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CANADA
DEPARTMENT OF MINES
HON. LOUIS CODERRE, MINISTER; A. P. LOW, LL.D., DEPUTY MINISTER.

MINES BRANCH
EUGENE HAANEL, PH.D., DIRECTOR.

THE
PRODUCTION OF COAL AND COKE

IN

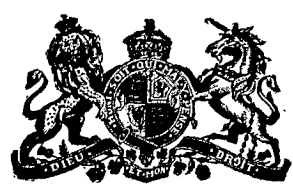
CANADA

During the Calendar Year
1912

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1913

ADVANCE CHAPTER OF THE ANNUAL REPORT ON THE MINERAL PRODUCTION OF CANADA, DURING THE CALENDAR YEAR 1912.

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

COAL.

The production of coal in Canada in 1912 exceeded that of any previous year, the total production being reported as 14,512,829 short tons valued at \$36,019,044 and constituting nearly 27 per cent of the total value of the mineral production of Canada during the year. The production was obtained by about 244 operating companies employing an average of 27,581 men at a wage cost of \$20,784,843. Compared with 1911, in which year the production was 11,323,388 short tons valued at \$26,467,646, an increase is shown of 3,189,441 tons, or 28 per cent in quantity and \$9,551,398 or 36 per cent in total value.

The largest previous year's output was in 1910 when the production was 12,909,152 short tons valued at \$30,909,779, compared with which 1912 shows an increase of 1,603,677 tons or 12 per cent and \$5,109,265 or over 11.6 per cent in total value.

In contrast to 1911 there were no very serious interruptions to mining operations during 1912 with the exception of the labour troubles in the mines of the Canadian Collieries, Limited, on Vancouver island, during the latter part of the year, and on account of which the production in British Columbia was somewhat less than might otherwise have been expected.

The character of the coal mined in Canada 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 term production in the tables and the text 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.

Statistics of the production by provinces in 1912 are shown in Table 1 and of the production during 1909-10-11 in Table 2.

In Nova Scotia there was an increased production in 1912 of 779,468 tons or 11 per cent, over 1911. This Province produced nearly 54 per cent of the total in 1912 as against 62 per cent in 1911. The production in New Brunswick is quite small in proportion to the other provinces and amounted to only 44,780 tons in 1912, a decrease of nearly 20 per cent from 1911. In the west for the first time on record Alberta has the largest production, amounting to 3,240,577 tons, the production in British Columbia being 3,208,997 tons; but, as already stated, the latter Province would have had a higher production had

labour troubles not prevented a normal output at the mines of the Canadian Collieries, Limited. The production in Alberta is the highest recorded for that Province, while in British Columbia the greatest production was attained in 1910. Large decreases were shown in these Provinces in 1911 and correspondingly large increases in 1912 due to the abnormal conditions of miners out on strike and consequent cessation of work during a large part of 1911.

COAL.—TABLE 1.

Production of Coal by Provinces, 1912.

Province.	Average No. of men employed.	Wages paid.	PRODUCTION OF COAL.		Average value per ton.	Per cent of total quantity.
			Tons.	Value.		
		\$		\$	\$ cts.	
Nova Scotia.....	13,736	8,893,697	7,783,888	17,374,750	2.233	53.63
British Columbia...	6,633	6,125,239	3,208,997	10,028,116	3.125	22.12
Alberta.....	6,648	5,474,192	3,240,577	8,113,525	2.503	22.33
Saskatchewan.....	374	213,690	225,342	368,135	1.633	1.55
New Brunswick....	144	50,000	44,730	89,560	2.000	0.31
Yukon Territory...	46	28,025	9,245	44,958	4.863	0.06
	27,581	20,784,843	14,512,829	36,019,044	2.481	100.00

COAL.—TABLE 2.

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

Comparison of Production 1910 with 1911 and 1911 with 1912.

Province.	(i) INCREASE OR (d) DECREASE.			
	Years 1910 and 1911.		Years 1911 and 1912.	
	Tons.	Per cent.	Tons.	Per cent.
Nova Scotia	(i) 573,278	8·91	(i) 779,468	11·13
British Columbia.....	(d) 788,213	23·66	(i) 666,465	26·21
Alberta	(d) 1,383,433	47·79	(i) 1,729,541	114·46
Saskatchewan.....	(i) 25,623	14·14	(i) 18,563	8·98
New Brunswick	(i) 326	0·59	(d) 11,001	19·72
Yukon Territory.....	(d) 13,345	82·45	(i) 6,405	225·00
Total for Canada.....	(d) 1,585,764	12·28	(i) 3,189,441	28·04

The Province of Nova Scotia in 1912 produced nearly 54 per cent of the total Canadian production, British Columbia 22·1 per cent, Alberta 22·3 per cent, and Saskatchewan 1·5 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.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.
	%	%	%	%	%	%	%	%	%	%	%	%	%
Nova Scotia.....	91	71	62·9	71·3	68·0	65·5	64·07	60·79	61·40	54·29	50·25	62·35	53·94
New Brunswick.....													
Saskatchewan*.....			0·7	1·5	1·5	1·2	1·11	1·44	1·37	1·83	1·40	1·83	1·55
Alberta*.....		4	5·4	6·2	8·0	10·8	12·77	15·14	15·42	18·99	22·42	13·34	22·33
British Columbia.....	8	25	31·0	21·0	22·5	22·4	21·98	22·50	21·77	24·82	25·80	22·45	22·12
Yukon Territory.....						0·1	0·07	0·13	0·04	0·07	0·13	0·03	0·06

* 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.

Statistics of the distribution of the coal production of Canada in 1912 given in following tables show 10,572,365 tons reported as sold for consumption in Canada, 1,537,585 tons sold for export to the United States, and 314,410 tons, sold for export to other countries, or total sales of 12,424,360 tons; 870,885 tons were used by colliery operators in the manufacture of coke, in steel plants and in brick plants, while 1,217,584 tons were used in the operation of collieries and by workmen. Of the coal thus disposed of 32,673 tons were derived from

stock carried forward from 1911. Returns as to the amount of coal lost due to breakage, washing, etc., are very incomplete, but 167,291 tons were thus reported bringing the total 'output' of coal up to 14,647,447 tons.

Notwithstanding Canada's large coal resources the total domestic production (including that exported) was equivalent in 1912 to only about 54 per cent of the total consumption, there having been imported for home consumption during 1912, 14,595,810 tons. The total consumption of coal as shown in subsequent tables was 26,934,800 tons, or an average of about 3.644 tons per capita, while the production averaged about 1.957 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 1912. 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 91.8 per cent in 1912 was used by collieries or sold for consumption in Canada chiefly within the Province; 2.8 per cent was sold for export and 5.3 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 1912 about 52.4 per cent of the production in this Province was used by the collieries or sold for home consumption; 33.7 per cent was sold for export, and 13.8 per cent used in making coke.

Production and Distribution of Coal Mined, by Provinces, 1912.

	Nova Scotia.	New Brunswick.	Sas- katch- ewan.	Alberta.	Yukon.	British Columbia.	Total.
Sales in Canada	6,133,348	42,780	215,796	2,772,374	8,053	1,410,014	10,572,365
Sales for export to U. S. . . .	482,597	.....	.....	93,126	.....	961,862	1,537,585
Sales for export to other countries	193,274	.....	.....	.....	.....	121,136	314,410
Total sales.	6,799,219	42,780	215,796	2,865,500	8,053	2,493,012	12,424,360
Used by producers in mak- ing coke, steel, brick, etc.	253,354	.....	2,048	170,818	.....	444,665	870,885
Used by producers for col- liery consumption and workmen	731,315	2,000	7,498	204,259	1,192	271,320	1,217,584
Total used.	984,669	2,000	9,546	375,077	1,192	715,985	2,088,469
Production *	7,783,888	44,780	225,342	3,240,577	9,245	3,208,997	14,512,829
Stock on hand Jan. 1.	211,089	.....	.....	29,307	.....	74,346	314,742
" Dec. 31	176,509	.....	.....	51,060	.....	54,500	282,069
Difference	34,580	.....	.....	+ 21,753	.....	- 19,846	- 32,673
Losses due to breakage or other causes	85,416	.....	6,392	63,908	.....	11,075	167,291
Total output.	7,834,724	44,780	232,234	3,326,238	9,245	3,200,226	14,647,447

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

Production and Distribution of Coal Mined, by Provinces, 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.....	273,543			61,591		117,215	452,354
Used by producers for colliery consumption and workmen.....	646,340	2,000	8,011	103,783		202,141	962,275
Total used.....	919,883	2,000	8,011	165,374		319,356	1,414,629
Production †.....	7,004,420	55,781	206,779	1,511,036	2,840	2,542,532	11,322,388
Stock on hand Jan. 1.....	173,164			10,675		81,207	265,046
" Dec. 31.....	211,538			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	49,796		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 1908-9-10.

	1908.	1909.	1910.
Sales in Canada.....	7,715,203	7,468,880	8,956,450
Sales for export to United States.....	1,218,656	1,173,772	1,847,943
" other countries.....	297,291	171,388	291,273
Total sales.....	9,231,150	8,814,040	11,095,666
Used by producers for the manufacture of coke.....	708,674	752,976	759,703
" colliery consumption and workmen.....	946,487	934,459	1,053,783
Production.....	10,883,311	10,501,475	12,909,152
Stock on hand Jan. 1.....	183,443	202,432	200,019
" Dec. 31.....	230,335	219,569	263,666
Difference.....	+ 46,892	+ 17,137	+ 63,647
Loss due to washing, breakage, or other causes.....	157,610	154,162	243,716
Total output.....	11,090,513	10,672,774	13,216,515

Statistics of the annual production of coal in Canada since 1785 are shown in Table 3. The total production from 1785 to 1912 has been 197,951,420 tons, of which 130,546,503 tons or 65.9 per cent are to be credited to Nova Scotia and 115,858, 438 tons or 23.2 per cent to British Columbia.

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	1,089,974	1,747,016	1 68	(d) 23,768	(d) 2.2
1876	994,762	1,729,546	1 74	(d) 46,212	(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) 36,753	(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	3,733,499	7,359,080	1 95	(i) 495,754	(i) 15.1
1894	3,847,070	7,429,468	1 93	(i) 63,671	(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	3,736,107	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	15,210,877	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) 748,325	(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
1912	14,512,829	36,019,044	2 48	(i) 3,189,441	(i) 28.04

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

Nova Scotia (1785 to 1873) 8,033,670 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 1912 were 2,127,133 tons valued at \$5,821,593 or \$2.74 per ton, as compared with exports in 1911 of 1,500,639 tons valued at \$4,357,074 or \$2.90 per ton, and exports in 1910 of 2,377,049 tons valued at \$6,077,350 or \$2.56 per ton. The exports during 1911 were unusually low, on account of the strike conditions in Alberta and British Columbia during that year.

The total imports during 1912 were 14,595,810 tons valued at \$39,478,037, as compared with imports in 1911 of 14,558,892 tons valued at \$39,292,591 and imports in 1910 of 10,597,982 tons valued at \$28,450,001.

Statistics of exports during 1910-11-12, showing the principal countries of destination, are given in Table 4, and the annual exports since 1873 in Table 5.

COAL.—TABLE 4.

Exports of Coal Produced in Canada During 1910-11-12.

Exported to	1910.		1911.		1912.		
	Tons.	Value.	Tons.	Value.	Tons.	%	Value.
		\$		\$			\$
Great Britain..	5,872	18,901	14,185	48,496	59,302	2.8	202,151
United States..	1,947,287	4,583,626	1,035,889	2,809,204	1,603,145	75.4	4,042,803
Newfoundland..	203,626	574,157	223,553	617,299	167,519	7.9	482,194
Other countries	220,264	900,666	227,012	882,075	297,167	13.9	1,094,445
Total.....	2,377,049	6,077,350	1,500,639	4,357,074	2,127,133	100.0	5,821,593

The United States is the principal market for Canadian coal exported, that country having taken about 75.4 per cent of the total exports in 1912. There were exported to Newfoundland 167,519 tons or 7.9 per cent of the total. Exports to other countries of 297,167 tons included 48,599 tons to Mexico and 37,985 tons to Australia. Smaller tonnages were also exported to Bermuda, St. Pierre, Cuba, Japan, and many other points.

COAL.—TABLE 5.

Annual 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.....	1,573,661	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.....	427,937	71,003	1905.....	1,635,237	86,792
1886.....	520,703	78,443	1906.....	1,335,041	44,758
1887.....	530,965	89,098	1907.....	1,894,074	101,778
1888.....	588,627	84,316	1908.....	1,729,833	102,071
1889.....	665,315	89,294	1909.....	1,588,099	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	1912.....	2,127,133	46,706

Coal imported is subdivided into three classes: anthracite, including anthracite dust; bituminous round and run of mine; and bituminous slack such as will pass through a $\frac{3}{4}$ " screen. The imports of anthracite in 1912 were 4,184,017 tons valued at \$20,080,388, an average of \$4.80 per ton, showing an increase of 163,440 tons over the 1911 imports. The imports of bituminous round and run of mine in 1912 were 8,491,840 tons valued at \$16,846,727, an average of \$1.98 per ton, showing a decrease of 413,975 tons from the imports in 1911. The imports of bituminous slack in 1912 were 1,919,953 tons valued at \$2,550,922 or an average of \$1.33 per ton, showing an increase of 287,453 tons or 17 per cent over the 1911 imports.

COAL.—TABLE 6.

Annual Imports of Coal into Canada.

Fiscal Year.	BITUMINOUS COAL.		ANTHRAHITE COAL AND ANTHRAHITE 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	754,891	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.....	1,409,282	3,528,959	1,201,335	4,595,727	53,104	29,818
1891.....	1,598,855	4,066,896	1,399,067	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	44,474
1894.....	1,359,509	3,315,094	1,530,522	6,354,040	117,573	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	225,662	59,609
1898.....	1,684,024	3,174,595	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	1,664,401	6,602,912	330,174	98,349
1901.....	2,616,392	4,956,025	1,933,283	7,923,950	414,432	275,559
1902.....	3,047,392	5,712,058	1,652,451	7,021,939	489,648	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	2,275,013	10,461,223	608,041	544,128
1905.....	4,176,274	8,002,896	2,604,137	12,093,371	650,261	343,466
1906.....	4,495,550	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 $\frac{3}{8}$ " 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	13,906,162	1,230,017	1,469,889
1910.....	5,966,466	11,919,341	3,266,235	14,735,062	1,365,281	1,795,598
1911.....	8,906,815	18,407,603	4,020,577	18,794,192	1,632,500	2,090,796
1912.....	(a) 8,491,840	16,846,727	(b) 4,184,017	20,080,388	(c) 1,919,953	2,550,922

(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 this would account for the changes indicated, and unless some error may possibly have crept into the Trade and Navigation report, no explanation is available.

The total consumption of coal in Canada during 1912 deduced from the records of production, exports, and imports was 26,934,800 tons, as compared with 24,247,698 tons in 1911, an increase of 2,687,102 tons or 11 per cent. Of the total consumption during the past year 12,385,696 tons or 46 per cent was domestic coal and 14,549,104 imported coal.

The per capita consumption in 1912, based on an estimate of the population made by the Census Office, was approximately 3.596 tons, as compared with a per capita consumption of 3.384 tons in 1911.

Consumption of Coal in Canada, 1911-1912.

	1911.		1912.	
	Tons.	Tons.	Tons.	Tons.
Production, Table 3.....	11,323,388		14,512,829	
Exports of Canada, Table 4.....	1,500,639		2,127,133	
Home consumption of Canadian coal.....		9,822,749		12,385,696
Imports, Table 6.....	14,558,892		14,595,810	
Exports not produce of Canada, Table 4.....	133,943		46,706	
Canadian consumption of imported coal.....		14,424,949		14,549,104
Total consumption of coal in Canada.....		24,247,698		26,934,800

COAL.—TABLE 7.

Annual Consumption of Coal in Canada.

Calendar Year.	Canadian.	Imported.	Total.	Percentage Canadian.	Percentage imported.	Consumption per capita.
	Tons.	Tons.	Tons.	%	%	Tons.
1886.....	1,595,950	1,884,161	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	1.153
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	2,917,818	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.....	3,631,832	4,092,361	7,724,243	47.0	53.0	1.454
1900.....	3,939,542	4,361,563	8,351,105	47.8	52.2	1.561
1901.....	4,912,664	4,810,213	9,722,877	50.5	49.5	1.810
1902.....	5,376,413	5,165,938	10,542,351	51.0	49.0	1.927
1903.....	6,005,735	5,491,870	11,507,605	52.2	47.8	2.055
1904.....	6,697,133	6,909,651	13,606,834	49.2	50.8	2.346
1905.....	7,032,661	7,343,880	14,376,541	48.9	51.1	2.362
1906.....	7,927,560	7,398,906	15,326,466	51.7	48.3	2.425
1907.....	8,617,352	10,519,503	19,166,855	45.0	55.0	2.947
1908.....	9,156,478	10,195,424	19,351,902	47.3	52.7	2.820
1909.....	8,913,376	9,711,826	18,625,202	47.9	52.1	2.682
1910.....	10,532,103	10,433,123	20,970,226	50.2	49.8	2.960
1911.....	9,822,749	14,424,949	24,247,698	40.5	59.5	3.384
1912.....	12,385,696	14,549,104	26,934,800	46.0	54.0	3.596

Nova Scotia.

The production of coal in Nova Scotia in 1912 was reported as 7,783,888 tons, as compared with a production of 7,004,420 tons in 1911, showing an increase of 779,468 tons or 13 per cent. This is entirely bituminous coal and represents the output of 13 operating companies, one of which, the Dominion Coal Company, contributed about 64 per cent of the total.

Of the production in 1912, the quantity sold for consumption in Canada was 6,123,348 tons, while 482,597 tons were reported as sold for export to the United States and 193,274 tons sold for export to other countries; 731,315 tons were used for colliery consumption and by workmen and 253,354 tons were used by colliery operators in making coke and in steel making, etc. A considerable tonnage of coal sold for consumption in Canada was also used in making coke, the total tonnage used for coke making in the Province being 913,157 tons of domestic coal.

About 37 per cent only of the total sales were for consumption within the Province itself. Almost an equal amount, about 35 per cent, was sold for consumption in the Province of Quebec. The adjacent Provinces of New Brunswick and Prince Edward Island and the colony of Newfoundland took in 1912 about 15 per cent of the 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 1912 was 5,968,922 tons or 76.6 per cent of the total; Pictou produced 785,547 tons or 11 per cent of the total, Cumberland county, 715,988 tons or 9 per cent of the total, and Inverness and other counties, 313,431 tons or 4 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 September 30, 1912, 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 by Companies, Nova Scotia, 1912, in Tons of 2,000 lbs.

43696—31

	Total sales.	USED.			Production. ²	STOCKS.		Losses. ³	Output.
		For coke. ¹	Colliery consumpt'n.	Workmen.		Jan. 1.	Dec. 31.		
Inverness Ry. and Coal Co	280,811	3,967	21,677	6,974	313,431	2,426	478	1,353	312,836
Sydney Coal Co., Ltd.	5,643		106	123	5,872				5,872
Dominion Coal Co., Ltd.	4,617,274		324,273	51,556	4,993,103	169,062	160,777	70,043	5,054,861
Nova Scotia Steel and Coal Co., Ltd.	648,572	226,294	41,405	13,404	934,675	1,583	8,960	459	942,511
The Colonial Coal Co., Ltd.	31,242	1,741	1,655	634	35,272	255	397	636	36,050
Acadia Coal Co., Ltd.	413,790		84,913	12,782	511,485	26,593	3,041		487,933
Intercolonial Coal Mining Co.	206,750	21,350	38,314	7,648	274,062	3,893	784	6,793	277,746
Cumberland Ry. and Coal Co.	389,194		72,246	13,046	474,486	7,277	2,072	107	469,388
Maritime Coal, Railway, and Power Co.	149,066		25,526	4,384	178,976				178,976
Minudie Coal Co., Ltd.	55,813		4,305	1,344	61,462			6,025	67,487
Atlantic Grindstone Coal and Ry. Co.	168				168				168
Riverside mine (Eastern Coal Co., Ltd.) ..	896				896				896
	6,799,219	253,354	614,420	116,895	7,793,888	211,089	176,509	85,416	7,834,724

¹ Includes also coal used by producers for steel making and other purposes, and for making briquettes.

² Production is obtained by adding sales and coal used.

³ Complete records of losses are not furnished by all producers.

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 consumption, tons, 2,240 lbs.	Production, tons, 2,240 lbs.	Output, tons, 2,000 lbs.	Sold or used, tons, 2,000 lbs.	Colliery consumption, tons, 2,000 lbs.	Production* tons, 2,000 lbs.	Price per ton, 2,240 lbs.	Value of production.
									\$ c.	\$
1872.....	880,950	785,914	110,341	896,255	986,664	880,224	123,582	1,003,806	1 75	1,568,446
1873.....	1,051,467	881,106	108,308	989,504	1,177,648	986,839	121,406	1,108,245	1 75	1,731,632
1874.....	872,720	749,127	119,582	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	1,454,084
1876.....	709,646	634,207	113,788	747,905	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	1,376,339
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	96,881	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	1,259,183	1,159,216	120,834	1,280,050	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	1,503,259	1,453,226	125,383	1,573,609	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	2,4 8,735
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	1,871,380	1,702,046	156,550	1,858,696	1 75	2,904,057
1888.....	1,776,128	1,576,692	157,443	1,784,135	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	1,736,111	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	2,290,168	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	2,182,968	2,489,807	2,214,848	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	2,527,982	1 75	3,949,970
1895.....	1,999,756	1,793,098	193,639	1,986,737	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	2,608,570	1 75	3,919,355
1897.....	2,340,031	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	5,622,808
1900.....	3,298,791	2,998,737	236,563	3,235,300	3,694,646	3,358,585	264,051	3,623,536	2 50	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	6,496,982
1902.....	4,725,480	4,229,120	378,198	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

COAL.—TABLE 8—Continued.

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

Calendar Year.	Output, tons, 2,240 lbs.	Sold or used, tons, 2,240 lbs.	Colliery consumption, tons, 2,240 lbs.	Production, tons, 2,240 lbs.	Output, tons, 2,000 lbs.	Sold or used, tons, 2,000 lbs.	Colliery consumption, tons, 2,000 lbs.	Production* tons, 2,000 lbs.	Price per ton, 2,240 lbs.	Value of production.
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	10,083,184
1906.....	5,844,813	5,093,131	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	645,490	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.....	5,317,109	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
1912.....	6,995,289	6,296,940	652,960	6,949,900	7,834,724	7,052,573	731,315	7,783,888	2 50	17,374,750

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

COAL.—TABLE 9.

Nova Scotia: Coal Trade by Counties, in Short Tons, Calendar Years Since 1906.

Calendar Year.	CUMBERLAND.		PICTOU.		CAPE BRETON.		OTHER COUNTIES.		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	530,648	849,402	678,025	4,840,653	4,267,346	452,877	375,742	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.....	534,296	436,125	833,956	691,852	5,405,355	4,917,902	347,944	312,201	7,125,551	6,358,080
1912.....	716,914	595,133	765,678	641,890	6,039,296	5,530,765	312,836	284,780	7,834,724	7,052,573

Sales include coal used for making coke and steel.

COAL.

Production and Sales by Companies, Nova Scotia, Year Ending September 30, 1912, in Short Tons.

Name of company.	Output.	Sales.	Colliery consumption.	Supplied workmen.	Supplied locomotive.	Reported unsaleable.	On bank at close of year.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons
Dominion Coal Co., Ltd.....	4,852,198	4,492,583	264,095	52,006	29,053	.....	76,524
Nova Scotia Steel & Coal Co., Ltd.....	919,705	871,236	38,393	21,008	4,527	.....	27,832
Cumberland Railway & Coal Co., Ltd.....	470,939	388,600	65,385	12,844	4,798	.....	6,982
Acadia Coal Co.....	492,213	402,362	85,727	12,657	1,875	.....	12,091
Maritime Coal, Railway & Power Co.....	169,465	141,304	24,444	3,717	568	.....	.....
Inverness Railway & Coal Co.....	324,469	290,433	21,389	6,713	9,951	.....	1,701
Intercolonial Coal Co.....	272,616	237,326	38,061	7,774	758	.....	1,207
Sydney Coal Co.....	5,143	5,294	94	171	.....	.....	24
Colonial Mining Co.....	39,448	34,188	4,628	632	.....	.....	402
North Atlantic Collieries Co.....	4,819	424	4,523	258	.....	.....	.....
Minudie Coal Co.....	68,179	55,061	4,063	1,473	254	.....	.....
Atlantic Grindstone & Coal Co.....	163	118	10	36	.....	7,581	.....
Total.....	7,619,357	6,918,929	550,812	119,289	51,784	7,581	126,813

COAL.—TABLE 10.

Nova Scotia: Output by Collieries During Fiscal Years Ending September 30,
1910-11-12.

Colliery.	1910. Tons of 2,000 lbs.	1911. Tons of 2,000 lbs.	1912. Tons of 2,000 lbs.
<i>Cape Breton County.</i>			
Dominion Coal Company.....	3,634,124	4,360,113	4,852,198
Nova Scotia Steel and Coal Co.....	936,710	848,762	919,705
North Atlantic Collieries.....	99,687	53,751	4,819
McKay Mining Company.....	19,136	32,571	(a)
Sydney Coal Company.....	4,464	4,129	5,143
Colonial Mining Co.....	15,625	5,023	39,448
<i>Cumberland County.</i>			
Cumberland Railway and Coal Co.....	60,298	214,871	470,939
Maritime Coal, Railway, and Power Co., Chignecto Joggins.....	181,264	183,416	169,465
Minudie Coal Co.....	61,037	61,019	68,179
Great Northern Coal Co.....	988	1,419	.....
Atlantic Grindstone and Coal Co.....	239	374	163
Eastern Coal Co.....	7,381	.....	.....
<i>Pictou County.</i>			
Acadia Coal Co.....	397,962	522,297	492,213
Intercolonial Coal Co.....	307,692	293,000	272,616
<i>Inverness County.</i>			
Inverness Coal and Railway Co.....	310,528	326,577	324,469
Port Hood Coal Co.....	97,269	46,135	.....

(a) See Colonial Mining Co.

COAL.—TABLE 11.

Nova Scotia: Distribution of Coal Sold.

Markets.	FISCAL YEARS ENDING SEPTEMBER 30.									
	1908.		1909.		1910.		1911.		1912.	
	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.....	1,804,377	29·37	1,642,716	31·77	1,681,052	30·65	2,007,192	32·25	2,197,213	31·76
" sea.....	380,332	6·19	339,462	6·57	342,787	6·25	354,514	5·70	373,594	5·40
Total Nova Scotia	2,184,709	35·56	1,982,178	38·34	2,023,839	36·90	2,361,706	37·95	2,570,807	37·16
New Brunswick.....	571,570	9·30	607,968	11·76	594,288	10·84	606,582	9·74	732,411	10·59
Prince Edward Island	70,931	1·15	88,365	1·71	89,031	1·62	90,314	1·45	103,378	1·49
Quebec Province.....	2,293,352	37·33	1,689,876	32·69	2,001,382	36·49	2,315,971	37·22	2,418,086	34·95
Newfoundland.....	231,909	3·77	174,998	3·39	19,224	3·62	206,299	3·32	224,719	3·25
United States.....	559,522	9·11	359,224	6·95	325,548	5·93	372,177	5·93	462,035	6·63
St. Pierre.....	9,976	0·16	11,463	0·22	8,405	0·15	10,107	0·16	10,535	0·15
Bunker coal.....	216,554	3·53	254,681	4·92	243,807	4·45	229,243	3·68	265,142	3·83
Other countries.....	5,261	0·09	846	0·02	.....	.....	*30,841	0·50	**131,816	1·90
Total.....	6,143,854	100·00	5,169,599	100·00	5,484,524	100·00	6,223,240	100·00	6,918,929	100·000

For time chartered boats.....	*Tons.	Per cent.	**Tons	Per cent.
Other countries.....	28,610	0·46	28,972	0·42
	2,231	0·04	102,844	1·48
	30,841	0·50	131,816	1·90

Number and Classes of Workmen Employed at Each Mine in Nova Scotia, Year Ending September 30, 1912.

Company.	UNDERGROUND.				SURFACE.				CONSTRUCTION.				TOTALS.		HORSES.		Pit days.
	Skilled labour.	Labourers	Boys.	Days.	Skilled labour.	Labourers	Boys.	Days.	Skilled labour.	Labourers	Boys.	Days.	Persons.	Days.	Above.	Below.	
Dominion Coal Co.	3,029	1,930	240	1,468,063	586	425	60	303,863	.....	.....	.....	.....	6,270	1,771,926	94	536	282
Nova Scotia Steel and Coal Co.....	1,022	841	186	542,622	143	226	24	117,472	.....	.....	.....	.....	2,442	660,094	1	22	306
Cumberland Railway and Coal Co.....	444	369	40	256,431	81	119	9	63,273	9	10	.....	5,490	1,081	325,194	10	59	300
Acadia Coal Co.	359	373	64	246,377	108	304	20	150,239	.....	.....	.....	.....	1,228	396,616	38	43	296
Intercolonial Coal Co.....	401	126	84	155,523	108	110	28	68,550	3	4	.....	1,586	864	225,665	10	59	300
Joggins Mines.....	333	66	3	102,430	19	48	9	20,882	.....	.....	.....	.....	478	123,312	4	9	299
Chignecto Mines.	28	21	3	13,338	14	16	3	7,408	.....	.....	.....	.....	85	20,746	1	1	296
Inverness Railway and Coal Co . . .	310	134	23	139,182	47	47	13	31,573	.....	.....	.....	.....	574	170,755	7	33	297
Sydney Coal Co.....	8	3	.....	1,624	2	2	.....	629	.....	.....	.....	.....	15	2,253	1	1	260
Mackay Mining Co.....	41	14	.....	15,876	6	11	1	5,326	2	1	.....	1,060	76	22,262	3	6	304
Minudie Coal Co.	94	22	14	36,808	15	16	5	10,194	3	.....	.....	922	169	47,924	3	2	292
Colonial Coal Co.....	5	.....	.....	1,456	4	.....	.....	1,302	3	3	.....	1,725	15	4,483	1	1	306
Totals.....	6,074	3,899	657	2,979,736	1,133	1,324	172	780,711	20	18	.....	10,783	13,297	3,771,230	173	772	.....

New Brunswick.

The total shipments of coal from mines in this Province, as estimated by the Provincial Department of Works, was 42,780 tons, and adding 2,000 tons for colliery consumption and workmen, etc., the production is placed at 44,780 tons, which is 11,001 tons less than the production in 1911.

Mining operations are carried on in the Grand Lake coal-field, in Queens county, in which a comparatively large number of small mines or openings are intermittently operated. About 50 per cent of the total output was directly reported by the following operators: The Rothwell Coal Co., Limited, The Minto Coal Co., Limited, The Northfield Coal Co., Limited, all of Minto, and the Thompson Coal and Brick Co. of Beersville.

COAL.—TABLE 12.

New Brunswick: Annual 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	1912.....	44,780	89,560	2 00

Saskatchewan.

The total production in 1912, as reported from 25 separate collieries, was 225,342 tons of lignite coal valued at \$368,135, an increase of 18,563 tons or 9 per cent over the 1911 production. Of the 1912 production 215,796 tons were sold for consumption in Canada and 9,546 tons used by the producers for colliery consumption, for workmen, and in brickmaking.

The output which has hitherto been obtained entirely from the Estevan and Souris fields in the southeastern portion of the Province is used mainly for domestic purposes within the Province and in Manitoba. During the past two years mining operations have been commenced in a district about 115 miles east of the Estevan field and 40 miles south of Moosejaw.

The principal operating mines of the Estevan field are the Western Dominion Collieries, Limited, and the Manitoba and Saskatchewan Coal Com-

pany. Amongst the other mines, the chief operators are the Hawkinson Mining Co., the Estevan Coal and Brick Co., the Maple Leaf Mines, Limited, the Excelsior Coal Mining Co., and the Great West Coal Company.

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	1902.....	70,400	112,640	1 52
1891.....				1903.....	116,703	169,618	1 45
1892.....	5,400	9,325	1 73	1904.....	124,885	187,021	1 50
1893.....	8,325	12,485	1 50	1905.....	107,596	152,334	1 42
1894.....	†15,051	15,153	1 01	1906.....	108,398	164,146	1 51
1895.....	15,769	31,538	2 00	1907.....	151,232	252,437	1 67
1896.....	16,706	25,059	1 50	1908.....	150,556	253,790	1 69
1897.....	25,000	37,500	1 50	1909.....	192,125	296,339	1 54
1898.....	25,000	37,500	1 50	1910.....	181,156	293,923	1 62
1899.....	25,000	37,500	1 50	1911.....	208,779	347,248	1 68
1900.....	40,500	60,750	1 50	1912.....	225,342	368,135	1 63
1901.....	45,000	72,000	1 60				

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

Alberta.

The coal production of Alberta has increased rapidly during the past few years and has in 1912 exceeded that of British Columbia, which until the past year has been the chief coal mining province of western Canada. Alberta has numerous small collieries, the total number operating in 1912 being about 182, and in addition 74 mines reported either no operations, or development only, nevertheless 91 per cent of the total production was, in the past year, derived from 34 collieries operated by 30 companies, each colliery having an output exceeding 10,000 tons. Nine of these collieries has each an output exceeding 100,000 tons.

The total production of marketable coal during the year was 3,240,577 tons valued at \$8,113,525 or an average of \$2.50 per ton. The coal production of this Province includes lignite, bituminous coal, and the only anthracite mined in Canada, the production of which in 1912 was 160,589 tons.

Of the total production in 1912, 2,772,374 tons were sold for home consumption in Canada and 93,126 tons for export; the producers used 204,259 tons for colliery consumption and for workmen, and 170,818 tons were used in making coke.

The production by collieries in 1912 and in 1911 is shown in tables following. The low production in 1911, it will be remembered, was due to the protracted

strike and closing down of all the large collieries in the southern part of the Province during that year.

The production in 1912 by 30 companies, each with an output exceeding 10,000 tons, was 2,961,056 tons. The aggregate production of all other collieries was 279,521 tons.

Production of Coal in Alberta in 1912, by Principal Collieries, in Short Tons.

Name of company.	Days in operation.	Total sales.	Total for colliery use.*	Total production.
Leitch Colliery, Ltd., Passburg.....	239	(a) 66,418	6,624	73,042
Davenport Coal Co., Burnis.	207	37,986	495	38,481
Maple Leaf Coal Co., Bellevue.....	278	48,849	1,923	50,772
Hillcrest Coal and Coke Co., Hillcrest	281	173,478	10,806	184,284
West Canadian Collieries, Bellevue.....	262	317,725	6,508	324,233
" " Blairmore	266	80,858	4,936	85,794
" " Lille	122	(b) 38,177	6,919	45,096
Canadian Coal Consolidated Co., Frank.....	269	123,381	17,999	141,380
International Coal and Coke Co., Coleman.....	293	(c) 402,288	23,050	425,338
McGillivray Creek Coal and Coke Co., Coleman.	255	119,342	4,056	123,398
Bankhead Mines, Ltd., Bankhead.....	256	(d) 124,539	(e) 36,000	160,539
Canmore Coal Co., Ltd., Canmore.....	236	142,231	9,931	152,162
" " ".....	299	97,527	1,742	99,269
Yellowhead Pass Coal and Coke Co., Ltd., <i>via</i> Bickerdike	313	11,207	2,075	13,282
Jasper Park Collieries, Ltd., Pocahontas.....	300	111,231	1,270	112,501
Western Coal and Coke Co., Lethbridge.....	301	11,969	2,431	14,400
City of Lethbridge Coal Mine ".....	262	10,467	.....	10,467
Lethbridge Collieries ".....	249	58,419	9,895	68,314
Canada West Coal Co., Taber.....	25	60,436	8,684	78,120
C. P. R. Dept. of Natural Resources, Lethbridge.	220	311,259	4,293	315,552
Diamond Coal Co., Ltd., Diamond City.....	236	35,847	2,551	38,398
Battle River Collieries, Rosenroll.....	225	11,500	850	12,350
Round Hill Collieries, Round Hill.....	160	17,608	747	18,355
Tofield Coal Co., Tofield.....	302	17,458	2,100	19,558
The Clover Bar Coal Co., Ltd., Clover Bar.....	282	20,686	1,750	22,436
Edmonton Standard Coal Co., Edmonton.....	286	24,750	2,000	26,750
Twin City Coal Co., Ltd., Edmonton.....	269	32,800	1,280	34,080
Alberta Coal Mining Co., Cardiff.....	216	52,683	2,500	55,183
Cardiff Collieries, Ltd., Cardiff.....	280	92,161	2,985	95,146
5 other companies, each producing over 10,000 tons.....	.....	109,032	13,294	122,326
All other companies, each producing under 10,000 tons.....	.....	2,771,362	189,694	2,961,056
Total production, Alberta.....	.....	3,036,318	204,259	3,240,577

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

- (a) " 17,923 tons for coke manufacturing.
 (b) " 27,177 " "
 (c) " 125,718 " "
 (d) " 90,000 tons of briquettes.
 (e) " 1,300 " "

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., Burmis	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, Pocahontas	96	10,619	350	10,969
Breckenridge & Lund Coal Co., Lundbreck	262	43,482	1,123	44,605
Alberta Railway & Irrigation Co., Lethbridge	104	131,859	7,041	138,900
Hureka 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		290,527	19,914	310,441
Other companies, each producing under 10,000 tons		1,157,773	155,703	1,313,476
		187,889	9,671	197,560
Total production, Alberta		1,345,662	165,374	1,511,036

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

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

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	193,298	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	581,332	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	1912	3,240,577	8,113,525	2 50

According to statistics published by the Coal Mines Branch of the Department of Public Works, Province of Alberta, the total output of coal in that Province in 1912, including a considerable tonnage of unmarketable slack, screening, etc., was 3,446,349 tons. The total sales are reported by the same authority as 2,879,489 tons; used in making coke, 170,818 tons; used under colliery boilers, 262,971 tons; added to stock, 22,002 tons; slack, including anthracite and lignite coals, 111,069 tons.

The total sales, as shown by returns furnished this Division, including sales to workmen, were 2,888,872 tons, which is slightly in excess of the record given above. There is a deficiency, however, of 82,084 tons in the quantity reported as colliery consumption and it is evident that a considerable tonnage of slack used under colliery boilers has not been included in some of the records sent to the Department of Mines.

The following tables show the total output of coal in Alberta during 1912, the output by districts and the labour employed according to the records compiled and published by Mr. John T. Stirling, Provincial Inspector of Mines.

Output of Bituminous Coal.

Tons of 2,000 lbs.	Crows- nest pass.	Calgary	Leth- bridge.	Edmon- ton.	Total.
Sold for consumption in Alberta.....	1,081,657	245,714	.....	125,636	1,453,007
Sold for consumption in other provinces.....	98,399	.....	.....	.....	98,399
Sold for export to the United States.....	86,682	.....	.....	.....	86,682
Total sales.....	1,266,738	245,714	.....	125,636	1,638,088
Used in making coke.....	170,818	.....	.....	.....	170,818
Used under colliery boilers.....	79,533	11,510	.....	4,420	95,463
To stock.....	7,727	2,215	.....	12,060	22,002
Total.....	1,524,816	259,439	.....	142,116	1,926,371

Output of Anthracite Coal.

Tons of 2,000 lbs,	CALGARY DISTRICT.	
	Coal.	Briquettes.
Sold for consumption in Alberta.....	21,700	60,000
Sold for consumption in other provinces.....	12,539	29,920
Sold for export to the United States.....	300	80
Total sales.....	34,539	90,000
Used under colliery boilers.....	36,000	.....
Used in making briquettes.....	108,000	.....
Total.....	178,539	90,000

¹ Annual Report, Department of Public Works of the Province of Alberta, 1912, pp. 61, 62.

Output of Lignite Coal.

Tons of 2,000 lbs.	Crows- nest pass.	Calgary.	Leth- bridge.	Edmon- ton.	Total.
Sold for consumption in Alberta.....		77,181	206,584	343,774	627,539
Sold for consumption in other provinces....		8,278	397,821	77,033	483,132
Sold for export to the United States.....			6,141		6,141
Total sales.....		85,459	610,546	420,807	1,116,812
Used under colliery boilers.....		1,688	112,126	17,694	131,508
Slack.....		1,788	38,015	53,266	93,069
Total output.....		88,935	760,687	491,767	1,341,389

Output of Coal in Alberta by Districts.

District.	Number of persons employed.	Lignite.	Bituminous.	Anthracite.
Crowsnest pass.....	2,261		1,500,594	
Pincher Creek.....	122		24,222	
Lethbridge.....	935	624,150		
Taber.....	430	124,795		
Bow Island.....	51	8,654		
Milk River.....	17	2,518		
Banff.....	906		256,896	178,589
Medicine Hat.....	147	35,223		
Aldersyde.....	49	11,888		
Carstairs.....	11		543	
Carbon.....	35	8,232		
Drumheller.....	115	14,581		
Three Hills.....	45	7,936		
Lacombe.....	87	12,076	2,000	
Wetaskiwin.....	154	48,126		
Edmonton.....	503	208,888		
St. Albert.....	60	8,479		
Tofield.....	83	37,241		
Cardiff.....	221	185,337		
Pembina.....	104	3,265		
Yellowhead pass.....	191		28,415	
Jasper Park.....	134		113,701	
Total.....	6,661	1,341,389	1,926,371	178,589

Average Number of Persons Employed.

Character of labour.	Bituminous.		Anthracite.		Lignite.		Total.	
	Above.	Below.	Above.	Below.	Above.	Below.	Above.	Below.
Supervision and clerical assistance	99	79	10	8	131	118	240	205
Miners and helpers.....	.....	1,586	.....	137	.....	1,818	.....	3,541
Mechanics or skilled labour	271	60	53	.....	207	53	531	118
Other employees.....	520	628	150	80	359	289	1,029	997
Total	890	2,353	213	225	697	2,283	1,800	4,861

British Columbia.

The total production of coal in British Columbia in 1912 from 17 collieries operated by 12 companies was 3,208,997 tons valued at \$10,028,116, as compared with a production of 2,542,532 tons in 1911 and 3,330,745 tons in 1910. The actual colliery output was somewhat higher as a considerable tonnage is lost in washing at some of the Vancouver Island collieries. The production in 1911 was greatly restricted on account of the closing down of the Crowsnest collieries because of labour difficulties and the very large increase in 1912 merely shows a return to normal conditions of operation. The 1912 production, although slightly less than that of 1910, is, with the exception of that year, the largest that has been recorded for the Province, and would probably have been greater even than the 1910 production had it not been for the falling off in production at the mines of the Canadian Collieries Limited, because of strikes during the latter part of the year.

Of the total production in 1912, 1,410,014 tons or nearly 44 per cent were sold for consumption in Canada, 961,862 tons or 30 per cent were sold for export to the United States, and 121,136 tons or 3.8 per cent were sold for export to other countries. The quantity used by producers in making coke was 444,665 tons or nearly 14 per cent of the production and 271,920 tons or 8.4 per cent were used under colliery boilers and for workmen.

The total production of coal on Vancouver island in 1912 was 1,571,683 tons, a falling off of 217,847 tons, as compared with 1911 when the production was 1,789,530 tons. The mines of the Canadian Collieries (Dunsmuir) Limited, were operated with a reduced staff of workmen from September 16, 1912, to the end of the year, owing to differences that had arisen between the company and its employees. The production of the Crowsnest mines in 1912 was 1,413,714 tons compared with 499,580 tons in 1911, the mines of the Crowsnest Pass Coal Company and the Hosmer mines being in operation for three months only during the latter year. The production in the Nicola and Princeton valleys in 1912 was 223,660 tons, as compared with 253,421 tons in 1911, a decrease of 29,761 tons.

Production by Districts, 1911 and 1912.

Coal.	1911.			1912.		
	Coast.	Crowsnest and Nicola valley.	Total.	Coast.	Crowsnest and Nicola valley.	Total.
		Short tons.			Short tons.	
Sold for consumption in Canada	1,188,769	348,188	1,536,957	947,631	462,883	1,410,014
Sold for export to United States	405,535	237,219	642,754	340,115	621,747	961,862
Sold for export to other countries	43,465	.....	43,465	121,136	.....	121,136
Total sales	1,637,769	585,407	2,223,176	1,408,882	1,084,130	2,493,012
Used for making coke		117,215	117,215	.....	444,665	444,665
Used for colliery consump- tion	151,761	50,380	202,141	162,801	108,519	271,320
Production	1,789,530	753,002	2,542,532	1,571,683	1,637,314	3,208,997

Coal Production by Collieries in British Columbia, in 1912, in Short Tons.

Colliery.	SALES.				Used in making coke.	Used under colliery boilers, etc.	Production.	Lost in washing.	STOCKS.		Output.
	In Canada.	To United States.	To other countries.	Total.					First of year.	Last of year.	
1. Protection, No. 1.....	251,540	112,447	82,192	446,179		44,495	490,674		5,535	1,525	486,664
Northfield.....	18,697	86,838	21,725	127,260		31,721	158,981		526	168	158,623
Douglas.....	54		70	124		712	836				836
2. New East Wellington.....	74,733	17,842		92,625		5,726	98,351		448	942	98,845
3. Ladysmith (Wellington).....	176,370	50,558		226,928		15,588	242,516		1,641	102	240,977
Cumberland (Comox).....	301,302	64,598	17,149	383,049		45,087	428,136		26,907	3,115	404,944
4. Fiddick and Richardson.....	121,497	7,331		129,328		18,704	148,032	7,703	37,167	46,132	164,750
Suquash.....	3,389			3,389		767	4,156			875	5,031
5. Coal Creek.....	61,929	430,817		492,746	248,058	39,801	780,605		124	115	780,596
Michel.....	12,603	133,943		146,546	115,316	22,368	284,230		20	115	284,325
6. Hosmer.....	103,956			103,956	81,291	26,696	211,943		1,889	778	210,832
7. Corbin.....	79,876	53,192		133,068		3,868	136,936				136,936
8. Diamond Vale.....	3,080			3,080		164	3,244				3,244
9. Middlesboro.....	150,283			150,283		10,052	160,335		689	483	160,129
10. Inland.....	30,000			30,000		1,299	31,299			100	31,399
11. Princeton.....	20,405	3,546		23,951		4,232	28,183	3,372			31,555
12. United Empire.....	250	250		500		40	540				540
Total.....	1,410,014	961,862	121,136	2,493,012	444,665	271,320	3,208,997	11,075	74,346	54,500	3,200,226

1. Western Fuel Co.
2. Vancouver-Nanaimo Coal Mining Co.
3. The Canadian Collieries (Dunsmuir), Ltd.
4. Pacific Coast Collieries, Ltd.
5. Crownsnest Pass Coal Co., Ltd.
6. The Hosmer Mines, Ltd.

7. Corbin Coal and Coke Co., Ltd.
8. Diamond Vale Collieries, Ltd.
9. Nicola Valley Coal and Coke Co., Ltd.
10. Inland Coal and Coke Co., Ltd.
11. Princeton Coal and Land Co., Ltd.
12. United Empire Coal Co., Ltd.

Coal Production by Collieries in British Columbia in 1912, Tons of 2,240 lbs.

Colliery.	SALES.				Used in making coke.	Used under colliery boilers, etc.	Production.	Lost in washing.	STOCKS.		Output.
	In Canada.	To United States.	To other countries.	Total.					First of year.	Last of year.	
1. Protection.....	224,589	100,399	73,386	398,374		39,728	438,102		4,942	1,362	434,522
Northfield.....	16,694	77,534	19,397	113,625		28,323	141,948		470	150	141,628
Douglas.....	48			111		636	747				747
New East Wellington.....	66,770	15,931	63	82,701		5,112	87,813		400	841	88,254
Ladysmith (Wellington).....	157,473	45,141		202,614		13,918	216,532		1,465	91	215,158
Cumberland (Comox).....	269,020	57,677		342,008		40,256	382,264		23,488	2,781	361,557
Fiddick and Richardson.....	108,479	6,992	15,311	115,471		16,700	132,171	6,878	33,185	41,234	147,098
Suquash.....	3,026			3,026		685	3,711			781	4,492
Coal Creek.....	55,294	394,658		439,952	221,480	35,537	696,969		111	103	696,961
Michel.....	11,253	119,592		130,845	102,961	19,971	253,777		18	103	253,862
6. Hosmer.....	92,818			92,818	72,581	23,836	189,235		1,687	695	188,243
7. Corbin.....	71,318	47,493		118,811		3,453	122,264				122,264
8. Diamond Vale.....	2,750			2,750		146	2,896				2,896
9. Middlesboro.....	134,181			134,181		8,975	143,156		615	431	142,972
10. Inland.....	26,786			26,786		1,160	27,946			89	28,035
11. Princeton.....	18,219	3,166		21,385		3,778	25,163	3,011			28,174
12. United Empire.....	223	223		446		36	432				432
Total.....	1,258,941	858,806	108,157	2,225,904	397,022	242,250	2,865,176	9,889	66,381	48,661	2,857,345

1. Western Fuel Co.
2. Vancouver-Nanaimo Coal Mining Co.
3. The Canadian Collieries (Dunsmuir), Ltd.
4. Pacific Coast Collieries, Ltd.
5. Crownest Pass Coal Co., Ltd.
6. The Hosmer Mines, Ltd.

7. Corbin Coal and Coke Co., Ltd.
8. Diamond Vale Collieries, Ltd.
9. Nicola Valley Coal and Coke Co., Ltd.
10. Inland Coal and Coke Co., Ltd.
11. Princeton Coal and Land Co., Ltd.
12. United Empire Coal Co., Ltd.

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.	Production.	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	416,679	.....	9,712	4,942	411,909
Northfield.....	36,145	94,049	2,300	132,494	.....	30,833	163,327	.....	1,945	470	161,852
Douglas.....	.....	31	.....	31	.....	1,385	1,416	.....	.....	.....	1,416
2. Extension.....	255,007	62,494	.....	317,501	.....	14,591	332,092	.....	1,981	1,465	331,576
Union.....	321,690	42,640	32,782	397,112	.....	39,250	436,362	.....	22,515	23,488	437,335
3. Fiddick and Richardson...	138,938	22,709	2,000	163,647	.....	11,441	175,088	22,279	30,829	38,510	205,048
Squash.....	1,613	.....	.....	1,613	.....	669	2,282	.....	.....	.....	2,282
4. New East Wellington.....	67,549	.....	.....	67,549	.....	3,000	70,549	2,069	100	400	72,918
5. Middlesboro.....	184,182	.....	.....	184,182	.....	6,752	190,934	.....	259	615	191,290
6. Princeton.....	16,336	1,909	.....	18,245	.....	823	19,068	4,328	.....	.....	23,396
7. Coal Creek*	26,200	123,377	.....	149,577	44,688	13,709	207,974	.....	1,529	111	206,556
Michel*	13,505	51,519	.....	65,024	40,303	9,198	114,525	.....	159	18	114,384
8. Hosmer*	10,721	.....	.....	10,721	19,665	11,450	41,836	6,503	3,388	1,687	46,638
9. Corbin.....	44,154	34,998	.....	79,152	.....	2,567	81,719	.....	.....	.....	81,719
10. Diamond Vale.....	5,384	.....	.....	5,384	.....	.....	5,384	.....	.....	.....	5,384
11. Coal Hill.....	10,400	.....	.....	10,400	.....	483	10,883	.....	.....	.....	10,883
12. West Wellington.....	.....	.....	.....	.....	.....	.....	.....	.....	90	298	208
Total.....	1,372,283	573,888	38,808	1,984,979	104,656	180,483	2,270,118	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 (Dunsinuir), 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. Crowsnest 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.—TABLE 15.
British Columbia: Annual 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					4 00	40,000
1852-59...	25,398					4 00	101,592
1859†...	1,989					4 00	7,956
1860...	14,247					4 00	56,988
1861...	13,774					4 00	55,096
1862...	18,118					4 00	72,472
1863...	21,345					4 00	85,380
1864...	28,632					4 00	114,528
1865...	32,819					4 00	131,276
1866...	25,115					4 00	100,460
1867...	31,239					4 00	124,956
1868...	44,005					4 00	176,020
1869...	35,080					4 00	143,208
1870...	29,843					4 00	119,372
1871-2-3...	148,459					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	167,007	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...	228,357	40,191	189,323	229,514	257,056	3 00	688,542
1882...	232,139	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	3,027,523
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	1,093,980	3 00	2,980,304
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	944,633	1,053,045	3 00	2,884,049
1896...	894,882	261,984	634,238	896,222	1,003,769	3 00	2,683,665
1897...	802,296	290,310	619,860	910,170	1,019,390	3 00	2,730,510
1898...	1,136,485	375,423	752,363	1,128,236	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...	1,590,173	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	1,614,630	1,805,411	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...	1,899,076	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	2,364,398	3 50	7,390,305
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
1912...	2,857,345	1,898,213	966,963	2,865,176	3,208,997	3 50	10,028,116

* 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 development in various coal mining fields of British Columbia is quoted from the Annual Report¹ of Mr. W. F. Robertson, Provincial Mineralogist of the Province.

'In addition to the coal mines actually producing, there are a number of important fields which have not as yet reached the producing stage—some of these partly developed and equipped, and others only prospected.

That these fields contain a large reserve of coal there is absolutely no doubt, and many of them will be developed and producing as soon as the market demands it and the transportation facilities can be provided.

Near Princeton, in addition to the colliery of the Princeton Coal and Land Company, which shipped some 21,386 tons of very good lignitic coal, a new colliery has begun shipping—United Empire—making a start this year by shipping 500 tons.

In the same section the Columbia Coal and Coke Company has continued development all year with a force of seventy men, but has not as yet begun shipping.'

'In the Nicola valley the Pacific Coast Coal and Coke Company has continued development with a small force, and although not shipping, reports indicate that the development has been successful in proving seams of good coal.

'In the coalfield of the Peace River valley, although the seams are thin, the coal is of exceptionally good quality.

'The Groundhog coal field was visited by the writer during the summer, an account of which will be found on page 81 et seq. of this Report. The extent of the coalfield proved to be all that was claimed, but the quality of the seams as exposed in the openings seen in the southern end of the field was very disappointing. The field has only been tested in one part, and it seems quite probable that further prospecting will develop cleaner seams of coal; the number and thickness of the seams is all that could be desired.

'The coalfields on the Bulkley, Telkwa and Zymoetz rivers, near the line of Grand Trunk Pacific Railway east of Hazelton, have all been undergoing development, but it is as yet premature to say how important they may prove to be.

'On the southern end of Graham island, on Skidegate inlet, a colliery (the British Pacific) has been partly equipped, but so far the output has been unimportant.

'In the interior of Graham island, to the east of the coal-outcrops at Camps Robertson and Wilson, systematic boring has been in progress all year, but without demonstrating workable coal. It would appear that the coal-measures had been laid down on a very uneven floor of igneous rock, many of the bosses of which were higher than the depth of the coal-deposit, so that they are now

¹ Annual Report of the Minister of Mines of British Columbia for the year ending December 31, 1912; p. 249.

found protruding through; it was on one of these bosses that the first boreholes happened to be put down. The work is to be continued this year in other spots.

'Drilling has been going on in the northern part of the island near Masset, but no word has been received of commercial coal-seams having been proved.

'But slight development has been done on the coal-area near Bear lake, in the Cariboo district.

'On Vancouver Island the coalfield on Quatsino sound has been undergoing development in a small way, with as yet no definite results.

'The large producing companies have all been quietly doing extensive development work—the Canadian Collieries, near Campbell river and south of Cumberland, and it is understood much of this has been satisfactory, but details are not available for publication.

'The Western Fuel Company has been engaged in opening a new shaft—which will develop a new and very extensive seam of coal. Two shafts, each 10 × 26 inside of timbers and 350 feet apart, are being sunk; no expense or trouble which would tend to increase the safety or economy of future work is being spared in opening up this new colliery—a policy for which the present management has already acquired an enviable reputation.

'The Pacific Coast Coal Mines, Limited, has continued the development of its Squash Colliery, and has this year mined about 4,500 tons of coal.'

Yukon.

The principal coal mining companies operating in the Yukon district are the Five Finger Coal Company at Tantalus in the southern Yukon and the Northern Light, Power, and Coal Co., Limited, operating the Sourdough mine, Colliery No. 2, on Coal Creek, 40 miles northwest of Dawson. The total production in 1912 was 9,245 tons valued at \$44,958.

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
1912.....	9,245	44,958	4 86

* 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 a record of the output of 'oven coke' produced chiefly for metallurgical purposes.

During 1912 the total quantity of coke made in Canadian coke oven plants from both domestic and imported coals was 1,406,028 tons. The quantity of coal used for this production was 2,053,807 tons, of which 1,428,509 tons were domestic coal and 525,298 tons were imported.

In 1911 the production was 954,388 tons of coke made from 1,409,844 tons of coal, of which 1,025,501 tons were domestic and 384,343 tons imported. In 1910 the production of coke was 901,269 tons derived from 1,373,793 tons of coal, of which 1,331,585 tons were domestic and 42,208 tons imported.

The quantity of coke sold or used by the producers in 1912 was 1,411,229 tons, as compared with 935,651 tons in 1911 and 902,715 tons in 1910.

The smaller quantity of Canadian coal used in 1911 was due to the coal miners' strike in southern Alberta and British Columbia during the greater part of that year, and the increased quantity of imported coal used to the construction of coke ovens in Ontario.

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 1912 were 628,174 tons and the exports 57,744 tons. Adding the production 1,411,229 tons to the net imports a consumption is shown of 1,981,659 tons. Similarly estimated the consumption in 1911 was 1,677,188 tons, and in 1910, 1,581,832 tons.

The production by provinces in 1911 and 1912 and the distribution of coke sold or used in 1912 are shown in the next two tables.

Coke Production, 1912.

Province.	Coal charged to ovens.	Output of coke.	STOCK ON HAND.		Coke sold or used.	Per cent.	Value of sales, etc.
			Jan. 1.	Dec. 31.			
	Tons.	Tons.	Tons.	Tons.	Tons.		\$
Nova Scotia.....	(a) 935,784	624,762	7,097	5,941	625,918	44.4	1,840,129
Ontario.....	(b) 502,671	376,314	22,937	19,397	379,854	26.9	1,709,343
Alberta.....	170,818	108,900	628	3,844	105,684	7.5	424,027
British Columbia.....	444,534	296,052	8,411	4,690	299,773	21.2	1,190,832
Total.....	2,053,807	1,406,028	39,073	33,872	1,411,229	100.0	5,164,331

(a) Including 22,627 tons imported coal.

(b) All imported coal.

Coke Production, 1911.

Province.	Coal charged to ovens.	Output of coke.	STOCK ON HAND.		Coke sold or used.	Per cent.	Value of sales, etc.
			Jan. 1.	Dec. 31.			
	Tons.	Tons.	Tons.	Tons.	Tons.		\$
Nova Scotia	846,695	562,512	210	5,168	557,554	59.6	1,814,977
Ontario	384,343	282,874	1,274	24,594	259,554	27.7	1,318,303
Alberta	61,591	35,059	1,785	625	36,216	3.9	146,251
British Columbia	117,215	73,943	14,557	6,173	82,327	8.8	350,879
Total	1,409,844	954,388	17,826	36,560	935,651	100.0	3,630,410

Distribution of Coke Production, 1912.

	Nova Scotia.	Ontario.	Alberta.	British Columbia.	Total.
Sold in Canada	12,585	10,388	98,939	243,383	365,295
Sold for export			6,705	56,288	62,993
Total sales	12,585	10,388	105,644	299,671	428,288
Used by maker in blast furnace or otherwise.	613,333	369,466	40	102	982,941
Total sold or used	625,918	379,854	105,684	299,773	1,411,229
Number of ovens in operation December 31.	765	110	174	356	1,905
Number of ovens idle December 31	183	100	193	472	948
Number of ovens building December 31					

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.

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	134,131	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.....	57,034	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	3,583,468	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
				1912.....	1,411,229	5,164,331	3 66

COKE.—TABLE 2.
Annual Production of Coke by Provinces.

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	20,934	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	1,683,070			241,572	1,049,432	76,321	297,595
1908.....	505,929	1,653,151			276,683	1,482,191	75,645	309,019
1909.....	492,992	1,608,092			281,786	1,509,597	87,233	366,734
1910.....	508,058	1,655,775	24,685	148,110	248,394	1,172,675	121,578	486,312
1911.....	557,554	1,814,977	259,554	1318,303	36,216	146,251	82,327	350,879
1912.....	625,918	1,840,129	379,854	1709,343	299,773	1,190,832	105,684	424,027

In Nova Scotia coke was made at Sydney, Sydney Mines, and Westville during 1912, but the ovens at Stellarton and Londonderry were idle. The output is used almost entirely in the manufacture of iron and steel. The Ontario

production was all from the ovens of the Lake Superior Corporation at Sault Ste. Marie, the blast furnaces and coking ovens of the Atikokan Iron Company at Port Arthur being idle throughout the year. In Alberta coke ovens were operated at Coleman, Lille, and Passburg, and in British Columbia at Fernie, Michel, and Hosmer, all in the Crowsnest district. 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, 1912, was 1,905, while 948 were reported idle on the same date. 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, carboic acid, etc. 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., Limited., has 100 Beehive ovens at Port Arthur, Ont., and the Algoma Steel Company 110 Koppers by-product regenerative ovens at Sault Ste. Marie.

In Alberta the West Canadian Collieries, Limited, 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 of the ordinary Beehive type, while the Leitch Collieries, Limited, have erected at Passburg 191 Mitchell rectangular ovens.

There are 1,420 beehive ovens in the Crowsnest district of British Columbia and 150 on Vancouver island.

The production of by-products from coke ovens in 1912 at Sydney and Sault Ste. Marie included 8,428,896 gallons of tar, and ammonia liquor containing 11,289 tons of sulphate of ammonia. In 1911 the production was 6,646,155 gallons of tar, and ammonia liquor containing 7,124 tons of sulphate of ammonia. Production in 1910 was: tar 3,963,591 gallons, sulphate of ammonia 3,491 tons, and in 1909, tar 4,016,824 gallons, and sulphate of ammonia 3,351 tons.

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

The exports of coke during the calendar year 1912 were 57,744 tons, as against exports of only 9,852 tons in 1911 and 57,971 tons in 1910. These exports are all from British Columbia and Alberta. The imports during the calendar year 1912 were 628,174 tons, valued at \$1,702,856, as against imports

of 751,389 tons, valued at \$1,843,248, in 1911, and 737,088 tons, valued at \$1,908,725, in 1910.

The imports shown in Table 4 cover the fiscal year.

COKE.—TABLE 3.

Annual Exports of Coke.

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	13,726	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	1912.....	57,744	252,763

COKE.—TABLE 4.

Annual Imports of Oven Coke.

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.....	308,796	680,138
1886.....	11,858	39,756	1902.....	267,142	842,315
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.....	43,499	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	1,887,493
			1912†.....	641,903	1,637,091

* For nine months only. † Duty free.

