

PRELIMINARY REPORT
ON THE
MINERAL PRODUCTION OF CANADA
IN
1908

27-A

EUGENE HAANEL, Ph.D.,

Director of Mines.

SIR,—I beg to submit herewith the annual preliminary report on the mineral production of Canada in 1908 including a table showing the revised statistics of production in 1907.

The figures of production given for 1908 are, of necessity, subject to revision, since at this time, in many instances, producers of metallic ores have not themselves received complete returns from smelters. For these and other reasons, estimates have to be made. It is hoped, however, that this preliminary statement may serve to give a general idea of the gross output of the mineral industry during the year.

When more complete information is available, the annual report will be prepared. It will contain the final statistics in greater detail, as well as information relating to exploration, development, prices, markets, imports and exports, &c.

Acknowledgments are due to the various operators who have promptly furnished statements of their production, to the Provincial Mineralogist of British Columbia for a complete preliminary statement of mineral production in that province, and to the other provincial mining bureaus for assistance kindly rendered.

I am, Sir, your obedient servant,

JOHN McLEISH.

DIVISION OF MINERAL RESOURCES AND STATISTICS,
February 25, 1909.

DEPARTMENT OF MINES
A. P. Low, B.Sc., LL.D., Deputy Minister of Mines.

MINES BRANCH
EUGENE HAANEL, Ph.D., Director.

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Prepared by
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OTTAWA
GOVERNMENT PRINTING BUREAU
1909.

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THE MINERAL PRODUCTION OF CANADA IN 1907.

(Revised).

Product.	Quantity. (a)	Value. (b)
METALLIC.		\$
Antimony ore	Tons. 2,016	65,000
" refined	Lbs. 63,850	5,108
Copper (c).....	" 56,525,541	11,307,369
Gold.....	Ozs. 405,553	8,382,780
Pig iron from Canadian ore (d).....	Tons. 107,599	1,982,307
Iron ore (exports)	" 25,901	45,907
Lead (e).....	Lbs. 47,738,703	2,542,086
Nickel (f).....	" 21,189,793	9,535,407
Cobalt.....	"	72,133
Silver (g).....	Ozs. 12,779,799	8,348,659
Zinc ore	Tons. 1,573	49,100
Total		42,345,856
NON-METALLIC.		\$
Arsenic.....		41,303
Asbestos.....	Tons. 62,130	2,484,768
Asbestic.....	" 28,296	20,275
Chromite.....	" 7,196	72,961
Coal.....	" 10,511,426	24,381,842
Corundum.....	" 1,892	177,922
Feldspar.....	" 12,584	29,819
Graphite	" 579	16,000
" artificial.....	Lbs. 407,779	
Grindstones.....	Tons. 5,414	60,376
Gypsum.....	" 485,921	646,914
Limestone for flux in iron furnaces	" 395,503	298,097
Manganese ore.....	" 1	22
Mica	" 774	312,599
Mineral pigments—Barytes.....	" 2,016	4,500
" " Ochres.....	" 5,828	35,570
Mineral water		110,524
Natural gas (h)		815,032
Peat	Tons. 50	200
Petroleum (i).....	Bbls. 788,872	1,057,088
Phosphate.....	Tons. 824	6,018
Pyrites	" 46,243	212,491
Quartz	" 56,685	124,148
Salt.....	" 72,697	342,315
Talc.....	" 1,534	4,602
Tripolite	" 30	225
Total		31,255,551

(a) Quantity of product sold or shipped.

(b) The metals, copper, lead, nickel and silver, are, for statistical purposes, valued at the final average value of the refined metal in New York. Pig iron is valued at the furnace, and the non-metallic products at the mine or point of shipment.

(c) Copper contents of ore, matte, &c., at 20·004 cents per pound.

(d) The total production of pig iron in Canada in 1907 was 651,962 short tons, valued at \$9,125,225, of which it is estimated about 107,599 tons valued at \$1,982,307 should be attributed to Canadian ore, and 544,363 tons, valued at \$7,142,919 to the ore imported.

(e) Lead contents are of ore, matte, &c., at 5·325 cents per pound.

(f) Nickel contents of matte shipped at 45 cents per lb.

(g) Silver contents of ore, &c., at 65·327 cents per lb.

(h) Gross returns from sale of gas.

(i) Deduced from the amount paid in bounties and valued at \$1·34 per barrel.

THE MINERAL PRODUCTION OF CANADA IN 1907—*Concluded.*

(Revised.)

Product.	Quantity. (a)	Value. (b)
STRUCTURAL MATERIAL AND CLAY PRODUCTS.		\$
Cement, natural Bbls.	5,775	4,043
" Portland "	2,436,093	3,777,328
Clay Products—		
Bricks, Common No.	439,015,556	3,455,524
" Pressed "	78,922,092	794,722
" Paving "	3,617,720	72,354
" Moulded and ornamental "		47,288
" Fire-brick and fire clay shapes "		131,322
Other clay products, including fire-proofing bricks and blocks		89,389
Pottery		253,809
Sewer pipe		667,100
Tiles, drain		288,018
Lime Bushels.	5,103,316	1,035,795
Stone—		
Building stone		1,830,000
Flagstones No.	3,000	2,250
Granite Tons.	151,136	194,712
Slate Squares.	4,335	20,056
Sand lime-brick No.	16,492,971	167,795
Sand and gravel (exports) Tons.	298,095	119,853
Total, structural material, &c.		12,951,358
" all other non-metallic		31,255,551
Total, non-metallic		44,206,909
" metallic		42,335,856
Estimated value of mineral products not reported		300,000
Total value, 1907		86,842,765

ANNUAL Mineral Production in Canada since 1886.

1886	\$ 10,221,255	1898	\$ 38,412,431
1887	10,321,331	1899	49,234,005
1888	12,518,894	1900	64,420,983
1889	14,013,113	1901	65,891,611
1900	16,763,353	1902	63,211,634
1891	18,976,616	1903	61,740,513
1892	16,623,415	1904	60,073,897
1893	20,035,082	1905	69,525,170
1894	19,931,158	1906	79,057,308
1895	20,505,917	1907	86,842,765
1896	22,474,256	1908	87,323,849
1897	28,485,023		

PRELIMINARY REPORT ON THE MINERAL PRODUCTION OF CANADA IN 1908.

(Subject to revision.)

Product.	Quantity. (a)	Value. (b)
METALLIC.		\$
Copper (c).....	Lbs. 64,361,636	8,500,885
Gold.....	" 99,420	9,559,274
Pig iron from Canadian ore (d).....	Tons. 45,725,886	1,664,302
Lead (e).....	Lbs. 19,143,111	1,920,487
Nickel (f).....	" 1,853,286	8,231,538
Cobalt.....	" 22,070,212	112,253
Silver (g).....	Ozs. 22,070,212	11,667,197
Total value, metallic.....		41,655,936
NON-METALLIC.		\$
Arsenic.....	Tons. 699	38,054
Asbestos.....	" 65,534	2,547,507
Asbestic and asbestic sand.....	" 25,239	25,829
Calcium carbide.....	" 6,864	417,150
Chromite.....	" 7,225	82,008
Coal.....	" 10,904,466	25,567,235
Corundum.....	" 1,039	100,389
Feldspar.....	" 7,877	21,099
Graphite.....	" 251	5,565
Grindstones.....	" 3,843	45,128
Gypsum.....	" 340,964	575,701
Limestone for flux in iron furnace.....	" 418,661	289,705
Magnesite.....	" 120	840
Mica.....	"	191,602
Mineral pigments—		
Barytes.....	" 4,091	18,265
Ochres.....	" 4,746	30,440
Mineral waters.....	"	109,391
Natural gas (h).....	"	1,012,060
Petroleum (i).....	Brls. 527,987	747,102
Phosphate (apatite).....	Tons. 1,596	14,794
Pyrites.....	" 47,336	224,824
Quartz.....	" 27,134	32,277
Salt.....	" 79,975	378,798
Talc.....	" 1,076	3,048
Tripolite.....	" 30	195
Total value, non-metallic.....		32,479,006

(a.) Quantity of product sold or shipped.

(b.) The metals, copper, lead, nickel and silver are for statistical and comparative purposes valued at the final average value of the refined metal in New York. Pig iron is valued at the furnace and non-metallic products at the mine or point of shipment.

(c.) Copper contents of ore, matte, &c., at 13.208 cents per pound.

(d.) The total production of pig iron in Canada in 1908 was 630,835 short tons valued at \$8,111,194, of which it is estimated about 99,420 tons valued at \$1,664,302 should be attributed to Canadian ore and 531,415 tons valued at \$6,446,892 to the ore imported.

(e.) Lead contents of ore, matte, &c., at 4.200 cents per lb.

(f.) Nickel contents of matte shipped at 43 cents per lb.

(g.) Silver contents of ore, &c., at 52.864 cents per lb.

(h.) Gross return from sale of gas.

(i.) Deduced from the amount paid in bounties and valued at \$1.41½ per barrel.

PRELIMINARY REPORT ON THE MINERAL PRODUCTION OF CANADA IN 1908—*Concluded.*

(Subject to revision.)

Product.	Quantity. (a)	Value. (b)
STRUCTURAL MATERIAL AND CLAY PRODUCTS.		\$
Cement—natural..... Bbls.	1,044	815
" Portland..... "	2,665,289	3,709,063
Flagstones..... No.	4,000	3,600
Sand and gravel (exports)..... Tons.	298,954	161,387
Sewer pipe.....		514,042
Clay products, stone, lime, &c., Estimated.....		8,500,000
Total structural material and clay products.....		12,888,907
All other non-metallic.....		32,479,006
Total value non-metallic.....		45,367,913
Total value metallic.....		45,655,936
Estimated value of mineral products not reported.....		300,000
Total value, 1908.....		87,323,849

REMARKS.

A preliminary review of the mineral production in Canada in 1908 shows a total mineral output valued at slightly over 87 million dollars as compared with a little less than 87 million dollars in 1907.

The industry has therefore in the aggregate more than held its own despite the large decreases in the prices of the metals. That this falling off in the prices of the metals has been an important and serious question for the metal mining industries, will be better realized when it is stated, that had the metals, copper, silver, lead and nickel maintained as high average prices in 1908 as in 1907, their total production in Canada in 1908 would have been worth over 8,000,000 dollars more to the producers than was actually the case.

A comparison of average monthly prices of metals in 1907 and 1908 as quoted by the Engineering and Mining Journal of New York showing the decreases in 1908 both in price and percentage is given hereunder.—

COMPARISONS OF PRICES OF METALS, 1907 and 1908.

	1907.	1908.	Decrease in 1908.	Percentage of Decrease.
	Cts. -	Cts.	Cts.	%
Copper.....	20.004	13.208	6.796	33.97
Lead.....	5.325	4.200	1.125	21.12
Nickel.....	45.	43.	2.	4.4 4.4
Silver.....	65.327	52.864	12.463	19.07
Spelter.....	5.962	4.726	1.236	20.73
Tin.....	38.166	29.465	8.701	22.79

The outstanding feature of the mining industry during the year has undoubtedly been the silver production, a total increase of over 72 per cent being shown in the number of ounces produced. The metals copper and gold also show important increases

in quantity produced, whilst iron, lead and nickel were produced in slightly smaller quantity than in 1907.

In the non-metallic class, decreases in gypsum and petroleum are more than counterbalanced by increases in coal, asbestos, natural gas, salt &c. The Portland cement industry shows a small increase in sales and a large increase in quantity of cement made with large stocks on hand at the close of the year.

The two following tables will illustrate these special features of increases and decreases more clearly, the first showing the total increases or decreases in value of some of the more important products and the second the percentage increase or decrease in quantity as well as value.

Product.	Increase.	Decrease.
Copper.....		\$2,806,484
Gold, Yukon.....	\$ 450,000	
Gold all other.....	726,494	
Pig iron, from Canadian ore.....		318,005
Lead.....		621,599
Nickel.....		1,303,869
Silver.....	3,318,538	
Asbestos.....	62,739	
Chromite.....	9,107	
Coal.....	1,185,393	
Gypsum.....		71,213
Natural gas.....	197,028	
Petroleum.....		309,986
Portland cement.....		68,265
Pyrites.....	12,333	
Salt.....	36,483	

Product.	QUANTITY.		VALUE.	
	Increase.	Decrease.	Increase.	Decrease.
	%	%	%	%
Metallic—				
Copper.....	13.86			24.82
Gold.....	14.03		14.03	
Pig iron, (from Canadian ore only).....		7.60		16.04
Pig iron, (from home and imported ore).....		3.24		11.11
Lead.....		4.22		24.45
Nickel.....		9.66		13.67
Silver.....	72.69		39.75	
Non-metallic.				
Asbestos and asbestic.....	0.38		2.73	
Coal.....	5.21		5.27	
Feldspar.....		37.40		29.27
Gypsum.....		29.83		11.01
Natural gas.....			24.00	
Petroleum.....		33.07		29.32
Salt.....	10.01		10.66	
Portland cement.....	9.41			1.81

Gold :—For the first time in nine years the gold output shows an increase over the previous year. The Yukon output in 1908 is estimated at about \$3,600,000 as compared with \$3,150,000 in 1907 while a considerably increased production is also shown in the province of British Columbia, derived chiefly from the Trail Creek ores, the placer workings having shown a smaller output.

In Nova Scotia the output in 1907 was \$282,686. Complete returns are not yet available for 1908, but the output was probably not over \$225,000.

Of the total gold output in 1908, over 44 per cent was obtained from placer and hydraulic workings and 56 per cent from sulphuret and quartz ores.

Silver:—The estimated silver production of Canada in 1908 was 22,070,212 ounces, shipped as fine bars, silver bullion, and obtained in matte, ore, etc., as compared with 12,779,799 ounces produced in 1907, an increase of over 72 per cent. Owing, however, to the much lower price received in 1908, the total value shows an increase of only 40 per cent. Over 87 per cent of the output was obtained from Ontario, and the increase is all to be credited to this province, since there was a slight falling off in the silver output of British Columbia.

The price of refined silver varied between a maximum of 57 cents on the 8th January and a minimum of $47\frac{5}{8}$ cents on the 2nd of December, the average monthly price being 52.864 cents per ounce, as compared with 65.327 cents in 1907.

The output from the Cobalt district in the province of Ontario again shows a very large increase over the previous year, nearly twice as much silver having been produced. Returns from 29 shipping mines show the ore and concentrates shipped, as approximately ^{25,497}~~27,202~~ tons, containing 19,296,430 ounces of silver as compared with 14,644 tons containing 9,982,363 ounces in 1907. Valued at the average price of refined silver for the year, the production in 1908 would be worth \$10,200,865 and it represents an average return of ~~484~~⁴⁴⁰ ounces of silver or \$~~440~~⁴⁴⁵ per ton of ore shipped as compared with an average return of 681 ounces of silver or \$445 per ton of ore shipped in 1907.

If the output of this district continues to increase at the present rate, Canada will in the immediate future, become one of the chief silver producing countries of the world. The total silver production of the world in 1907 was approximately 193 million ounces, the chief contributing countries being, Mexico 65 million ounces, United States, 59 million ounces, Australia 17 million ounces, Canada nearly 13 million ounces, Germany 12 million ounces. With an output of 22 million ounces in 1908 Canada probably moves up to third place, but still does not produce more than from 10 to 12 per cent of the world's output.

Copper:—Statistics of copper production in 1908 show a total output of 64,361,636 lbs., an increase of over 14 per cent over the production of 1907. There was an increase of over 900,000 lbs. in the copper from the Sudbury mines, while preliminary statistics of production in British Columbia appear to show a very important increase in production in that province of over 7,000,000 pounds.

The New York price of electrolytic copper varied but slightly during the year the lowest being 12 cents in February and the highest $14\frac{1}{4}$ cents in December, the average for the year being 13.208.

The total exports of copper in ore, matte and blister, being, according to Customs Department returns 25,568 tons.

Lead:—All of the lead production shown in the general table, viz.: 45,725,886 pounds valued at \$1,920,487 was obtained in the province of British Columbia. The production in 1907 was 47,738,703 pounds valued at \$2,542,086, a decrease in quantity being therefore shown of about 4 per cent.

The total amount paid as bounty on lead production was, during the twelve months \$139,064.57.

The exports of lead in ore, etc., during the year were 2,256 tons, and of pig lead 6,971 tons or a total of 9,227 tons.

The price of lead in New York during the year varied between 3.60 and 4.60 cents averaging about 4.2 cents per pound.

Nickel:—With the exception of the nickel contained in the ores shipped from the Cobalt district, the production of nickel in Canada is derived entirely from the well-known nickel-copper deposits of the Sudbury district. Previous to 1906 the output had been increasing steadily for a number of years. During the past three years, however, the production has not varied very greatly. About 815 tons less matte was shipped in 1908 than in 1907. The nickel contents were also somewhat lower in 1908, averaging about 45.1 per cent as compared with 48.1 per cent in 1907. On the other hand the copper contents were higher in 1908.

Two companies are carrying on active operations: The Mond Nickel Co., at Victoria Mines, and the Canadian Copper Co., at Copper Cliff. The ore is first roasted

and then smelted to a Bessemer matte containing from 77 to 80 per cent of the combined metals, copper and nickel, which is shipped to the United States and Great Britain for refining.

The following were the aggregate results of the operations on the nickel-copper deposits of Ontario in 1906, 1907 and 1908 :—

	1906.	1907.	1908.
	Tons of 2,000 lbs.	Tons of 2,000 lbs.	Tons of 2,000 lbs.
Ore mined.....	343,814	351,916	409,551
Ore smelted.....	340,059	359,076	360,180
Bessemer matte produced.....	20,364	22,041	21,197
" " shipped.....	20,310	22,025	21,210
Copper contents of matte shipped.....	5,265	6,996	7,503
Nickel " ".....	10,745	10,595	9,572
Spot value of matte shipped.....	\$4,628,011	\$3,289,382	\$2,930,989
Wages paid.....	1,117,420	1,278,694	1,286,265
Men employed.....	1,417	1,660	1,690

According to Customs returns exports of nickel in matte, etc., were for twelve months ending December 31, as follows :—

	1906.	1907.	1908.
	Pounds.	Pounds.	Pounds.
To Great Britain.....	2,716,892	2,518,338	2,554,486
To United States	17,936,953	16,857,997	16,865,407
	20,653,845	19,376,335	19,419,893

The price of refined nickel in New York, was quoted during the first nine months at from 45 to 50 cents per pound and during the balance of the year from 40 to 45 cents according to size and terms or order.

The above figures do not include the nickel contents of the silver-cobalt ores from the Cobalt district, of which it is difficult to obtain satisfactory returns. The shippers of silver-cobalt ores receive little or no return for the nickel contents although this metal forms an important constituent of the ore.

Iron Ore.—The total shipments of iron ore from mines in Canada in 1908 were 203,490 short tons, valued at the mine at \$486,857 as compared with 312,496 tons valued at \$666,941 in 1907. The greater part of this production was from the Helen mine, Michipicoten, delivered to Midland and Hamilton. During 1908 very little Canadian ore was exported.

Pig Iron.—The total production of pig iron in Canada in 1908, from both Canadian and imported ores, according to direct returns from nine plants comprising 16 furnaces, was 630,835 short tons valued at \$8,111,194 as compared with 651,962 tons valued at \$9,125,226 in 1907. These figures do not include the output from the two electric furnace plants, making ferro-products, which are situated at Welland, Ontario, and Buckingham, Quebec. Of the total output of pig iron during 1908, 6,709 tons, valued at \$171,383 were made with charcoal as fuel and 624,126 tons valued at \$7,939,811 with coke.

The amount of Canadian ore, including mill cinder, &c., used was 219,266 tons while the quantity of imported ore was 1,051,445 tons. The total amount of coke used during the year was 817,746 short tons valued at \$1,770,320. The total amount of charcoal used was 1,121,990 bushels valued at \$85,738. The quantity of limestone flux charged was 483,065 tons.

The plant of the Atikokan Iron Co., Ltd., was out of commission throughout the year, while a number of others were operated for a part of the year only. The blast furnace at Londonderry was in blast for little over a month and the furnace of the Deseronto Iron Co., Ltd., for about two months.

Steel.—The returns for the year from eight companies making steel showed a total output of ingots and castings of 588,763 short tons valued at \$9,233,602, as compared with 706,982 tons valued at \$15,612,590 from seven companies in 1907.

These figures are made up as follows :—

	1907.		1908.	
	Tons.	\$	Tons.	\$
<i>Ingots</i> —Open hearth (basic)	459,240	9,157,703	443,442	6,001,277
Bessemer (basic).....	225,989	4,293,791	135,557	2,535,287
<i>Castings</i> —Open hearth (acid and basic).....	20,602	2,031,380	9,051	617,126
Other Steels.....	1,151	129,716	713	79,912
	706,982	15,612,590	588,763	9,233,602

Iron and Steel Bounties :—Following is a statement of the bounties paid on iron and steel during the calendar year, as kindly furnished by the Trade and Commerce Department :

	1907.		1908.	
	Quantity on which Bounty was paid.	Bounty.	Quantity on which Bounty was paid.	Bounty.
	Tons.	\$ c.	Tons.	\$ c.
Pig iron made from Canadian ore.	95,914.97	201,421 47	101,647	213,458 34
Pig iron, made from imported ore.....	537,803.45	591,583 80	517,427	569,166 93
Total, pig iron.....	633,718.42	793,005 27	619,074	782,628 27
Steel ingots.....	666,589.87	1,099,873 37	556,289	917,876 63
Steel wire rods.....	68,738.22	412,417 26	49,630	297,778 68
Total bounty paid on iron and steel.		2,305,295 90		1,998,283 58

Asbestos.—Returns of shipments of asbestos from the Eastern Townships, province of Quebec, were received from twelve operating companies who employed 2,643 men in mine and mills and paid in wages \$1,002,768. Several other companies were engaged in development work and preparing to make shipments during the coming year.

The total shipments divided into crude and mill stock were in 1907 and 1908 as follows :

	1907.		1908.	
	Tons.	Value.	Tons.	Value.
		\$		\$
Crude.....	4,327	830,633	3,346	692,232
Mill stock.....	57,803	1,654,135	62,188	2,855,275
Total asbestos.....	62,130	2,484,768	65,533	2,547,507
Asbestic and asbestic sand.....	28,206	20,275	25,239	25,829
Total products.....	90,426	2,505,043	90,772	2,573,336

Exports of asbestos, according to Customs returns, were :

	Tons.	Value.
		\$
Twelve months ending December, 1906.....	59,864	1,689,257
" " " " 1907.....	56,753	1,669,299
" " " " 1908.....	61,210	1,842,763

Coal and Coke.—Each of the coal mining provinces except British Columbia, contributed an increased output to the coal production in Canada in 1908. The total sales and shipments of coal, including colliery consumption and coal use in making coke, were 10,904,466 short tons, an increase of about 5 per cent as compared with 1907. Of the total, Nova Scotia contributed over 59 per cent, Saskatchewan and Alberta over 19 per cent and British Columbia 21 per cent.

The production by provinces was approximately as follows, the figures, of course, being still subject to correction :

Province.	1907.		1908.	
	Tons of 2,000 lb.	Value.	Tons of 2,000 lb.	Value.
		\$		\$
Nova Scotia.....	6,354,133	12,764,999	6,539,866	13,138,124
New Brunswick.....	34,584	77,814	60,000	135,000
Saskatchewan.....	151,232	252,437	130,000	214,500
Alberta.....	1,591,579	3,836,286	1,845,000	4,899,611
British Columbia.....	2,364,898	7,390,306	2,329,600	7,280,000
Yukon.....	15,000	60,000	*	*
Total.....	10,511,426	24,381,842	10,904,466	25,567,235

*No production reported.

The total production of oven coke in 1908 was approximately 865,257 short tons, valued at \$3,668,974, being an increase of about 3 per cent over the quantity produced in 1907. The coke was made in the provinces of Nova Scotia, Alberta and British Columbia and entirely from Canadian coal. At the end of the year there were in Nova Scotia about 659 ovens in operation and 173 idle and in Alberta and British Columbia on the same date 916 in operation and 528 idle, not including the ovens at Hosmer and Comox in British Columbia, from which no returns have yet been received.

Petroleum and Natural Gas.—The production of crude petroleum is as usual practically all derived from the Ontario peninsula. Direct returns from the producers have not been obtained, but the production has been estimated on the basis of the bounty of $1\frac{1}{2}$ cents per gallon paid by the Dominion Government. The total bounty paid in 1908 was \$277,193.21, representing a production of 527,987 barrels, compared with a bounty of \$414,157.89 paid in 1907 representing a production of 788,872 barrels. A decreased production of 33 per cent is, therefore, shown.

Natural gas was produced in the counties of Welland, Haldimand, Norfolk, Kent, Essex and Bruce, in Ontario and at Medicine Hat, Alberta; the sales from the Ontario fields constituting over 95 per cent of the total.

The total receipts from gas sold in 1908 show an increase of about 24 per cent over the receipts of 1907 and are now larger than at any time since the gas was first used.

Portland Cement.—Complete statistics of cement production in 1908 have been received from twenty-three operating plants.

The total quantity of cement made was 3,495,961 barrels as compared with a total 2,491,513 barrels made in 1907 showing an increase of 1,004,448 barrels or over 40 per cent.

The total sales were 2,665,289 barrels as compared with 2,436,093 barrels in 1907, an increase of 229,196 barrels or over 7 per cent. The total daily capacity of the 23 plants was about 27,500 barrels as compared with an operating capacity of 14,300 barrels 1907. The operating plants were distributed as follows:—One each in Nova Scotia, British Columbia and Manitoba, the latter manufacturing a natural Portland, two in Alberta, three in Quebec province and 15 in Ontario.

Of the 23 operating plants, twelve use marl and clay, ten use limestone and clay, and one blast furnace slag.

Detailed statistics of production in 1907 and 1908 are as follows:—

	1907.	1908.
	Barrels.	Barrels.
Portland cement sold.....	2,436,093	2,665,289
" manufactured.....	2,491,513	3,495,961
Stock on hand, January 1.....	299,015	383,349
" " December 31.....	354,435	1,214,011
Value of cement sold.....	\$3,777,328	\$3,709,063
Wages paid.....	956,080	1,274,638
Men employed.....	1,786	3,029

The average price per barrel at the works in 1908 was \$1.39 as compared with \$1.55 in 1907.

The imports of Portland cement into Canada during the 12 months ending November 1908 were 1,600,934 cwt. valued at \$530,209.

This is equivalent to 457,408 barrels of 350 pounds at an average price per barrel of \$1.16. The imports in 1907 were equivalent to 672,630 barrels valued at \$837,520 or an average price per barrel of \$1.24 $\frac{1}{2}$. The duty is 12 $\frac{1}{2}$ cents per hundred pounds.

There is very little cement exported from Canada, the consumption is, therefore, practically represented by the Canadian sales together with the imports.

Following is an estimate of the Canadian consumption of Portland cement for the past five years:—

Year	Canadian.	Imported.	Total.
	Barrels.	Barrels.	Barrels.
1904.....	910,358	784,630	1,694,988
1905.....	1,346,548	917,558	2,264,106
1906.....	2,119,764	694,503	2,814,267
1907.....	2,436,093	672,630	3,108,720
1908.....	2,665,289	457,408	3,122,697

EXPORTS of the Products of the Mine, Year 1908.

(Compiled from Trade and Navigation Monthly Statements.)

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Products.	Quantity.	Value.
		\$
Arsenic.....	Lbs. 1,913,732	43,493
Asbestos.....	Tons. 61,210	1,842,763
Barytes.....	Cwt. 3,509	13,690
Chromite.....	Tons. 4,571	56,864
Coal.....	" 1,729,833	4661,377
Feldspar.....	" 9,524	34,045
Gold.....	" 7,740,918	7,740,918
Gypsum.....	Tons. 280,091	324,574
Copper, fine in ore, &c.....	Lbs. 51,136,371	5,934,559
Lead, in ore, &c.....	" 4,511,931	153,394
" pig, &c.....	" 13,942,663	469,060
Nickel, in ore, &c.....	" 19,419,893	1,866,624
Silver, in ore, &c.....	Ozs. 20,884,451	12,403,482
Platinum, in ore concentrates, &c.....	" 43	937
Mica.....	Lbs. 580,195	198,839
Mineral Pigments.....	" 249,635	4,850
Mineral Water.....	Galls. 8,953	3,659
Oil, refined.....	" 25	296
Ores—		
Antimony.....	Tons. 149	5,647
Iron.....	" 4,334	72,260
Other ores.....	" 13,910	509,779
Phosphate.....	" 1	30
Plumbago.....	Cwt. 7,706	10,159
Pyrites.....	Tons. 17,283	96,600
Salt.....	Lbs. 527,229	3,840
Sand and gravel.....	Tons. 298,954	161,387
Slate.....	" 10,709	2,539
Stone, ornamental.....	" 1,314	28,777
" building.....	" 4,009	14,034
" for manufacture of grindstones.....	" 661	5,991
Other products of the mine.....		176,007
Manufactures—		
Bricks.....	M. 2,334	9,047
Aluminum, in bars, &c.....	Cwt. 194,546	399,785
" manufactured.....		1,727
Cement.....		34,591
Clay, manufactures of.....		92
Coke.....	Tons. 58,708	248,759
Grindstones, manufactured.....		13,730
Gypsum, ground.....		9,765
Iron and steel—		
Stoves.....	No. 651	8,258
Castings, N.E.S.....		28,062
Pig iron.....	Tons. 290	10,614
Machinery (linotype machines).....		126,590
" N.E.S.....		285,257
Sewing machines.....	No. 9,697	109,002
Typewriters.....	" 3,720	169,939
Scrap iron and steel.....	Cwt. 92,566	73,807
Hardware (tools, &c.).....		57,631
" N.E.S.....		59,304
Steel and manufactures of.....		1,169,073
Lime.....		43,316
Metals, N.O.P.....		65,360
Plumbago, manufactures of.....		876
Stone, ornamental.....		13,748
" building.....		1,446