CANADA

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DEPARTMENT OF MINES MINES BRANCH

HON. ROBERT ROGERS, MINISTER; A. P. LOW, ILL.D., DEPUTY MINISTER; EUGEND HAANEL, PH.D., DIRECTOR.

THE

PRODUCTION OF COAL AND COKE

IN

CANADA



During the Calendar Year

1911

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JOHN McLEISH, B.A. Chief of the Division of Mineral Resources and Statistics.



OTTAWA GOVERNMENT PRINTING BUREAU

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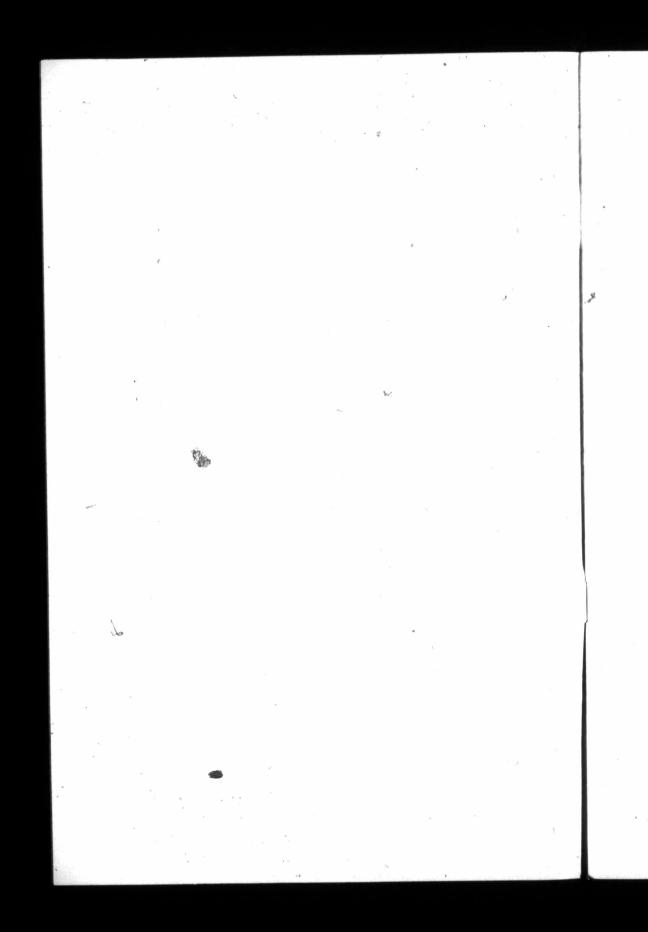
Chief of the Division of Mineral Resources and Statistics.



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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.

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Statistics of the production by provinces during the past three years are sown in Table 1, and Table 2 shows the increases and decreases in each year as impared 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.	190	1909.		10.	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	10,408,580	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.

	(i) INCREASE OR (d) DECREASE.									
Province.		Years 1909 an	d 1910.	Years 1910 and 1911.						
		Tons.	Per cent.		Tons.	Per cent.				
Nova Scotia	(i) (i)	779,053	13.78	(i)	573,278	8 91				
British Columbia	(i)	724,618	27.80	(d)	788,213	23 66				
Alberta	(1)	899,728	45 11	(d)	1,383,433	47 79				
Saskatchewan.	(d)	10,969	5.71	(i)	25,623	14 14				
New Brunswick	(1)	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 scaboard 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.

 $1874,\ 1890,\ 1900,\ 1902,\ 1903,\ 1904,\ 1905,\ 1906,\ 1907,\ 1908,\ 1909,\ 1910,\ 1911$

											1	£0.									
Nova Scotia () New Brunswick, ()	71	62	9	69	4	71	3	65	0	65 5	64	07	60	79	61	• 40	54	29	50	25.62	k.
Saskatchewan"		0	7	0	9	1	5	1	$\overline{5}$	1:2	1	11	1	44	1	37	1	83	1	40 A	83
Alberta*	4	1.	4	5	+	6	2	н	0	10.8	12	77	15	14	15	42	18	.99	22	12 13	34
British Columbia.																					
Yukon Territory .				0	1					0 1	0	07	()	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 totas 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 percent 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 cast 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 i₇ 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 čoke 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 4911, 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.

	Nova Seotia,	New Bruns- wick.	Sas- katch- ewan.	Alberta.	Yukon.	British Columbia.	Total.
Sales in Canada Sales for export to U. S	5,003,933 356,089		173,084		16,135		8,956,450 1,847,943
Sales for export to other countries				240,071			291,273
Total sales	5,583,770	\$3,455	173,084	2,552,809	16,135	2,716,413	11,095:666
Used by producers in mak- ing coke Used by producers for col- liery consumption and	183,560	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		196,250		379,893	759,703
workmen.	663,812	2,000	8,072	145,410	50	234,439	1,053,783
Stock on hand Jan. 1	149,958	-,					200,019
" Dec. 31				8,957		79,376	263,666
Difference Losses due to breakage or	+ 25,375						+ 63,647
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	13,216,513

Coal Output in Canada 1910.

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

Coal Output in Canada, 1911 ...

	Nova Scotia.	New Bruns- wick.	Sas- katch- ewan.	Alberta.	Yukon.	British Columbia.	Total.
Sales in Canada Sales for export to U. S. Sales for export to other	5, 462, 828 385, 095	53,781	198,768	1,304,778 40,723		1,536,957 642,754	8,559,952 1,068,572
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 mak- ing coke. Used by producers for colli-	273,548			61,591	- 	117,215	452,35
ery consumption and workmen.	6 46,34 0	2.000	-8,011	103,783		202,141	962,278
Stock on hand Jan. 1.	173,164						265,046
Dec. 31							307.75
Difference							+ 42.70
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 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
sed 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.
		8	8		
1785 to 1873	*8,591,150				1
1874	1,063,742	1.763,423	1 66	2.10 X X 20.10 X 20.00	a construction and a second
1875	1,039,974	1,747,016	1 68	(d) 23,768	(d), 22
1876	994,762	1.729.546	1 74	(d) 45,212	(d) , $\frac{2}{4}$, $\frac{2}{3}$
1877	1.036.670	1,794,415	1 73	(i) 41,908	(a) 4 3 (i) 4 2
1878	1.089.744	1,941,285	1 78	(i) 53,074	(i) 51
1879	1,126,497	2,050,639	1 82	(i) $36,753$	
1880	1,482,714	2,657,194	1 79	(i) 356,217	1 1.17
1881	1,537,106	2,688,621	1 75	(i) 54.392	
882	1,848,148	3,248,446	1 76		(i) <u>3.7</u>
883	1,818,684	3, 109, 635	1 71	(i) 311,042	(i) 20.2
884	1,984,959	3,593,831	1 81	(d) 29,464	(d) 1.6
885	1,920,977	3,417,807	1 78	(i) $166,275$	(i) 9.1
886	2,116,653			(d) 63,982	(d) 3·2
207		3,739,840	1 77	(i) 195,676	(i) 10 2
887 898	2,429,330	4,388,206	1 81	(i) 312 ,677	(i) 14-8
	2,602,552	4,674,140	1 80	(i) 173,222	(i) 7 1
889	2,658,303	4,894,287	1 84	(i) 55,751	(i) 2 1
890	3,084,682	5,676,247	1 84	(i) 426,379	(i) 16:0
891	3,577,749	7,019,425	1 96	(i) 493,067	(i) 16°0
892	3,287,745	6,363,757	1.94	(a) 290,004	(d) 8.1
893	3,783,499	7,359,080	1 95	(i) 495,754	(i) 15·1
894	3,847,070	7,429,468	1 93	(i) 63,571	(i) 1.7
895	3,478,344	6,739,153	1 94	(d) 368,726	(d) 9.6
896	3,745,716	7,226,462	1 93	(i) 267.372	(i) 7.7
897	3,786,107	7,303,597	1 93	(i) 40,391	(i) 1 1
898	4,173,108	8,224,288	1 97	(i) 387,001	(i) 10 2
899	4,925,051	10,283,497	2 09	(i) 751,943	(i) 18 0
900	5,777,319	13,742,178	2 38	(i) 852,268	(i) 17·3
901	6,486,325	12,699,243	1 96	(i) 709,006	(i) 12.3
902	7,466,681	15,210,877	2 04	(i) 780,356	(i) 151
903	7,960,364	15,942,833	2 00	(i) 493,683	(i) 6.6
904	8,254,595	16,592,231	2 01	(1) 435,085 (1) 294,231	(i) 3.7
905	8,667,948	17,520,263	$\frac{2}{2}$ 02	(1) 254,251 (1) 413,353	(i) 50
906	9,762,601	19,732,019	2 02	(i) 1.094.653	(1) 50 (1) 12.6
907	10,511,426	24,381,842	$2 02 \\ 2 32$		
908	10,886,311	25,194,573	$2 32 \\ 2 31$		(i) 7.7
909	10,501,475		$\frac{2}{2} \frac{31}{36}$	(i) $374,885$	(i) 3.5
910	12,909,152	24,781,236		(d) 384,836	(d) 3.5
911.		30,909,779	2 39	(i) 2,407 ,677	(i) 22.93
211	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 :—

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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 \$76,410 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.

Expo	rts of Coal	produced	in Canada	during 19	09-10-11.	
• Exported to	190	9.	191	0.	191	1.
in ported to	Tons.	Value.	Tons.	Value.	Tops.	Value.
>		*8		8		8
Great Britain	10,671	36,403	5,872	18,901	14,185	48,496
United States	1,240,519 175,801	3,357,111 493,040	1,947,287 203,626	4,583,626 574,157	1,035,889 223,553	2,809,204 617,299
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 Froduce o Canada.
	Tons.	Tons.		Tons.	Tons.
873	420,683	5,403	1893.	960,312	102,82
874.	310,988	12,859	1894.	1,103,694	89,78
875	250,348	14,026	1895.	1,011,235	96,83
876	248,638	4,995	. 1896	1,106,661	116,77
377	301,317	4,829	1897	986,130	101,84
378	327,959	5,468	1898	1,150,029	99,18
379	306,648	8,468	1899.	1,293,169	101,00
380	432,188	14,217	1900	1,787,777	62,77
381	395, 382	14,245	1901	1,573,661	53,89
382	412,682	37,576	1902	2,090,268	23,45
383	486,811	44,388	1903.	1,954,629	27,13
384	474,405	62,665	1904.	1,557,412	27,30
385	427,937	71,003	1905.	1,635,287	86,79
386	520,703	78,443	1906.	1,835,041	44,75
387	580,965	89,098	1907	1,894,074	101,77
388	588,627	84,316	1908	1,729,833	102,07
389	665,315	89,294	1909	1,588,099	161,09
390	▶ 724,486	82,534	1910	2,377,049	159,88
391	971,259	77,827	1911	1,500,639	133,94
892	823,733	93,988			

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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 3" 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.

Fiscal Year.	BITUMING	OUS COAL.	ANTHRAC AN ANTHRACI	(D	Bituminous coal fust.		
	Tons.	Value.	Tons.	Value.	Tons.	Value.	
		8		8 .		8	
380	457,049	1,220,761	516,729	1,509,960	3,565	8.87	
381	587,024	1,741,568	572,092	2,325,937	337	66	
382	636,374	1,992,081	638,273	2,666,356	47.1	90	
383	911,629	2,996,198	754,891	3,344,936	8,154	10.08	
384	1,118,615	3,613,470	868,000	3,831,283	12,782	14.60	
385	1,011,875	3,197,539	910,324	3,909,844	20,185	20,41	
886	930,949	2,591,554	995,425	4,028,050	36,230	36,99	
387	1,149,792	3,126,225	1,100,165	4,423,062	31,401	33,17	
388	1,231,234	3,451,661	+2,138,627	5,291,875	28,808	34.73	
389.	1,248,540	3,255,171	1.291.705	5,199,481	39,980	47,13	
390	1,409,282	3,528,959	1,201,335	4,595,727	53,104	29,81	
391	1,598,855	4,060,896	1,399,067	5,224,452	60,127	36,13	
392.	1,615,220	4,099,221	1,479,106	5,640,346	82,091	39,84	
393	1,603,154	3,967,764	1,500,550	6,355,285	109,585	44, 47	
94	1,359,509	3,315,094	1,530,522	6,354,040	. 117,573	49,51	
395	1,444,928	3,321,387	1,404,342	5,350,627	181,318	52,22	
396	1,538,489	3,299,025	1,574,355	5,667,096	210,386	53,74	
397	1,543,476	3,254,217	1,457,295	5,695,168	225,562	59,60	
98	1,684,024	3,179,595	1,460,701	5,874,685	229,445	45,55	
399	2,171,358	3,691,946	1,745,460	6,490,509	276,547	44,71	
00	2,439,764	4,310,964	1,654,401	6,602,912	330,174		
01	2,516,392	4,956,025	1,933,283	7,923,950	414,432	98,34	
02	3,047,392	5,712,058	1,652,451	7,021,939	489,548	275,50	
03	3,511,412	7,776,717	1,456,713	7,021,939	489,548 550,883	264,57	
04.	4,053,900	9,108,208	2,275,018	10,461,223		420,31	
05	4,176,274	8,002,896	2,604,137	12,093,371	$608,041 \\ 650,261$	544,12 343,45	
06	4,495,550	8,360,348	2,200,863	10,304,308	747,251	489,18	
1	1,100,000	0,000,040	2,200,005	10,304,308	Bituminous		
Calendar Year.	Bituminous	round and					
Calendar I (al.		the mine.			as will pass thro		
07	6,370,152	13,232,445	3,141,873	14,506,129	1,139,256	1,121,94	
08.	6,025,574	12,516,748	3,160,110	14,478,536	1,111,811	1,121,94 1,355,67	
09	5,625,063	11,455,818	3,017,844	13,906,152	1,230,017	1,305,67 1,469,88	
10	5,966,466	11,919,341	3,266,235	14,735,062	1,365,281	1,409,68	
11		18,407,603	(b) 4,020,577	14,735,062	(c) 1,632,500	1,795,59 2,090,79	

Imports of Coal into Canada.

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

(a). Duty, 53c. per ton. (b). Coal, anthractic, and anthractic coal duse, duty first, end with the perton.
14c. per ton.
14 In the anthracite column the imports show a very considerable increase in 1888 over 1887, an nerease 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 1 would account for the changes indicated, and unless some error may possibly have crept into Trade and Navigation report, no explanation is available.

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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 30.5 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.

	19	# 10.	191	1.
	Tons.	Tons.	Tons.	Tons.
Production, Table 3 Exports of Canada, Table 4	2,377,049) 	1,500,639	
Imports, Table 6 Exports not produce of Canada, Table 4	$10,597,982 \\ 159,859$		133,943	9,822,749
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.		Consump- tion per capita.
(report)	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	1.123
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	4.40	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	4,912,664	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	7,343,880	14.376.541	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	10,549,503	19,166,855	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	9,711,820	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.
				10 0	00 0	0 0000

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Nova Scotia.

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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; 646,340tons 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 consump- tion.	Supplied workmen.	Supplied locomotive.	Keported unsaleabl	bank at clow- e. of year.
	Tons.	Tons.	Tons.	P	Tons.	Tons.	
Dominion Coal Co., Ltd. Nova Scoria Staal & Coal Co. 1,64	4,360,113	3,971,278	246,112 33.556	48,939	23,514 3.925		125,840 43,342
Cumberland Railway & Coal Co, Ltd.	214,871		42,827	4,654	3,269		7,602
Acadia Coal Co Maritime Coal Bailway & Power Co	522,297		83,898	10,985 3 379	1,384		22, 498
Inverness Railway & Coal Co	326.577		20,300	6,015	10,376		3,731
	293,000		38,049	7,289	802		11,042
Sydney Coal Co.	4,129		96	153			410
MacKay Colliery	32,571		1,887	460			
North Atlantic Collieries Co.			069'6	1,234		2,696	3,143
Port Hood Coal Co			8,7,98	1,261			267
Minudie Coal Co.			3,120	1,267	112	4,961	
Autantic Uringstone & Coar Co	5.023		2.164	141			
Great Northern Coal Co	1,419		809	39			62
	6,953,457	6,078,377	509,894	105,926	11,930	7,657	217,984

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COAL.-TABLE 8.

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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.	90
	880.950	785.914	110.341	896.255	986,664		123,582	1,003,806	1 75	
K73	1,051,467	881,106	108,398	989,504	1,177,643	986,839	121,406	1,108,245	1 75	
	872,720	749.127	119,582	868,709	977,446		133,932	972,954	1 75	
	781,165	706,795	124,110	830,905	874,905		139,003	930,613	1 75	
	709,646	634,207	113,788	747,995	794,804		127,443	837,755	1 75	
	757,496	687,065	98,841	785,906	848,396		110,702	880,215	1 75	
	770,603	693,511	88,627	782, 138	863,075		99,262	875,994	1 75	
	788,271	688, 624	84,787	773,411	882,863		06' 1 6	866,220	1 75	
	1,032,710	954,659	96,831	1,051,490	1,156,635		108,401	1,777,669	01 1	_
	1,124,270	1,035,014	107,888	1,142,902	1,209,183		120,834	1,280,000	02 1	
862	1,360,811	1,200,1/9	111,361	1,301,000	1 503 950		195, 383	1,578,600	1 1 2 2	9 466 576
	1,389,995	1 961 650	116.769	1.378.419	1.556.011		130.781	1.543.829	1 75	
885	1.352,205	1.254.510	127.624	1.382,134	1.514.470		142,939	1,547,990	1 75	
886	1,502,611	1,373,666	142,421	1,516,087	1,682,924		159,512	1,698,018	1 75	
	1,670,830	1,519,684	139,777	1,659,461	1,871,330		156,550	4,858,596	1 75	
	1,776,128	1,576,692	157,443	1,734,135	1,989,263		176,336	1 '942,231	1 75	_
	1,756,279	1,555,107	158,131	1,713,238	1,967,032		177.107	1,918,827	1 75	
	1,984,001	1,786,111	161,240	1,947,351	2, 222, 081		180,589	2,181,033	21	
	2,044,784	1,849,945	174,983	2,024,928	2,290,108		130,361	2,207,919	1 75	
005 009	1, 342, (80	L, (027, 549	1/0,032	9 1 29 068	0 480 907		930 026	9 444 994	1 75	
	9 950 631	9,060,090	106 906	9 967 196	2, 590, 707		219.751	2.597,989	1 75	_
	1 000 756	1 703 008	193 639	1 986 737	2, 239, 727		216.875	2.295.145	1 75	
896	2.292.675	2.046.828	192,975	2, 239, 808	2.537.706		216,132	2.508,570	1 75	3,919,355
	2,340,031	2.044.672	181.716	2, 226, 388	2.020,835		203,522	2,403,554	1 75	
	2 262 656	2,121,126	187.428	2.288,554	2,584,175		187.519	2,563,180	1 75	
	2,865,443	2,633,989	177.460	2,811,449	3,209,296		138,775	3,148,822	2 00	
	3.296.791	2,998,737	236,563	3,235,300	3,694,646		264,051	3,623,536	2 50	
	3,821,033	3,411,127	301,434	3,712,561	4,279,557		337,606	4,158,068	1 75	6,496,982
	4,725,480	4,229,120	379,198	4,608,318	5,292,538		424,702	5,161,316	2 00	
	5,215,562	4,565,720	481,903	5,047,623	5, 841, 429		539,731	5,653,338	77 00 77	10,095,246
	AG4 044						400			000 000

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400,891 5,641,592 5,821,622 5,167,476 459,107 5,646,553 2,000 400,891 5,564,553 2,000 407,256 5,574,191 7,714,307 516,198 6,220,506 5,573,571 5,573,509 5,573,569 5,573,569 5,573,569 5,573,569 5,573,571 5,561 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,573,591 5,735,591 5,735,591 5,735,591 5,735,591 5,735,717 5,562,089 2,255 5,732,946 7,125,551 5,523,590 546,340 7,004,420 2,25	427,774 5,041,502 5,546,191 5,7476 479,107 5,646,553 2 400,891 5,554,022 6,546,191 5,704,307 5,161,188 6,220,506 477,256 5,676,73,882 6,486,663 5,884,406 489,727 5,524,133 576,509 5,889,767 6,406,489 5,861,761 645,690 6,652,539 2 577,089 6,523,946 7,125,501 6,368,912 5,823,681 07,461 6,431,142 2 542,376 6,523,946 7,125,501 6,368,019 646,340 7,104,420 2 577,089 6,523,946 7,125,501 6,368,019 646,340 7,004,420 2	5,197,877 4,613,818 427,774 5,041,592 5,821,622 5,167,476 479,107 5,646,583 2<00 5,744,813 5,064,592 5,5821,622 6,166,191 5,714,007 5,646,583 2<00						,					
400,891 5,641,592 5,821,622 5,167,476 459,107 5,646,553 2 00 40,891 5,564,553 2 00 407,807 516,198 6,220,506 5,573,856 5,573,856 5,573,856 5,573,856 5,573,856 5,573,856 5,573,856 5,573,856 5,573,856 5,573,875 5,573,875 5,573,875 5,573,875 5,732,599 5,225 5,573,875 5,732,946 5,713,872 5,583,849 6,7401 6,534 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,223,946 7,125,551 6,365,089 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004,420 2 25 5,77,089 6,20,080 646,340 7,004 7,00 7,004,420 2 25 5,755 6,	5, 197 4, 613, 818 497, 77 5, 641, 562 5, 747 5, 646, 583 2, 00 5, 844, 817 5, 846, 5181 497, 77 5, 64, 563 5, 741, 50 5, 646, 583 2, 00 5, 744, 613 5, 676, 583 5, 646, 581 5, 77, 506 5, 290, 506 2, 200 5, 775, 503 5, 735, 818 486, 406 5, 673, 818 486, 406 2, 220, 506 2, 200 6, 076, 339 5, 234, 778 5, 673, 581, 668, 668 5, 673, 581 5, 673, 583 5, 220, 506 2, 220 6, 076, 339 5, 196, 716 6, 703, 112 5, 613, 102 5, 514, 113 2, 220 6, 106, 339 5, 196, 716 6, 103, 102 5, 833, 61 6, 102, 613 2, 220 6, 106, 330 5, 196, 103 5, 118, 102 5, 833, 61 6, 622, 689 2, 225 6, 106, 106 5, 106, 102 5, 118, 102 5, 833, 61 6, 612, 613 2, 225 6, 106, 106, 106, 106, 106, 106, 106, 10	5,197,877 4,613,818 427,774 5,041,592 5,821,622 5,167,476 479,107 5,646,583 2<00						,					
407,774 5,041,502 5,821,622 5,167,476 479,107 5,646,553 2,00 407,891 5,674,292 6,546,191 7,714,307 516,198 6,220,506 2,20 477,256 5,673,581 6,466,563 5,864,406 498,727 6,524,599 2,225 576,509 5,998,767 6,805,489 5,861,701 6,5,690 6,522,539 2,225 522,479 5,046,508 5,718,871 5,066,912 5,851,177 5,652,089 2,25 522,479 5,742,916 5,718,12 5,861,177 5,652,089 2,25 542,379 5,732,946 7,125,501 6,358,090 646,340 7,004,420 2,25	400, 891 5, 841, 632 5, 107, 476 479, 107 5, 646, 583 2, 00 400, 891 5, 554, 102 6, 546, 109 5, 713, 851 5, 66, 583 2, 00 477, 286 5, 673, 586, 565 5, 673, 586 5, 673, 586 2, 200 2, 200 576, 500 5, 939, 767 6, 846, 102 5, 866, 912 5, 861, 761 456, 690 5, 324, 706 2, 225 576, 500 5, 946, 508 5, 861, 701 6, 456, 112 5, 660 2, 225 526, 500 5, 946, 511 5, 823, 681 646, 410 7, 104, 420 2, 255 577, 089 6, 523, 946 7, 125, 551 6, 366, 340 6, 461, 142 2, 255 577, 089 6, 523, 940 7, 125, 551 6, 368, 080 646, 340 7, 004, 420 2, 255	5,197,877 4,613,818 427,774 5,041,592 5,821,622 5,167,476 479,107 5,646,583 2<00 5,844,815 5,654,022 6,546,191 5,714,307 5,646,183 20,107 5,646,583 2<00						/					
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COAL.-TABLE 9.

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

Calandar Vaar	CUMBERLAND	AND.	PICTOU	.no	CAPE BRETON.	RETON.	OTHER COUNTRIES.	UNTRIES.	Total.	al.
Calculat Lett	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	5.704.5
206	534,047	445,288	840,533	729,043	4,698,147	4,346,180	395,836	343,895	6,468,563	5,864,406
	662,157	530, 648	849,802	678,025	4,840,653	4,267,346	452,877	375.742	6.805.489	5.851.
60	494,919	403,371	743,860	599,743	4,081,333	3.723,135	398,759	340,663	5,718,871	5,066.
910.	350, 363	288,706	714,846	588,678	5,035,800	4.571.347	414.153	374,950	6.515.162	5.823.
911	538, 296	436,125	833,956	691.852	5.405.355	4.917.902	347 944	319,901	7,125,551	6.358 (

Sales include coal used for making coke and steel.

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COAL.-TABLE 10.

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

Cape Breton County. Dominion Coal Company.			
Dominion Coal Company.			
Nova Scotia Steel and Coal Co North Atlantic Colheries. McKay Mining Company. Sydney Coal Company. Colonial Mining Co	3,119,556 848,444 81,292 15,217 5,301 709	3,634,124 936,710 99,687 19,136 4,464 15,625	$\begin{array}{r} 4,360,113\\ 848,762\\ 53,751\\ 32,571\\ 4,129\\ 5,023 \end{array}$
Cumberland County.			
Cumberland Railway and Coal Co. Maritime Coal, Railway, and Power Co., Chignecto. Minudie Coal Co. Stratheona Coal Co. Great Northern Coal Co. Atlantic Grindstone and Coal Co. Eastern Coal Co.	$\begin{array}{c} 421,437\\ 56,392\\ 55,620\\ 55,766\\ 7,936\\ 4,272\\ 721\\ 4,940\end{array}$	$\begin{cases} 60,298 \\ 181,264 \\ 61,037 \\ 988 \\ 239 \\ 7,381 \end{cases}$	214,871) 183,416 61,019 1,419 374
Colchester County.			
Colchester Coal Co	1,490		· •
Pictor County.			
Acadia Coal Co Intercolonial Coal Co Marsh colliery	408,792 327,576 22,585	397,962 307,692	522,297 293 000
Inverness County.			
Inverness Coal and Railway Co Mabou Coal Co. Port Hood Coal Co	$296,546 \\ 1,804 \\ 106,669$	310,528 97,269	326,577 46,135

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COAL.-TABLE 11.

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Nova Scotia: Distribution of Coal Sold.

				FISCA	FISCAL YEARS ENDING SEPTEMBER 30.	NG SEPTH	MBER 30.			
Markets.	1907.		1908.		1909.		1910.		1911.	
	of $2,000$ lbs.	Per cent.	$\operatorname*{Tons.}_{\mathrm{of}\ 2,000\ lbs.}$	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, 736 322, 773	08.08 0.20	1,804,377	$29 \ 37 \ 6 \ 19$	1,642,716 339,462	31 77 6 57	1,631,052 342,787	30°65 6°25	2,007,192 354,514	32 - 25 5 - 70
	2,063,509 478,383 86,792 1,914,743 1,64,082 690,082 690,082	85 51 5 25 25 25 5 21 25 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 2	2,184,709 571,570 70,931 70,931 2,293,352 359,392 559,592	35-56 9-30 37-33 9-11 9-11	$\begin{array}{c} 1.982.178\\ 607,968\\ 607,968\\ 88,365\\ 1,689,876\\ 174,998\\ 359,224\end{array}$	38 34 11 76 11 71 32 69 3 32 69	$\begin{array}{c} 2,023,839\\ 594,288\\ 594,288\\ 89,031\\ 2,001,382\\ 19,224\\ 325,548\end{array}$	36 90 10 84 1 62 36 49 3 62 5 93	2,361,706 606,532 90,314 2,315,971 206,299 372,177	$\begin{array}{c} 37 & 95 \\ 9 & 74 \\ 1 & 45 \\ 37 & 22 \\ 3 & 32 \\ 5 & 98 \\ 5 & 98 \end{array}$
Mexico. Bunker coal Other countries	. 61	0.15 4.05 0.25	9,976 216,554 5,261	0.16 3.53 0.00	$\begin{array}{c} 11.463\\ 254,681\\ 846\end{array}$	$\begin{array}{c} 0 & \underline{22} \\ 4 & \underline{92} \\ 0 & 02 \end{array}$	8,405 243,807	0 15 4 45	10,107 229,243 *30,841	0 16 3 68 0 50
Total.	5,652,292	100 000	6,143,854	100.001	5,169,599	100.00	5,484,524	100.00	6,223,240	100.00
* For time chartered boats Other countries	ooats						Tone. Per 28,610 (2,231 (Per cent. 0:46 0:04		
						1	30,841	02.0	~	

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

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		UNDER	UNDERGROUND			Х ^{г.} В.	SURFACE.		Coxs1	CoNSTRUCTION.	0N.	IoT	l'otals.	HORSES.	X. X.	PIT DAYS.
Company.	Skined Isbour.	srenoda.I	Boys.	зяўв(I	Skilled (abour:	Labourers	Boys.	Days.	skilled Isbour.	rabourers.	.sysC	Dersons.	.ядв(Т	.970dA	Below.	Worked.
Theminian Coal Co.	002.0	1 7407	+)12(+	1 2 30 7 11:		1772.	13	021 120				5 530	1 505 915	9	1	036
Nova Scotia Steel and Coal Co	1 050	202	202	041 2001	141	206	Ĩ	111 816				0 449	642.712		1110	112
Cumberland Railway and Coal Co	259	2002	22	162,883	X	120	-0	62.67.2		21	XXX	203	232, 393			567
Acadia Coal Co.	343	354	2	251,538	(16)	017	61	136,940				1,163	X14 XXX	31		166
Intercolonial Coul Co.	349	152	ż	149,756		114	92	37.732	1	-	661	818	207.987			502
Mar. Coal, Ry. and Power Co., Joggins.	269	Ŷ	1 - \$	106,124	17	6;†	11	24,0865				440	130,210			563
Inverness, Railway and Coal Co	312	1:30	- 21	137.725	24	13	1	29,161			• :	550	166, 226			2672
Mat. Coal, Ry. and Power Co., Chignecto	-	X	~	10,357	9	0	÷1	3.224				22	13,581			1.4
Sydney Coal Co.	9	21		1.759	-	:1		169	-	~	19	15	2,517			168
Mackay Mining Co.	36	1.3		14,5065	5	X		4.174	-	ŝ	107	()()	18,934			505
North Atlantic Collieries.	÷.	-	16	32,622	12	32	1-	13,477				1665	16,00,01			266
Port Hood Coal Co.	1:00	:-:		22,872	15	17	~	9,973				222	32,845	+	ŝ	183
Great Northern Coal Co	+	-		660 1	1	÷1		782	÷1	1	662	11	611 2			29
Minudie Coal Co	66	16	1.5	31,114	14	1+	+	9,504	1	•	440	156	41,058	3	1	246
Atlantic Grindstone and Coal Co	21			1111	51			178				4	668			105
Colonial Coal Co.	6	÷1		3, 249	++	21	1	1, 26:5				<u>x</u>	5,117	1	21	300
	5,755	3,491	582	2,802,534	1,004	1,272	183	721,858	x	2	2,757	12,522	3,527,149	182	s10	

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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 collicry 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.
		8	\$ cts.			8	8 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	$\frac{2}{2}$ 00
1899	10,528	15,792	1 50		0.,101	111,002	~ 10

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.

Average Average Calendar Calendar Tons. Value Tons Value. value value Year. Year. per ton per ton b \$ cts. 8 8 × 1890 2002001 00 1901 45,000 72,000 60 70,400 116,703 1891 1909 112,640 521892 5,400 9,325 1 73 1903 169.618 45 1893 8,325 12,485 50 1904 124,885 187,021 50 $^{+15,051}_{-15,769}$ 15,153 107,596108,3981894 1 01 1005 152,334 42 1895 2 31.538 00 1906 164.146 51 1896 16,706 25,059 50 1907 151 232 252,437 67 37,500 37,500 1897 25,000 50 1908 150,556 253,790 69 0,1 25,00025,00025,0001898 1 50 1909 192 125 296 339 54 1899 37,500 1 50 1910 181,156 293,923 62 1900 40,500 60,750 1 50 1911 206,779 347.248 155

Saskatchewan: Annual Production.

† 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 cohsumption 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., Burmis	104	21,669	300	
The Hillcrest Coal and Coke Co., Hillcrest.	168	44,664	4,025	21,969
Leitch Collieries Ltd., Passburg.	153	52,315		48,689
Maple Leaf Coal Co., Bellevue		13,150	2,310	54,625
Canadian Coal Consolidated Co., Frank	86	24,912	1,138	14,288
West Canadian Collieries, Blairmore mine	122	24, 312	12,514	37,426
" Lille "	89	79,604	(c) 36 ,107	115 711
Bellevue	30	10,004	(C) 30 , 107	115,711
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	252	43,482	1,123	44,605
Alberta Railway & Irrigation Co., Lethbridge.	104	131,859	7,041	138,900
Eureka 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
It other companies each producing over 10 000		867,246	135,789	1,003,035
14 other companies, each producing over 10,000		000 507	10.014	
tons.		290,527	19,914	310,441
14 other companies, each producing under 10,000 tons		187,889	9,671	197,560
Total production, Alberta		1,345,662	165,374	1,511,036

* Includes consumption under boilers, workmen, etc.

(a) (b) 47,308 tons of briquettes. 892 ...

...

(c) (d) 23,754 tons used in making coke.

37,837

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

COAL.-TABLE 14.

Alberta: Annual Production.

Calendar Ye a r.	Tons.	Value.	A verage value per ton.	Calendar Year.	Tons.	Value.	A verage value per ton
		8	\$ cts.			8	8 cts
.887	74,152	157,577	2 13	1900	311,450	778,625	2 50
.888	115,124	183,354	1 59	1901	340,275	850,687	2 50
.889	97,364	179,640	1 85	1902	402,819	960,601	2 38
.890	128,753	198,298	1 54	1903	495,893	1,117,541	2 25
.891	174,131	437,243	2 51	1904	661,732	1,404,524	2 12
.892	178,970	460,605	2 57	1905	931,917	1,993,915	2 14
.893	230,070	586,260	2 55	1906	1,246,360	2,614,762	2 10
.894	184,940	473,827	2 56	1907	1,591,579	3,836,286	2 41
.895	169,885	382,526	2 25	1908	1,685,661	4,127,311	2 45
.896	209,162	581,832	2 78	1909	1,994,741	4,838,109	2 43
897	242,163	630,408	2 60	1910	2,894,469	7,065,736	2 44
.898	315,088	788,720	2 50	1911	1,511,036	3,979,264	2 63
899	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 mineoperators and the Labour Union to agree as to wages and working conditions.

The total production in 1911 was 2,542,532 tons, valued at \$7,945,410, 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 percent 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 379,893 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 collicries located on Vancouver island, and of the mainland collicries 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 1,702,936 tons in 1910. In the latter districts the quantity sold for consumption in Ganada 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.

		1910.			1911.	
Coal,	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	348,184	1,536,957
States	403, 370	845,113	1,248,483	405,535	237,219	642,754
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 consump- tion	135,864	98,576	234,440	151,761	50,380	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.

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Lost STOCKS.	ry un s, washing. First of Last of Output. year.	84,332 9,712 4,942 411,909 30,883 1,945 4,942 11,872 1,945 170 101,872	1,981 1,465 29,515 23,488	22, 279 30, 829 38, 510	2,069 100 400	4 204 615	1.529 111	159 18	6,503 3,388 1,687		483 10, S83 208 208 208 208 208	
	making colliery coke. boilers, etc.	34,	14, 39,	II	ŝ	6,		40,303 9,		2í		101 020 100
Total.	382,347 132,494 21	317,501	163,647	67,549	184,182	149.577	65,024	10,721	5.384	10,400	1 001 000	
Sa	To other countries.	1,726 2,300	32.782	2,000								2420.000
SALKS	To United States.	140,162 94,049 31	62,494	22,709		1 909	123,377	51,519		N665 * FC		200 000
	In Canada.	240,459 36,145	255,007 321.690	138,938	610,1	184,182	26,200	13,505	10,721	197.04	10,400	1 37-0 949
	Colliefy.	1. Protection Northfield. Domeras	2. Extension Union	3. Fiddick and Richardson.	4. New East Wellington	5. Middlesboro. 6. Princeton	7. Coal Creek*	Michel*	- `	10. Diamond Vale	 Coal Hill. West Wellington. 	Total

* In operation during three months owing to strike.

The Western Fuel Co.
 The Western Fuel Co.
 The Canadian Collieries (Dunsmuit), Ltd.
 Pacific Coast Coal Mines, Ltd.
 The Varcowver-Namino Coal Mining Co., Ltd.
 Nicola Varea Coal and Cole Co., Ltd.
 Princeton Coal and Land Co., Ltd.

Crowsnest Pass Coal Co., Ltd.
 Hommer Mines, Ltd.
 Corbin Coal and Coke Co., Ltd.
 Diamond Vale Collicrius, Ltd.
 The Inhand Coal and Coke Co., Ltd.
 Biggs Birs.

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

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		SALES	.E8.		Used in	Used under	Lost	STORKS.	K.Y.	
Collery.	In Canada.	To United States.	To other countries.	Total.	making coke.	colliery boilers, etc.	in washing.	First of year.	Last of vear.	Output.
Protection	187,923	133,360	10,583	331,866		31,439		8.327	112.6	364,689
Northfield	36,035	922,776	6,535	120,346		28,495		2.605	1.945	148,181
Extension	251,208	72,920		324, 128		12,467	43,812	1.5005	1.981	380.482
Union	308,266	48,623	25,873	382,762	4,670	37,355	79,790	6.986	20,835	518 496
Fiddick	92,701	27,473	17,209	137,473		10,305	11,602	13.238	25,899	170,171
Suquash	766			7645		1,000		1,050	2.123	0.830
New East Wellington	29,542			29,542				200	100	24,442
Middlesboro	138,681			138,681		2,987		440	656	141 48
Princeton	6,278	3,570		x7x 6		300			+1.720	11 252
Coal Creek	41,110	431,772		472,882	118,432	39.756		36	1.530	699 564
Michel	77,290.	204,525		281,815	147.134	28,500		16	159	457 581
Carbonado	+	*	*		*	*	×	i,	*	*
Hosmer	. 54,098			54,098	68.953	22.086	11.073	1.475	3 388	158 193
9 Corbin.	10,080	114,790		124,870		1.981			~~~~	126,581
Diamond Vale	2,261			2.261		100			01	SF 6
11 Coal Hill	2,200			2,200		100				2,300
Total	1,238,439	1,114,809	\$ 60,290	2,413,538	339,489	206,871	146.277	36.290	009.69	3, 139, 235

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

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A State

Crow-mest Pass Coal Co., Ltd.
 Hosmer Mines, Ltd.
 P. Corbin Coal and Coke Co., Ltd.
 D. Diamond Vale Collieries, Ltd.
 Coal Hill Syndicate.

COAL. - TABLE 15.

British Columbia: Production.

Calendar	Output,	Home con-	Sold for	Produce	TION.*	Price	
Year.	tons. 2,240 lbs.	tons. 2,240 lbs.	export. 2,240 lbs.	Tons. 2,240 lbs.	Tons. 2 000 lbs,	per ton, 2,240 lbs.	Value.
						8 cts.	*
1836-52	10,000	1		1	11,200	4.00	40,000
1852-59	25,398				28,446	4 00	101,592
1859‡ 1860	1,989 14,247				2,228	4 00	7,956
1861	14,247				15,957 15,427	4 00	56,988
1862	18,118				20,292	4 00	55,096 72,472
1863	21,345				23,906	4 00	85,380-
1864	28,632		to 1873, incl		32,068	4.00	114,528.
1865	32,819	output is	taken as proe	luction.	36,757	4 06	131,276
*1866 1867	25,115 31,239				28,129	4 00	100,460
1868	44,005				34,988 49,286	4 00	124,956
1869	35,080		*		40,098	4 00	176,020 143,208
1870	29,843				33, 424	4 00	119,372
1871-2 3.	148,459	j.		()	166,274	4 00	593,836
1874	81,547	25,023	56,038	81,061	90,788	3 (0)	243,183
1875 1876	110,145 139,192	$31,252 \\ 17,856$	$66,392 \\ \pm 122,329$	97,644	109,361	3.00	292,932
1877	154,052	24,311	115:381	$140,185 \\ 139,692$	157,007 156,455	3 00 3 00	430,555
1878	170,846	26,166	164,682	190,848	213,750	3 00	419,076 572,544
1879	241,301	40,294	192,096	232,390	269,277	3 00	697,170
1880	267,595	46,513	225,849	272,362	305,045	3.00	\$17,086
1881	228,357	40,191	189,323	229,514	237,056	3 00	688,542
1882 1883	282,139	56,161	232,411	288,572	323,201	3 00	865,716
1883	213,299 394,070	$64,786 \\ 87,388$	149,567 306,478	214,353 393,866	240,075 441,130	3.00	$643,059 \\ 1,181,598$
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
$1889 \dots 1890 \dots$	579,830 678,140	124,574	443,675 508,270	568,249	636,439	3 00	1,704,747
1891	1,029,097	177,075 202,697	806,479	685,345 1,009,176	767,586 1,130,277	3 00	2,056,035 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	1,093,980	3 00	2,930,304
1894	1,012,953	165,776	827,642	993,418	1,112,628	3 00	2,980,254
1895 1896	939,654	188,349	756,334	944,683	1,058,045	3 00	2,834,049
1896	894,882 802,296	261,984 290,310	634,238 619,860	896,222 910,170	1,003,769	3 00	2,688,666
1898	1,136,485	375,423	752,863	1,128,286	$1,019,390 \\ 1,263,680$	3 00	2,730,510 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 1904.	1,450,663 1,685,698	947,499 1,129,465	549,449 533,593	1,496,948 1,663,058	1,676,581 1,62,695	3 00	4,490,844
1905	1,736,696	1,089,667	647,343	1,003,008 1,737,010	1,862,625	3 00 3 00	4,989,174 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	2,364,898	3 50 4	7,390,306
1808	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 1911	3,152,207 2,304,794	1,798,873 1,657,422	1,175,007	2,973,880	3,330,745	3 50	10,408,580
totte	2,001,191	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 Consump-tion' and 'Sold for Export'. ‡ Two months only.

AND .

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 2,840 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.

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Calendar Year.	Tons.	Value.	Average value per ton.
		8	8 cts.
901	*5.864	86,230	14.70
302	4,910	37.280	7 59
30.5	1.849	29,584	16 00
304			
900	7,000	21,000	3 00
906	7,000	28,000	4 00
907	15,000	60,000	4 00
908	3.847	21,158	5.50
909	7.364	49,502	6 72
910	16,185	110,925	6 85
911	2.840	12,780	4 50
1	2,	12,100	1.00

* 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.

Province.	Coal charged	Output	Stock of	N HAND.	Coke sold or	Value of
	to ovens.	of coke.	Jan. 1.	Dec. 31.	used.	sales, etc.
	Tons.	Tons.	Tons.	Tons.	Tons.	8
Nova Scotia Ontario Alberta British Columbia	756,003 42,208 196,250 379,332	508,025 25,959 123,093 244,192	417 40 18,759	$384 \\ 1,274 \\ 1,555 \\ 14,557$	508,058 24,685 121,578 248,394	1,655,775 148,110 486,312 1,172,675
Total	1,373,793	901,269	19,216	17,770	902,715	3,462,872

Coke Production, 1910.

Coke Production, 1911.

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Nova Scotia Ontario Alberta. British Columbia.	$846,695 \\ 384,343 \\ 61,591 \\ 117,215$	562,512 282,874 35,059 73,943	$210 \\ 1,274 \\ 1,785 \\ 14,557$	$5,168 \\ 24,594 \\ 625 \\ 6,173$	557,554 259,554 36,216 82,327	$\substack{1,814,977\\1,318,303\\146,251\\350,879}$
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 Sold for export		614	$27,882 \\ 7,871$	80,908 1,419	122,945 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. Number of ovens idle December 31 Number of ovens building December 31	$\begin{array}{c} 664\\ 284\\ 0\end{array}$	$\begin{array}{c} 110\\ 100\\ 0 \end{array}$	$226 \\ 40 \\ 101$		$1,650 \\ 1,104 \\ 101$

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.
		8	8 cts.			8	s ct
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	3,583,468	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

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COKE.-TABLE 2.

Production of Coke by Provinces, 1897-1911.

Calendar Year.	Nova Scotia.		ONTARIO.		British Columbia.		Albe	·rta.
Catendar Year.	Tons.	Value.	Tons.	Value,	Tons.	Value.	Tons.	Value.
		8		8		8		
1897	41,532	90,950			19,154	85.507		
1898	48,400	111,000						
1899	62,459	178,767			38,361			
1900	61,767	223,395				425,745		
1901	222,694	590,560				637,665		
1902	363,330	899,930						
1903	371,745	888,094			189,573	846,310		
1904	275,927	808,022				1,148,090	20,984	78,936
1905	386,366	1,054,712			269,256	1,202,035	44,866	
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				1,482,191	75,645	
1909	492,992	1,608,092			281,786	1,509,567	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	36,21t	146,251		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 bechive 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 crecting 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 $7\frac{1}{2}$ inches centre to centre. The side walls and piers are built of stone—as in other ovens, the tops are covered with elay.'

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 ovensif 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 entireblock 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 Luhrig 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 \$1,843,248, 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.
*		8			8
897	2,987	6,078	1905	116,071	5.09,908
898	3,774	8,394	1906	37,003	168,571
899	5,557	18,726	1907	70,617	320,357
900	41,529	131,278	1908	58,708	248,759
901	57.505	176,990	1909	74,067	329,051
902	62,568	180,920	1910	57,971	250,713
903	32,608	135,957	1911	9,852	39,823
904	1(2,463	345,031			,

COKE.-TABLE 4.

Imports of Oven Coke, 1880-1911.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		8			8
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	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

* For nine months only. † Duty free.

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