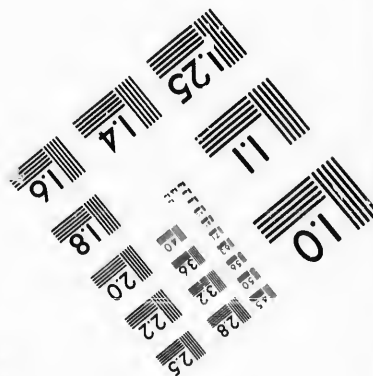
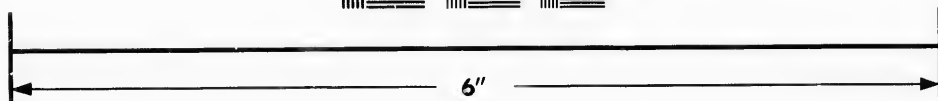
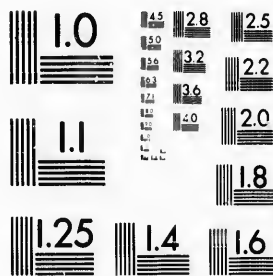


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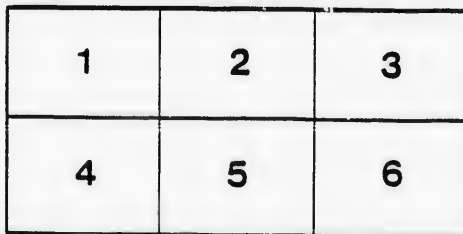
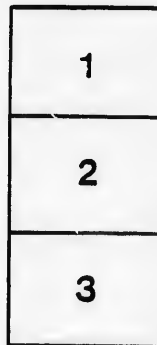
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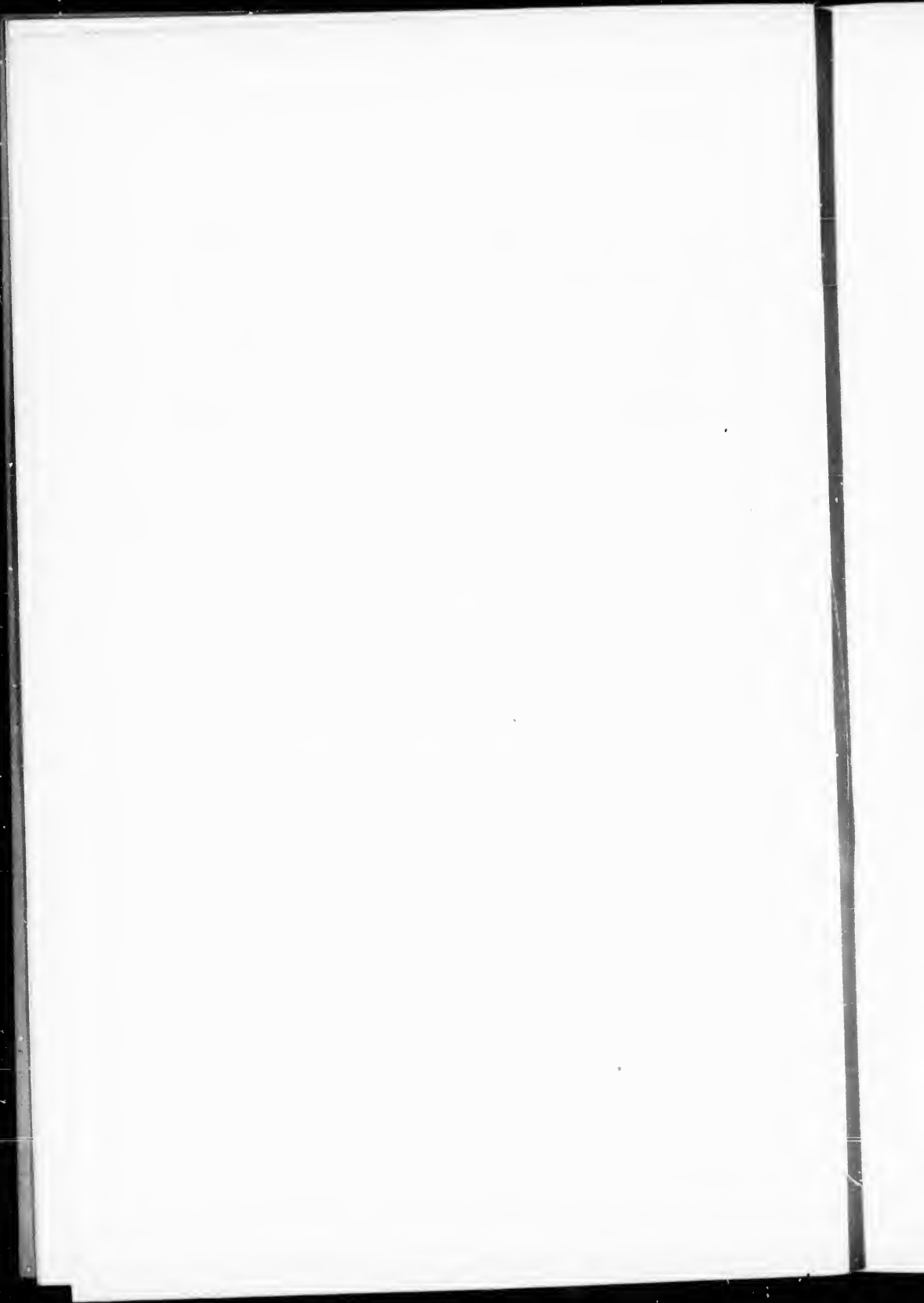
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1898

MINERAL PRODUCTION OF CANADA

To Dr. G. M. DAWSON, C.M.G., F.R.S., Etc.,
Director of the Geological Survey.

SIR,—I have the honour to submit herewith the annual preliminary statistical statement of the mineral production of Canada for the calendar year 1898.

As in the past, it has not been found possible to get in all the returns at this date, but we are enabled in most cases to fill in the places of those missing by close estimates based on a general knowledge of the progress made in the various industries.

Thus, although the figures must be taken as subject to revision, they can yet be considered as very close to those which will be given in the final report. For 1897 the difference between the grand totals in the preliminary and final statements was found to be less than one-half per cent.

The completed annual report will follow later and besides containing a revise of the general table of production, will include other details relating to exploration, development, exports, imports, etc. As much of this information is not available till several months after the close of the year and the compilation and printing necessarily occupy some time, it cannot be issued until well on in the year following the one covered.

I am, sir,

Your obedient servant,

ELFRIC DREW INGALL.

Geological Survey of Canada,
Section of Mineral Statistics and Mines,
21st February, 1899.

GEOLOGICAL SURVEY OF CANADA
G. M. DAWSON, C.M.G., LL.D., F.R.S., DIRECTOR.

SECTION OF
MINERAL STATISTICS AND MINES

SUMMARY
OF THE
MINERAL PRODUCTION OF CANADA
FOR 1898

ELFRIC DREW INGALL, M.E.

*Associate of the Royal School of Mines, England, Mining Engineer
to the Geological Survey of Canada.*

ASSISTANTS

THEO. C. DENIS, B.A.Sc.

J. McLEISH, B.A.



PUBLISHED BY AUTHORITY OF PARLIAMENT.

No. 671.

GEOLOGICAL SURVEY OF CANADA.

SUMMARY OF THE MINERAL PRODUCTION OF CANADA IN 1898.

(Subject to Revision.)

PRODUCT.	Quantity. (a)	Value. (a)
METALLIC.		\$
Copper (fine, in ore, &c.) (b)..... Lbs.	17,951,421	2,159,556
Gold, Yukon District*..... \$10,000,000		
" all other..... 3,700,000		13,700,000
Iron ore..... Tons.	58,161	152,510
Lead (fine, in ore, &c.) (c)..... Lbs.	31,915,319	1,296,399
Nickel (fine, in ore, &c.) (d)..... "	5,517,690	1,820,838
Silver, (fine, in ore, &c.) (e)..... Oz.	4,434,085	2,583,298
Total metallic		21,622,601
NON-METALLIC.		
Asbestos and asbestic..... Tons.	23,785	486,227
Chromite..... "	2,021	24,252
Coal..... "	4,172,655	8,227,958
*Coke (f)..... "	72,444	219,200
Felspar..... "	2,500	6,250
*Fire clay..... "	2,170	5,000
Graphite..... "		11,098
Grindstones..... "		39,465
Gypsum..... "	219,256	230,440
Limestone for flux..... "	33,913	31,153
Manganese ore..... "	50	1,600
Mica..... "		117,598
Mineral pigments—		
Baryta..... Tons.	1,070	5,258
Ochres..... "	2,341	18,600
*Mineral water..... "		155,000
Moulding sand..... Tons.	10,572	21,038
*Natural gas (g)..... "		320,000
Petroleum (h)..... Bbls.	700,790	981,106
Phosphate (apatite)..... Tons.	733	3,665
Pyrites..... "	32,218	128,872
Salt..... "	57,142	248,639

* Partly estimated.

(a) Quantity or value of product marketed. The ton used is that of 2,000 lbs.

(b) Copper contents of ore, matte, &c., at 12.03 cents per lb.

(c) Lead contents of ores, &c., at 3.78 cents per lb.

(d) Nickel contents of ore, matte, &c., at 33 cents per lb.

(e) Silver contents of ore at 58.26 cents per oz.

(f) Oven coke, all the production of Nova Scotia and British Columbia.

(g) Gross return from sale of gas.

(h) Calculated from inspection returns at 100 gall. crude to 42 refined oil, and computed at \$1.40 per bbl. of 35 imp. galls. The barrel of refined oil is assumed to contain 42 imp. galls.

SUMMARY OF THE MINERAL PRODUCTION OF CANADA
IN 1898—*Concluded.*

(Subject to Revision.)

PRODUCT.	Quantity. (a)	Value. (a)
STRUCTURAL MATERIALS AND CLAY PRODUCTS.		\$
Cement, natural rock Bbls.	87,125	73,412
" Portland "	163,084	324,168
Flagstones		4,250
Granite		73,573
* Pottery		135,000
Sewer pipe		166,421
Slate		40,791
Terra cotta		167,962
Tripolite Tons.	1,017	16,660
Building material, including bricks, building stone, lime, sands and gravels and tiles (estimated as for previous year)		3,600,000
Total structural materials and clay products		4,602,177
All other non-metallic		11,282,419
Total non-metallic		15,884,596
Total metallic		21,622,601
Estimated value of mineral products not returned		250,000
1898 Total		37,757,197
1897 "		28,661,430
1896 "		22,584,513
1895 "		20,758,450
1894 "		19,933,857
1893 "		20,035,082
1892 "		16,628,417
1891 "		18,976,616
1890 "		16,763,353
1889 "		14,013,913
1888 "		12,518,894
1887 "		11,321,331
1886 "		10,221,255

* Partly estimated.

(a) Quantity or value of product marketed. The ton used is that of 2,000 lbs.

REMARKS.

In studying the figures given in the above general table, many interesting and gratifying features will be noticed. In the grand total an increase is shown of over \$9,000,000 or nearly 32 per cent as compared with 1897. This is a still larger proportional increase than that of 1897 over 1896 which amounted to nearly 27 per cent. Compared with 1886, the first year for which statistics were issued, we find an increase in the value of mineral products in thirteen years of nearly 270 per cent. When it is remembered that during the same period the increase in the population has been only about 14 per cent, it will be evident that the proportional importance of the mining industry to the country is very much greater than it was at the beginning of the period dealt with. Thus the per capita value of the mineral production of the country has increased from about \$2.20 to \$7.20.

Whilst these large increases of late years have of course been partly due to the discovery and working of the rich gold-placers of the Yukon, other important mineral industries have also contributed to them, and there is every reason to expect a continued rapid growth in many of them for some years to come, especially as the province of British Columbia continues to develop.

The following table shows the principal changes in the production and values for the year 1898 as compared with the revised figures for 1897.

PRODUCT.	QUANTITY.		VALUE.	
	Increase.	Decrease.	Increase.	Decrease.
	p.c.	p.c.	p.c.	p.c.
<i>Metallic:—</i>				
Copper	34.96	.....	43.81	.....
Gold .....	.....	.....	127.31	.....
Iron Ore.....	14.70	.....	17.05	.....
Lead .....	.....	18.20	.....	13.63
Nickel.....	38.02	.....	30.14	.....
Silver.....	.....	20.23	.....	22.27
<i>Non-Metallic:—</i>				
Asbestos and As- bestic.....	.....	21.87	9.17	.....
Coal	10.21	.....	12.66	.....
Gypsum.....	.....	8.52	.....	5.76
Natural Gas.....	.....	.....	.....	1.80
Petroleum.....	.....	1.28	.....	3.00
Cement.....	21.93	.....	44.43	.....

It will be observed that most of the large increase in the total is to be credited to the metals, gold, copper, nickel, the non-metallic materials, coal, asbestos and cement also contributing. Beginning with the most important, the increases in these products were as follows, viz.:—Gold, about \$7,673,000; coal, over \$924,000; copper, nearly \$658,000;

nickel, nearly \$422,000; asbestos, iron ore and cement aggregating about \$185,000.

Of the gold output the main feature was the very large increase in that of the Yukon. This accounts for \$7,500,000 of the enlargement, which is three times as great an estimated output as that for last year. With the exception of the gold washings of the Saskatchewan River in the North west Territories, there were also increases in all the other districts of the Dominion.

There were increased outputs of coal in all the different districts. In copper the largest increase was in Ontario, which amounted to over 50 per cent of the previous year's output. British Columbia showed also a considerable enlargement, whilst in Quebec a small falling off was apparent. A rise in the price of the metal makes the proportional increase in value greater than that for quantity.

In nickel, the increase in the quantity is greater than that in the value, owing to a fall in the average price of the metal for the year.

The falling away in the production of both lead and silver is, in the former case, partly offset by the rise in the average price, whilst in the latter case a lower price for the year has aggravated the proportional decrease in the value as compared with the quantity.

Whilst there was a decrease in the actual quantity of the product of the asbestos mines of Quebec, the value shows a large percentage increase, which is explained by the lesser proportion of asbestic and low grade fiber in the output.

The proportional contributions of the chief products to the grand total of value are set forth in the following table both for 1897 and 1898.

1897.		1898.	
PRODUCT.	Per cent of Total Production.	PRODUCT.	Per cent of Total Production.
Coal	26.87	Gold	36.28
Gold	21.02	Coal	21.79
Building material	12.56	Building material	9.53
Silver	11.59	Silver	6.84
Copper	5.24	Copper	5.72
Nickel	4.88	Nickel	4.82
Lead	4.87	Lead	3.19
Petroleum	3.53	Petroleum	2.60
Asbestos	1.55	Asbestos	1.29
Natural Gas	1.14	Cement	1.05
Cement .....	.96	Natural Gas .....	.85
Gypsum .....	.85	Salt .....	.66
Salt .....	.79	Gypsum .....	.61
Coke .....	.62	Coke .....	.58

With the exception of the transposition of the positions of gold and coal, of natural gas and cement, and of gypsum and salt, the items stand in the same order as before. The feature mainly noticeable is of course the assumption of the first place by gold, and its large predominance over the rest. To this is largely due the fact that the metallic minerals as a class contributed in 1898 over 57 per cent of the whole, as compared with about 48 per cent last year. The structural materials amounted to about 12 per cent, and the other non-metallic minerals to about 30 per cent.



