld		Us	sed		Lost	Sto	cks	
Colliery	In Canada	To United States	To other coun- tries	Total	Making coke	Under colliery boilers, etc.	Production	in washing, etc.	First of year	Last of year	Output
1. Harwood. No. 1 Mine. Reserve. 2. East Wellington No. 1 (Jingle Pot)	$\begin{array}{c c}12,928\\16,274\\35,764\end{array}$	67,514 240,642 75,128 11,780		$\begin{array}{c} 229,767\\ 326,904\\ 92,564\\ 10,416\\ 199,380\\ 398,539\\ 77,910\\ 13,899\\ 27,027\\ 83,788\\ 276,406\\ 109,886\\ 106,448\\ 35,184\\ 35,184\\ 34,433\\ 4,344\\ 644\\ \end{array}$	76 44,917 126,539 138,125	4,664 17,742 13,114 20,777 787 1,711 20,854 36,164 8,823 7,263 2,317 7,200	$\begin{array}{c} 238,477\\ 393,321\\ 113,414\\ 15,080\\ 211,198\\ 456,570\\ 98,687\\ 14,686\\ 28,738\\ 231,181\\ 450,695\\ 118,709\\ 113,711\\ 37,501\\ 41,633\\ 4,344\\ 644\end{array}$	$\begin{array}{c} 16,912\\ 13,968\\ 4,144\\ 322\\ 61,231\\ 144,948\\ 18,508\\ \hline \\ 3,522\\ \hline \\ 20,160\\ \hline \\ 515\\ 1,752\\ \hline \\ \end{array}$	140 167	175 146 95	$\begin{array}{c} 256,001\\ 444,286\\ 119,466\\ 16,078\\ 275,482\\ 602,970\\ 92,545\\ 18,993\\ 32,260\\ 231,181\\ 450,759\\ 138,869\\ 113,746\\ 38,162\\ 43,313\\ 4,344\\ 644\\ \end{array}$
	1,113,126	842,986	65,427	2,021,539	309,657	237,393	2,568,589	285,982	38,205	62,733	2,879,099

6. Nanoose Collieries, Ltd.
 7. Crow's Nest Coal Co., Ltd.
 8. Corbin Coal and Coke Co., Ltd.
 9. Middlesboro Collieries, Ltd.

 1. Canadian Western Fuel Company.
 6

 2. British Columbia Coal Mining Co.
 7

 3. Canadian Collieries (Dunsmuir), Ltd.
 8

 4. Pacific Coast Coal Mines, Ltd.
 9

 5. Granby Consolidated Mg., S., & Power Co., Ltd.

10. Fleming Coal Co., Ltd. 11. Princeton Coal and Land Co., Ltd. 12. Coalmont Collieries, Ltd. 13. Telkwa Collieries Co.

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Annual Production of Coal in British Columbia

			<u> </u>	•			
Calendar Year	Output	Home con- sumption	Sold for export	Proc) luction*	Price per long ton	Value
		Lo	ig tons.		Short tons		
1836 to 1873 1874	. 81,547 110,145 139,192 154,052 170,846 241,301	25,023 31,252 `17,856 24,311 26,166 40,294 46,513	56,038 66,392 †122,329 115,381 164,682 192,096 225,849	81,061 97,644 140,185 139,692 190,848 232,390 272,362	$\begin{array}{c} 538,480\\ 90,788\\ 109,361\\ 157,007\\ 156,455\\ 213,750\\ 260,277\\ 305,045 \end{array}$	\$ ets 4 00 3 00 3 00 3 00 3 00 3 00 3 00 3 00 3 00 3 00	5. \$ 1,923,140 243,183 292,932 420,555 419,076 572,544 697,170 817,086
1881 1882	$\begin{array}{c} 282,139\\ 213,299\\ 394,070\\ 365,596\\ 326,636\\ 413,360\\ 489,301 \end{array}$	$\begin{array}{c} 40,191\\ 56,161\\ 64,786\\ 87,388\\ 95,227\\ 85,987\\ 99,216\\ 115,953\\ 124,574\\ 177,075\end{array}$	$\begin{array}{c} 189,323\\232,411\\149,567\\306,478\\237,797\\249,205\\334,839\\365,714\\443,675\\508,270\end{array}$	$\begin{array}{c} 229,514\\ 288,572\\ 214,353\\ 303,866\\ 333,024\\ 335,192\\ 434,055\\ 481,667\\ 568,249\\ 685,345\end{array}$	$\begin{array}{c} 257,056\\ 323,201\\ 240,075\\ 441,130\\ 372,987\\ 375,415\\ 486,142\\ 539,467\\ 636,439\\ 767,586\end{array}$	$\begin{array}{c} 3 \cdot 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ 3 \ 00 \\ \end{array}$	$\begin{array}{c} 688,542\\ 865,716\\ 643,059\\ 1,181,598\\ 999,072\\ 1,005,576\\ 1,302,165\\ 1,445,001\\ 1,704,747\\ 2,056,035 \end{array}$
1891	$1,029,097\\826,335\\978,294\\1,012,953\\939,654\\894,882\\802,296\\1,136,485\\1,306,324\\1,590,178$	$\begin{array}{c} 202,697\\ 196,223\\ 207,851\\ 165,776\\ 188,349\\ 261,984\\ 290,310\\ 375,423\\ 526,058\\ 685,667\end{array}$	806,479 640,579 768,917 827,642 634,238 619,860 752,863 751,711 914,184	$\begin{array}{c} 1,009,176\\836,802\\976,768\\993,418\\944,683\\896,222\\910,170\\1,128,286\\1,277,769\\1,599,851\end{array}$	$\begin{array}{c} 1,130,277\\ 937,218\\ 1,093,980\\ 1,112,628\\ 1,058,045\\ 1,003,769\\ 1,019,390\\ 1,263,680\\ 1,431,101\\ 1,791,833\\ \end{array}$	3 00 3 00	$\begin{array}{c} 3,027,528\\ 2,510,406\\ 2,930,304\\ 2,980,254\\ 2,834,049\\ 2,688,666\\ 2,730,510\\ 3,884,858\\ 3,833,307\\ 4,799,553\\ \end{array}$
1901	$1,691,557\\1,641,626\\1,450,663\\1,685,698\\1,736,696\\1,899,076\\2,219,602\\2,111,931\\2,388,196\\3,152,207$	$\begin{array}{c} 799, 666\\ 837, 871\\ 947, 499\\ 1, 129, 465\\ 1, 089, 667\\ 1, 236, 476\\ 1, 438, 402\\ 1, 438, 402\\ 1, 486, 511\\ 1, 585, 232\\ 1, 798, 873 \end{array}$	$\begin{array}{c} 914,163\\776,809\\549,449\\533,693\\647,343\\679,829\\673,114\\597,157\\741,667\\1,175,007\end{array}$	$1,713,829\\1,614,680\\1,496,948\\1,663,058\\1,737,010\\1,916,305\\2,111,516\\2,083,668\\2,326,899\\2,973,880$	$\begin{array}{c} 1,919,488\\ 1,808,441\\ 1,676,581\\ 1,862,625\\ 1,945,452\\ 2,146,262\\ 2,364,808\\ 2,333,708\\ 2,606,127\\ 3,330,745\\ \end{array}$	$\begin{array}{c} 3 & 00 \\ 3 & 00 \\ 3 & 00 \\ 3 & 00 \\ 3 & 00 \\ 3 & 50 \\ 3 & 50 \\ 3 & 50 \\ 3 & 50 \\ 3 & 50 \end{array}$	$\begin{array}{c} 5,141,487\\ 4,844,040\\ 4,490,844\\ 5,211,030\\ 5,748,915\\ 7,390,306\\ 7,292,838\\ 8,144,147\\ 10,408,580\\ \end{array}$
1911	$\begin{array}{c} 2,304,794\\ 2,857,345\\ 2,587,357\\ 2,182,164\\ 1,962,817\\ 2,487,012\\ 2,375,745\\ 2,570,624\\ 2,417,820\\ \end{array}$	$\begin{array}{c} 1,657,422\\ 1,898,213\\ 1,799,643\\ 1,397,036\\ 1,191,219\\ 1,463,152\\ 1,380,325\\ 1,482,300\\ 1,413,597\end{array}$	$\begin{array}{c} 612,696\\ 966,963\\ 623,946\\ 602,785\\ 653,078\\ 844,045\\ 792,789\\ 811,083\\ 761,343\\ \end{array}$	$\begin{array}{c} 2,270,118\\ 2,865,176\\ 2,423,589\\ 1,999,821\\ 1,844,297\\ 2,307,197\\ 2,173,114\\ 2,293,383\\ 2,174,940 \end{array}$	$\begin{array}{c} 2,542,532\\ 3,208,997\\ 2,714,420\\ 2,239,799\\ 2,065,613\\ 2,584,061\\ 2,433,888\\ 2,568,589\\ 2,435,933\\ \end{array}$	3 50 3 50 3 50 3 50 3 50 3 50 3 50 3 79 5 01 5 71	$\begin{array}{c} 7,945,413\\ 10,028,116\\ 8,482,562\\ 6,999,374\\ 6,455,041\\ 8,075,190\\ 8,235,716\\ 11,494,681\\ 12,420,445\end{array}$
Total	······	••••••	••••••	56,161,375	62,900,741	•••••	192,794,531

*This production is obtained by adding "Home Consumption" and "Sold for Export." †52,935 tons of this amount were reported as sales without the division into "Home Consumption" and "Sold for Export."

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Yukon

Coal production in the Yukon district in 1919 was reported as 1,100 tons, all the product of the Tantalus Mine of the Five Fingers Coal Company, near Whitehorse.

Annual Production of Coal in Yukon Territory

Calendar year	Short tons	Value	Average per ton	Calendar year	Short tons	Value	Average per ton
1901	4,910 1,849 7,000 7,000 15,000 3,847 7,364	\$ 86,230 37,280 29,584 21,000 28,000 60,000 21,158 49,502 110,925	$\begin{array}{c} \$ & \text{cts.} \\ 14 & 70 \\ 7 & 59 \\ 16 & 00 \\ \hline & & 3 & 00 \\ 4 & 00 \\ 4 & 00 \\ 4 & 00 \\ 5 & 50 \\ 6 & 72 \\ 6 & 85 \\ \end{array}$	1911 1912	19,722 13,443 9,724 3,300 4,872 2,900 1,100	\$ 12,780 44,958 95,945 53,760 38,800 13,200 29,232 11,600 4,400 748,450	\$ cts. 4 50 4 86 4 86 4 00 4 00 4 00 4 00 4 00 4 00 4 00

*Part of this production was mined in 1900.

[†]Value not reported, but estimated.

Coke

The accompanying statistics cover only the production of coke in byproduct and beehive coke oven plants and do not include retort coke recovered by gas companies.

Both domestic and imported coal are used in the manufacture of coke in Canadian coke oven plants.

In 1919, 854,835 tons of domestic and 1,025,706 tons of imported coal were charged to coke ovens, from which was obtained an output of 1,160,470tons of coke, thus averaging 0.617 tons of coke per ton of coal charged. Coke from by-product ovens comprised 89 per cent of the total.

In 1918, 1,348,232 tons of domestic coal, and 635,010 tons of imported coal were charged to coke ovens, from which was obtained an output of 1,258,284 tons of coke, thus averaging 0.634 tons of coke per ton of coal charged. Coke from by-product ovens comprised 70 per cent of the total.

The amount of coke sold or used by producers in 1919 was 1,133,680 tons, as compared with 1,250,744 tons in 1918, a slight decrease.

In addition to the tonnage sold or used by producers, there were imported during 1919, 383,374 tons of coke, while the exports totalled 14,709 tons. The Canadian consumption in 1919 was, therefore, 1,502,345 tons, a decrease of 37 per cent. The consumption of oven coke during recent years has been as follows: 1,285,228 tons in 1908; 1,449,369 tons in 1909; 1,581,832 tons in 1910; 1,677,188 tons in 1911; 1,981,832 tons in 1912; 2,186,170 tons in 1913; 1,509,068 tons in 1914; 1,772,461 tons in 1915; 2,178,318 tons in 1916; 2,192,373 tons in 1917; and 2,386,722 tons in 1918.

Coke Production, 1919

(In short tons)

Province	Coal charged to	Coke	Stock o	on hand	Coke sold or	Per cent of total	Value of coke
	ovens	output	Jan. 1	Dec. 31	used	production	sold or used
Nova Scotia Ontario Alberta British Columbia	699,696 *1,025,706 155,139	394,744 667,081 98,645	$3,034 \\ 9,281 \\ 565 \\ 2,164$	13,552 26,856 453	$383,253 \\ 649,506 \\ 565 \\ 100,356$	33 • 82 57 • 29 0 • 04 8 • 85	\$ 3,939,906 4,886,662 3,602 890,217
Total	1,880,541	. 1,160,470	15,044	40,861	1,133,680	100.00	9,720,387

*All imported coal.

Coke Production, 1918

(In short tons)

Province	Coal charged to	Coke	Stock o	on hand	Coke sold or	Per cent of total	Value of coke
·	ovens	output	Jan. 1	Dec. 31	used	production	sold or used
Nova Scotia Ontario Alberta British Columbia	$\begin{array}{r} 985,113 \\ * 635,010 \\ 53,462 \\ 309,657 \end{array}$	$581,870 \\ 431,970 \\ 32,801 \\ 211,643$	$1,597 \\ 2,424 \\ 505 \\ 3,300$	3,034 9,307 652 2,373	580,433 425,087 32,654 212,570	• 46•41 33•99 2•61 16•99	\$ 5,966,609 3,300,127 213,884 1,554,575
Total	1,983,242	1,258,284	7,826	15,366	1,250,744	100.00	\$ 11,035,195

*All imported coal.

Distribution of Coke Production, 1919

(In short tons)

	Nova Scotia	Ontario	Alberta	British Columbia	Total
Sold in Canada Sold for export		109,961	565	71,305 9,109	: 183, 460 9, 109
Total sales	1,629	109,961	565	80,414	192, 569
Used by maker in blast furnace or other- wise	381,624	539,545		19,942	941,111
Total sold or used	383,253	649,506	565	100,356	1,133,680
Number of ovens in operation Dec. 31	86	. 240		261	. 587

Year	Coal chargedto ovens		% Recov- ery per charge	Stock o Jan. 1	n hand Dec. 31	Coke sold or used	Value of coke sold or used	Average price
1910	$1,373,793\\1,409,844\\2,053,807\\2,247,913\\1,541,547\\1,856,393\\2,134,911\\1,928,923\\1,988,242\\1,880,541\\$	$\begin{array}{r} 954,388\\ 1,406,028\\ 1,517,133\\ 1,015,253\\ 1,200,766\\ 1,448,782\\ 1,231,865\\ 1,258,284\end{array}$	67.7 68.5 67.5 65.9 64.7 67.9 63.9 63.4	17,826 39,073	17,770 36,560 33,872 20,560 12,027 38,964 17,975 7,827 15,366 40,861	935,651 1,411,229 1,530,499 1,023,860 1,170,473 1,469,741 1,245,862 1,250,744	$\begin{array}{c} 3,630,410\\ 5,164,331\\ 5,919,596\\ 3,658,514\\ 4,258,580\\ 6,049,412\\ 6,662,581\\ 11,035,195\end{array}$	3 88 3.66 3.87 3.55 3.64 4.12 - 5.35 8.82

(In short tons)

Annual Production of Coke

Calendar Year	Short Tons	Value	Average per Ton	Calendar Year	Short Tons	Value	Average per Ton
1886 1887	$35,396 \\ 40,428$		\$2.88 3.36			\$1,734,404 2,032,048	
1888 1889 1890	45,373 54,539 56,450	$155,043 \\ 166,298$	2.95	1906 1907	700,488 782,055 842,003	2,863,503 3,583,468	4.26
1891 1892 1893	$57,084 \\ 56,135 \\ 61,078 \\ 58.044$	160,249	2.85	1909 1910	858,257 862,011 902,715 935,651	3,484,393 3,462,872	$\frac{4.04}{3.84}$
1894 1895 1896 1897	58,044 53,356 49,619 60,686	$143,047 \\ 110,257$	2.80 2.68 2.22 2.91	1912 1913	1,411,229 1,530,499 1.023.860	5,164,331 5,919,596	3.60 3.87
1898 1899 1900	87,600 100,820 157,134	286,000 350,022	$3.26 \\ 3.47$	1915 1916	1,170,473 1,469,741 1,245,862	$4,258,580 \\ 6,049,412$	$\begin{array}{c} 3.64\\ 4.12\end{array}$
1901 1902	$365,531 \\ 502,043$	1,228,225 1,519,185	3.36 3.03	1918		11,035,195 9,720,387	

	Nova	Scotia	Ont	ario	Alb	erta	British Columbia	
Calendar Year	Short Tons	Value	Short Tons	Value	Short Tons	Value	Short Tons	Value
-	,	\$		s		s		' S
897	41,532	90.950				•	19,154	85,507
898	48,400	111.000					39,200	
899	62,459	178,767					38,361	171,255
.900	61,767	223,395					95,367	425,745
.901	222,694	590,560					142,837	637,665
902	363, 330	899,930					138,713	619,255
.903	371,745						189,753	846,310
904	275,927	808,022			20,984	78,936		1,148,090
905	386,366	1,054,712			44,866		269,256	1,202,035
906	476, 364	1,540,976			69.486			1,054,485
907	524,110	1,688,070			76.321	297,595		1,049,432
908	505,929	1,658,151			75,645			1,482,191
909	492,992	1,608,092			87,233		281,786	1,509,567
910	508,058	1,655,775	24,685	148,110	121,578	486,312	248,394	1,172,675
911	557,554						82,327	350,879
912	625,918	1,840,129	379,854	1,709,343	105,684	424,027	299,773	1,190,832
913	722,038	2,352,153	419,287	1,991,613		269,612	321,771	1,306,218
914	343,289	1,118,614	386, 314	1,352,099	29,059	116,236	265, 198	1,071,565
915	585,873	1,905,766	285,251	1,141,004			275,523	1.116.506
916	654,433	2,617,732	472,507	2,008,155	41,950	167,800	300,851	1,255,725
917	643,757	3,218,785	389,048	2,155,326			181,408	1,106,488
918	580,433	5,966,609	425,087	3,300,127	32,654		212,570	1,554,575
919	383,253	3,939,906	649,506				100,356	890,217

Annual Production of Coke by Provinces

Output of Coke Showing Beehive and By-Product Coke Separately

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• (In short tons)

Calendar Year	Beehive	%	By-Product	• %	Total
1909.	$\begin{array}{r} 471,045\\491,378\\242,311\\402,054\\498,501\\322,701\\391,380\\443,460\\317,399\\379,218\\124,241\end{array}$	$\begin{array}{c} 54.0\\ 54.5\\ 25.4\\ 28.6\\ 32.9\\ 31.8\\ 32.6\\ 30.6\\ 25.8\\ 30.1\\ 10.7\end{array}$	$\begin{array}{r} 400,682\\ 409,891\\ 712,077\\ 1,003,974\\ 1,018,632\\ 692,552\\ 809,386\\ 1,005,322\\ 914,466\\ 879,066\\ 1,036,229\\ \end{array}$	$\begin{array}{r} 46\cdot00\\ 45\cdot5\\ 74\cdot6\\ 71\cdot4\\ 67\cdot1\\ 68\cdot2\\ 67\cdot4\\ 69\cdot4\\ 74\cdot2\\ 69\cdot9\\ 89\cdot3\end{array}$	$\begin{array}{r} 871,72\\901,260\\954,382\\1,406,022\\1,517,13\\1,015,255\\1,200,766\\1,448,782\\1,231,866\\1,258,288\\1,160,470\end{array}$

Annual Exports of Coke

Calendar Year	Short Tons	Value	Calendar Year	Short Tons	Value
1897 898 899 900 901 902 903 904 905 906 907	5,557 41,529 57,505 62,568 32,608 102,463 116,071	\$ 6,078 8,394 18,726 131,278 176,990 180,920 180,920 185,957 345,031 509,908 168,571 320,357	1908	$\begin{array}{c} 74,067\\ 57,971\\ 9,852\\ 57,744\\ 68,235\\ 67,838\\ 35,869\\ 48,539\\ 23,595\\ 29,612 \end{array}$	$\begin{array}{c} \$ \\ 248, 75 \\ 329, 06 \\ 250, 71 \\ 39, 82 \\ 252, 70 \\ 308, 41 \\ 306, 14 \\ 160, 05 \\ 221, 33 \\ 137, 31 \\ 223, 62 \\ 129, 70 \end{array}$

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Calendar Year	Short Tons	Value	Calendar Year	Short Tons	Value .
1907 1908 1909 1910 1911 1912	$\begin{array}{r} 426,971\\661,425\\737,088\\751,389\end{array}$		1914 1915 1916 1917	553,046 637,857 757,116 970,106 1,165,590	\$ 2,180,830 1,585,259 1,608,464 2,229,078 6,517,260 8,975,445 2,405,740

Annual Imports of Oven Coke

The Nova Scotia coke was made at Sydney and Sydney Mines, the ovens formerly operated at Westville being idle throughout the year.

In Ontario the production came from the Algoma Steel Corporation plant at Sault Ste. Marie, and from the new ovens operated by the Steel Company of Canada, at Hamilton, Ont.

In Alberta the coke oven plants at Lille, Passburg and Coleman were idle. In British Columbia coke was made by the Crow's Nest Pass Coal Company at Fernie and Michel, the Canadian Collieries (Dunsmuir), Limited, at Union Bay, and the Granby Consolidated Mining and Smelting Company at Anyox.

The coke production of the eastern provinces is used almost entirely in the iron and steel industry, while that of the western provinces is used chiefly by the copper and lead smelters, finding a market in the United States as well as in Canada.

Coke Oven By-Products

The coke-oven plants at the Dominion Iron and Steel Company, at Sydney, N.S.; Sault Ste. Marie, and Hamilton, Ont.; and Anyox, B.C., are by-product plants, and the recoveries of coke oven by-products in 1919 included 12,394,249 gallons of tar; 11,765 tons of sulphate of ammonia, together with important quantities of benzol, toluol, and solvent naphtha and naphthalene.

Year	Tar	Sulphate of Ammonia	Year	Tar	Sulphate of Ammonia
· · · · · · · · · · · · · · · · · · ·	Gallons	Short Tons		Gallons	Short Tons
1901	$\begin{array}{c} 2,662,612\\ 4,094,135\\ 3,281,249\\ 1,649,197\\ 3,407,784\\ 3,725,723\\ 4,424,615\\ 4,450,166\\ 4,016,824 \end{array}$	$1, 614 \\ 2, 393 \\ 3, 207 \\ 1, 773 \\ 2, 500 \\ 2, 364 \\ 1, 738 \\ 3, 342 \\ 3, 416 \\$	1910 1911	5,714,172 7,365,931 9,012,202	$\begin{array}{c} 3, 491 \\ 7, 124 \\ 11, 289 \\ 10, 608 \\ 8, 572 \\ 10, 448 \\ 11, 040 \\ 9, 941 \\ 10, 825 \\ 11, 765 \end{array}$

Annual Production of Coke Oven By-Products

The imports of sulphate of ammonia in 1919 were reported as 203,408 pounds, valued at \$12,129, as against imports in 1918 of 8,427 pounds, valued at \$1,273; imports in 1917 of 566,969 pounds valued at \$26,062, imports in 1916 of 239,096 pounds, valued at \$9,672; imports in 1915 of 503,158 pounds, valued at \$14,637; and imports in 1914 of 763,597 pounds valued at \$21,335.

Exports of sulphate of ammonia during the twelve months ending December 31, 1919, were 18,488 tons, valued at \$1,821,880, as compared with exports in 1918 of 8,696 tons, valued at \$1,027,558. The exports during previous years have not been separately recorded.