GEOLOGICAL AND NATURAL HISTORY SURVEY OF CANADA.
ALFRED R. C. SELWYN, C.M.G., LL.D., F.R.S., DIRECTOR.

DIVISION OF

MINERAL STATISTICS & MINES

ANNUAL REPORT

FOR

1889

ELFRIC DREW INGALL.,

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

IN CHARGE.

H. P. BRUMELL

Assistant to the Division.

PUBLISHED BY AUTHORITY OF PARLIAMENT.

MONTREAL:
WM. FOSTER BROWN & CO.

1890.

NOTES

The year used throughout this report is the calendar year, and the ton that of 2,000 pounds, unless otherwise stated.

The fiscal year begins the 1st of July.

The figures given throughout the report referring to exports and imports are compiled from data obtained from the books of the Customs Department and will occasionally shew discrepancies, which there are no means of correcting, however.

The figures given in the tables of exports and imports under the headings of each province do not necessarily represent the production and consumption of these provinces; e. g., material produced in Ontario is often shipped from Montreal and entered there for export, so falling under the heading, Quebec.

To Dr. Alfred R. C. Selwyn, C.M.G., F.R.S., etc.,
Director Geological Survey of Canada.

Dear Sir,—I beg herewith to submit the annual report of the division of Mineral Statistics and Mines for 1889.

I regret that it has to be handed in somewhat later than usual, but owing to an unfortunate complication of circumstances this could not be avoided.

My predecessor, Mr. Coste, ceased all active participation in the work in March, 1889, whilst I was placed in charge of the work of the division in the November following. In this way, for about six months the office was short-handed, Mr. Brumell, the assistant to the division, being left to carry on the work on the lines previously followed by my predecessor, whilst his time and attention were largely occupied in collecting data and making enquiries in connection with the Petroleum and Natural Gas industries.

Thus the routine and other work of the division has unavoidably fallen in arrears, and it will yet take some time and considerable effort to bring it up to a state of efficiency whilst not neglecting the current business of the office, which matters have absorbed all my own attention and effort for the past few months.

The accompanying report will, for these reasons, be found less full and interesting and more purely statistical than I could have wished; for, outside of Mr. Brumell's studies before alluded to, and apart from the statistical data of past years, the division was found to be furnished with little or no information relating to the Mines and Mining industries of the Dominion.

A beginning has been made towards rectifying this state of things, and if I can get an opportunity during the present summer season I shall make myself familiar, personally as far as possible, with the districts and people with whom we have to deal in the prosecution of the work. I hope thus to be able to deal more efficiently and satisfactorily with the information coming to hand and to better perform the functions of my office.

The report will be found to contain articles on Petroleum and Natural Gas, by Mr. Brumell, assistant to the Division, which, in view of his investigations of these subjects for the past two years, I entrusted to him.

Thanks are also due to him for his very able and willing fulfilment of the duties of his office.

Our acknowledgments are also due to the Provincial Departments of Mines of Nova Scotia and British Columbia and to the Dominion Customs Department for aid received, as well as to all those, too numerous to specify, who supplied us so willingly with statistical and other information.

I remain, Sir,

Your obedient servant,

ELFRIC DREW INGALL.

SUMMARY OF THE MINERAL PRODUCTION OF CANADA IN 1889.

Product.	Quantity.	Value.	Compared with 1888 (a).
Antimony Ore ..... tons.	55	$ 1,100	Decrease.
Asbestus ..... "	6,113	426,554	Increase.
*Bricks ..... thousands.	200,561	1,273,884	do
*Building Stone ..... cub. yds.	341,337	913,691	do
Cement ..... bbls.	90,474	69,790	do
Charcoal ..... bush.	1,593,300	93,463	do
Coal ..... tons.	2,719,478	5,584,182	do
Coke ..... "	54,539	155,043	do
Copper (fine, cont'd. in ore). lbs.	6,809,752	885,424	do
Fertilizers ..... tons.	775	26,606	do
Fire Clay ..... "	400	4,800	
Flagstones ..... sq. feet.	14,000	1,400	Decrease.
Glass and Glassware	.....	150,000	do
Gold ..... ozs.	72,328	1,295,159	Increase.
Granite ..... tons.	10,197	79,624	Decrease.
Graphite ..... "	242	3,160	Increase.
Grindstones ..... "	3,404	30,863	Decrease.
Gypsum ..... "	213,273	205,108	Increase.
*Iron ..... "	73,231	2,763,062	do
Iron Ore ..... "	84,181	151,640	Decrease.
Lead (fine, contained in ore). lbs.	165,100	6,604	do
*Lime ..... bush.	2,948,249	362,848	Increase.
Limestone for flux ..... tons.	22,122	21,909	do
Manganese Ore ..... "	1,455	32,737	Decrease.
Marble ..... "	980	980	do
Mica (exports of cut and crude) ..... lbs.	36,529	28,718	
Mineral Paints ..... tons.	794	15,280	Increase.
Mineral Water ..... galls.	424,600	37,360	do
*Miscellaneous clay products	.....	239,385	Decrease.
Moulding Sand ..... tons.	170	850	Increase.
Petroleum ..... bbls.	639,991	612,101	Decrease.
Phosphate ..... tons.	30,988	316,662	Increase.
Pig Iron ..... "	25,921	499,872	do
Platinum ..... ozs.	1,000	3,500	Decrease.
Pyrites ..... tons.	72,225	307,292	Increase.
Salt ..... "	32,832	129,547	Decrease.
Sand and Gravel (exports) .. "	283,044	52,647	Increase.
Silver ..... ozs.	383,318	343,848	Decrease.
Slate ..... tons.	6,935	119,160	Increase.
Soapstone ..... "	195	1,170	do
*Steel ..... "	27,873	973,282	do
Sulphuric Acid ..... lbs.	10,998,713	152,592	do
*Tiles ..... thousands.	10,526	134,265	do
Estimated value of mineral products not returned (principally nickel, iron and structural materials)	.....	992,838	
Total	.....	$19,500,000	Increase.
Total, 1888	.....	16,500,000	

* Incomplete.

(a) Comparison of values only.

EXPORTS.

MINERALS AND MINERAL PRODUCTS, MINED OR MANUFACTURED IN CANADA, DURING 1889.

PRODUCT.	VALUE.	PRODUCT.	VALUE.
*Acid, Sulphuric	$ 1,152	Lime and Cement	$ 161,249
Asbestus, first class	319,461	Mica, crude and cut	28,718
do second class	27,308	do ground	1,879
do third class	13,375	Oil, crude and refined	10,777
Barytes	80	Ore, Antimony	695
*Brick	1,906	do , Iron	39,887
Coal	2,334,905	do , Manganese	29,350
Coke	1,050	do , Silver	212,163
Copper	168,457	Phosphate	394,768
*Fertilizers	1,411	Plumbago (graphite)	538
Gold	609,250	Salt	2,390
Glass and Glassware	6,287	Sand and gravels	52,647
Grindstones	29,982	Slate	3,303
Gypsum (crude)	194,404	Stone, unwrought	21,374
do (ground)	772	Stone, wrought	28,204
Iron and Steel, about	310,000	Other articles	30,407
		Total	$5,038,149

* For last six months of year only.

EXPORTS.

PRODUCTS OF THE MINE DURING THE FISCAL YEAR 1889.

EXPORTED TO	VALUE.	EXPORTED TO	VALUE.
United States	$3,753,351	British West Indies	$ 4,130
Great Britain	422,355	Japan	4,000
Newfoundland	153,311	Norway and Sweden	1,200
Sandwich Islands	17,380	United States of Columbia	796
St. Pierre	16,564	British Guiana	702
Germany	15,856	Danish West Indies	586
Mexico	10,118		
Spanish West Indies	7,640	Total	$4,419,170
Belgium	6,000		
France	5,181	1888 "	$4,110,937

IMPORTS.

MINERALS AND MINERAL PRODUCTS DURING 1889.

PRODUCT.	VALUE.	PRODUCT.	VALUE.
Alum and Aluminous Cake	$ 26,395	Iron and Steel, all sorts..	$1,908,966
Antimony.....	14,342	Lead and mfrs. of	356,732
Arsenic.....	3,999	Lime.....	7,835
Asbestus and mfrs. of....	15,602	do Chloride of.....	59,533
Ashes, Pot, Pearl and Soda.	3,462	Litharge.....	24,652
Asphaltum	33,550	Lithographic Stone	3,625
Baryta.....	611	Manganese Oxide	2,833
Borax.....	23,544	Marble.....	109,099
Brass and mfrs. of	548,563	Mercury.....	8,534
Bricks.....	11,459	Mineral waters.....	37,969
do Bath.....	2,765	Nickel.....	101
do and Tiles, fire.....	18,502	Paints.....	533,351
Buhrstones.	5,850	Paraffin wax.....	6,424
Building Stone.....	128,108	Petroleum and mfrs. of..	505,995
Cement	12,959	Plaster of Paris.....	9,755
do Portland.....	243,134	Platinum.....	4,155
Chalk.....	6,169	Potash Salts.....	13,354
Clay, all sorts.....	23,877	Precious Stones	159,948
Coal, Anthracite.....	4,808,230	Pumice.....	3,526
do Bituminous	3,257,437	Salt.....	306,064
do Dust	43,641	Sand and Gravel.....	33,766
Coal Tar and Pitch.....	102,476	"Silex".....	991
Coke.....	130,921	Slate.....	25,093
Copper and mfrs. of.....	443,235	Soda Salts.....	302,194
Copperas.....	3,096	Stone or Granite, N.E.S..	78,090
Earthenware	275,371	Spelter.....	50,267
Emery.....	15,945	Sulphur	40,677
Fertilizers	47,706	Sulphuric Acid	2,854
Flagstones.....	46,741	Tiles, Sewer, etc	82,127
Fuller's Earth.....	508	Tin and mfrs. of.....	1,334,577
Glass and Glassware.....	1,257,661	Whiting.....	28,225
Graphite and mfrs. of.....	28,577	Yellow Metal.....	94,937
do Pencils.....	57,300	Zinc and mfrs. of	106,095
Grindstones.....	24,742		
Gypsum	2,158	Total.....	$17,910,980

ABRASIVE MATERIALS.

The total production of grindstones during 1889 was 3,404 tons, with a value of $30,863. These figures show a very considerable decrease of 2,360 tons and $20,266 from last year.

New Brunswick. The returns received from New Brunswick give a total production of grindstones for that province of 2,692 tons, having a value, at the quarries, of $23,735. This is the production of six operators, or one less than last year, and shows a decrease in production of 1,101 tons and in value of $6,994.

Nova Scotia. The returns, as given by the Inspector of Mines of Nova Scotia, show a production of but 712 tons of grindstones, valued at $7,128. Here also, as in New Brunswick, we find a very considerable decrease, amounting to 1.259 tons and $13,272.

Exports and imports. The exports and imports of grindstones, as well as of buhrstones, emery, pumice stone and silex are detailed in the following tables :—

ABRASIVE MATERIALS.

TABLE 1.

EXPORTS OF GRINDSTONES.

PROVINCE.	1887.	1888.	1889.
Ontario	$ 500	$ 252	.....
Quebec	12	.....	$ 1,387
Nova Scotia	10,425	11,430	7,150
New Brunswick	17,832	16,494	21,437
Manitoba	.....	.....	8
Totals	$28,769	$28,176	$29,982

ABRASIVE MATERIALS.

TABLE 2.

IMPORTS OF GRINDSTONES.

PROVINCE.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	1,390	$15,915	1,404	$16,065
Quebec	505	6,094	471	6,719
Nova Scotia	....	199	55	935
New Brunswick	1	9	1	8
Manitoba	56	786	24	359
British Columbia	6	199	30	656
Totals	1,958	$23,202	1,985	$24,742

ABRASIVE MATERIALS.

TABLE 3.

IMPORTS OF BUHRSTONES.

PROVINCE.	1887.	1888.	1889.
Ontario	$1,184	$ 239	$ 917
Quebec	2,325	3,507	4,933
British Columbia	26	....	....
Totals	$3,535	$3,746	$5,850

ABRASIVE MATERIALS.

TABLE 4.

IMPORTS OF PUMICE STONE.

PROVINCE.	1888.	1889.
Ontario	$1,629	$ 1,832
Quebec	1,255	1,575
Nova Scotia	23	35
New Brunswick	26	80
Prince Edward Island	....	4
Manitoba	5	....
British Columbia	19	....
Totals	$2,957	$3,526

ABRASIVE MATERIALS.

TABLE 5.

IMPORTS OF EMERY.

PROVINCE.	1888.	1889.
Ontario	$10,337	$12,164
Quebec	1,915	2,076
Nova Scotia	232	270
New Brunswick	1,603	1,421
Manitoba	.....	2
British Columbia	12	12
Total	$14,099	$15,945

ASBESTUS

TABLE A

PRODUCTION BY DISTRICTS

DISTRICT	YEAR	VALUE	QUALITY.	QUANTITY
		$		TONS.
THETFORD.	1888	157,040	1ST	1,786
		29,740	2ND	519
		11,430	3RD	762
	1889	252,005	1ST	2,629
		37,884	2ND	570
		13,340	3RD	801
COLERAINE, ETC.	1888	25,040	1ST	337
		26,495	2ND	601
		5,262	3RD	399
	1889	51,230	1ST	563
		46,815	2ND	797
		25,280	3RD	753
TOTALS.	1888	182,080	1ST	2,123
		56,235	2ND	1,120
		16,692	3RD	1,161
	1889	303,235	1ST	3,192
		84,699	2ND	1,367
		38,620	3RD	1,554.

IMPORTS OF "SILEX" OR CRYSTALLIZED QUARTZ.

TABLE 6.

PROVINCE.	1888.		1889.	
	Cwts.	Value.	Cwts.	Value.
Ontario	5,699	$1,154	935	$597
Quebec	263	237	368	11
Nova Scotia	2	11	151	66
New Brunswick	239	147	287	299
Manitoba	.....	.....	43	18
Totals	6,203	$1,549	1,784	$991

Mr. R. Chalmers, of the Survey staff, in his preliminary report, to the Director, on his work in Southern New Brunswick, mentions occurrences of infusorial earth, and says :—"Infusorial earth has been reported as occurring at Fitzgerald Lake, St. John County, and at Pollet River and Pleasant Lakes, King's County. The deposits at the two first mentioned places are quite large."

ANTIMONY.

Production.

Outside of the small amount of the ore of this metal produced in Nova Scotia, as per returns from the Inspector of Mines for that province, nothing was done. The returns received from owners of the mines in New Brunswick and Quebec report their properties as being still idle. The total production was 55 tons, worth $1,100, all the production of the Rawdon mine in Hants County. This mine only worked a part of the year, which accounts for the small yield. This amounts to a decrease in the production of 290 tons and $2,596.

Enquiries were made at this office recently, by manufacturers of Babbitt metal, for Canadian sources of antimony, and they were put in communication with owners of mines, which it is hoped will lead to business.

Of the above quantity produced 30 tons, valued at $695, were entered in the Customs Department as exported from the Province of Nova Scotia.

ANTIMONY.

TABLE 1.

IMPORTS.

PROVINCE.	1888.		1889.	
	Pounds.	Value.	Pounds.	Value.
Ontario	50,481	$4,754	51,027	$6,198
Quebec	96,690	10,127	68,665	7,407
Nova Scotia	552	162	1,460	132
New Brunswick	3,908	417	4,166	533
Manitoba	180	6	73	3
British Columbia	264	36	327	69
Totals	152,075	$15,502	125,718	$14,342

ARSENIC.

The production of refined arsenic, which has been carried on for some years past at the Deloro mine, Ont., was suspended during 1889, so that there is no production to report, there being no other producer in the Dominion.

The accompanying table of imports will show what demand there is for this article in the Dominion.

ARSENIC.

TABLE 1.

IMPORTS.

PROVINCE.	1888.		1889.	
	Pounds.	Value.	Pounds.	Value.
Ontario	3,944	$125	63,732	$2,096
Quebec	17,244	610	50,374	1,759
Nova Scotia	2,272	82	3,925	137
New Brunswick	....	....	100	4
Manitoba	35	4	20	3
Totals	23,495	$821	118,151	$3,999

ASBESTUS.

Production.

The returns of the producers of this mineral in 1889 show a total output of 6,113 tons, valued at $426,554. This is a considerable increase over last year, amounting to 1,708½ tons, and in value of $171,547.

As against 11 producers last year, returns were received of the operations of 13 for 1889, employing 575 hands.

The contributions of the different districts to this grand total are as follows :—

Thetford ..... 4,000 tons
Black Lake and Coleraine, etc ..... 2,113 "

Under the latter heading are included the produce of various scattered and outlying mines which are not, however, actually in the Black Lake district.

A comparative statement for 1888 and 1889 of the amounts, etc., of the different grades of asbestus produced by the different districts is shown in Graphic Table A.

Exports and imports.

The exports and imports are set forth in tables Nos. 1 and 2 :—

ASBESTUS.

TABLE 1.

EXPORTS.

Quality.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
First Class	3,623	$262,552	4,579	$319,461
Second "	110	5,306	593	27,308
Third "	201	9,884	416	13,375
Totals	3,936	$277,742	5,588	$360,144

ASBESTUS.

TABLE 2.

IMPORTS.

PROVINCE.	1888.	1889.
Ontario	$3,557	$7,128
Quebec	4,302	3,929
Nova Scotia	265	.....
New Brunswick	591	3,335
Prince Edward Island	.....	906
Manitoba	46	.....
British Columbia	149	304
Totals	$8,910	$15,602

Dr. Ells, in the preliminary report of his summer's work done in that district, states that an effort is being made to open up new mines on the "asbestus areas on the east side of Brompton Lake, on lot 26, range X, Brompton Gore, but at present this locality is accessible with difficulty, and the indications are not equal to those presented at Thetford and Coleraine."

Dr. Selwyn, also, in speaking of an area visited by himself during the summer in the northern peninsula of Newfoundland, says :—"Diorites and Serpentines appear to be somewhat largely developed, and it seems quite likely that valuable deposits of asbestus may accompany them as they do in the Eastern Townships of Quebec."

COAL.

Production.

The production of this mineral for the whole Dominion amounted to 2,719,478 tons, valued at $5,584,182 at the pit's mouth.

This shows an increase over last year of 61,344 tons and $324,350. Although the production has increased, it has not done so at the same rate as in the past few years, a fact which will be apparent by reference to the accompanying graphic table A. It will there be noticed also that the total value has increased at a greater rate than the tonnage, which is due to the greater production from British Columbia, the price of whose product is always higher than that of the eastern coal fields.

The proportions yielded to the grand total by the different provinces are given in Table B., where they are graphically represented and speak for themselves.

Table C. represents the number of men employed in each province in the production of these amounts of coal, together with the proportionate number of tons produced per man per year.

The following tables give details of the production, sales and distribution of the two principal coal producing provinces, viz., Nova Scotia and British Columbia, as supplied by the mining departments of those provinces.

The graphic tables D and E represent the production of these two provinces and the fluctuations of the past years, and for purposes of comparison both these and the other three are constructed on the same scale.

COAL.

TABLE 1.

NOVA SCOTIA.

PRODUCTION, SALES AND COLLIERY CONSUMPTION.

Period.	Production.	Sales.	Colliery Consumption.
1889—First quarter. Tons.....	350,707	203,130	43,453
1889—Second " "	481,004	419,649	45,383
1889—Third " "	624,773	640,008	39,260
1889—Fourth " "	510,548	478,933	49,010
Totals "	1,967,032	1,741,720	177,106
1888 " ..... "	1,989,263	1,765,895	176,336
1887 " ..... "	1,871,338	1,702,046	156,550
1886 " ..... "	1,682,924	1,538,504	159,512
1885 " ..... "	1,514,470	1,405,051	142,939

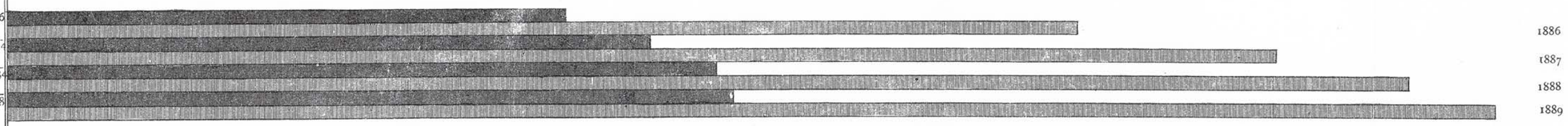
GEOLOGICAL AND NATURAL HISTORY SURVEY OF CANADA.

ALFRED R. C. SELWYN, C. M. G., LL. D., F. R. S., DIRECTOR.

Plate II.

COAL

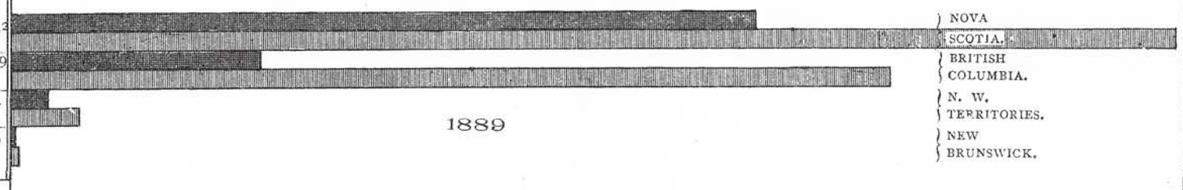
ANNUAL PRODUCTION OF CANADA.



VALUE	QUANTITY
$	TONS.
4,017,225	2,091,976
4,758,590	2,418,494
5,259,832	2,658,134
5,584,182	2,719,478

TABLE A.

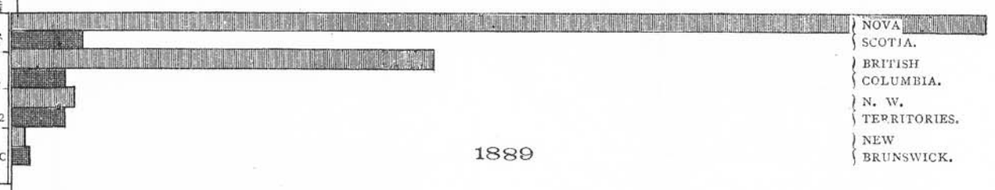
PRODUCTION BY PROVINCES.



VALUE	QUANTITY
$	TONS
3,073,489	1,967,033
2,319,320	649,409
179,640	97,364
11,733	5,673

TABLE B.

MEN EMPLOYED ETC. BY PROVINCES.



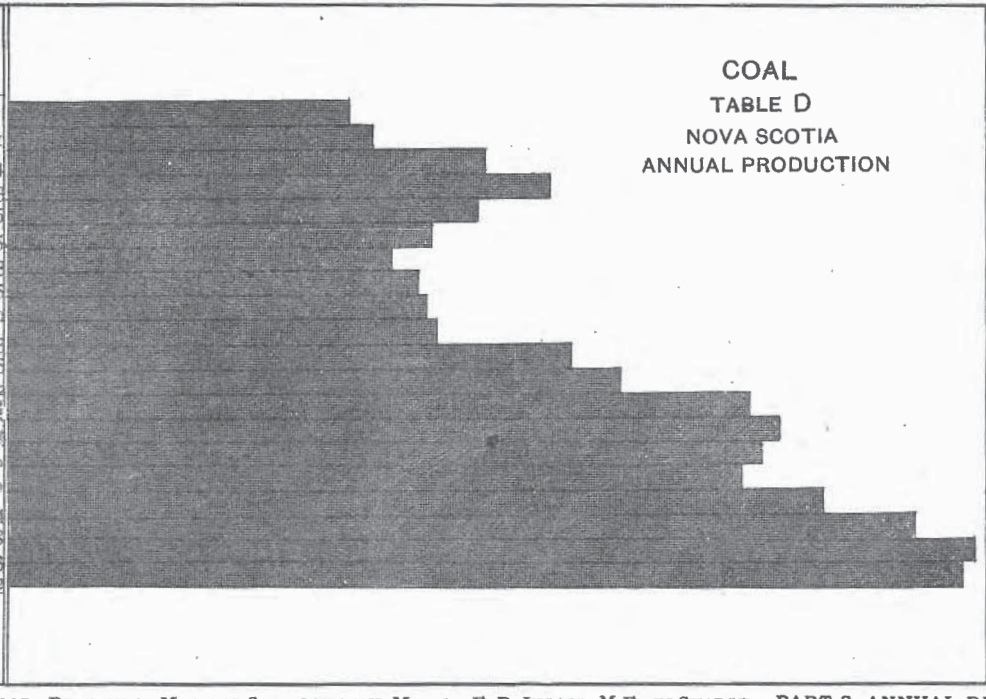
NO. OF MEN EMPLOYED	NO. OF TONS MINED PER ANNUM PER MAN.
5,167	38[illegible]
2,241	29[illegible]
334	292
63	9[illegible]

TABLE C.

Plate III.

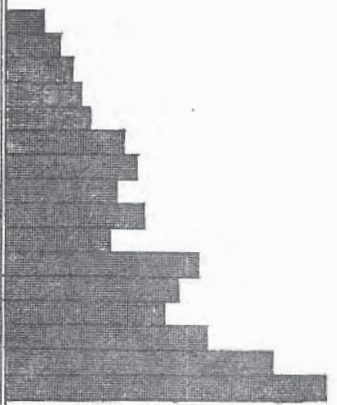
COAL
TABLE D
NOVA SCOTIA
ANNUAL PRODUCTION

YEAR	TONS
1870	700,861
1871	754,031
1872	984,664
1873	1,117,643
1874	977,446
1875	848,395
1876	794,803
1877	848,395
1878	863,081
1879	882,863
1880	1,156,635
1881	1,259,182
1882	1,529,708
1883	1,593,259
1884	1,556,010
1885	1,514,470
1886	1,682,924
1887	1,871,338
1888	1,989,263
1889	1,967,032



COAL
TABLE E
BRITISH COLUMBIA
ANNUAL PRODUCTION

YEAR	TONS
1874	81,574
1875	110,145
1876	131,192
1877	154,052
1878	170,846
1879	241,301
1880	267,595
1881	228,357
1882	282,139
1883	213,299
1884	394,070
1885	365,596
1886	326,636
1887	413,360
1888	548,017
1889	649,409



Coal.

Table 2.

Nova Scotia.

Distribution of Coal sold.

Market.	Tons.
Nova Scotia :—	
Transported by land	351,995
" " sea	264,481
Total	616,476
New Brunswick	218,595
Newfoundland	98,048
Prince Edward Island	61,533
Quebec	707,612
West Indies	4,461
United States	33,584
Other Countries	1,411
Total	1,741,720

Coal.

Table 3.

Nova Scotia.

Coal Trade by Counties.

Year 1889.	Cumberland.		Pictou.		Cape Breton.		Total.	
	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.
First quarter.	122,064	109,375	112,761	83,835	115,882	9,920	350,707	203,130
Second "	123,720	103,775	99,432	84,573	257,852	227,301	481,004	419,649
Third "	133,519	113,086	137,803	127,540	353,451	399,382	624,773	640,008
Fourth "	169,991	143,747	133,149	129,552	207,408	205,634	510,548	478,933
Totals...	549,294	469,983	483,145	429,500	934,593	842,237	1,967,032	1,741,720

COAL.

TABLE 4.

NOVA SCOTIA.

PRODUCTION BY DISTRICTS, 1889.

Colliery.	Tons.	Colliery.	Tons.
Chignecto	20,801	Caledonia	128,015
Joggins	50,870	Francklyn	4,531
Minudie	1,456	Glace Bay	90,630
Springhill	476,167	Gowrie	125,104
Acadia	301,960	International	138,785
Black Diamond	38,097	Ontario	3,210
East River	1,730	Reserve	136,247
Intercolonial	141,072	Sydney	162,362
Holmes	286	Victoria	121,633
Bridgeport	24,076	Total	1,967,032

COAL.

TABLE 5.

BRITISH COLUMBIA.

1889.

Name of Colliery.	Coal raised.	Sold for home consumption.	Sold for exportation.	On hand Jan. 1st, 1889.	On hand Jan. 1st, 1890.	Number of men employed.
	Tons.	Tons.	Tons.	Tons.	Tons.	
Nanaimo	250,735	44,929	200,800	5,736	10,744	875
Wellington	306,189	85,707	221,011	4,145	3,416	862
E. Wellington	57,537	8,552	48,259	112	612	190
Union	34,948	112	26,645	2,240	10,431	314
Totals	649,409	139,298	491,715	12,233	25,203	2,241

The number of producers making returns was 41, of whom 19 operated in Nova Scotia, 4 in British Columbia, 10 in the North West Territories and 8 in New Brunswick.

North-West Territories.

The mines at Lethbridge and Anthracite still continue to be the main producers, the other operators contributing but a small proportion to the total output for the district. The production for this year, compared with that of last, shows a decrease of 17,760 tons and $3,714.

New Brunswick.

The greater proportion of the coal produced by this province was due to the operations of two companies, viz., the Newcastle Mining Co. and the Grand Lake Coal Co. As against last year's results, this province shows a decrease in the production of 57 tons and an increase in value of $683. The decrease in the production is due to a number of the smaller operators having suspended operations, whilst the better quality of the material produced by a more careful system of mining under the larger companies, who have taken their places, will account for the increase in the prices realized.

Exports.

Of the total produce of the Dominion, 2,719,478 tons, 24.4 per cent., or 665,315 tons, were exported, as shown in Table 7, as compared with 22.1 per cent. exported in 1888.

Coal.

Table 6.

Exports: Nova Scotia and British Columbia.

Year.	Nova Scotia.		British Columbia.	
	Tons.	Value.	Tons.	Value.
1874	252,124	$647,539	51,001	$ 278,180
1875	179,626	404,351	65,842	356,018
1876	126,520	263,543	116,910	627,754
1877	173,389	352,453	118,252	590,263
1878	154,114	293,795	165,734	698,870
1879	113,742	203,407	186,094	608,845
1880	199,552	344,148	219,878	775,008
1881	193,081	311,721	187,791	622,965
1882	216,954	390,121	179,552	628,437
1883	192,795	336,088	271,214	946,271
1884	222,709	430,330	245,478	901,440
1885	176,287	349,650	250,191	1,000,764
1886	240,459	441,693	274,466	960,649
1887	207,941	390,738	356,657	1,262,552
1888	165,863	330,115	405,071	1,605,650
1889	186,608	396,830	470,683	1,918,263
Totals..	3,001,764	$5,886,522	3,564,814	$13,781,929

COAL.

TABLE 7.

EXPORTS: THE PRODUCE OF CANADA.

Province.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	25	$ 107	55	$ 193
Quebec	17,506	38,281	7,249	17,848
Nova Scotia.	165,863	330,115	186,608	396,830
New Brunswick	3	15	710	1,728
Prince Edward Island	105	214	9	32
Manitoba	54	349	1	11
British Columbia	405,071	1,605,650	470,683	1,918,263
Totals	588,627	$1,974,731	665,315	$2,334,905

The coal exported as given above was distributed as follows :—

	Tons.
Great Britain	27,705
United States	533,593
Newfoundland	79,105
St. Pierre	8,741
France	291
Germany	460
Sweden and Norway	102
Spanish West Indies	3,088
British West Indies	2,055
Danish West Indies	302
Sandwich Islands	1,218
Japan	1,800
Mexico	2,875
Brazil	1,260
Spain	250
British Guiana	615
Hong Kong	1,855
Total	665,315

COAL.

TABLE 8.

EXPORTS: NOT THE PRODUCE OF CANADA.

Province.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	70,198	$165,816	72,008	$173,382
Quebec	9,864	20,179	12,625	31,181
Nova Scotia	4,024	11,180	4,483	10,154
New Brunswick	230	409	178	500
Totals	84,316	$197,584	89,294	$215,217

The above was shipped to the following places :—

Destinations.	Tons.
Great Britain	14,364
United States	74,874
Newfoundland	56
Total	89,294

COAL.

TABLE 9.

IMPORTS OF ANTHRACITE.

Province.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	900,776	$3,746,081	803,390	$3,156,757
Quebec	348,350	1,401,904	350,633	1,338,049
Nova Scotia	22,923	94,122	26,916	124,674
New Brunswick	51,074	195,287	44,463	168,673
Prince Edward Island	2,518	9,904	4,269	8,257
Manitoba	523	3,447	2,135	11,820
British Columbia	....	3	.....	.....
Totals	1,326,164	$5,450,748	1,231,806	$4,808,230

COAL.

TABLE 10.

IMPORTS OF BITUMINOUS COAL.

Province.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	1,195,736	$3,258,113	1,180,202	$3,007,896
Quebec	82,667	175,127	80,413	195,043
Nova Scotia	1,423	10,001	535	3,614
New Brunswick	4,715	13,336	3,828	10,018
Manitoba	2,203	7,620	8,870	31,878
British Columbia	355	4,828	884	8,988
Totals	1,287,189	$3,469,025	1,274,732	$3,257,437

COAL.

TABLE 11.

IMPORTS OF COAL DUST.*

Province.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	37,195	$41,027	48,345	$43,372
Quebec	10,649	14,170	23	172
Nova Scotia	82	375	12	97
New Brunswick	6	170	.....	.....
Manitoba	55	267	.....	.....
British Columbia	.....	10	.....	.....
Total	47,987	$56,019	48,380	$43,641

*All slack and small coal is thus entered in the books of the Customs Department.

There were 54,539 tons of oven coke produced in 1889, valued at $155,043, showing an increase in tonnage of 9,166 over 1888, and in value of $20,862. Nova Scotia still remains the only district producing any notable quantity of this material. Coke.

There were 350 tons of this product, valued at $1,050, exported during 1889, from Nova Scotia to Newfoundland.

The following Table shows the home market for coke, as illustrated by the importation, and as compared with last year.

COKE.

TABLE 1.

IMPORTS OF OVEN COKE.

Province.	1888.		1889.	
	Tons.	Value.	Tons.	Value.
Ontario	22,948	$80,841	33,283	$113,117
Quebec	5,171	16,068	4,399	15,221
New Brunswick	198	827	314	1,419
Manitoba	198	816	165	940
British Columbia	155	939	19	224
Totals	28,670	$99,491	38,180	$130,921

There were 1,593,300 bushels of charcoal produced during 1889, valued at $93,463. Of this nearly 50 per cent. is produced at the Drummondville and Radnor Forges in the Province of Quebec for use at those works. The remainder is made in Ontario and principally exported. Charcoal.

In reporting on the work done in their various districts, the officers of the Geological Survey, in their preliminary reports to the Director, make mention of various points of interest connected with coal and its allied substances, as follows :—Mr. McConnell, speaking of the country north of the Lesser Slave Lake, N.W.T., and along the Peace River, above Lake Athabaska, says :—" Lignite was found in several places along Peace River, but in seams too small to be workable. It was also found in the Laramie plateau south of the Lesser Slave Lake. Here four seams were found ranging in thickness from one to four feet, besides a number of smaller ones scattered through about 1,000 feet of Development and discovery. North-West Territory.

shales and sandstone. This lignite is apparently of fair quality, but has not yet been analysed. Drift lignite was also found in Martin River, near the base of Martin Mountain" (at N.E. corner of Lesser Slave Lake), "but was not traced to its source."

Nova Scotia.

Mr. Hugh Fletcher, speaking of his work in Pictou and Colchester Counties, N.S., mentions the albertite found on the north side of the Cobequid Hills, and of its associations thus:—"Along the north side of the hills, as far west as Waugh River, runs a belt of red conglomerate, described as Permian in previous reports, of the same geological age as that of New Glasgow, interstratified with red grit, sandstone and marl, and overlaid by grey sandstones, like those of Pictou and West River. These are succeeded in turn by brownish red sandstones and marls, with one or two thin layers of limestone. * * * All are affected by important east and west faults. Associated with the conglomerate, and also occasionally with the grey sandstones, are veins of albertite and of baryte. The veins of albertite are not, however, confined to these rocks. Hitherto no veins of greater thickness than four inches have been found, and these are lenticular and irregular." Speaking of the grey sandstone of Hodson, near River John, he says:—"Small seams of bituminous coal have been discovered in the grey sandstone, but none seem to be persistent."

Speaking of the southern part of Colchester County, he continues:—"The small coal seams of West River, Riverdale and Kemptown, with their associated slaty shales and quartzites, have been traced in the North, Chiganose and Debert Rivers, where much money has been spent in attempts to find them in workable shape."

He also visited the reported occurrence of coal at Kennetcook Corner, in Hants County, and found that "the seams are all apparently too small to be workable, and the basin in which they lie, between lower carboniferous limestone and gypsum, is very narrow."

Other points with regard to new features in the Nova Scotia coal fields are given in the report for the Department of Mines for that province as follows:—

"*Cumberland Co.*—During the past year explorations were carried on to the east of the Styles mine by Messrs. Sharp, Hickman *et al.*, and several seams said to vary in thickness up to eight feet were discovered. The coal is of good quality, and the results of the explorations, it is claimed, prove the extension of the Cumberland coal field for a considerable distance east of the limits hitherto generally assigned to it. Discoveries made to the north-west of the old General Mining Association area appear to show an anticlinal, having the Springhill Basin to the south, and the Maccan and Styles Basin to the north. If these results are confirmed a much greater portion of the Cumberland

coal field will be accessible to the miner than has hitherto appeared possible. Some little work was also done in tracing the Oxford seams, which appear to form a basin, having a general east and west course.

" The Minudie mine worked a little during the first of the year, and was re-opened towards its close.

" *Colchester Co.*—At Coal Brook, about 12 miles from Truro, Mr. George Ross, of Truro, secured a lease, and has opened a seam of coal of good quality, said to be 3 feet 9 inches thick. Some prospecting was also done at Middle Stewiacke.

" *Pictou Co.*—At the Intercolonial Colliery arrangements were made for working the coal in an adjoining area belonging to Mr. S. H. Holmes, included between the line of the Intercolonial Company and the supposed southerly extension of the McCullock Brook fault.

" Some small prospecting was done by Wm. P. McNeil, on the area lying immediately north of the East River area.

" *Cape Breton Co.*—Mr. Greener has continued his explorations in the vicinity of North Sydney, in the measures lying on the prolongation of the Low Point coal strata. From analyses made of two of the seams by Mr. Maynard Bowman, Dominion Analyst, they are of excellent quality, when it is considered that the samples were taken from the outcrop, the percentage of ash running as low as 2.06, and of sulphur less than one per cent. Toward the close of the year I understand that Mr. Greener drove in some distance on one of the seams and found that it was thickening, and was then 5 feet 3 inches thick. The importance of the discovery of a workable seam of good quality at this point is apparent, for a large tract of coal-bearing measures becomes proved, and encouragement is given to others to search outside the hitherto recognized limits of the Sydney coal field. Explorations were also carried on in the district west of the Gardiner mine and a license to work selected."

The Department of Mines of British Columbia reports as follows of the operations in coal mining in the coal fields of Vancouver Island:— British Columbia.

" During the year the following collieries have been in operation, namely :—

" Nanaimo Colliery, of the New Vancouver Coal Mining and Land Co., Limited.

" Wellington Colliery, of Messrs. R. Dunsmuir & Sons.

" East Wellington Colliery, of the East Wellington Coal Co.

" Union Colliery, of the Union Colliery Co.

" Very extensive and encouraging prospecting operations, involving a large outlay of capital, have been carried on by the above-named companies, and also by the Oyster Harbor Coal Company, during the present year, by means of diamond drills of great power (capable of

boring to 4,000 feet), to prove and establish an extension of the Nanaimo coal fields, and also those of Comox ; and the Tumbo Island Coal Company are prospecting their coal land on the island of that name in the Gulf of Georgia by sinking a shaft.

" *Nanaimo.*—There has been some very extensive boring in this district during the past year. Amongst them was the continuation of the bore-hole * * * * in No. 2 Esplanade Shaft. This was put down to the depth of 1,263 feet, the depth of shaft being 617 feet, makes the total from the surface 1,880 feet. From not having struck any coal, there was another bore-hole put down by the same company in the South Field. In this bore they passed through a seam of hard coal 12 feet thick, at 469 feet from the surface. This bore has been continued till the present time, and is 1,460 feet down. This bore shows a good prospect, and is very encouraging.

" *Oyster Harbor Coal Company.*—Exploration with two diamond drills have been in progress at Oyster Harbor and Chemainus Bay during nearly the whole of this year. The first bore, commenced in January, was put down at the head of Oyster Harbor, on the north-west side, and pierced a depth of 1,300 feet through sandstone and shale, and was stopped in a fine-looking sandstone. The rocks at this place are tilted at a high angle, the cores from the bore showing a dip of some 25 degrees. While in process of boring, inflammable gas extended from this hole in sufficient quantity to burn with a bright flame when a match was applied.

" A second bore was started on the eastern side of the harbor, which, after going down 690 feet, was stopped for want of water. The stream which fed the drill dried up and the machinery was removed.

" A third hole was bored on the north-west side of Chemainus Bay, close to the water's edge. This hole was sunk to a depth of 1,600 feet, using up all the rods available, and operations were suspended. The rocks, as shown by the cores, which are sandstone, mostly, with shale bands, are all said to be of the right kind, and we may expect to hear more of operations in this neighborhood.

" At Chemainus Bay, after getting down 300 feet about, the measures were found to be lying horizontally, and very nicely bedded the whole depth of the bore.

" *Tumbo Island Coal Mining Company.*—This island, lying at the south-east entrance of the Straits of Georgia, is being prospected for coal by the above named company. They commenced by putting a bore-hole down close to the water's edge ; in this they passed through about five feet of hard coal. This prospect so encouraged them that they went down to the dip and started to sink a shaft, in which they

are now down fully 100 feet. They have a steam engine, pit head gear, and other necessary appliances. Owing to the location of this shaft being so far to the dip of the bore-hole they do not expect to get to the coal at less than about 600 feet from the surface. This is a large undertaking, and will take a large amount of capital to reach the coal and put everything in order. It is to be hoped that when they get the shaft down they will find the coal as good as expected."

New Brunswick.

Mr. R. Chalmers, who has been working up the surface geology of the southern part of New Brunswick, in drawing attention to the deposits of peat there, thus mentions a somewhat new use to which this material can be put :—

"Peat Bogs are numerous and well developed near the Bay of Fundy coast and in many places inland. Those near Musquash, Popelogan and Digdeguash Rivers are quite extensive. Lying just east of Musquash Harbor is a bog, covering an area of 450 acres, and 20 feet in depth, which is now about to be utilized in the preparation of 'moss litter.' This is an article used in stables as bedding for horses. Owners of studs in the United States have for some time been looking for a material for this purpose sufficiently light and porous to be an absorbant of the liquids, moisture and ammonia which collect in stables, and which could afterwards be used as a fertilizer in gardens, etc. A few capitalists from St. John, St. Stephen and other places have formed what is known as the Musquash Moss Litter Company, and, having purchased this bog, are now erecting buildings and machinery there for the preparation of this article, which, it is claimed, is well adapted for the object intended, and as good as the imported European moss litter. The kind of peat used is not the upper or living peat, nor the deep-lying, decayed material, but that between the two, in which the mosses and rootlets are only partially decomposed, and which has the fibres nearly whole. The chief process in its preparation is depriving it of the water, of which it contains 90 to 95 per cent. This is done by a plunger, by pressing it between rollers and by evaporation. When thoroughly dried it is packed in bales for shipment, and is worth $15 to $17 per ton in the principal United States cities. This new enterprise promises to be successful."

COPPER.

The returns received at this office for this metal are unfortunately not quite complete, owing to the failure of one of the operators to send in a return. As, however, it is known that very little was done at this place, other than prospecting and development work, its absence will affect the grand total very little.

Production.

There were * 111,774 tons of ore marketed during the year, having a copper content of 6,809,752 lbs., which, calculated at an average price of 13c. on the ground, equals $885,424.

The above represents the production, outside of an included 28,000 lbs. from British Columbia mines, of some four operators in the Provinces of Ontario and Quebec. Besides the returns received from the above, three others were heard from who, whilst operating, were not producing, making a total of seven, giving employment to 1,035 men, to which must be added 39 returned as employed by the Coxheath Copper Mining Co., of Cape Breton, and an unknown number for the mines of British Columbia.

The above figures of production show a considerable increase over last year, when it was reported as 5,562,864 lbs. contained in 63,479 tons of ore.

Exports and Imports.

The exports and imports of copper for 1889 are given in the following tables :—

COPPER.

TABLE 1.

EXPORTS.

Year.	Ontario.	Quebec.	Total.
1885.....	.....	$262,600	$262,600
1886.....	$16,404	232,855	249,259
1887.....	3,416	134,550	137,966
1888.....	.....	257,260	257,260
1889.....	.....	168,457	168,457

*Over 60 per cent of this amount was concentrated by smelting to the condition of matter ranging from 22 to 25 per cent in copper content and shipped in this form.

COPPER.

TABLE 2.

IMPORTS: PIGS, BARS, ETC.

Province.	1888.		1889.	
	Pounds.	Value.	Pounds.	Value.
Ontario	761,600	$130,730	1,003,538	$137,551
Quebec	944,800	88,438	1,694,796	216,831
Nova Scotia	45,200	6,276	77,922	8,658
New Brunswick	5,100	1,291	.....	9,642
Prince Edward Island	400	63	3,200	404
Manitoba	.....	.....	95,562	18,371
British Columbia	10,700	2,007	33,945	6,257
Totals	1,767,800	$228,805	.....	$397,714

Note.—Under this heading are included the items specified by the Customs Department as follows,—"Bars, rods, bolts, ingots and sheathing not planished or coated." "Old and scrap," "pigs," "copper in sheets," "wire of copper, round or flat."

COPPER.

TABLE 3.

IMPORTS: MANUFACTURES.

Province.	1888.	1889.
Ontario	$41,748	$15,306
Quebec	79,763	17,909
Nova Scotia	4,710	3,935
New Brunswick	10,371	2,878
Prince Edward Island	76	54
Manitoba	2,592	1,660
British Columbia	4,654	3,779
Totals	$143,914	$45,521

Note.—Under this heading are included the items specified by the Customs Department as follows:—"Seamless drawn tubing," "wire cloth," all other manufactures of, not elsewhere specified."

Development and Discovery.

The mining of copper has been carried on with considerable vigour the older districts continuing to produce as usual, viz., those of the eastern townships of Quebec, and of Sudbury, whilst a little development work was done in Nova Scotia. The main feature of note consists of the entry of a new producing district into the field, namely, that of Kootenay in British Columbia, the Toad Mountain group of mines in this district having shipped some 70 tons of argentiferous copper ore, consisting chiefly of the sulphurets, the copper content averaging 20 per cent.

Ontario.

Coming further west, we find an interesting discovery of a native copper-bearing area, reported by Dr. Lawson, of the Geological Survey staff, as having been examined by him, and occurring in the townships of Blake and Crooks on Thunder Bay. This is the more interesting as seeming to indicate a detached area of the Keweenian, or native copper-bearing formation proper of that region, in the midst of the higher Animikie or silver-bearing formation of Thunder Bay.

The other officers of the staff also indicate various interesting features from their several fields of work. Dr. Bell mentions the continued activity in the Sudbury district, where, besides the producing mines, a number are actively engaged prospecting and developing. He says :—" Five mines are in operation at present. Three of them are worked by the Canadian Copper Company, namely, the Stobie, three miles and a half north-north-east of Sudbury Junction, the Copper Cliff, three miles and a half south-west of the same point, and the Evans, one mile further south. The Dominion Mineral Company is working a mine situated about a mile north-east of the Stobie, and the Messrs. Vivian, of Swansea, are opening the Murray mine, on the main line of the Canadian Pacific Railway, three miles and a half north-west of Sudbury Junction.

" Two smelting furnaces, capable of reducing 300 tons of ore a day, are in operation at the Copper Cliff mine. One of them has been running without interruption for nearly a year. The other went into blast on the 4th September. Both the Dominion Mining Company and the Vivians are erecting similar blast furnaces."

Quebec.

Speaking of the eastern townships district, Dr. Ells says :—" The new mine of the Memphremagog Mining Company, lot 28, range ix., Potton, was examined. It shows a body of ore, mostly iron and copper pyrite, about sixteen feet thick, and extending for several hundred yards. This is capped by a considerable body of bog iron ore, which should be valuable if facilities for shipping and smelting were afforded. But little work, other than exploratory, has yet been done at this place."

Mr. Fletcher, speaking of the district on the north side of the Cobequid Hills, in Colchester County, Nova Scotia, speaks as follows : —" Reference has often been made to the grey sulphide and carbonate of copper found associated with carbonized plants in calcareous, concretionary beds among the grey sandstones of this formation, or as nodules in red and green marls. In many places, but particularly on Waugh River and French River, these ores have been largely but not profitably worked." Nova Scotia.

Little or nothing was done in the way of mining of this metal in this province, and that little was done at the Coxheath mines in Cape Breton, the operations being thus described by Mr. Gilpin, the Inspector of Mines for the province :—

" No work of note has been done this year, the failure of the French Copper Syndicate having upset all basis of price, etc. At the Coxheath mines the Eastern Development Company have, since the opening of their mine on what may be considered a working basis, turned their attention to preparations for building a railway and smelters. The county of Cape Breton has released them from taxation on all real and personal property for 25 years. At the mine a carpenter's shop, dynamite magazine and dryhouse have been put up. Below ground the shaft has been deepened about 50 feet, and more cross-cuts driven, which have proved the continuation in depth and quality of the valuable veins referred to in my last report. The ore extracted in the underground levels has been dressed, and the amount of ore now in stock is about 2,000 tons.

" During the summer explorations have shown a valuable vein about 1,500 feet south of the present workings. This vein is about 10 feet wide and runs 17 per cent. of copper, and holds per ton 5 dwts. gold, and $\frac{1}{2}$ ounce of silver. The discovery has added greatly to the resources of the company "

GOLD.

Production.

The production of the above metal for 1889 shows an increase again, the quantities being 72,328 ozs., with a total value of $1,295,159, as against 61,310 ozs. and $1,098,610 for 1888. We have thus an increase of 11,108 ozs. and $196,549.

The following table gives the production by provinces :—

GOLD.

TABLE 1.

PRODUCTION BY PROVINCES.

Province.	Ozs.	Value.	Number of men.
British Columbia.....	34,642	$588,923	1,929
Nova Scotia.....	26,155	510,029	682
Quebec.	60	1,207	26
North-West Territory (including Yukon District)	11,471	195,000	about 250
Totals.....	72,328	$1,295,159	2,887

British Columbia.

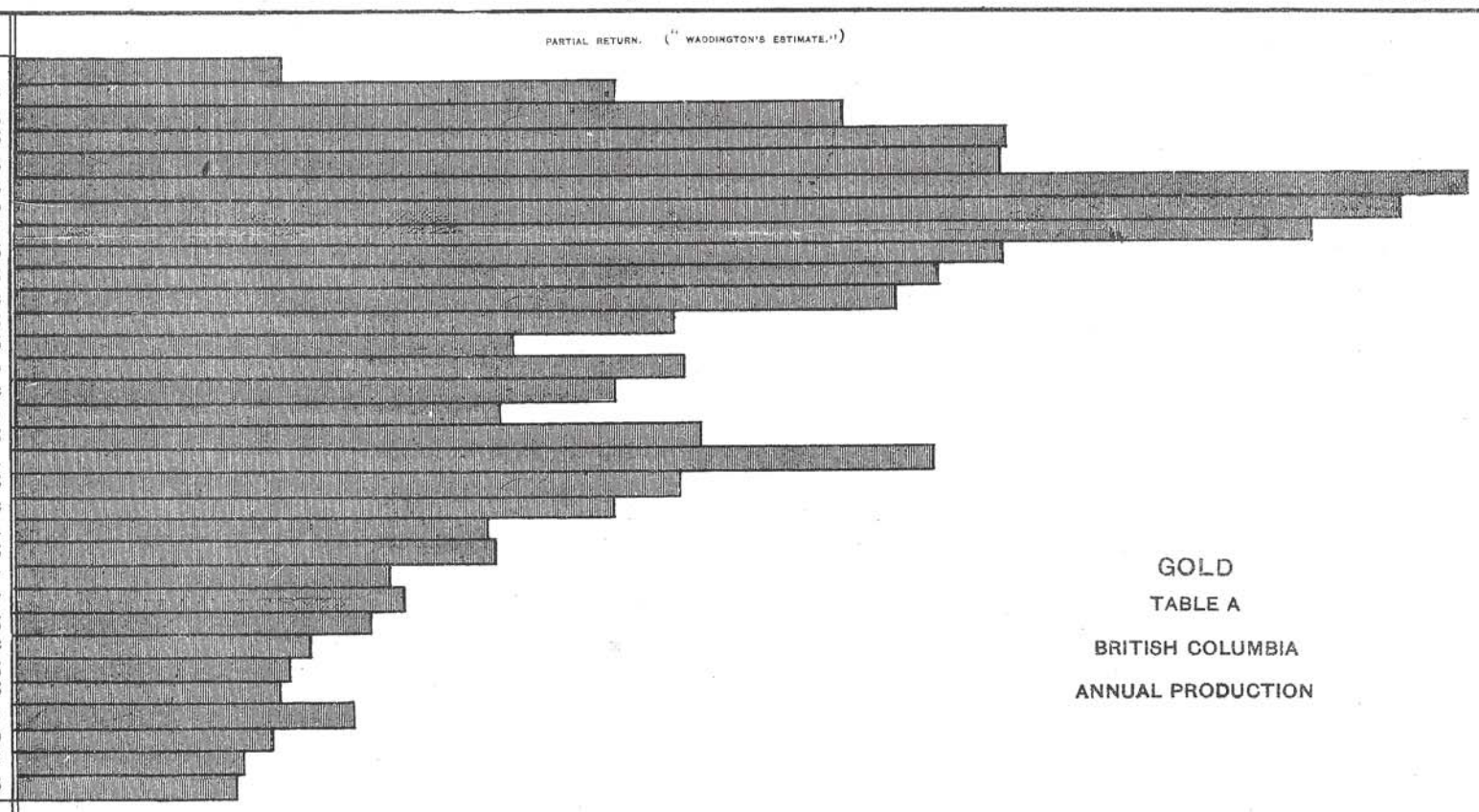
Tables A. and B. and No. 2 give the details of the gold production of British Columbia, both for 1889 and the yield of past years, and are compiled from figures given in the official reports of the Minister of Mines for that province, which also gives the following figures of the value of gold exported by the banks at Victoria during 1889 :—

Bank of British Columbia.....	$254,816
" " British North America.....	47,373
Garesche, Green & Co.....	188,580
Total.....	$490,769

The graphic tables bring out many interesting features, the most noticeable being the considerable falling off in the product since the palmy days of 1863-1865. This is due to the fact that nearly all the gold is obtained from placer deposits, attention having been directed to the quartz ledges only quite recently, and the result has been as usual a continuous falling off of the amount of gold produced as the richer and more easily worked placer deposits become exhausted.

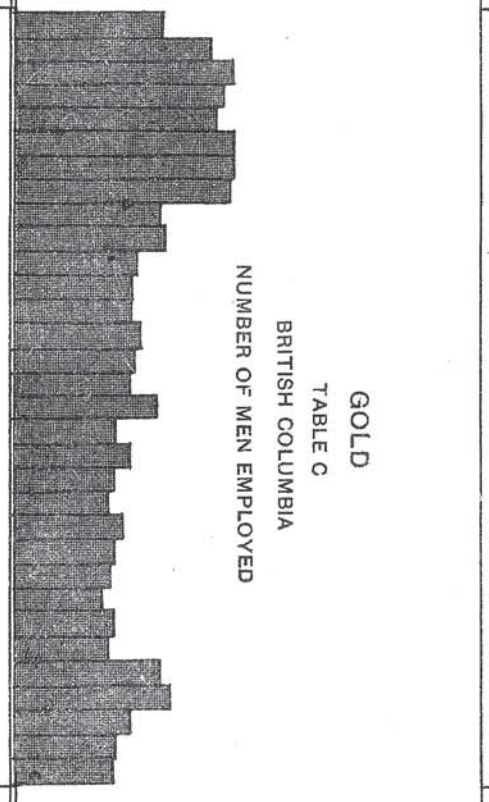
The data for tables A., B. and C. are taken from the " Mineral Wealth of British Columbia," by Dr. G. M. Dawson, Part R, Annual

YEAR	VALUE
1858	$ 705,000
1859	1,615,072
1860	2,228,543
1861	2,666,118
1862	2,656,903
1863	3,913,563
1864	3,735,850
1865	3,491,205
1866	2,662,106
1867	2,480,868
1868	2,372,972
1869	1,774,978
1870	1,336,956
1871	1,799,440
1872	1,610,972
1873	1,305,749
1874	1,844,618
1875	2,474,904
1876	1,786,648
1877	1,608,182
1878	1,275,204
1879	1,290,058
1880	1,013,827
1881	1,046,737
1882	954,085
1883	794,252
1884	736,165
1885	713,738
1886	903,651
1887	693,709
1888	616,731
1889	588,923



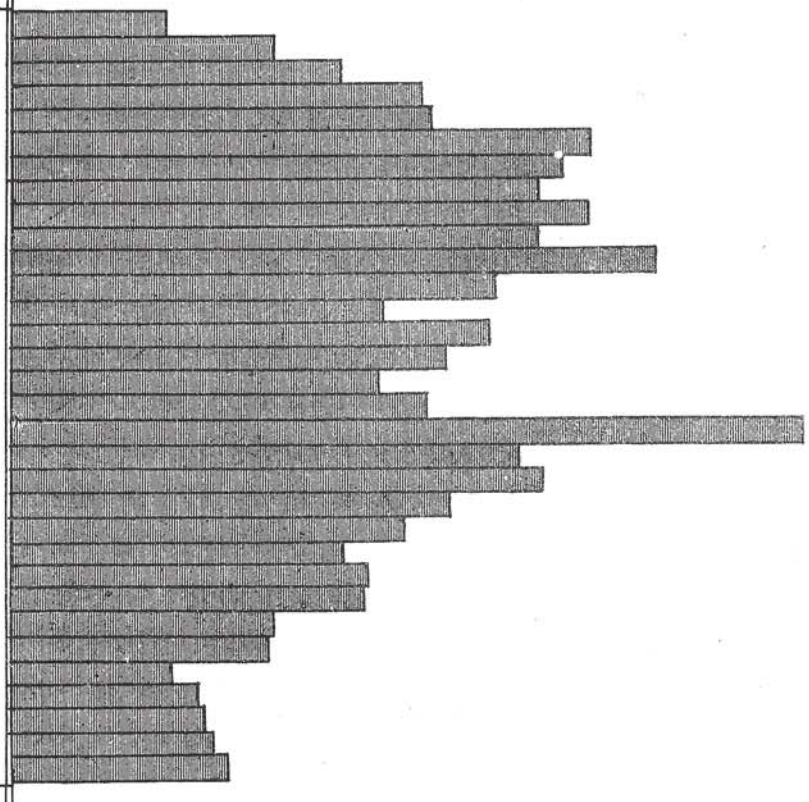
GOLD
TABLE A
BRITISH COLUMBIA
ANNUAL PRODUCTION

YEAR	NUMBER
1858	3000
1859	4000
1860	4,400
1861	4.200
1862	4,100
1863	4,400
1864	4.400
1865	4,294
1866	2,982
1867	3,044
1868	2,399
1869	2,369
1870	2,348
1871	2,450
1872	2,400
1873	2,300
1874	2,868
1875	2,024
1876	2,282
1877	1,960
1878	1,883
1879	2,124
1880	1,955
1881	1,898
1882	1,738
1883	1,965
1884	1,858
1885	2,902
1886	3,147
1887	2,342
1888	2007
1889	1,929



GOLD
TABLE C
BRITISH COLUMBIA
NUMBER OF MEN EMPLOYED

YEAR	$ VALUE
1858	$ 235
1859	403
1860	506
1861	634
1862	648
1863	889
1864	849
1865	813
1866	893
1867	814
1868	992
1869	749
1870	569
1871	734
1872	671
1873	567
1874	643
1875	1,223
1876	783
1877	820
1878	677
1879	607
1880	518
1881	551
1882	548
1883	404
1884	396
1885	246
1886	287
1887	296
1888	307
1889	330



GOLD
TABLE B
BRITISH COLUMBIA
EARNINGS PER MAN

Report of the Geological Survey for 1887, with added figures for 1888 and 1889, which brings the total known and estimated yield of gold from 1858 to 1889 inclusive up to $54,697,727.

GOLD.

TABLE 2.

BRITISH COLUMBIA.

YIELD, ETC., BY DISTRICTS.

Districts.	Divisions.	Whites.	Chinese.	Yield of Gold by divisions.	Total yield by districts.
Cariboo.....	Barkerville.....	89	181	$78,542	
	Lightning Creek.....	28	134	41,150	
	Quesnellemouth	5	127	37,000	
	Keithley Creek.....	32	205	61,200	
		154	647		$217,892
Cassiar.....	.....	33	64	54,910	54,910
Kootenay	Western.....	361	25	12,700	
	Eastern..	31	58	36,300	
		392	83		49,000
Lillooet.....	.....	30	150	60,364	60,364
Yale.....	Osoyoos.....	137	57	10,500	
	Similkameen.....	75	104	35,800	
		212	164		46,300
					$428,466
	Total Whites.....	821	....		
	" Chinese.	....	1108		
	Total employed....	1,929			

The statistics for Nova Scotia are, as usual, furnished by the Inspector of Mines for that province, and as set forth in the tables D. and E. and Nos. 3 and 4 which follow, give necessary details relating to the industry there. Nova Scotia.

A comparison of table D. with table A. shows some interesting points of difference, but it must be borne in mind that the scale of the former is twice that of the latter. The gold of Nova Scotia is altogether obtained from veins, so that we find no general falling off as in British Columbia.

The addition of the figures for this year brings the totals for the 28 years from 1862 to 1889 inclusive up to the following figures :—Total tons of quartz crushed, 660,407. Total ounces yielded, 482,190. Total value of same at $19.50 per oz., $9,402,697.

GOLD.

TABLE 3.

NOVA SCOTIA.

DISTRICT DETAILS.

Districts.	Number of mines.	Days' labor.	Mills.	Tons of quartz crushed.	Yield per ton.			Maximum yield per ton.			Total yield of gold.		
					ozs.	dwts.	grs.	ozs.	dwts.	grs.	ozs.	dwts.	grs.
Brookfield	1	4,688	2	1,472	1	4	9	1	19	13	1,796	17	18
Caribou and Moose River	4	20,819	5	7,338	0	5	4	0	7	12	1,906	1	10
Fifteen Mile Stream	1	3,634	1	1,416	0	11	2	0	14	6	786	9	0
Lake Catcha	1	10,764	2	807	0	15	1	2	9	10	607	10	0
Malaga Barrens	2	28,686	2	4,388	0	18	2	1	5	13	3,976	3	13
Montague	2	10,286	3	953	1	19	21	26	11	20	1,901	10	6
Oldham	1	8,405	1	1,391	1	18	22	5	11	18	2,709	0	18
Rawdon	1	7,192	2	925	2	10	23	3	18	19	2,358	10	0
Renfrew	2	8,141	2	1,070	0	13	1	1	15	18	697	17	15
Salmon River	1	17,393	1	7,633	0	5	7	0	7	14	2,032	14	0
Sherbrooke	2	5,257	4	1,618	0	3	0	0	3	21	243	17	17
Stormont	2	16,319	1	2,925	0	11	22	0	15	19	1,745	6	0
Tangier and Mooseland	1	3,168	2	427	0	5	6	0	15	9	112	4	12
Uniacke	2	13,307	3	2,296	0	12	2	4	15	0	1,393	11	9
Whitburn	4	28,593	2	1,639	1	9	18	2	3	15	2,440	15	18
Wine Harbor	1	2,355	2	707	0	11	17	1	0	0	413	18	6
Unproclaimed, &c.	5	22,541	15	2,155	0	9	14	0	19	14	1,035	18	15
Totals	33	211,548	50	39,160	0	17	22	26	11	20	26,155	6	13

YEAR	VALUE
	$
1862	141,871
1863	272,448
1864	390,349
1865	496,357
1866	491,491
1867	532,563
1868	400,555
1869	348,427
1870	387,392
1871	374,972
1872	255,349
1873	231,122
1874	178,244
1875	218,629
1876	233,585
1877	329,205
1878	245,253
1879	268,328
1880	257,823
1881	209,755
1882	275,090
1883	301,207
1884	313,554
1885	432,971
1886	455,564
1887	413,631
1888	436,939
1889	510,022

GOLD
TABLE D
NOVA SCOTIA
ANNUAL PRODUCTION

GOLD
TABLE F
QUEBEC
ANNUAL PRODUCTION

SECOND HALF OF YEAR ONLY.

YEAR	VALUE $
1877	12,057
1878	17,937
1879	23,972
1880	33,174
1881	56,661
1882	17,093
1883	17,787
1884	8,726
1885	2,426
1886	3,981
1887	1,604
1888	3,563
1889	1,207

YEAR	QUANTITY
	TONS.
1862	6,473
1863	17,000
1864	21,431
1865	24,421
1866	32,157
1867	31,384
1868	32,259
1869	35,144
1870	30,824
1871	30,787
1872	17,089
1873	17,708
1874	13,844
1875	14,810
1876	15,490
1877	17,369
1878	17,989
1879	15,936
1880	13,997
1881	16,556
1882	21,081
1883	25,954
1884	25,186
1885	28,890
1886	29,010
1887	32,280
1888	36,178
1889	39,160

GOLD
TABLE E
NOVA SCOTIA

TONS OF QUARTZ CRUSHED.

YEAR	VALUE
	$
1862	21.9
1863	16.02
1864	18.11
1865	20.32
1866	15.28
1867	16.96
1868	12.41
1869	9.91
1870	12.56
1871	12.17
1872	14.81
1873	13.05
1874	12 87
1875	14.89
1876	15.08
1877	19.01
1878	13.63
1879	16.83
1880	18.42
1881	12.66
1882	13.04
1883	11.60
1884	12.44
1885	14.98
1886	15.70
1887	12.81
1888	12.08
1889	13.02

AVERAGE YIELD OF
GOLD PER TON (2000 LBS.)
CRUSHED