

CANADA
DEPARTMENT OF MINES
MINES BRANCH

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THE
PRODUCTION OF COAL AND COKE
IN
CANADA

During the Calendar Year
1911

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ADVANCE CHAPTER OF THE ANNUAL REPORT ON THE MINERAL PRODUCTION OF CANADA, DURING THE CALENDAR YEAR 1911.

(Tons used throughout this report are short tons of 2,000 pounds, except otherwise stated.)

COAL.

Coal mining both from the point of view of tonnage handled and gross value of output is the most important of Canada's mining industries. The character of coal mined is chiefly bituminous, although anthracite is obtained from one mine in Alberta and a considerable tonnage of lignite is mined in Alberta and Saskatchewan. The total production for all classes in 1911 was, according to returns received, 11,323,388 short tons, as compared with a production of 12,909,152 tons in 1910 and 10,501,475 tons in 1909, the falling off in 1911 as compared with 1910 being 1,585,764 tons or about 12 per cent. The total approximate selling value of the coal at the mines in 1911 was \$26,467,646 or an average of \$2.34 per ton, as compared with a total value of \$30,909,779 or an average of \$2.39 per ton in 1910.

The coal mining industry in Canada has had a fairly steady growth in past years, and the decreased production in 1911 was due entirely to the unfortunate labour troubles which resulted in the closing down from April 1 to November 20 of about 16 important mines in the southern part of Alberta and the eastern part of British Columbia. About 6,000 men ceased work and there was practically no coal mined in the districts affected for a period of nearly eight months. The production by these sixteen companies during the period they were in operation in 1911 was only 1,219,178 tons, as against 3,874,355 tons produced by the same mines in 1910, showing a direct falling off, attributable to the strike, of at least 2,655,177 tons. In fact, if the probable increase of production of these mines under ordinary operating conditions be assumed, it is safe to say that the coal production in 1911 might easily have been 3,000,000 tons in excess of that actually reported. Practically every coal mining district, other than those affected by the strike, showed an increased production in 1911.

With a view to relieving the threatened shortage of coal in the Provinces of Alberta and Saskatchewan, the Dominion Government passed an Order in Council remitting the duty on bituminous coal imported into Canada at the ports on the southern frontier of the Dominion west of Sault Ste. Marie for consumption in the Provinces of Manitoba, Saskatchewan, Alberta, and British Columbia, east of the 122nd meridian of longitude, such remission of duties to become effective on and after August 7. The remission of duties was discontinued on and after December 6. The imports of bituminous coal showed an increase during the year of 2,939,349 tons or nearly 50 per cent over the imports in 1910.

Statistics of the production by provinces during the past three years are shown in Table 1, and Table 2 shows the increases and decreases in each year as compared with the previous year.

It may be explained that the term production in these tables is used to represent the amount 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 in some cases includes coal lost or unsaleable or coal carried into stock on hand at the end of the year.

In the Province of Nova Scotia an increased production of 573,278 tons or about 9 per cent is shown in 1911, while a small increase is also shown in New Brunswick. The Province of Saskatchewan shows an increase of 25,623 tons or over 14 per cent. A falling off of over 47 per cent is shown in the Alberta production and of over 23 per cent in the production of British Columbia.

COAL.—TABLE 1.

Production by Provinces, 1909-10-11, in tons of 2,000 lbs.

Province.	1909.		1910.		1911.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Nova Scotia.....	5,652,089	\$11,354,643	6,431,142	\$12,919,705	7,004,420	\$14,071,379
British Columbia..	2,606,127	8,144,147	3,330,745	10,403,580	2,542,532	7,945,413
Alberta.....	1,994,741	4,838,109	2,894,469	7,065,736	1,511,036	3,979,264
Saskatchewan.....	192,125	296,339	181,156	293,923	206,779	347,248
New Brunswick....	49,029	98,496	55,455	110,910	55,781	111,562
Yukon Territory...	7,364	49,502	16,185	110,925	2,840	12,780
Total.....	10,501,475	24,781,236	12,909,152	30,909,779	11,323,388	26,467,646

COAL.—TABLE 2.

(Comparison of Production 1909 with 1910, and 1910 with 1911.

Province.	(i) INCREASE OR (d) DECREASE.			
	Years 1909 and 1910.		Years 1910 and 1911.	
	Tons.	Per cent.	Tons.	Per cent.
Nova Scotia	(i) 779,053	13.78	(i) 573,278	8.91
British Columbia.....	(i) 724,618	27.80	(d) 788,213	23.66
Alberta.....	(i) 899,728	45.11	(d) 1,383,433	47.79
Saskatchewan.....	(d) 10,969	5.71	(i) 25,623	14.14
New Brunswick.....	(i) 6,426	13.11	(i) 326	0.59
Yukon Territory.....	(i) 8,821	119.79	(d) 13,345	82.45
Total for Canada.....	(i) 2,407,677	22.93	(d) 1,585,764	12.28

The Province of Nova Scotia in 1911 produced 62 per cent of the total Canadian production; British Columbia 22 per cent; Alberta 13 per cent, and Saskatchewan a little under 2 per cent. The relative importance of the different provinces as coal producers for a number of years past is indicated in the next table, in which is shown the proportional contributions of each province to the total tonnage of coal produced in Canada. The coal fields on the Atlantic seaboard still continue to produce more than half the total, although in 1910 the combined output of the western provinces was only a little less than 50 per cent of the total.

Province.	1874.	1890.	1900.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
	%	%	%	%	%	%	%	%	%	%	%	%	%
Nova Scotia.....	91	71	62.9	69.4	71.3	68.0	65.5	64.07	60.79	61.40	54.29	50.25	62.35
New Brunswick.....													
Saskatchewan*.....			0.7	0.9	1.5	1.5	1.2	1.11	1.44	1.37	1.83	1.40	1.33
Alberta*.....		4	5.4	5.4	6.2	8.0	10.8	12.77	15.14	15.42	18.99	22.42	13.34
British Columbia.....	8	25	31.0	24.2	21.0	22.5	22.4	21.98	22.50	21.77	24.82	253.0	22.45
Yukon Territory.....				0.1			0.1	0.07	0.13	0.04	0.07	0.13	0.03

* Alberta and Saskatchewan were established as provinces on September 1, 1905. For the purpose of comparison, the coal production during the years previous to that date has been separated according to the present boundaries of these Provinces.

Of the total coal production in Canada during the past year, 8,559,952 tons were reported as sold for consumption in Canada, 1,068,572 tons sold for export to the United States, and 280,235 tons sold for export to other countries, or total sales 9,908,759 tons; 381,340 tons were used by colliery operators in making coke, and 1,033,289 tons were used for colliery purposes and by workmen. In addition to the coal thus disposed of, 42,709 tons were mined and added to stock at the end of the year and 182,567 tons reported as waste; these two items are not included as "Production," but bring the total output up to 11,548,664 tons.

Thus of the total output about 85.8 per cent was placed directly in the market, 3.3 per cent made into coke by the mine operators, 8.9 per cent used in colliery consumption for workmen, and 1.6 per cent reported as waste. The quantities entered as loss due to washing, breakage, etc., do not necessarily include all the losses due to these causes since many companies do not make any returns under this heading. Also the quantity entered as sold for consumption in Canada probably includes a small quantity which is ultimately exported.

Notwithstanding Canada's large coal resources, the total domestic production (including that exported) was equivalent in 1911 to only about 46.7 per cent of the total consumption, there having been imported for home consumption during 1911, 14,558,892 tons. The total consumption of coal as shown in subsequent tables was 24,247,698 tons, or an average of about 3.388 tons per capita, while the production averaged about 1.582 tons per capita of population. The principal coal-fields are located on the extreme east and in the far west, while

the central Provinces of Ontario and Quebec, which contain the great bulk of the population, are without coal deposits. Nova Scotia coal is largely consumed within the Province and also finds a considerable market in Quebec. A little less than 9 per cent of the coal production of this Province was reported as sold for export in 1911. The market in Ontario is almost altogether supplied, and that of Quebec province to a lesser degree, by coal imported from the nearer fields of the adjacent states of the United States. There are no anthracite coals in eastern Canada, and our requirements of this fuel have to be met entirely by imports from Pennsylvania. Manitoba is also supplied largely by importations from the United States.

The Saskatchewan production finds a local market within the Province and also in Manitoba.

Of the Alberta production about 93.2 per cent in 1911 was used by collieries and sold for consumption in Canada, chiefly within the Province; 2.7 per cent sold for export, and 4.1 per cent used for making coke which was marketed in British Columbia and in the United States. British Columbia is the largest producer of coal for export. In 1911 about 68.4 per cent of the production in this Province was used by the collieries and sold for home consumption; 27.0 per cent was sold for export, and 4.6 per cent used in making coke.

Owing to the greatly reduced output in Alberta and British Columbia in 1911, there was a very much smaller proportion of the output used for making coke or sold for exports.

The output by provinces showing the distribution of coal mined in 1910 and 1911 is given in the next two tables.

Coal Output in Canada 1910.

	Nova Scotia.	New Brunswick.	Saskatchewan.	Alberta.	Yukon.	British Columbia.	Total.
Sales in Canada	5,003,933	53,455	173,084	2,309,438	16,135	1,400,405	8,956,450
Sales for export to U. S. ...	356,089	.....	.....	243,371	.....	1,248,483	1,847,943
Sales for export to other countries.....	223,748	.....	.....	.....	.....	67,525	291,273
Total sales.....	5,583,770	53,455	173,084	2,552,809	16,135	2,716,413	11,095,666
Used by producers in making coke	183,560	.....	.....	196,250	.....	379,393	759,703
Used by producers for colliery consumption and workmen.....	663,812	2,000	8,072	145,410	50	234,439	1,053,783
Stock on hand Jan. 1.....	149,953	.....	.....	10,074	.....	39,987	200,019
" Dec. 31	175,333	.....	.....	8,957	.....	79,376	263,666
Difference.....	+ 25,375	.....	.....	- 1,117	.....	+ 39,389	+ 63,647
Losses due to breakage or other causes	58,645	.....	10,010	14,724	.....	160,337	243,716
Total output*.....	6,515,162	55,455	191,166	2,908,076	16,185	3,530,471	13,216,515

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

Coal Output in Canada, 1911.

	Nova Scotia.	New Brunswick.	Saskatchewan.	Alberta.	Yukon.	British Columbia.	Total.
Sales in Canada.....	5,462,828	53,781	198,768	1,304,778	2,840	1,536,957	8,559,952
Sales for export to U. S.	385,095	.....	.....	40,723	.....	642,754	1,068,572
Sales for export to other countries.	236,609	.....	.....	161	.....	43,465	280,235
Total sales	6,084,532	53,781	198,768	1,345,662	2,840	2,223,176	9,908,759
Used by producers in making coke.	273,548	.....	.....	61,591	.....	117,215	452,354
Used by producers for colliery consumption and workmen.	646,340	2,000	8,011	103,783	.....	262,141	962,275
Stock on hand Jan. 1.	173,164	.....	.....	10,675	.....	81,207	265,046
" Dec. 31.	211,338	.....	.....	15,773	.....	80,644	307,755
Difference.	+ 38,174	.....	.....	+ 5,098	.....	- 563	+ 42,709
Losses due to breakage or other causes.	82,957	.....	10,414	40,796	.....	39,400	182,567
Total output ‡	7,125,551	55,781	217,193	1,565,930	2,840	2,581,369	11,548,664

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

Distribution of Coal mined in Canada during the Years 1907-8-9.

	1907.	1908.	1909.
Sales in Canada.	7,358,135	7,715,203	7,468,880
Sales for export to United States.	1,514,182	1,218,656	1,173,772
" " other countries	129,957	297,291	171,388
Total sales	9,002,274	9,231,150	8,814,040
Used by producers for the manufacture of coke.	751,967	708,674	752,976
" " colliery consumption and workmen.	757,185	946,487	934,459
Stock on hand Jan. 1.	212,559	183,443	202,432
" Dec. 31.	190,224	230,335	219,569
Difference.	- 22,335	+ 46,892	+ 17,137
Loss due to washing, breakage, or other causes.	351,783	157,610	154,162
Total output.	10,840,874	11,090,813	10,672,774

Statistics of the annual production of coal in Canada since 1784 are shown in Table 3. The total production from 1785 to 1911 has been 183,438,591 tons; of which 122,762,615 tons or 66.9 per cent are to be credited to Nova Scotia and 42,649,441 tons or 23.2 per cent to British Columbia.

The production during the ten years 1871-1880 inclusive was 11,380,416 tons; the following ten year period, 1881-1890, showed a total production of 22,001,394 tons. The production from 1891 to 1900 was 40,381,708 tons and from 1901 to 1910 it was 80,497,726 tons, each decennial period showing a production only a little less than twice that of the previous ten years.

COAL.—TABLE 3.

Annual Production showing the Increase or Decrease each year.

Year.	Tons.	Value.	Average value per ton.	Increase (i) or decrease (d) in tonnage.	Increase (i) or decrease (d) per cent.
		\$	\$		
1785 to 1873.....	*8,591,150				
1874.....	1,063,742	1,763,423	1 66		
1875.....	1,039,974	1,747,016	1 68	(d) 23,768	(d) 2·2
1876.....	994,762	1,729,546	1 74	(d) 45,212	(d) 4·3
1877.....	1,036,670	1,794,415	1 73	(i) 41,908	(i) 4·2
1878.....	1,089,744	1,941,285	1 78	(i) 53,074	(i) 5·1
1879.....	1,126,497	2,050,639	1 82	(i) 36,763	(i) 3·4
1880.....	1,482,714	2,657,194	1 79	(i) 356,217	(i) 31·6
1881.....	1,537,106	2,688,621	1 75	(i) 54,392	(i) 3·7
1882.....	1,848,148	3,248,446	1 76	(i) 311,042	(i) 20·2
1883.....	1,818,684	3,109,635	1 71	(d) 29,464	(d) 1·6
1884.....	1,984,959	3,593,831	1 81	(i) 166,275	(i) 9·1
1885.....	1,920,977	3,417,807	1 78	(d) 63,982	(d) 3·2
1886.....	2,116,653	3,739,840	1 77	(i) 195,676	(i) 10·2
1887.....	2,429,330	4,388,206	1 81	(i) 312,677	(i) 14·8
1888.....	2,602,552	4,674,140	1 80	(i) 173,222	(i) 7·1
1889.....	2,658,303	4,894,287	1 84	(i) 55,751	(i) 2·1
1890.....	3,084,632	5,676,247	1 84	(i) 426,379	(i) 16·0
1891.....	3,577,749	7,019,425	1 96	(i) 493,067	(i) 16·0
1892.....	3,287,745	6,363,757	1 94	(d) 290,004	(d) 8·1
1893.....	3,783,499	7,359,080	1 95	(i) 495,754	(i) 15·1
1894.....	3,847,070	7,429,468	1 93	(i) 63,571	(i) 1·7
1895.....	3,478,344	6,739,153	1 94	(d) 368,726	(d) 9·6
1896.....	3,745,716	7,226,462	1 93	(i) 267,372	(i) 7·7
1897.....	3,786,107	7,303,597	1 93	(i) 40,391	(i) 1·1
1898.....	4,173,108	8,224,288	1 97	(i) 387,001	(i) 10·2
1899.....	4,925,051	10,283,497	2 09	(i) 751,943	(i) 18·0
1900.....	5,777,319	13,742,178	2 38	(i) 852,268	(i) 17·3
1901.....	6,486,325	12,699,243	1 96	(i) 709,006	(i) 12·3
1902.....	7,466,681	15,210,377	2 04	(i) 780,356	(i) 15·1
1903.....	7,960,364	15,942,333	2 00	(i) 493,683	(i) 6·6
1904.....	8,254,595	16,592,231	2 01	(i) 294,231	(i) 3·7
1905.....	8,667,948	17,520,263	2 02	(i) 413,353	(i) 5·0
1906.....	9,762,601	19,732,019	2 02	(i) 1,094,653	(i) 12·6
1907.....	10,511,426	24,381,842	2 32	(i) 748,825	(i) 7·7
1908.....	10,886,311	25,194,573	2 31	(i) 374,885	(i) 3·5
1909.....	10,501,475	24,781,236	2 36	(d) 384,836	(d) 3·5
1910.....	12,909,152	30,909,779	2 39	(i) 2,407,677	(i) 22·93
1911.....	11,323,388	26,467,646	2 34	(d) 1,585,764	(d) 12·28

* The total production for the years 1785 to 1873 is made up as follows :—

Nova Scotia (1785 to 1873).....	8,053,670 tons of 2,000 pounds.
British Columbia (1836 to 1873).....	537,480 " 2,000 "

EXPORTS AND IMPORTS.

The statistics of exports and imports of coal as given in tables following have been compiled from the reports of the Department of Customs. The total exports during 1911 were 1,500,639 tons valued at \$4,357,074, or \$2.90 per ton, as compared with exports in 1910 of 2,377,049 tons valued at \$6,077,350, or \$2.56 per ton. A decrease in exports is, therefore, shown in 1911, of 876,410 tons, or about 36.8 per cent. The exports during 1911 are the smallest recorded since 1899.

The total imports during 1911 were 14,558,892 tons valued at \$39,292,591, as compared with imports in 1910 of 10,597,982 tons valued at \$28,450,001, showing an increase in imports of 3,960,910 tons or 37.4 per cent.

Statistics of exports during 1909-10-11 showing the principal countries of destination are given in Table 4, and annual exports since 1873 in Table 5.

COAL.—TABLE 4.

Exports of Coal produced in Canada during 1909-10-11.

Exported to	1909.		1910.		1911.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$
Great Britain.....	10,671	36,403	5,872	18,901	14,185	48,496
United States.....	1,240,519	3,357,111	1,947,287	4,583,626	1,035,889	2,809,204
Newfoundland.....	175,801	493,040	203,626	574,157	223,553	617,299
Other countries....	161,108	569,788	220,264	900,666	227,012	882,075
Total.....	1,588,099	4,456,342	2,377,049	6,077,350	1,500,639	4,357,074

The United States is the principal market for Canadian coal exported, that country having taken about 69.1 per cent of the total exports in 1911. There were exported to Newfoundland 223,553 tons or 14.9 per cent of the total. Exports to other countries of 227,012 tons include 55,316 tons to Mexico and 46,926 tons to Australia. Considerable tonnages are also exported to Bermuda, St. Pierre, Cuba, Japan, and many other points.

COAL.—TABLE 5.

Exports.

Calendar Year.	Produce of Canada.	Not the produce of Canada.	Calendar Year.	Produce of Canada.	Not the produce of Canada.
	Tons.	Tons.		Tons.	Tons.
1873.....	420,683	5,403	1893.....	960,312	102,827
1874.....	310,988	12,859	1894.....	1,103,694	89,786
1875.....	250,348	14,026	1895.....	1,011,235	96,836
1876.....	248,638	4,995	1896.....	1,106,661	116,774
1877.....	301,317	4,829	1897.....	986,130	101,848
1878.....	327,959	5,468	1898.....	1,150,029	99,189
1879.....	306,648	8,468	1899.....	1,293,169	101,004
1880.....	432,188	14,217	1900.....	1,787,777	62,776
1881.....	395,382	14,245	1901.....	1,873,661	53,894
1882.....	412,682	37,576	1902.....	2,090,268	23,453
1883.....	486,811	44,388	1903.....	1,954,629	27,138
1884.....	474,405	62,665	1904.....	1,557,412	27,308
1885.....	427,537	71,003	1905.....	1,635,287	86,792
1886.....	520,703	78,443	1906.....	1,835,041	44,758
1887.....	580,965	89,098	1907.....	1,894,074	101,778
1888.....	588,627	84,316	1908.....	1,729,333	102,071
1889.....	665,315	89,204	1909.....	1,583,099	161,098
1890.....	724,486	82,534	1910.....	2,377,049	159,859
1891.....	971,259	77,827	1911.....	1,500,639	133,943
1892.....	823,733	93,988			

Coal imported is subdivided into three classes: anthracite, including anthracite dust; bituminous round and run of the mine; and bituminous slack such as will pass through a $\frac{3}{4}$ " screen. The imports of anthracite in 1911 were 4,020,577 tons valued at \$18,794,192, an average of \$4.67 per ton, thus showing an increase of 754,342 tons over the 1910 imports. The imports of bituminous round and run of the mine in 1911 were 8,905,815 tons valued at \$18,407,603, an average of \$2.07 per ton; showing an increase of 2,939,349 tons or 49.3 per cent over the 1910 imports. The imports of bituminous slack in 1911 were 1,632,500 tons valued at \$2,090,796 or an average of \$1.28 per ton, showing an increase of 267,219 tons or 19.6 per cent over the 1910 imports.

COAL.—TABLE 6.
Imports of Coal into Canada.

Fiscal Year.	BITUMINOUS COAL.		ANTHRACITE COAL AND ANTHRACITE DUST.		BITUMINOUS COAL DUST.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$
1880.....	457,049	1,220,761	516,729	1,509,960	3,565	8,877
1881.....	587,024	1,741,568	572,092	2,325,937	337	666
1882.....	636,374	1,992,081	638,273	2,666,356	471	900
1883.....	911,629	2,996,198	751,891	3,344,936	8,154	10,082
1884.....	1,118,615	3,613,470	868,000	3,881,283	12,782	14,600
1885.....	1,011,875	3,197,539	910,324	3,909,844	20,185	20,412
1886.....	930,949	2,591,554	995,425	4,028,050	36,230	36,996
1887.....	1,149,792	3,126,225	1,100,165	4,423,062	31,401	33,178
1888.....	1,231,234	3,451,661	†2,138,627	5,291,875	28,808	34,730
1889.....	1,248,540	3,255,171	1,291,705	5,199,481	39,980	47,139
1890.....	1,409,232	3,528,959	1,201,335	4,595,727	53,104	29,818
1891.....	1,598,855	4,060,896	1,899,067	5,224,452	60,127	36,130
1892.....	1,615,220	4,099,221	1,479,106	5,640,346	82,091	39,840
1893.....	1,603,154	3,967,764	1,500,550	6,355,285	109,585	47,474
1894.....	1,359,509	3,315,094	1,530,522	6,354,040	117,973	49,510
1895.....	1,444,928	3,321,387	1,404,342	5,350,627	181,318	52,221
1896.....	1,538,489	3,299,025	1,574,355	5,667,096	210,386	53,742
1897.....	1,543,476	3,254,217	1,457,295	5,695,168	225,562	59,609
1898.....	1,684,024	3,179,595	1,460,701	5,874,685	229,445	45,556
1899.....	2,171,358	3,691,946	1,745,460	6,490,509	276,547	44,717
1900.....	2,439,764	4,310,964	1,654,401	6,602,912	339,174	98,349
1901.....	2,516,392	4,966,025	1,933,283	7,923,950	414,432	275,559
1902.....	3,047,392	5,712,068	1,652,451	7,021,939	489,548	264,550
1903.....	3,511,412	7,776,717	1,456,713	7,028,664	550,883	420,317
1904.....	4,053,900	9,108,208	2,275,018	10,461,223	608,041	544,128
1905.....	4,176,274	8,002,896	2,604,137	12,093,371	650,261	343,456
1906.....	4,495,350	8,360,348	2,200,863	10,304,308	747,251	489,180
Calendar Year.	Bituminous round and run of the mine.				Bituminous slack such as will pass through a $\frac{3}{4}$ " screen.	
1907.....	6,370,152	13,232,445	3,141,873	14,506,129	1,139,256	1,121,949
1908.....	6,025,574	12,516,748	3,160,110	14,478,536	1,111,811	1,355,677
1909.....	5,625,063	11,455,818	3,017,844	13,906,152	1,230,017	1,469,889
1910.....	5,966,466	11,919,341	3,266,285	14,735,062	1,365,281	1,795,598
1911.....	(a)8,905,815	18,407,603	(b)4,020,577	18,794,192	(c)1,632,500	2,090,796

(a). Duty, 53c. per ton. (b). Coal, anthracite, and anthracite coal dust; duty free. (c). Duty 14c. per ton.

† In the anthracite column the imports show a very considerable increase in 1888 over 1887, an increase of over 94 per cent, the falling off again in 1889 being quite as remarkable. The average values per ton for the three years 1887, 1888, and 1889, were \$4.02, \$2.47, and \$4.03 respectively. Although a duty of 50c. per ton on anthracite coal was removed May 13, 1887, it is hardly thought would account for the changes indicated, and unless some error may possibly have crept into Trade and Navigation report, no explanation is available.

The total consumption of coal in Canada during 1911, deduced from the records of production, exports and imports, was 24,247,698 tons, as compared with 20,970,226 tons in 1910; an increase of 3,277,472 tons or 15.6 per cent. Of the total consumption during the past year 9,822,749 tons or 40.5 per cent was domestic coal and 14,424,949 imported coal.

The per capita consumption in 1911, based on an estimate of the population made by the Census Office, was approximately 3.388 tons. This is the largest per capita consumption on record. The consumption in Canada is still small when compared with that of the United States, where the production has reached a total of about 5 tons per capita.

Consumption of Coal in Canada, 1910-1911.

	1910.		1911.	
	Tons.	Tons.	Tons.	Tons.
Production, Table 3	12,909,152	.....	11,323,388	.....
Exports of Canada, Table 4	2,377,049	.....	1,500,639	.....
Home consumption of Canadian coal .....	.....	10,532,103	.....	9,822,749
Imports, Table 6	10,597,982	.....	14,558,892	.....
Exports not produce of Canada, Table 4	159,859	.....	133,943	.....
Canadian consumption of imported coal .....	.....	10,438,123	.....	14,424,949
Total consumption of coal in Canada .....	.....	20,970,226	.....	24,247,698

COAL.—TABLE 7.

Consumption of Coal in Canada, 1886-1911.

Calendar Year.	Canadian.	Imported.	Total.	Percentage Canadian.	Percentage imported.	Consumption per capita.
	Tons.	Tons.	Tons.	%	%	Tons.
1886.....	1,595,950	1,881,161	3,480,111	45.9	54.1	0.758
1887.....	1,848,365	2,192,260	4,040,625	45.7	54.3	0.871
1888.....	2,013,925	3,314,353	5,328,278	37.8	62.2	1.137
1889.....	1,992,988	2,490,931	4,483,919	44.4	55.6	0.946
1890.....	2,360,196	2,581,187	4,941,383	47.8	52.2	1.031
1891.....	2,606,490	2,980,222	5,586,712	46.7	53.3	1.158
1892.....	2,464,012	3,082,429	5,546,441	44.4	55.6	1.133
1893.....	2,823,187	3,110,462	5,933,649	47.6	52.4	1.198
1894.....	2,743,376	2,017,818	5,661,194	48.5	51.5	1.130
1895.....	2,467,109	2,933,752	5,400,861	45.7	54.3	1.066
1896.....	2,639,055	3,206,456	5,845,511	45.1	54.9	1.140
1897.....	2,799,977	3,124,485	5,924,462	47.3	52.7	1.143
1898.....	3,023,079	3,274,981	6,298,060	48.0	52.0	1.200
1899.....	3,631,882	4,092,361	7,724,243	47.0	53.0	1.454
1900.....	3,989,542	4,361,563	8,351,105	47.8	52.2	1.561
1901.....	4,912,064	4,810,213	9,722,877	50.5	49.5	1.797
1902.....	5,376,413	5,165,938	10,542,351	51.0	49.0	1.895
1903.....	6,005,735	5,491,870	11,507,605	52.2	47.8	2.018
1904.....	6,697,183	6,909,651	13,606,834	49.2	50.8	2.325
1905.....	7,032,661	7,343,850	14,376,511	48.9	51.1	2.391
1906.....	7,927,560	7,398,906	15,326,466	51.7	48.3	2.477
1907.....	8,617,352	10,519,503	19,136,855	45.0	55.0	3.034
1908.....	9,156,478	10,195,424	19,351,902	47.3	52.7	2.976
1909.....	8,913,376	9,711,826	18,625,202	47.9	52.1	2.779
1910.....	10,532,103	10,438,123	20,970,226	50.2	49.8	3.031
1911.....	9,822,749	14,424,949	24,247,698	40.5	59.5	3.388

Nova Scotia.

The production of coal in Nova Scotia in 1911 was reported as 7,004,420 tons, as compared with a production of 6,431,142 tons in 1910, showing an increase of 573,278 tons or nearly 9 per cent. This is entirely bituminous coal and represents the output of 14 operating companies, one of which, the Dominion Coal Company, contributed about 62 per cent of the total.

Of the production in 1911, the quantity sold for consumption in Canada was reported as 5,462,828 tons, while 385,095 tons were reported as sold for export to the United States and 236,609 tons sold for export to other countries; 646,340 tons were used for colliery consumption and by workmen, and 273,548 tons were used by colliery operators in making coke and in steel making. A considerable tonnage of coal sold for consumption in Canada was also used in making coke, the total tonnage used for coke making being 846,695 tons.

About 38 per cent only of the total sales were for consumption within the Province itself. Almost an equal quantity was sold for consumption in the Province of Quebec. The adjacent Provinces of New Brunswick and Prince Edward Island, and the colony of Newfoundland, take annually about 1,000,000 tons or 14½ per cent of the present output.

There are five principal coal-fields in the Province, that affording the largest production being the Sydney coal-field in Cape Breton county. The production in Cape Breton county in 1911 was 5,302,477 tons or 75.7 per cent of the total; Pictou county produced 836,776 tons or 12 per cent of the total; Cumberland county 525,925 tons or 7.5 per cent of the total, and Inverness and other counties 339,242 tons or 4.8 per cent of the total.

Annual statistics of the production of coal in Nova Scotia since 1872 are shown in Table 8, the figures being given in both long and short tons; the production by counties during the past six years is shown in Table 9. The record in each case covers the calendar year.

The statistics published by the Provincial Department of Mines cover the fiscal year ending September 30, and the details of colliery output during the year ending Sept. 30, 1911, as published in the Provincial Mines Report, are shown below; while the colliery output during the last three fiscal years is shown in Table 10 and the distribution of coal sold during the same periods in Table 11.

COAL.

Production and Sales by Companies, Nova Scotia, year ending September 30, 1911, in short tons.

Name of company.	Output.	Sales.	Colliery consumption.	Supplied workmen.	Supplied locomotive.	Reported unsaleable.	Tons on bank at close of year.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Dominion Coal Co., Ltd.....	4,360,113	3,971,278	246,112	48,939	23,514	.....	125,840
Nova Scotia Steel & Coal Co., Ltd.....	848,762	779,316	38,556	20,080	3,925	.....	43,342
Cumberland Railway & Coal Co., Ltd.....	214,871	156,537	42,327	4,654	3,269	.....	7,602
Acadia Coal Co.....	522,297	417,648	83,898	10,985	1,384	.....	22,498
Maritime Coal, Railway & Power Co.....	183,416	16,096	18,664	3,372	1,438	.....	.....
Inverness Railway & Coal Co.....	326,577	300,969	20,300	6,015	10,376	.....	3,731
Intercolonial Coal Co.....	293,000	268,016	38,049	7,289	802	.....	11,042
Sydney Coal Co.....	4,129	3,767	96	153	.....	.....	410
MacKay Colliery.....	32,571	30,463	1,887	460	.....	.....	.....
North Atlantic Collieries Co.....	53,751	40,065	9,690	1,234	.....	2,696	3,143
Port Hood Coal Co.....	46,135	38,031	8,798	1,261	.....	.....	297
Minudie Coal Co.....	61,019	51,670	3,120	1,267	222	4,961	.....
Atlantic Grindstone & Coal Co.....	374	312	25	37	.....	.....	.....
Colonial Mining Co.....	5,023	3,517	2,164	141	.....	.....	.....
Great Northern Coal Co.....	1,419	692	608	39	.....	.....	79
	6,953,457	6,078,377	509,894	105,926	44,930	7,657	217,984

COAL.—TABLE 8.

Nova Scotia: Output, Sales, Colliery Consumption, and Production.

Calendar Year.	Output, tons, 2,240 lbs.	Sold or used, tons, 2,240 lbs.	Colliery consump- tion, tons, 2,240 lbs.	Production, tons, 2,240 lbs.	Output, tons, 2,000 lbs.	Sold or used, tons, 2,000 lbs.	Colliery consump- tion, tons, 2,000 lbs.	Production* tons, 2,000 lbs.	Price per ton, 2,240 lbs.	Value of production.
									\$ c.	\$
1872	880,950	785,914	110,841	896,255	986,664	880,224	123,582	1,003,806	1 75	1,568,446
1873	1,051,467	881,106	108,898	989,504	1,177,643	986,889	121,406	1,108,245	1 75	1,731,632
1874	872,720	749,127	119,532	868,709	977,446	839,022	133,932	972,954	1 75	1,520,240
1875	781,165	706,795	124,110	830,905	874,905	791,610	139,003	930,613	1 75	1,454,034
1876	709,646	634,207	113,788	747,995	794,804	710,312	127,443	837,755	1 75	1,308,991
1877	757,496	687,065	98,841	785,906	848,396	769,513	110,702	880,215	1 75	1,375,339
1878	770,603	693,511	88,627	782,138	863,075	776,732	99,262	875,994	1 75	1,368,741
1879	788,271	688,624	84,787	773,411	882,863	771,259	94,961	866,220	1 75	1,353,469
1880	1,032,710	954,659	96,831	1,051,490	1,156,635	1,069,218	108,451	1,777,669	1 75	1,840,108
1881	1,124,270	1,035,014	107,888	1,142,902	1,259,133	1,159,216	120,834	1,230,050	1 75	2,000,079
1882	1,365,811	1,250,179	111,381	1,361,560	1,529,708	1,400,200	124,747	1,524,947	1 75	2,382,730
1883	1,422,553	1,297,523	111,949	1,409,472	1,508,259	1,453,226	125,833	1,578,609	1 75	2,466,576
1884	1,389,295	1,261,650	116,769	1,378,419	1,556,011	1,413,048	130,781	1,543,829	1 75	2,412,233
1885	1,352,205	1,254,510	127,624	1,382,134	1,514,470	1,405,051	142,939	1,547,990	1 75	2,418,735
1886	1,502,611	1,373,666	142,421	1,516,087	1,682,924	1,538,506	159,512	1,698,018	1 75	2,653,152
1887	1,670,830	1,519,684	139,777	1,659,461	1,871,330	1,702,046	156,550	1,858,596	1 75	2,904,057
1888	1,776,128	1,576,692	157,443	1,734,135	1,989,263	1,765,895	176,336	1,942,231	1 75	3,034,735
1889	1,756,279	1,555,107	158,131	1,713,238	1,967,032	1,741,720	177,107	1,918,827	1 75	2,998,167
1890	1,984,001	1,786,111	161,240	1,947,351	2,222,081	2,000,444	180,589	2,181,033	1 75	3,407,864
1891	2,044,784	1,849,945	174,983	2,024,928	2,290,158	2,071,938	195,981	2,267,919	1 75	3,543,624
1892	1,942,780	1,752,934	175,092	1,928,026	2,175,913	1,963,286	196,103	2,159,389	1 75	3,374,046
1893	2,223,042	1,977,543	205,425	2,132,968	2,429,807	2,214,843	230,076	2,444,924	1 75	3,820,194
1894	2,250,631	2,060,920	196,206	2,257,126	2,520,707	2,308,231	219,751	2,527,932	1 75	3,949,970
1895	1,999,756	1,793,098	193,639	1,936,737	2,239,727	2,008,270	216,875	2,225,145	1 75	3,476,790
1896	2,292,675	2,046,828	192,975	2,239,808	2,537,706	2,202,447	216,132	2,508,570	1 75	3,919,355
1897	2,340,081	2,044,672	181,716	2,226,388	2,020,835	2,290,032	203,522	2,403,554	1 75	3,806,170
1898	2,262,656	2,121,126	187,428	2,288,554	2,584,175	2,375,661	187,519	2,563,180	1 75	4,004,970
1899	2,865,443	2,633,989	177,460	2,811,449	3,209,296	2,950,067	138,775	3,148,822	2 00	5,622,308
1900	3,298,791	2,998,737	236,563	3,235,300	3,694,646	3,358,585	264,051	3,623,536	2 00	8,088,250
1901	3,821,033	3,411,127	301,434	3,712,561	4,279,557	3,820,462	337,606	4,158,068	1 75	6,496,932
1902	4,725,480	4,229,120	379,198	4,608,318	5,292,538	4,736,614	424,702	5,161,316	2 00	9,216,636
1903	5,215,562	4,565,720	481,903	5,047,623	5,841,429	5,113,607	539,731	5,653,338	2 00	10,095,246
1904	5,131,985	4,551,740	144,904	4,996,644	5,747,823	5,097,949	498,292	5,596,241	2 00	9,993,238

1905.....	5,197,877	4,613,818	427,774	5,041,592	5,821,622	5,167,476	479,107	5,646,583	2 00	10,088,184
1906.....	5,844,813	5,093,181	460,891	5,554,022	6,546,191	5,704,307	516,198	6,220,505	2 00	11,108,044
1907.....	5,775,503	5,236,077	437,256	5,673,333	6,468,563	5,864,406	489,727	6,354,133	2 25	12,764,999
1908.....	6,076,330	5,224,787	576,509	5,939,767	6,805,489	5,851,761	645,690	6,652,539	2 25	13,364,476
1909.....	5,106,135	4,524,029	522,479	5,046,508	5,718,871	5,066,912	585,177	5,652,089	2 25	11,354,643
1910.....	5,817,109	5,199,715	542,376	5,742,091	6,515,162	5,823,681	607,461	6,431,142	2 25	12,919,705
1911.....	6,362,099	5,676,857	577,089	6,253,946	7,125,551	6,358,080	646,340	7,004,420	2 25	14,071,379

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

COAL.—TABLE 9.

Nova Scotia: Coal trade by Counties, in short tons, Calendar Years 1906-7-8-9-10-11.

Calendar Year.	CUMBERLAND.		PICTOU.		CAPE BRETON.		OTHER COUNTRIES.		Total.	
	Raised.	Sales.	Raised.	Sales.	Raised.	Sales.	Raised.	Sales.	Raised.	Sales.
1906.....	659,734	566,308	769,496	657,310	4,804,407	4,221,293	312,554	259,396	6,546,191	5,704,307
1907.....	534,047	445,288	840,533	729,043	4,698,147	4,346,180	395,836	343,895	6,468,563	5,864,406
1908.....	662,157	530,848	849,802	673,025	4,340,653	4,267,346	452,877	275,742	6,805,489	5,851,761
1909.....	494,919	403,371	743,860	599,743	4,081,333	3,723,135	398,759	340,663	5,718,871	5,066,912
1910.....	350,363	288,706	714,846	588,678	5,035,800	4,571,347	414,153	374,950	6,515,162	5,823,681
1911.....	538,296	436,125	833,956	691,852	5,405,355	4,917,902	347,944	312,201	7,125,551	6,358,080

Sales include coal used for making coke and steel.

COAL.—TABLE 10.

Nova Scotia: Output by Collieries during Fiscal Years ending September 30,
1909-10-11.

Colliery.	1909. Tons of 2,000 lbs.	1910. Tons of 2,000 lbs.	1911. Tons of 2,000 lbs.
<i>Cape Breton County.</i>			
Dominion Coal Company.	3,119,556	3,634,124	4,360,113
Nova Scotia Steel and Coal Co.	848,444	936,710	848,762
North Atlantic Collieries.	81,292	99,087	53,751
McKay Mining Company	15,217	19,136	32,571
Sydney Coal Company	5,301	4,464	4,129
Colonial Mining Co.	709	15,625	5,023
<i>Cumberland County.</i>			
Cumberland Railway and Coal Co.	421,437	60,298	214,871
Maritime Coal, Railway, and Power Co., Chignecto.	56,392	181,264	183,416
Minudie Coal Co. " " " " Joggins.	55,620		
Strathcona Coal Co.	55,766	61,037	61,019
Great Northern Coal Co.	7,936		
Atlantic Grindstone and Coal Co.	4,272	988	1,419
Eastern Coal Co.	721	239	374
	4,940	7,381	
<i>Colchester County.</i>			
Colchester Coal Co.	1,490		
<i>Pictou County.</i>			
Acadia Coal Co.	408,792	397,962	522,297
Intercolonial Coal Co.	327,576	307,692	293,000
Marsh colliery.	22,585		
<i>Inverness County.</i>			
Inverness Coal and Railway Co.	296,546	310,528	326,577
Mabou Coal Co.	1,804		
Port Hood Coal Co.	106,669	97,269	46,135

COAL.—TABLE 11.

Nova Scotia: Distribution of Coal Sold.

Markets.	FISCAL YEARS ENDING SEPTEMBER 30.									
	1907.		1908.		1909.		1910.		1911.	
	Tons. of 2,000 lbs.	Per cent.	Tons. of 2,000 lbs.	Per cent.	Tons. of 2,000 lbs.	Per cent.	Tons. of 2,000 lbs.	Per cent.	Tons. of 2,000 lbs.	Per cent.
Nova Scotia—										
Transported by land.....	1,740,736	30·80	1,804,377	29·37	1,642,716	31·77	1,681,052	30·65	2,007,192	32·25
" sea.....	322,773	5·71	380,332	6·19	339,462	6·57	342,787	6·25	354,514	5·70
Total Nova Scotia ..	2,063,509	36·51	2,184,709	35·56	1,982,178	38·34	2,023,839	36·90	2,361,706	37·95
New Brunswick.....	478,383	8·46	571,570	9·30	607,968	11·76	594,288	10·84	606,582	9·74
Prince Edward Island ..	36,792	1·54	70,931	1·15	88,365	1·71	89,031	1·62	90,314	1·45
Quebec Province.....	1,914,743	33·88	2,293,352	37·33	1,689,876	32·69	2,001,382	36·49	2,315,971	37·22
Newfoundland.....	164,082	2·90	231,909	3·77	174,998	3·39	19,224	3·62	206,299	3·32
United States.....	690,269	12·21	559,592	9·11	359,224	6·95	325,548	5·93	372,177	5·98
West Indies.....	2,910	0·05								
Mexico.....	8,502	0·15								
St. Pierre.....			9,976	0·16	11,463	0·22	8,405	0·15	10,107	0·16
Bunker coal.....	229,121	4·05	216,554	3·53	254,681	4·92	243,807	4·45	229,243	3·68
Other countries.....	13,981	0·25	5,261	0·09	846	0·02			*30,841	0·50
Total.....	5,652,292	100·000	6,143,854	100·00	5,169,595	100·00	5,484,524	100·00	6,223,240	100·00

* For time chartered boats.....

Other countries.....

Tons.	23,610	Per cent.	0·46
	2,231		0·04
	30,841		0·50

Number and Classes of Workmen employed at each mine in Nova Scotia, Year ending September 30, 1911.

Company.	UNDERGROUND.				SURFACE.				CONSTRUCTION.			TOTALS.		HORSES.		PIT DAYS.
	Skilled labour.	Labourers	Boys.	Days.	Skilled labour.	Labourers	Boys.	Days.	Skilled labour.	Labourers	Days.	Persons.	Days.	Above.	Below.	Worked.
Dominion Coal Co.	2,729	1,565	269	1,330,746	526	380	61	255,469				5,530	1,595,215	85	514	269
Nova Scotia Steel and Coal Co.	1,050	803	205	530,896	146	205	33	111,816				2,442	642,712	4	110	274
Cumberland Railway and Coal Co.	259	296	32	168,883	87	120	5	62,672	2	2	838	803	232,393	18	40	293
Acadia Coal Co.	343	354	82	251,538	90	275	19	136,940				1,163	388,478	31	47	291
Intercolonial Coal Co.	349	152	84	149,756	92	114	26	57,732	1	1	499	819	207,987	12	33	295
Mar. Coal, Ry. and Power Co., Joggins.	269	83	7	106,124	21	49	11	24,086				440	130,210	6	12	293
Inverness Railway and Coal Co.	312	130	21	137,725	42	43	11	29,161				559	166,886	6	28	297
Mar. Coal, Ry. and Power Co., Chignecto	29	8	3	10,357	6	5	2	3,224				53	13,581	1	1	174
Sydney Coal Co.	6	2	...	1,759	1	2	...	694	1	3	64	15	2,517	1	1	168
Mackay Mining Co.	36	13	...	14,506	5	8	...	4,174	1	3	234	66	18,934	3	3	293
North Atlantic Collieries.	70	29	16	32,623	12	32	7	13,477				166	46,099	7	13	266
Port Hood Coal Co.	196	37	5	22,872	15	21	3	9,973				277	32,845	4	5	183
Great Northern Coal Co.	4	1	...	1,099	1	2	...	688	2	1	662	11	2,449	...	...	67
Mimudie Coal Co.	92	16	15	31,114	14	14	4	9,504	1	...	440	156	41,058	3	1	246
Atlantic Grindstone and Coal Co.	2	...	...	238	2	...	...	380	...	...	...	4	668	...	...	102
Colonial Coal Co.	9	2	...	3,249	4	2	1	1,868	...	...	...	18	5,117	1	2	300
	5,755	3,491	739	2,802,534	1,064	1,272	183	721,858	8	10	2,757	12,522	3,527,149	182	810	.....

New Brunswick.

The coal production in New Brunswick is derived from the Grand Lake coal-field, in Queens county, in which a comparatively large number of small mines are intermittently operated. Only about 50 per cent of the production has been reported by the producers.

The actual shipments during 1911 are estimated by the Provincial Department of Works at 53,781 tons. Adding 2,000 tons for colliery consumption, workmen, etc., the production is placed at 55,781 tons, practically the same production as 1910.

COAL.—TABLE 12.

New Brunswick: Production.

Calendar Year.	Tons.	Value.	Value per ton.	Calendar Year.	Tons.	Value.	Value per ton.
		\$	\$ cts.			\$	\$ cts.
1887.....	10,040	23,607	2 35	1900.....	10,000	15,000	1 50
1888.....	5,730	11,050	1 93	1901.....	17,630	51,857	2 94
1889.....	5,673	11,733	2 07	1902.....	18,795	39,680	2 11
1890.....	7,110	13,850	1 95	1903.....	16,000	40,000	2 50
1891.....	5,422	11,030	2 03	1904.....	9,112	18,224	2 00
1892.....	6,768	9,375	1 39	1905.....	29,400	58,800	2 00
1893.....	6,200	9,837	1 59	1906.....	34,076	68,152	2 00
1894.....	6,469	10,264	1 59	1907.....	34,584	77,814	2 25
1895.....	9,500	14,250	1 50	1908.....	60,000	135,000	2 25
1896.....	7,500	11,250	1 50	1909.....	49,029	98,496	2 25
1897.....	6,000	9,000	1 50	1910.....	55,455	110,910	2 00
1898.....	6,160	9,240	1 50	1911.....	55,781	111,562	2 00
1899.....	10,528	15,792	1 50				

Saskatchewan.

Returns were received from 16 separate collieries in this Province during 1911, showing a total production¹ of 206,779 tons of lignite coal valued at \$347,248, an increase of 25,623 tons or 14 per cent over the production reported for 1910.

Of the 1911 production, 198,768 tons were sold for consumption in Canada and 8,011 tons used by the producers for colliery consumption and for workmen.

The output which has hitherto been obtained entirely from the Estevan and Souris fields in the southern portion of the Province, is used mainly for domestic purposes in Saskatchewan and Manitoba.

During 1911 a new colliery was opened on section 60, township 10, range 28, west of the 2nd Meridian, about 40 miles south of Moosejaw and 115 miles west of the Estevan field, by the Consumers Coal Company, Ltd., of Moosejaw. As yet this district has no railway communication and the production is entirely for local consumption. The present plant has a capacity of 75 tons per day.

¹ Figures have since been increased by 1,400 tons valued at \$2,600.

As soon as railway facilities are available, the Company proposes to install a plant with a daily capacity of 500 tons.

The principal operating mines of the Estevan field are the Western Dominion Collieries, Ltd., and the Manitoba and Saskatchewan Coal Company, each with an output close to 100,000 tons. Amongst the other mines the chief operators are: The Estevan Coal and Brick Co., The Maple Leaf Mines, Ltd., The Excelsior Coal Mining Company, Geo. Parkinson, Bastien and Sons, and The Kelly mine.

COAL.—TABLE 13.

Saskatchewan: Annual Production.

Calendar Year.	Tons.	Value.	Average value per ton.	Calendar Year.	Tons.	Value.	Average value per ton.
		\$	\$ cts.			\$	\$ cts.
1890.....	200	200	1 00	1901.....	45,000	72,000	1 60
1891.....				1902.....	70,400	112,640	1 62
1892.....	5,400	9,325	1 73	1903.....	116,703	169,618	1 45
1893.....	8,325	12,485	1 50	1904.....	124,885	187,021	1 50
1894.....	†15,051	15,153	1 01	1905.....	107,596	152,334	1 42
1895.....	15,769	31,538	2 00	1906.....	108,398	164,146	1 51
1896.....	16,706	25,059	1 50	1907.....	151,232	252,437	1 67
1897.....	25,000	37,500	1 50	1908.....	150,556	253,790	1 69
1898.....	25,000	37,500	1 50	1909.....	192,125	296,339	1 54
1899.....	25,000	37,500	1 50	1910.....	181,156	293,923	1 62
1900.....	40,500	60,750	1 50	1911.....	206,779	347,248	1 68

† Including a small quantity from the Turtle Mountain district, Manitoba.

Alberta.

The production of coal in Alberta has shown a steady increase each year since 1899 and under ordinary operating conditions the output in 1911 would undoubtedly have been greater than that of 1910. The closing down of the principal bituminous collieries in the southern part of the Province, however, for a period of nearly eight months of the year, due to the coal miners' strike to which reference has already been made, resulted in a greatly reduced output in 1911. The production of marketable coal during this year, according to direct returns received from the operators, was 1,511,036 tons, valued at \$3,979,264, or an average of \$2.63 per ton, as compared with 2,894,469 tons, valued at \$7,065,736, produced in 1910, showing a falling off of 1,383,433 tons or 48 per cent. The coal production of this Province includes the only anthracite mined in Canada, 90,460 tons in 1911, together with bituminous and lignite coals.

Of the total production in 1911, 1,304,778 tons were sold for consumption in Canada and 40,884 tons for export. The producers used 103,783 tons for colliery consumption and for workmen, and 61,591 tons were used in making coke. In 1910, the quantity sold for consumption in Canada was 2,309,438 tons, while

243,371 tons were sold for export to the United States, 145,410 tons were used for colliery consumption and by workmen, and 196,250 tons were used in making coke.

The production of 21 of the principal operating companies is shown in the following table. It will be observed that most of these companies were in operation for from three to four months only during the year and consequently their output is only about one-third or less of their capacity. These 21 companies produced a total of 1,003,035 tons, and 14 other companies, with an output of over 10,000 tons each, from whom permission for publication was not received, produced a total of 310,441 tons. Thus about 87 per cent of the total production was obtained from 35 operators, having an output exceeding 10,000 tons each.

Production of Coal in Alberta in 1911 by Principal Collieries, in short tons.

Name of Company.	Days in operation.	Total sales.	Total for colliery use.*	Total production.
The Davenport Coal Co., Burnis	104	21,669	300	21,969
The Hillcrest Coal and Coke Co., Hillcrest	168	44,664	4,025	48,689
Leitch Collieries Ltd., Passburg	153	52,315	2,310	54,625
Maple Leaf Coal Co., Bellevue	144	13,150	1,138	14,288
Canadian Coal Consolidated Co., Frank	86	24,912	12,514	37,426
West Canadian Collieries, Blairmore mine	122	79,604	(c) 36,107	115,711
" " Lille "	89			
" " Bellevue "	30			
International Coal and Coke Co., Coleman	100	92,869	(d) 46,158	139,027
The Canmore Coal Co., Canmore	32	26,673	2,105	28,778
Bankhead Mines, Ltd., Bankhead	77	(a) 78,609	(b) 11,851	90,460
Jasper Park Collieries, Pochontas	96	10,619	350	10,969
Breckenridge & Lund Coal Co., Lundbreck	252	43,482	1,123	44,605
Alberta Railway & Irrigation Co., Lethbridge	104	131,859	7,041	138,900
Fureka Coal Co., Taber	273	12,914	2,430	15,344
Rock Springs Sootless Coal Co., Taber	264	20,543	3,000	23,543
Red Cliff Brick and Coal Co., Redcliff	268	17,652	.....	17,652
Round Hill Collieries, Round Hill	144	12,825	137	12,962
Edmonton Standard Coal Co., Edmonton	300	29,300	900	30,200
Ritchie Coal Co., Edmonton	168	10,000	550	10,550
Messrs. Love & Cameron, Edmonton	300	10,000	50	10,050
Alberta Coal Mining Co., Edmonton	200	33,708	2,500	36,208
Cardiff Collieries, Ltd., Cardiff	300	99,879	1,200	101,079
14 other companies, each producing over 10,000 tons .....	.....	867,246	135,789	1,003,035
14 other companies, each producing under 10,000 tons .....	.....	290,527	19,914	310,441
.....	.....	187,889	9,671	197,560
Total production, Alberta .....	.....	1,345,662	165,374	1,511,036

* Includes consumption under boilers, workmen, etc.

- (a) " 47,308 tons of briquettes.
 (b) " 892 " "
 (c) " 23,754 tons used in making coke.
 (d) " 37,837 " "

The annual production in Alberta since 1887 is shown in Table 14.

COAL.—TABLE 14.

Alberta: Annual Production.

Calendar Year.	Tons.	Value.	Average value per ton.	Calendar Year.	Tons.	Value.	Average value per ton.
		\$	\$ cts.			\$	\$ cts.
1887.....	74,152	157,577	2 13	1900.....	311,450	778,625	2 50
1888.....	115,124	183,354	1 59	1901.....	340,275	850,687	2 50
1889.....	97,364	179,640	1 85	1902.....	402,819	960,601	2 38
1890.....	128,753	198,298	1 54	1903.....	495,893	1,117,541	2 25
1891.....	174,131	437,243	2 51	1904.....	661,732	1,404,524	2 12
1892.....	178,970	460,605	2 57	1905.....	931,917	1,993,915	2 14
1893.....	230,070	586,260	2 55	1906.....	1,246,360	2,614,762	2 10
1894.....	184,940	473,827	2 56	1907.....	1,591,579	3,836,286	2 41
1895.....	169,885	382,526	2 25	1908.....	1,685,661	4,127,311	2 45
1896.....	209,162	581,832	2 78	1909.....	1,994,741	4,838,109	2 43
1897.....	242,163	630,408	2 60	1910.....	2,894,469	7,065,736	2 44
1898.....	315,088	788,720	2 50	1911.....	1,511,036	3,979,264	2 63
1899.....	309,600	774,000	2 50				

British Columbia.

The same conditions which resulted in the large falling off in coal production in the Province of Alberta were also the cause of a decreased output in British Columbia. The mines of the Crowsnest district, East Kootenay, were closed down for a period of eight months from April to November along with the mines in southwestern British Columbia, owing to the inability of the mine operators and the Labour Union to agree as to wages and working conditions.

The total production in 1911 was 2,542,532 tons, valued at \$7,945,413, as compared with a production of 3,330,745 tons, valued at \$10,408,580, reported in 1910, showing a decrease of 788,213 tons or about 24 per cent.

A large proportion of the coal production of this Province is annually exported; in 1910 nearly 40 per cent or considerably over one-third of the total production was sold for export, while a considerable tonnage, over 11 per cent of the production in 1910, is made into coke. The direct result of the closing down of the Crowsnest Pass, Hosmer, and Corbin collieries was a considerably reduced coke output which in turn seriously affected the operations of the smelting furnaces of the Boundary district and at Trail. A great falling off was also caused in the amount of coal sold for export, only a little more than half as much coal being sold for export in 1911 as in 1910. On the other hand there was a substantial increase in the amount of coal sold for consumption in Canada, and this notwithstanding the keen competition now being given by fuel oil on the coast. Of the total production in 1911, 1,536,957 tons, or 60 per cent, were sold for consumption in Canada, as compared with 1,400,405 tons or 42 per cent similarly disposed of in 1910; 642,754 tons, or 25 per cent of the production, were

sold for export to the United States in 1911, as against 1,248,483 tons or 37.5 per cent in 1910; and 43,465 tons were sold for export to other countries, as against 67,525 tons in 1910. The quantity used by producers in making coke in 1911 was 117,215 tons, only 4.6 per cent of the production, as against 379,892 tons or 11.4 per cent in 1910; and the quantity used by producers under colliery boilers and for workmen in 1911 was 202,141 tons or 8 per cent of the production, as against 234,439 tons in the previous year.

The production of the coast collieries located on Vancouver island, and of the mainland collieries in East Kootenay and Nicola valley is separately shown in the next table. The total production of coal on Vancouver island in 1911 was 1,789,530 tons, as against 1,627,810 tons in 1910, and the production of the Crowsnest Pass and Nicola Valley districts in 1911 was 753,002 tons, as against 1,702,935 tons in 1910. In the latter districts the quantity sold for consumption in Canada in 1911 was 348,188 tons, as against 384,584 tons in 1910, a comparatively small decrease; whereas the quantity sold for export in 1911 was only 237,219 tons, as against 845,113 tons in 1910, or a decrease of nearly 72 per cent.

Coal.	1910.			1911.		
	Coast.	Crowsnest and Nicola valley.	Total.	Coast.	Crowsnest and Nicola valley.	Total.
		Short tons.			Short tons.	
Sold for consumption in Canada	1,015,821	384,584	1,400,405	1,188,769	348,188	1,536,957
Sold for export to United States	403,370	845,113	1,248,483	405,535	237,219	642,754
Sold for export to other countries	67,525	.....	67,525	43,465	.....	43,465
Total sales	1,486,716	1,229,697	2,716,413	1,637,769	585,407	2,223,176
Used for making coke	5,230	374,662	379,892	.....	117,215	117,215
Used for colliery consumption	135,864	98,576	234,440	151,761	50,386	202,141
Production	1,627,810	1,702,935	3,330,745	1,789,530	753,002	2,542,532

The coal production by collieries in British Columbia in 1910 and 1911 is shown in the following tables, while the annual production of coal since 1836 is given in Table 15. The total production to the end of 1911 has been 42,649,441 short tons of which 22,617,371 tons or about 53 per cent has been produced during the past ten years.

Coal Production by Collieries in British Columbia in 1911, in tons of 2,240 lbs.

Colliery.	SALES.				Used in making coke.	Used under colliery boilers, etc.	Lost in washing.	STOCKS.		Output.
	In Canada.	To United States.	To other countries.	Total.				First of year.	Last of year.	
1. Protection.....	240,459	140,162	1,726	382,347	.....	34,332	.....	9,712	4,942	411,909
Northfield.....	36,145	94,049	2,300	132,494	.....	30,833	.....	1,945	470	161,852
Douglas.....	.....	31	.....	31	.....	1,385	.....	.....	.....	1,416
2. Extension.....	255,007	62,494	.....	317,501	.....	14,591	.....	1,981	1,465	331,576
Union.....	321,690	42,640	32,782	397,112	.....	39,250	.....	22,515	23,488	437,335
3. Fiddick and Richardson.....	138,938	22,709	2,000	163,647	.....	11,441	22,279	30,329	38,510	205,048
Suquash.....	1,613	.....	.....	1,613	.....	669	.....	.....	.....	2,282
4. New East Wellington.....	67,549	.....	.....	67,549	.....	3,000	2,069	100	400	72,918
5. Middlesboro.....	184,182	.....	.....	184,182	.....	6,752	.....	259	615	191,290
6. Princeton.....	16,336	1,909	.....	18,245	.....	823	4,328	.....	.....	23,396
7. Coal Creek*.....	26,200	123,377	.....	149,577	44,688	13,709	.....	1,529	111	206,556
Michel*.....	13,505	51,519	.....	65,024	40,303	9,198	.....	159	18	114,384
8. Hosmer*.....	10,721	.....	.....	10,721	19,665	11,450	6,503	3,388	1,687	46,638
9. Corbin.....	44,154	34,998	.....	79,152	.....	2,567	.....	.....	.....	81,719
10. Diamond Vale.....	5,384	.....	.....	5,384	.....	.....	.....	.....	.....	5,384
11. Coal Hill.....	10,400	.....	.....	10,400	.....	483	.....	.....	.....	10,883
12. West Wellington.....	.....	.....	.....	.....	.....	.....	.....	90	298	208
Total.....	1,372,283	573,888	38,808	1,984,979	104,656	180,483	35,179	72,507	72,004	2,304,794

* In operation during three months owing to strike.

1. The Western Fuel Co.
2. The Canadian Collieries (Dunsmuir), Ltd.
3. Pacific Coast Coal Mines, Ltd.
4. The Vancouver-Nanaimo Coal Mining Co., Ltd.
5. Nicola Valley Coal and Coke Co., Ltd.
6. Princeton Coal and Land Co., Ltd.

7. Crownsnest Pass Coal Co., Ltd.
8. Hosmer Mines, Ltd.
9. Corbin Coal and Coke Co., Ltd.
10. Diamond Vale Collieries, Ltd.
11. The Inland Coal and Coke Co., Ltd.
12. Biggs Bros.

Coal Production by Collieries in British Columbia in 1910, in tons of 2,240 lbs.

Colliery.	SALES.				Used in making coke.	Used under colliery boilers, etc.	Lost in washing.	Stocks.		Output.
	In Canada.	To United States.	To other countries.	Total.				First of year.	Last of year.	
1 Protection.....	187,923	133,360	10,583	331,866		31,439		8,327	9,711	364,689
Northfield.....	36,085	77,776	6,535	120,346		28,495		2,605	1,945	148,181
2 Extension.....	251,208	72,920		324,128		12,467	43,812	1,906	1,981	380,482
Union.....	308,266	48,623	25,873	382,762	4,670	37,355	79,790	6,986	20,835	518,426
3 Fiddick.....	92,701	27,473	17,259	137,473		10,305	11,602	13,238	25,829	171,971
Suquash.....	766			766		1,000		1,050	2,123	2,839
4 New East Wellington.....	29,542			29,542				200	100	29,442
5 Middlesboro.....	138,681			138,681		2,987		440	259	141,487
6 Princeton.....	6,278	3,570		9,848		300			†1,720	11,868
7 Coal Creek.....	41,110	431,772		472,882	118,432	29,756		36	1,530	622,564
Michel.....	77,290	204,525	*	281,815	147,134	28,500	*	27	159	457,581
Carbonado.....		*	*	*	*	*	*	*	*	*
8 Hosmer.....	54,098			54,098	68,953	22,086	11,073	1,475	3,388	158,123
9 Corbin.....	10,080	114,790		124,870		1,931				126,581
10 Diamond Vale.....	2,261			2,261		100			70	2,431
11 Coal Hill.....	2,200			2,200		100				2,300
Total.....	1,238,439	1,114,809	60,290	2,413,538	339,189	206,871	146,277	36,290	69,650	3,139,235

* Not in operation. † Development coal not marketed.

- | | |
|--|-----------------------------------|
| 1. The Western Fuel Co. | 7. Crownest Pass Coal Co., Ltd. |
| 2. The Canadian Collieries (Dunsmuir), Ltd. | 8. Hosmer Mines, Ltd. |
| 3. Pacific Coast Coal Mines, Ltd. | 9. Corbin Coal and Coke Co., Ltd. |
| 4. The Vancouver-Nanaimo Coal Mining Co., Ltd. | 10. Diamond Vale Collieries, Ltd. |
| 5. Nicola Valley Coal and Coke Co., Ltd. | 11. Coal Hill Syndicate. |
| 6. Princeton Coal and Land Co., Ltd. | |

COAL.—TABLE 15.

British Columbia: Production.

Calendar Year.	Output, tons, 2,240 lbs.	Home consumption, tons, 2,240 lbs.	Sold for export, 2,240 lbs.	PRODUCTION.*		Price per ton, 2,240 lbs.	Value.
				Tons, 2,240 lbs.	Tons, 2,000 lbs.		
						\$ cts.	\$
1836-52...	10,000				11,200	4 00	40,000
1852-59...	25,398				28,446	4 00	101,592
1859†...	1,989				2,228	4 00	7,956
1860.....	14,247				15,957	4 00	56,988
1861.....	13,774				15,427	4 00	55,096
1862.....	18,118				20,292	4 00	72,472
1863.....	21,345				23,906	4 00	85,380
1864.....	28,632	From 1836 to 1873, inclusive, the output is taken as production.			32,068	4 00	114,528
1865.....	32,819				36,757	4 00	131,276
1866.....	25,115				28,129	4 00	100,460
1867.....	31,239				34,988	4 00	124,956
1868.....	44,005				49,286	4 00	176,020
1869.....	35,080				40,098	4 00	143,208
1870.....	29,843				33,424	4 00	119,372
1871-2-3..	148,459				166,274	4 00	593,836
1874.....	81,547	25,023	56,038	81,061	90,788	3 00	243,183
1875.....	110,145	31,252	66,392	97,644	109,361	3 00	292,932
1876.....	139,192	17,856	122,329	140,185	157,007	3 00	420,555
1877.....	154,052	24,311	115,381	139,692	156,455	3 00	419,076
1878.....	170,846	26,166	164,682	190,848	213,750	3 00	572,544
1879.....	241,301	40,294	192,096	232,390	260,277	3 00	697,170
1880.....	267,595	46,513	225,849	272,362	305,045	3 00	817,086
1881.....	223,357	40,191	189,323	229,514	257,056	3 00	688,542
1882.....	282,139	56,161	232,411	288,572	323,201	3 00	865,716
1883.....	213,299	64,786	149,567	214,353	240,075	3 00	643,059
1884.....	394,070	87,388	306,478	393,866	441,130	3 00	1,181,598
1885.....	365,596	95,227	237,797	333,024	372,987	3 00	999,072
1886.....	326,636	85,987	249,205	335,192	375,415	3 00	1,005,576
1887.....	413,360	99,216	334,839	434,055	486,142	3 00	1,302,165
1888.....	489,301	115,953	365,714	481,667	539,467	3 00	1,445,001
1889.....	579,830	124,574	443,675	568,249	636,439	3 00	1,704,747
1890.....	678,140	177,075	508,270	685,345	767,586	3 00	2,056,035
1891.....	1,029,097	202,697	806,479	1,009,176	1,130,277	3 00	3,027,528
1892.....	826,335	196,223	640,579	836,802	937,218	3 00	2,510,406
1893.....	978,294	207,851	768,917	976,768	1,093,080	3 00	2,930,304
1894.....	1,012,953	165,776	827,642	993,418	1,112,628	3 00	2,980,254
1895.....	939,654	188,349	756,334	944,683	1,058,045	3 00	2,834,049
1896.....	894,882	261,984	634,238	896,222	1,003,769	3 00	2,688,666
1897.....	802,296	290,310	619,860	910,170	1,019,390	3 00	2,730,510
1898.....	1,136,485	375,423	752,863	1,128,286	1,263,680	3 00	3,384,858
1899.....	1,306,324	526,058	751,711	1,277,769	1,431,101	3 00	3,833,307
1900.....	1,590,178	685,667	914,184	1,599,851	1,791,833	3 00	4,799,553
1901.....	1,691,557	799,666	914,163	1,713,829	1,919,488	3 00	5,141,487
1902.....	1,641,626	837,871	776,809	1,614,680	1,808,441	3 00	4,844,040
1903.....	1,450,663	947,499	549,449	1,496,948	1,676,581	3 00	4,490,844
1904.....	1,685,698	1,129,465	533,593	1,663,058	1,862,625	3 00	4,989,174
1905.....	1,736,696	1,089,667	647,343	1,737,010	1,945,452	3 00	5,211,030
1906.....	1,899,075	1,236,476	679,829	1,916,305	2,146,262	3 00	5,748,915
1907.....	2,219,602	1,438,402	673,114	2,111,516	2,364,898	3 50	7,390,306
1898.....	2,111,931	1,486,511	597,157	2,083,668	2,333,708	3 50	7,292,838
1909.....	2,388,196	1,585,232	741,667	2,326,899	2,606,127	3 50	8,144,147
1910.....	3,152,207	1,798,873	1,175,007	2,973,880	3,330,745	3 50	10,408,580
1911.....	2,304,794	1,657,422	612,696	2,270,118	2,542,532	3 50	7,945,413

* This production is obtained by adding 'Home Consumption' and 'Sold for Export'.

† 52,935 tons of this amount were exported as sales without the division into 'Home Consumption' and 'Sold for Export'.

‡ Two months only.

The following general summary of the coal potentialities of British Columbia is quoted from the Annual Report of Mr. W. F. Robertson, Provincial Mineralogist for British Columbia.¹

'In addition to the areas actually being worked, there is in the Quatsino Mining Division on Quatsino sound a Cretaceous coal-field now being developed by Thos. Pearson and associates, which gives promise of containing extensive beds of coal; prospecting workings have been in progress here for four or five years, with considerable success.'

'The Suquash area is now being opened up by actual mining by the Pacific Coast Coal Mines, Ltd., and has already made small shipments and it is expected that the output will be increased rapidly.'

'On Graham island coal has been known for forty years. Exploratory workings on coal outcrops have been carried on at Camps Robertson and Wilson; at present systematic boring of the measures of the dip to accurately define the beds is being done at several points, to prove the existence of a commercially workable field; when this is done a railway will be built to convey the coal to tide-water—probably on Skidegate inlet.'

To the north of these camps, areas have been located and considerable boring done, with results which show the field to continue nearly to Masset. The eastern extension of the field has not, as yet, been satisfactorily established.'

'In the Peace River valley extensive coal-fields are located and partly prospected but these also are, as yet, far from transportation.'

'Near Bear lake and river, tributaries of the Fraser river near its most northerly head, and thus near the located line of the Grand Trunk Pacific railway, a coal-area is being developed, which, according to the recent reports of engineers who have examined it, has considerable promise, and being near the railway assumes importance, as it is the only known area near the line in British Columbia.'

Yukon.

The principal coal mining companies operating in the Yukon district are the Five Fingers Coal Co., at Tantalus in the southern Yukon, and the Northern Light, Power, and Coal Co., Ltd., operating the Sourdough mine on Coal creek, 40 miles northwest of Dawson. No report was received from the latter Company respecting their operations during 1911, consequently the only production reported for that year was 2,340 tons, valued at the mine at \$12,780. The total production of the district in 1910 was reported as 16,185 tons, valued at \$110,925.

¹ Annual Report of the Minister of Mines (British Columbia) for the year ending December 31, 1911.

COAL.—TABLE 16.

Yukon Territory: Annual Production.

Calendar Year.	Tons.	Value.	Average value per ton.
		\$	\$ cts.
1901.....	*5,864	86,230	14 70
1902.....	4,910	37,280	7 59
1903.....	1,849	29,584	16 00
1904.....			
1905.....	7,000	21,000	3 00
1906.....	7,000	28,000	4 00
1907.....	15,000	60,000	4 00
1908.....	3,847	21,158	5 50
1909.....	7,364	49,502	6 72
1910.....	16,185	110,925	6 85
1911.....	2,840	12,780	4 50

* Part of this production was mined in 1900.

COKE.

The statistics of coke production given herewith do not include coke made as a by-product in the manufacture of illuminating gas, but are restricted to the record of the output of 'oven coke' produced chiefly for metallurgical purposes.

The total output of coke in 1911 was 954,388 tons produced from 1,409,844 tons of coal: of which 671,514 tons were produced from domestic coal and 282,874 tons from imported coal.

In 1910 the total production was 901,269 tons produced from 1,373,793 tons of coal, of which 875,310 tons were produced from domestic coal and 25,959 tons from imported coal. The quantity of coke sold or used by the producers in 1911 was 935,651 tons, as compared with 902,715 tons in 1910.

The consumption of coke in Canada is much in excess of the domestic production, there being a considerable importation of coke chiefly into Ontario and Quebec for use in the metallurgical industries.

The imports of coke during the calendar year 1911 were 751,389 tons and the exports 9,852 tons. These figures taken in conjunction with the production of 935,651 tons (sold or used), would indicate a consumption of 1,677,188 tons. Similarly estimated the consumption in 1910 was 1,581,832 tons, and in 1909, 1,449,369 tons.

The production by provinces in 1910 and 1911 and the distribution of coke sold or used in 1911 are shown in the next three tables. While a small increase is shown in total production, there was a very large decrease in the coke output in Alberta and British Columbia due to the closing down of the collieries and coke ovens for about eight months of the year on account of labour disputes. In so far as the total production of Canada is concerned, however, this decrease is more than balanced by the increased output in Ontario due to the placing in operation of the new by-product ovens at Sault Ste. Marie and by the increased production in Nova Scotia.

Coke Production, 1910.

Province.	Coal charged to ovens.	Output of coke.	STOCK ON HAND.		Coke sold or used.	Value of sales, etc.
			Jan. 1.	Dec. 31.		
	Tons.	Tons.	Tons.	Tons.	Tons.	\$
Nova Scotia.....	756,003	508,025	417	384	508,053	1,655,775
Ontario.....	42,208	25,959	.....	1,374	24,655	143,110
Alberta.....	196,250	123,093	40	1,555	121,573	486,312
British Columbia.....	379,332	244,192	18,759	14,537	248,394	1,172,675
Total.....	1,373,793	901,269	19,216	17,770	902,715	3,462,872

Coke Production, 1911.

Nova Scotia.....	846,695	562,512	210	5,168	557,554	1,814,977
Ontario.....	384,343	282,874	1,274	24,594	259,554	1,318,303
Alberta.....	61,591	35,059	1,785	625	36,216	146,251
British Columbia.....	117,215	73,943	14,557	6,173	82,327	350,879
Total.....	1,409,844	954,388	17,826	36,560	935,651	3,630,410

Distribution of Coke Production, 1911.

	Nova Scotia.	Ontario.	Alberta.	British Columbia.	Total.
Sold in Canada.....	13,541	614	27,882	80,908	122,945
Sold for export.....			7,871	1,419	9,290
Total sales.....	13,541	614	35,753	82,327	132,235
Used by maker in blast furnace or otherwise.	544,013	258,940	463	0	803,416
Total sold or used.....	557,554	259,554	36,216	82,327	935,651
Number of ovens in operation December 31.	664	110	226	650	1,650
Number of ovens idle December 31.....	284	100	40	680	1,104
Number of ovens building December 31....	0	0	101	0	101

The annual production of coke since 1886 is shown in Table 1 and the annual production by provinces since 1897 in Table 2.

COKE.—TABLE 1.

Annual Production, 1886-1911.

Calendar Year.	Tons.	Value.	Value per ton.	Calendar Year.	Tons.	Value.	Value per ton.
		\$	\$ cts.			\$	\$ cts.
1886.....	35,396	101,940	2 88	1899.....	100,820	350,022	3 47
1887.....	40,428	135,951	3 36	1900.....	157,134	649,140	4 13
1888.....	45,373	134,151	2 96	1901.....	365,531	1,228,225	3 36
1889.....	54,539	155,043	2 84	1902.....	502,043	1,519,185	3 03
1890.....	56,450	166,298	2 95	1903.....	561,318	1,734,404	3 09
1891.....	57,084	175,592	3 08	1904.....	554,083	2,032,048	3 66
1892.....	56,135	160,249	2 85	1905.....	700,488	2,436,211	3 48
1893.....	61,078	161,790	2 65	1906.....	782,055	2,863,503	3 66
1894.....	58,044	148,551	2 56	1907.....	842,003	3,588,468	4 26
1895.....	53,356	143,047	2 68	1908.....	858,257	3,449,361	4 02
1896.....	49,619	110,257	2 22	1909.....	862,011	3,484,393	4 04
1897.....	60,686	176,457	2 91	1910.....	902,715	3,462,872	3 84
1898.....	87,600	286,000	3 26	1911.....	935,651	3,630,410	3 88

COKE.—TABLE 2.

Production of Coke by Provinces, 1897-1911.

Calendar Year.	NOVA SCOTIA.		ONTARIO.		BRITISH COLUMBIA.		Alberta.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$		\$
1897.....	41,532	90,950			19,154	85,507		
1898.....	48,400	111,000			39,200	175,000		
1899.....	62,459	178,767			38,361	171,255		
1900.....	61,767	223,395			95,367	425,745		
1901.....	222,694	590,560			142,837	637,665		
1902.....	363,330	899,930			138,713	619,255		
1903.....	371,745	888,094			189,573	846,310		
1904.....	275,927	808,022			257,172	1,148,090	20,984	78,936
1905.....	386,366	1,054,712			269,256	1,202,035	44,866	179,464
1906.....	476,364	1,540,976			236,205	1,054,485	69,486	268,042
1907.....	524,110	1,688,070			241,572	1,049,432	76,321	297,595
1908.....	505,929	1,658,151			276,683	1,482,191	75,645	309,019
1909.....	492,992	1,608,092			281,786	1,509,567	87,233	366,734
1910.....	508,053	1,655,775	24,685	148,110	248,394	1,172,675	121,578	486,312
1911.....	557,554	1,814,977	259,554	1,318,303	36,216	146,251	82,327	350,879

Coke is made in Nova Scotia principally at Sydney and Sydney Mines, but also at Westville, Stellarton, and Londonderry. This Province in 1911 produced about 59 per cent of the total output for Canada and the output is used almost entirely in the manufacture of iron. In Ontario coke is made by the Atikokan Iron Company at Port Arthur for use in the Company's blast furnace, and by the Algoma Steel Company at Sault Ste. Marie. The latter Company have acquired and are operating coal lands in West Virginia for their supply of coal. In Alberta coke ovens are operated at Coleman and Lille, near Blairmore, and in British Columbia at Fernie, Michel, Carbonado, and Hosmer in the Crowsnest pass, and at Union Bay, Vancouver island. The coke output of these Provinces is used chiefly by the copper and lead smelters; finding a market in the United States as well as in British Columbia.

The total number of ovens in active operation on December 31 was 1,650; while 1,104 were reported idle on the same date and 101 in course of construction. In Nova Scotia the Dominion Iron and Steel Company at Sydney has 620 finished ovens, all of the Otto Hoffman by-product type. The by-products from these ovens include tar and ammonia. The tar is sold to the Dominion Tar and Chemical Company, whose works are contiguous to the coke oven plant, and this product is further treated for the manufacture of refined tar, pitch of various grades, benzole, creosote, carbolic acid, etc. The production of tar in 1911, including the production from the by-product ovens at Sault Ste. Marie, was 6,646,155 gallons, and ammonia liquor containing 7,124 tons of sulphate of ammonia. In 1910 the production of tar was 3,963,591 gallons and of sulphate of ammonia 3,491 tons; and in 1909, tar 4,016,824 gallons, and sulphate of

ammonia, 3,351 tons. The Nova Scotia Steel and Coal Company has 30 ovens of the Bauer type and 120 Bernard ovens; the latter are situated near the blast furnace and the surplus gas is used for the production of steam for the electric power plant. The surplus gas from the Bauer ovens is used in generating steam for general colliery use. The other ovens in this Province number 178 and are all of the beehive type. The Atikokan Iron Co., Ltd., has 100 beehive ovens at Port Arthur, Ontario, and the Algoma Steel Company 110 Koppers by-product regenerative ovens at Sault Ste. Marie.

In Alberta the West Canadian Collieries, Ltd., at Lille, has 50 ovens of the Bernard or Belgian type. The ovens of the International Coal and Coke Company at Coleman, 216 in number, are the ordinary beehive as are also the ovens in British Columbia, comprising 1,420 in the Crowsnest district and 150 on Vancouver island. In Alberta, also, the Leitch Collieries, Ltd., are erecting at Passburg 101 Mitchell rectangular ovens.

The following description of these ovens has been furnished by Mr. W. L. Hamilton, Manager of the Leitch Collieries, Ltd.:—

‘This type of oven is similar to the beehive oven in the method of burning and quality of coke produced. They are rectangular in shape, being 30 feet long; 4 feet 10 inches wide; 4 feet 6 inches high at the doors, and 8 feet high at the middle. About 10,000 nine inch bricks are necessary to build one oven. The ovens are spaced 7 feet 7½ inches centre to centre. The side walls and piers are built of stone—as in other ovens, the tops are covered with clay.’

‘The ovens are operated altogether by machinery, electric power being used. The charge of coal is delivered to the oven through a port at the top of the oven, an electric larry of 10 tons capacity being used. The charge is then levelled by a levelling machine, after which the drafts are set, and the coke is burnt much the same as a beehive oven, except that the oven has two doors and drafts must be set on each of them. When the charge is coked the doors are removed and the coke is quenched in the oven, after which the entire oven is pushed at once into the yard; it is then loaded into the railway cars by hand. The larries, leveller, and pusher, are all manufactured by the Scottdale Foundry & Machine Co., of Scottdale, Pa., who have acquired quite a reputation in designing and building this class of machinery. This equipment is sufficient for a plant of 300 ovens if necessary.’

‘There is a vast saving of time in this type of oven. It requires but two minutes to push out one oven and move to the next, while one man can scarcely draw a beehive oven by hand in less than one hour. As soon as an oven is pushed out it is immediately charged and levelled. The doors are then closed and a great deal of the heat which is lost in a beehive oven is retained, allowing a much larger charge of coal to be coked than in the case of a hand drawn oven.’

‘There is also a large saving in the cost of operation as this machinery does the work of a large number of men. To operate this block of 101 ovens, the following men will be required. One man to charge ovens; one man to operate

both pusher and leveller; two men to quench ovens; four men to put up doors and set drafts; besides the men to load coke from the yard into the cars.'

'Several types of patent oven doors are being tested and eventually the entire block will be equipped at a great saving of time and brick.'

'The purchase of a coke loader is under consideration at the present time. If a machine for this purpose can be made to work satisfactorily it will further reduce the number of men necessary to operate the plant.'

'The coal used for coke is $\frac{1}{2}$ inch screenings. Before coking it is washed by a Lührig washery of a capacity of 500 tons per day. Forty-eight hour coke will be made in these ovens, about 300 tons per day being the capacity of the complete plant. At the present time, 25 ovens are being heated up and coke will be made within a couple of weeks.'

Statistics of exports and imports of coke as published by the Customs Department are shown in Tables 3 and 4 following.

The exports during the calendar year 1911 were only 9,852 tons, as against 57,971 tons in 1910 and 74,067 tons in 1909. These exports are almost entirely from British Columbia and Alberta and the falling off in 1911 is, of course, a result of the greatly reduced output of these Provinces.

The record of imports of coke shown in Table 4 covers the fiscal year. The total imports during the calendar year, 1911 were 751,389 tons valued at \$1,848,248, as against 737,088 tons valued at \$1,908,725, in 1910.

The operation of the new coke ovens at Sault Ste. Marie would naturally displace a considerable tonnage of coke formerly imported at this point for use in the blast furnaces, but this displacement seems to have been more than balanced by the coke imported to meet the shortage in British Columbia.

COKE.—TABLE 3.

Exports of Coke to the United States, 1897-1911.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
		\$			\$
1897.....	2,987	6,078	1905.....	116,011	509,908
1898.....	3,774	8,394	1906.....	37,003	168,571
1899.....	5,557	18,726	1907.....	70,617	320,357
1900.....	41,529	131,278	1908.....	58,708	248,759
1901.....	57,505	176,990	1909.....	74,067	329,051
1902.....	62,568	180,920	1910.....	57,971	250,715
1903.....	32,608	135,957	1911.....	9,852	39,823
1904.....	102,463	345,031			

COKE.—TABLE 4.

Imports of Oven Coke, 1880-1911.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		\$			\$
1880.....	3,837	19,353	1896.....	61,612	203,826
1881.....	5,492	26,123	1897.....	83,330	267,540
1882.....	8,157	36,670	1898.....	135,060	347,040
1883.....	8,943	38,588	1899.....	141,284	362,826
1884.....	11,207	44,518	1900.....	187,878	506,839
1885.....	11,564	41,391	1901.....	308,786	680,138
1886.....	11,858	39,756	1902.....	267,142	842,815
1887.....	15,110	56,222	1903.....	256,723	1,222,756
1888.....	25,487	102,334	1904.....	221,050	765,123
1889.....	29,557	91,902	1905.....	371,593	807,842
1890.....	36,564	133,344	1906.....	480,222	1,311,375
1891.....	38,533	177,605	1907*.....	400,536	1,132,680
1892.....	49,499	194,429	1908.....	619,269	2,166,036
1893.....	41,821	156,277	1909.....	466,292	1,136,624
1894.....	42,864	176,996	1910†.....	702,053	1,695,603
1895.....	43,235	149,434	1911.....	763,114	1,887,403

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