Minister of Mines

PROVINCE OF BRITISH COLUMBIA

ANNUAL REPORT

For the Year Ended 31st December

1958

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1959

BRITISH COLUMBIA DEPARTMENT OF MINES

VICTORIA, B.C.

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To His Honour FRANK MACKENZIE ROSS, C.M.G., M.C., LL.D.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The Annual Report of the Mining Industry of the Province for the year 1958 is herewith respectfully submitted.

W. K. KIERNAN,
Minister of Mines.

Minister of Mines' Office,
May, 1959.

John G. Biggs died on January 23rd, 1958, in his eighty-second year. He was born in 1877 in County Durham, England. He came to Canada in 1905, at the age of 28, and settled first at Wellington on Vancouver Island, where he found employment with Canadian Collieries (Dunsmuir) Limited. Shortly afterwards he moved to Cumberland, where he was employed by the same company until 1919, when he joined the Department of Mines as Inspector of Mines. He was stationed at Merritt from 1919 until 1928, when he was transferred to Princeton. He remained there until his retirement in 1941.

Harry E. Miard died on December 21st, 1958, in New Westminster. He was born in Paris, France, in 1879, emigrating to Canada in 1897. His association with coal-mining in British Columbia began in 1901 at Coal Creek. In 1914 he left the position of overman at Coal Creek to return to France as a soldier of the Republic. In 1919, shortly after returning to Coal Creek, he joined the staff of the Inspection Branch of the Department of Mines at Fernie. His duties as Inspector of Mines and as a member of the Board of Examiners took him to many of the mining camps of the Province. He retired at Fernie in 1946. After his retirement he did consulting work for The Consolidated Mining and Smelting Company of Canada, Limited, and The Crow's Nest Pass Coal Company Limited. He held a life membership in the Canadian Institute of Mining and Metallurgy.

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ANNUAL REPORT OF THE MINISTER OF MINES, 1958

Introduction

A Report of the Minister of Mines of the Province of British Columbia has been published each year since 1874.

The Annual Report records the salient facts in the progress of the mineral industry, also much detail about individual operations, including those undertaken in the search for, exploration of, and development of mineral deposits, as well as the actual winning of material from mineral deposits.

The Annual Report of the Minister of Mines now contains introductory sections dealing with Statistics and Departmental Work, followed by sections dealing with Lode Metals; Placer; Structural Materials and Industrial Minerals; Petroleum and Natural Gas; Inspection of Lode Mines, Placer Mines, and Quarries; Coal; and Inspection of Electrical Equipment and Installations at Mines and Quarries, each with its own table of contents. A table listing the properties described, in geographic groupings, precedes the index.

An introductory review of the mineral industry and notes at the first of several of the main sections deal generally with the industry or its principal subdivisions. Notes in the various sections deal briefly with exploration or production operations during the year or describe a property in more complete detail, outlining the history of past work and the geological setting as well as describing the workings and the mineral deposits exposed in them. Some notes deal with areas rather than with a single property.

The work of the branches of the Department is outlined briefly in the section on Departmental Work. This section is followed by notes dealing briefly with the work of other British Columbia or Federal Government services of particular interest to the mineral industry of British Columbia. Information concerning mine operations and some of the activities of the Inspection Branch of the Department of Mines is contained in the section on Inspection of Lode Mines, Placer Mines, and Quarries, early in the section on Coal and in the section on Inspection of Electrical Equipment and Installations at Mines and Quarries.

The section on Statistics begins with an outline of current and past practice in arriving at quantities and calculating the value of the various products.

Review of the Mineral Industry, 1958

Production in 1958, the centennial year, brought the accumulated value of the mineral output of British Columbia well past the 4-billion-dollar mark. The statistics of mineral production for 1858 show only coal valued at a few thousand dollars and placer gold valued at $705,000. For 1958, thirty-eight items are listed—fifteen under metals, seven under industrial minerals, thirteen under structural materials, and three under fuels. Their combined value is $146,875,081, placer gold and coal combined contributing slightly more than 4 per cent of the total.

Lead contributed 23.6 per cent and zinc 29.4 per cent of the value of 1958 mineral output. Fourteen other products each contributed from 1 to 6 per cent. It is noteworthy that asbestos contributed 5.2 per cent of the total value, being greater than gold, silver, and copper, which ranged from 4.6 to 2 per cent of the total value. Although still a relatively small item, natural-gas output contributed 2.6 per cent of the 1958 total value.

The part of total value contributed by each group of mineral products in 1958 was: Principal metals, 63.8 per cent; other metals, 7.2 per cent; industrial minerals, 8.0 per cent; structural materials, 13.6 per cent; fuels, 7.4 per cent. The details of prices, quantities of minerals produced, and values are found in tables on pages A 13 to A 48.

The value of mineral output for 1958 was materially less than that of recent years because of reduced prices for copper, lead, and zinc, and reduced output of gold, silver, copper, coal, and several other products. Increases were recorded for iron ore, petroleum, and natural gas. Mine closures in 1957 and the closing of six mines in 1958 account for the reduction in quantity of gold, silver, copper, tungsten, and coal. The values for the " principal metals " and the " other metals " groups were much below the 1953–57 average and the 1957 figures; consequently the percentages contributed by metals were also reduced. Industrial minerals and structural materials have been increasing in value, and their 1958 values, although less than those of 1957, exceeded the 1953–57 averages. The 1958 value for fuel exceeded the five-year average, increases in natural gas and petroleum more than offsetting the decline in coal output.

The quantity of lead exceeded the average of the preceding five years by about 2 per cent, and that of zinc exceeded the five-year average by 6 per cent, but the combined value of the two metals was 12.6 million dollars below the five-year average. Copper output was reduced sharply compared with recent years. Although there were considerable changes in the output of individual gold mines, their combined output in 1958 was approximately the same as in 1957. However, in comparison with recent years, little gold was won from ores yielding one or more of the metals copper, lead, and zinc as the main product or as principal products. In 1957 such ores yielded about a sixth of the total gold. Silver output was reduced similarly, although at several mines silver output increased with lead output. The value of the " principal metals " group declined more than $18,000,000 from the 1957 figure. Commercial production of nickel was recorded for the first time; production was started in January and suspended in August. Tungsten production was suspended in August. Iron-ore production was materially greater than in 1957, one producer having operated throughout the year and the other for about nine months. Texada Mines Limited, recovering a copper-gold concentrate as a by-product in concentrating iron ore, and Cowichan Copper, milling ore for the first time, contributed more than half the copper output.

In the " structural materials " field a substantial increase in cement-making capacity was achieved when the plant of Lafarge Cement of North America Ltd. on Lulu Island began operating in January, but the Provincial output for the year was somewhat less than in 1957.

Production of coal was much below the 1957 output, but oil production increased by a half and the 1958 output of natural gas was about eight times that of 1957.

The number of lode-mineral claims recorded in 1958, a measure of exploration activity, was 13, 459, compared with 12,110 in 1957. Lode-mine exploration increasingly is carried on by large companies doing geological, geophysical, and geochemical work, stripping with heavy equipment, diamond drilling, and often meeting transportation problems by using fixed-wing aircraft or helicopters. These procedures contrast with the traditional ones that were responsible for most lode discoveries in the past. Except for the Cassiar property, the new mines of the post-war period are old discoveries which determined and intelligent effort and increased prices have made profitable sources of mineral wealth.

Interest has been shown in a wide range of minerals, including asbestos, barite, gypsum, limestone, magnesite, and silica, in addition to the metals that have been the main contributors of mineral wealth. Exploration in the Merritt-Highland Valley area indicates large reserves of copper, with substantial quantities of good milling grade and very large quantities of low-grade material. Copper mineralization on Racing River and Toad River in the northeastern part of the Province received preliminary exploration. Further work was done on the Boss Mountain molybdenum property, and low-grade molybdenum-bearing material at Glacier Gulch received preliminary testing.

Exploration for oil and gas was carried on actively mainly in northeastern British Columbia, where the area of interest has broadened, as indicated by a considerable enlargement of the area held under permit. Interest was not confined to northeastern British Columbia. More than 2,700,000 acres of land on Graham Island and off the east coast of the Island was taken under permit, and near the end of 1958, 12,700,000 acres in the Skeena Mountains, and a further 445,000 acres lying to the southeast, were taken under permit. Five wells between 1,800 and 6,000 feet in depth were drilled and abandoned along the east coast of Graham Island.

More than forty drilling rigs were operated in 1958, and 484,287 feet of drilling was done on 112 wells, of which, at the end of the year, one was suspended and twenty were drilling, fifty-one had been abandoned, seventeen had been completed as oil wells, and twenty-three as gas wells. Two of the oil-well completions and nine gas-well completions were wildcat wells. These additions and some revisions brought the number of oil wells to thirty-nine and gas wells to 148. Most of the wells drilled, including sixty wildcat wells and all wells successfully competed, are in northeastern British Columbia.

The West Coast Transmission Company pipe-line was operated for the full year. Gas production from sixty-nine wells amounted to 64,051,785,000 cubic feet, and oil production from twenty-eight wells amounted to 512,359 barrels. At Taylor, on the Peace River, the McMahon gas scrubbing plant and adjoining refinery and sulphur recovery plant produce dry sweet gas for transmission, having recovered liquid condensate and sulphur. Refining the condensate yields propane, butane, finished motor and aviation fuels, kerosene, and diesel oil.

Revenue to the Government from petroleum and natural gas amounted to $9,472,200.74, including fees, rentals, and miscellaneous, $4,326,288.54; tender bonuses, $4,510,123.14; and royalties on gas, oil, and processed products, $635,809.06.

The average number employed through 1958 in placer, lode, coal, industrial-minerals and structural-material mining was 11,201. Major expenditures by those branches of the industry included: Salaries and wages, $45,035,287; fuel and electricity, $7,922,163; process supplies (inclusive of explosives, chemicals, drill-steel, lubricants, etc.), $13,215,371; Federal taxes, $6,062,698; Provincial taxes, $1,847,466; municipal and other taxes, $1,925,952; levies for workmen's compensation (including silicosis), unemployment insurance, and other items, $1,782,744. Dividends amounted to $14,966,123. The lode-mining industry spent $27,614,725 in freight and treatment charges on ores and concentrates.

The recorded expenditures of the petroleum and natural-gas industry amounted to $39,980,479, of which $31,507,890 was for exploration and included $14,897,919 for exploratory drilling. The expenditures recorded included for salaries and wages, $3,898,271; for fuel and electricity, $158,876; and for process supplies, $1,837,665. The total number reported employed on December 31st, 1958, was 846.

Statistics

The statistics of the mineral industry are collected and compiled and the statistical tables for this Report are prepared by the Bureau of Economics and Statistics, Department of Industrial Development, Trade, and Commerce.

In the 1951 Report, extensive rearrangements of tables and of their order were made. The tables in the present Report closely parallel those presented in Reports for years preceding 1951, but additional details have been incorporated, and the present order is considered to make more apparent the relationship between summary tables and the tables giving the details summarized.

In the 1958 Report, adjustments have been made to bring lead and zinc production figures into line with the best information available. The changes are reflected in Tables I, II, III, VI, VIIA, VIIB, VIIIA, VIIIB, and in the gross-value figure in Table XIV. The gross-value figures have also been corrected to include early production of iron, mercury, and tungsten so that Table XIV now records the tonnage from all lode-mining operations year by year beginning with 1901 and also records the gross value of the principal metals; however, it does not record the value of by-product metals antimony, bismuth, cadmium, indium, and tin, contributing a minor part of value of the output of any mine.

METHOD OF COMPUTING PRODUCTION

The tables of statistics recording the mineral production of the Province for each year are compiled from certified returns made by the operators, augmented by some data obtained from the Royal Canadian Mint and from the operators of customs smelters. The value of each mineral product, in Canadian funds, is calculated at the average price for the year (*see* p. A 13). The quantities of metals are net after making deductions for losses in smelting and refining.

METALS

Prior to 1925 the average prices for gold and copper are true average prices, but, as a means of correcting for losses in smelting and refining, the prices of other metals were taken at the following percentages of the year's average price for the metal: Silver, 95 per cent; lead, 90 per cent; and zinc, 85 per cent. For 1925 and subsequent years the value has been calculated using the true average price and the net metal contents, in accordance with the procedures adopted by the Dominion Bureau of Statistics and the co-operating Provincial Departments of Mines.

Beginning with the Annual Report for 1948, production figures for individual lode-mining operations are the assay contents of the products shipped (ore, concentrates, or bullion), no deductions being made for losses in smelting and refining. In previous Annual Reports the production figures given for individual properties are net, after deductions for smelting and refining losses.

Placer Gold

The data on placer-gold production were very largely obtained from the Gold Commissioners until 1925. The value of placer gold in dollars is now obtained from returns received annually from the operators. At the old standard price, $20.67 per ounce of

fine gold, $17 was regarded as a close approximation of the average value per ounce of crude placer gold produced in British Columbia. Dividing the production reported in dollars by 17 gave the equivalent in crude ounces. The average value $17 per ounce is equivalent to a fineness of 822½. Beginning with 1932 the average value per crude ounce has been based on the same fineness but has recognized the varying price of gold. The average price per ounce of crude placer gold for the year is listed on page A 13.

Lode Metals, Gross and Net Contents

The gross contents are the gold and silver contents of bullion and for ores and concentrates the total assay contents, obtained by multiplying the assay by the weight. The quantities for gold, silver, copper, lead, and zinc in Table XV and in "Notes on Metal Mines" are gross.

Calculations of the value of production are based on the total assay content for gold and on net content for the other principal metals. These are: In lead ores and concentrates and zinc concentrates, for silver 98 per cent, lead 95 per cent, and zinc 85 per cent of the total assay content; and in copper concentrates, 95 per cent of the silver and the total assay content of copper less 10 pounds per ton of concentrates. Quantities for silver, lead, zinc, and copper in Tables I to VIII, inclusive, are net.

Average Metal Prices

In the interests of uniformity the Statistical Bureaux of the Provinces and the Dominion Bureau of Statistics use the same average metal prices in valuing mineral production. Up to and including the year 1939 the prices used in evaluating metal and mineral production were:—

Gold and silver: The average United States price for the year, as quoted in the Engineering and Mining Journal, converted into Canadian funds at the average exchange rate.

Copper, lead, and zinc: For lead and zinc, the average London Metal Market price for the year converted into Canadian funds at the average exchange rate; for copper, until 1932 the New York price for copper was used, thereafter the average London Metal Market price was used.

Suspension of trading on the London Metal Exchange in September, 1939, and the controls of metals during the war years necessitated changes from the procedures which had been followed.

The method of arriving at the price for gold continued unchanged, but the prices for the metals controlled were those set by the Canadian Metals Controller. In 1945 the controls were largely removed from sales but not from prices. Control of metal prices ended on June 6th, 1947. For 1945 and subsequent years the prices are those computed by the Dominion Bureau of Statistics, using information supplied by the principal Canadian refiners of silver and the base metals.

In the period 1945–47 the prices received for silver, lead, and zinc sold for use in Canada were substantially less than the prices received for these metals exported to the United States. The prices for silver in 1945 and 1946 and for copper, lead, and zinc in 1946 and 1947 are weighted averages, taking into consideration sales in Canada at the ceiling prices and sales abroad at New York prices converted into Canadian funds.

Prices are now arrived at by the methods as given in the footnotes to table of average prices on page A 13.

FUEL

Coal

In 1926 a change was made in computing coal and coke statistics. The practice in former years had been to list as coke production only the coke made in bee-hive ovens,

the coal used in making it not being listed; coke made in by-product ovens was not listed as coke, but the coal used in making this coke was credited as coal production. The result was that both the coal and the coke production figures were incomplete. Starting with the 1926 Annual Report, the standard practice of the Bureau of Statistics, Ottawa, was adopted. This consists of crediting all coal produced, including that used in making coke, as primary mine production. Coke-making is considered a manufacturing industry. As the data are of interest to the mining industry, Table X is included in the Report to show the total coke produced in the Province, together with by-products, and the values given by the producers. The pre-1926 data have now been reworked and brought into conformity with current practice. Table IXA lists the full mine output (gross) produced and its net value, and these figures are incorporated in Table I, in the total mine production for the Province. Table X gives the complete data for coke, gas, and by-products manufactured for the period 1895 to 1925, and for each year subsequent to 1925.

Up to and including the year 1947, production was recorded in long tons (2,240 pounds). Beginning in 1948, production is given in short tons (2,000 pounds). The quantity of coal produced in the preceding years has been recalculated in short tons.

The average price for coal, listed year by year (*see* p. A 13), is the total value divided by the quantity. Up to and including 1945, the quantity is the gross mine output; for 1946 and subsequent years, the quantity is the quantity sold and used. For 1946 and subsequent years, the value (Tables I, III, VIIA, IXA, IXB, and IXC) is the amount realized from sales of coal, at colliery loading points, plus the colliery valuation of coal used under companies' boilers and in making coke. For 1946 and subsequent years the quantity sold and used is shown in Table IXC. " Use " includes coal used under company stationary and locomotive boilers, and used in making coke. Washery loss and changes in stocks, year by year, are shown in the table " Collieries of British Columbia, Production and Distribution by Collieries and by Districts," page 135 of this Report.

Natural Gas

Commercial production of natural gas began in 1954. The production shown in Tables I, III, VIIA, and VIIIA is the total dry and residue gas sold. The figures are compiled from the monthly disposition report and Crown royalty statement filed with the Department of Mines by the producer. The quantity is reported as thousands of cubic feet at standard conditions (14.4 pounds per square inch pressure, 60° F. temperature).

Petroleum

Commercial production of petroleum began in 1956. The figures shown in Tables I, III, VIIA, and VIIIA are compiled from the monthly disposition report and Crown royalty statement filed with the Department of Mines by the producer. The quantity is reported in barrels (35 imperial gallons=1 barrel).

AVERAGE PRICES USED IN VALUING PROVINCIAL PRODUCTION OF GOLD, SILVER, COPPER, LEAD, ZINC, AND COAL

Year	Gold,[1] Crude, Oz.	Gold, Fine, Oz.	Silver, Fine, Oz.	Copper, Lb.	Lead, Lb.	Zinc, Lb.	Coal, Short Ton
	$	$	Cents	Cents	Cents	Cents	$
1901	17.00	20.67	56.002 N.Y.	16.11 N.Y.	2.577 N.Y.	.....	2.679
1902	.....	.....	49.55 ,,	11.70 ,,	3.66 ,,	.....	.....
1903	.....	.....	50.78 ,,	13.24 ,,	3.81 ,,	.....	.....
1904	.....	.....	53.36 ,,	12.82 ,,	3.88 ,,	.....	.....
1905	.....	.....	51.33 ,,	15.59 ,,	4.24 ,,	.....	.....
1906	.....	.....	63.45 ,,	19.28 ,,	4.81 ,,	.....	.....
1907	.....	.....	62.06 ,,	20.00 ,,	4.80 ,,	.....	3.125
1908	.....	.....	50.22 ,,	13.20 ,,	3.78 ,,	.....	.....
1909	.....	.....	48.93 ,,	12.98 ,,	3.85 ,,	.....	.....
1910	.....	.....	50.812 ,,	12.738 ,,	4.00 ,,	4.60 E. St. L.	.....
1911	.....	.....	50.64 ,,	12.38 ,,	3.98 ,,	4.90 ,,	.....
1912	.....	.....	57.79 ,,	16.341 ,,	4.024 ,,	5.90 ,,	.....
1913	.....	.....	56.80 ,,	15.27 ,,	3.93 ,,	4.80 ,,	.....
1914	.....	.....	52.10 ,,	13.60 ,,	3.50 ,,	4.40 ,,	.....
1915	.....	.....	47.20 ,,	17.28 ,,	4.17 ,,	11.25 ,,	.....
1916	.....	.....	62.38 ,,	27.202 ,,	6.172 ,,	10.88 ,,	.....
1917	.....	.....	77.35 ,,	27.18 ,,	7.91 ,,	7.566 ,,	.....
1918	.....	.....	91.93 ,,	24.63 ,,	6.67 ,,	6.94 ,,	4.464
1919	.....	.....	105.57 ,,	18.70 ,,	5.19 ,,	6.24 ,,	.....
1920	.....	.....	95.80 ,,	17.45 ,,	7.16 ,,	6.52 ,,	.....
1921	.....	.....	59.52 ,,	12.50 ,,	4.09 ,,	3.95 ,,	.....
1922	.....	.....	64.14 ,,	13.38 ,,	5.16 ,,	4.86 ,,	.....
1923	.....	.....	61.63 ,,	14.42 ,,	6.54 ,,	5.62 ,,	.....
1924	.....	.....	63.442 ,,	13.02 ,,	7.287 ,,	5.39 ,,	.....
1925	.....	.....	69.065 ,,	14.042 ,,	7.848 Lond.	7.892 Lond.	.....
1926	.....	.....	62.107 ,,	13.795 ,,	6.751 ,,	7.409 ,,	.....
1927	.....	.....	56.37 ,,	12.92 ,,	5.256 ,,	6.194 ,,	.....
1928	.....	.....	58.176 ,,	14.570 ,,	4.575 ,,	5.493 ,,	.....
1929	.....	.....	52.993 ,,	18.107 ,,	5.050 ,,	5.385 ,,	.....
1930	.....	.....	38.154 ,,	12.982 ,,	3.927 ,,	3.599 ,,	.....
1931	.....	.....	28.700 ,,	8.116 ,,	2.710 ,,	2.554 ,,	4.018
1932	19.30	23.47	31.671 ,,	6.380 Lond.	2.113 ,,	2.405 ,,	3.795
1933	23.02	28.60	37.832 ,,	7.454 ,,	2.391 ,,	3.210 ,,	.....
1934	28.37	34.50	47.461 ,,	7.419 ,,	2.436 ,,	3.044 ,,	.....
1935	28.94	35.19	64.790 ,,	7.795 ,,	3.133 ,,	3.099 ,,	.....
1936	28.81	35.03	45.127 ,,	9.477 ,,	3.913 ,,	3.315 ,,	.....
1937	28.77	34.99	44.881 ,,	13.078 ,,	5.110 ,,	4.902 ,,	.....
1938	28.93	35.18	43.477 ,,	9.972 ,,	3.344 ,,	3.073 ,,	.....
1939	29.72	36.14	40.488 ,,	10.092 ,,	3.169 ,,	3.069 ,,	.....
1940	31.66	38.50	38.249 ,,	10.086 ,,	3.362 ,,	3.411 ,,	.....
1941	31.66	38.50	38.261 ,,	10.086 ,,	3.362 ,,	3.411 ,,	.....
1942	31.66	38.50	41.166 ,,	10.086 ,,	3.362 ,,	3.411 ,,	.....
1943	31.66	38.50	45.254 ,,	11.75 ,,	3.754 ,,	4.000 ,,	.....
1944	31.66	38.50	43.000 ,,	12.000 ,,	4.500 ,,	4.300 ,,	.....
1945	31.66	38.50	47.000 ,,	12.550 ,,	5.000 ,,	6.440 ,,	.....
1946	30.22	36.75	83.650 ,,	12.80 ,,	6.750 ,,	7.810 ,,	4.68
1947	28.78	35.00	72.000 ,,	20.39 ,,	13.670 ,,	11.230 ,,	5.12
1948	28.78	35.00	75.000 Mont.	22.35 U.S.	18.040 ,,	13.930 ,,	6.09
1949	29.60	36.00	74.250 U.S.	19.973 ,,	15.800 U.S.	13.247 U.S.	6.51
1950	31.29	38.05	80.635 ,,	23.428 ,,	14.454 ,,	15.075 ,,	6.43
1951	30.30	36.85	94.55 ,,	27.70 ,,	18.4 ,,	19.9 ,,	6.46
1952	28.18	34.27	83.157 ,,	31.079 ,,	16.121 ,,	15.874 ,,	6.94
1953	28.31	34.42	83.774 ,,	30.333 ,,	13.265 ,,	10.675 ,,	6.88
1954	27.52	34.07	82.982 ,,	29.112 ,,	13.680 ,,	10.417 ,,	7.00
1955	28.39	34.52	87.851 ,,	38.276 ,,	14.926 ,,	12.127 ,,	6.74
1956	28.32	34.44	89.373 ,,	39.787 ,,	15.756 ,,	13.278 ,,	6.59
1957	27.59	33.55	87.057 ,,	26.031 ,,	14.051 ,,	11.175 ,,	6.76
1958	27.94	33.98	86.448 ,,	23.419 ,,	11.755 ,,	10.009 ,,	7.45

[1] Unrefined placer gold, average price per ounce, is taken as $17 divided by $20.67 times the price of an ounce of fine gold.

Prices for fine gold are the Canadian Mint buying prices. Prices for other metals are those of the markets indicated, converted into Canadian funds. The abbreviations are: Mont.=Montreal; N.Y.=New York; Lond.=London; E. St. L. =East St. Louis; and U.S.=United States.

Prior to 1925 the prices for gold and copper are true average prices, but the prices of other metals were taken at the following percentages of the year's average price for the metal: Silver, 95 per cent; lead, 90 per cent; and zinc, 85 per cent.

For coal *see* last paragraph under "Fuel," page A 12.

The bases for the prices listed are discussed in detail on pages A 11 and A 12.

TABLE I.—TOTAL MINERAL PRODUCTION FOR ALL YEARS UP TO AND INCLUDING 1958

	Total Quantity	Total Value	Quantity, 1958	Value, 1958
Gold—placer, crude, oz.	5,205,946	$96,113,030	5,650	$157,871
„ lode, fine, oz.	15,330,565	441,792,116	194,354	6,604,149
Silver, oz.	410,144,046	246,148,046	7,040,416	6,086,299
Copper, lb.	2,929,310,734	479,655,119	12,658,649	2,964,529
Lead, lb.	12,577,660,683	911,051,022	294,573,159	34,627,075
Zinc, lb.	10,259,550,396	816,745,894	432,002,790	43,234,839
Miscellaneous metals[1]	----------	140,475,311	----------	10,575,795
Industrial minerals[2]	----------	88,054,493	----------	11,763,473
Structural materials[3]	----------	268,696,444	----------	19,999,576
Coal[4], tons	141,382,685	546,146,500	796,413	5,937,860
Natural gas, M s.c.f.	72,744,107	4,326,924	64,051,785	3,915,239
Petroleum, crude[5], bbls.	1,002,340	2,071,418	512,359	1,008,376
Totals	----------	$4,041,276,317	----------	$146,875,081

[1] For individual miscellaneous metals, *see* Tables III and VIIIc, pages A 15 and A 28.
[2] For individual industrial minerals, including sulphur, *see* Tables III and VIIIb, pages A 15 and A 30.
[3] For individual structural materials, *see* Tables III and VIIIe, pages A 15 and A 32.
[4] Total quantity is *gross* mine output; it includes material discarded in picking and washing. The quantity shown for 1958 is that sold and used (*see also* Table IXc.)
[5] Includes 582 barrels produced for test purposes in 1955, no value assigned.

TABLE II.—PRODUCTION FOR EACH YEAR FROM 1836 TO 1958, INCLUSIVE

1836–95 (incl.)	$95,355,010	1928	$65,372,583
1896	7,507,956	1929	68,791,020
1897	10,455,268	1930	55,769,578
1898	10,906,861	1931	35,247,837
1899	12,429,707	1932	28,803,214
1900	16,344,751	1933	32,652,542
1901	19,671,572	1934	42,481,319
1902	17,486,550	1935	48,886,303
1903	17,495,954	1936	54,179,442
1904	18,977,359	1937	74,475,902
1905	22,600,525	1938	64,485,551
1906	24,997,646	1939	65,707,398
1907	25,928,660	1940	75,121,424
1908	23,950,573	1941	77,514,446
1909	24,443,025	1942	76,699,878
1910	26,377,066	1943	67,204,417
1911	23,499,072	1944	54,740,844
1912	32,440,800	1945	62,070,548
1913	30,296,398	1946	72,453,745
1914	26,388,825	1947	112,582,204
1915	29,447,508	1948	145,517,874
1916	42,290,462	1949	132,956,254
1917	37,010,392	1950	139,837,689
1918	41,782,474	1951	176,330,205
1919	33,296,313	1952	171,309,429
1920	35,543,084	1953	153,193,544
1921	28,066,641	1954	153,383,860
1922	35,162,843	1955	174,710,606
1923	41,304,320	1956	190,084,302
1924	48,704,604	1957	172,264,617
1925	61,492,242	1958	146,875,081
1926	67,188,842		
1927	60,729,358	Total	$4,041,276,317

NOTE.—For revisions to lead and zinc production *see* footnote 3, Table VI.

TABLE III.—QUANTITY AND VALUE OF MINERAL PRODUCTS FOR YEARS 1949 TO 1958

Description	1949		1950		1951		1952		1953	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Principal Metals		$		$		$		$		$
Gold—placer, crude ..... oz.	17,886	529,524	19,134	598,717	23,691	717,911	17,554	494,756	14,245	403,230
,, lode, fine ..... oz.	288,396	10,382,256	283,983	10,805,553	261,274	9,627,947	251,393	8,615,238	253,553	8,727,294
Silver ..... oz.	7,636,053	5,669,769	9,507,225	7,666,151	8,215,884	7,768,118	8,796,720	7,315,088	8,376,953	7,017,709
Copper ..... lb.	54,856,808	10,956,550	42,212,133	9,889,458	43,249,658	11,980,155	42,005,512	13,054,893	49,021,013	14,869,544
Lead ..... lb.	365,378,899	41,929,866	284,024,522	41,052,905	273,456,604	50,316,015	284,949,396	45,936,692	297,634,712	39,481,244
Zinc ..... lb.	288,188,620	38,176,346	290,344,227	43,769,392	337,511,324	67,164,754	372,871,717	59,189,656	382,300,862	40,810,618
Totals	.....	107,644,311	.....	113,782,176	.....	147,574,900	.....	134,606,323	.....	111,309,639
Miscellaneous Metals										
Antimony ..... lb.	158,288	61,020	643,540	216,229	1,310,836	622,647	2,333,239	1,028,025	1,551,043	570,474
Bismuth ..... lb.	102,913	210,972	162,616	369,138	191,471	451,872	142,246	312,941	71,298	157,569
Cadmium ..... lb.	665,449	1,364,170	650,540	1,535,274	1,164,933	3,122,021	726,172	1,561,270	787,158	1,550,701
Indium ..... oz.	689	1,550	4,952	12,132	582	1,368	404	889	6,752	14,922
Iron ore concentrates ..... tons	5,472	27,579	.....	.....	113,535	790,000	900,481	5,474,924	991,248	6,763,105
Platinum ..... oz.	99	7,468	111	9,239	22	2,085	2	176	.....	.....
Tin ..... lb.	619,117	633,047	796,403	828,259	346,718	495,807	212,113	250,293	1,092,228	581,746
Tungsten (WO_3) ..... lb.	.....	.....	281,160	281,160	.....	.....	1,434,640	4,565,024	2,168,977	5,950,323
Totals	.....	2,305,806	.....	3,251,431	.....	5,485,800	.....	13,193,542	.....	15,588,840
Industrial Minerals										
Asbestos ..... tons	.....	.....	.....	.....	.....	.....	20	23,000	3,102	988,716
Barite ..... tons	1,314	13,145	1,440	17,284	1,248	16,224	848	13,408	3,560	52,845
Diatomite ..... tons	36	963	4	108	8	223	12	240	.....	.....
Flux (quartz, limestone) ..... tons	108,531	213,773	144,325	268,411	144,235	292,100	55,588	141,478	37,358	110,698
Granules (quartz, limestone, granite) ..... tons	5,941	79,661	7,886	104,590	5,727	73,767	1,610	21,026	4,620	59,321
Gypsum and products ..... tons	98,977	616,490	92,882	620,108	124,729	263,072	91,112	235,453	172,665	387,655
Iron oxides ..... tons	2,752	23,301	.....	.....	.....	.....	.....	.....	.....	.....
Mica ..... lb.	578,000	5,675	456,000	5,533	606,000	7,462	314,000	3,001	604,000	11,338
Perlite ..... tons	.....	.....	.....	.....	.....	.....	.....	.....	1,112	11,120
Sodium carbonate ..... tons	47	517	.....	.....	.....	.....	.....	.....	.....	.....
Sulphur ..... tons	160,435	1,546,798	143,343	1,421,806	194,874	1,840,992	182,607	1,745,258	151,954	1,590,055
Totals	.....	2,500,323	.....	2,437,840	.....	2,493,840	.....	2,182,864	.....	3,211,748
Structural Materials										
Brick—common ..... No.	3,220,000	95,075	3,980,500	117,770	1,353,000	41,820	830,815	28,248	1,382,883	51,381
,, face, paving, sewer ..... No.	509,560	24,793	974,380	52,823	3,127,888	153,575	2,566,540	121,254	4,307,894	226,459
,, firebrick, blocks	.....	135,391	.....	282,962	.....	380,742	.....	435,681	.....	426,783
Clays ..... tons	6,500	22,339	6,706	32,264	14,786	60,255	11,483	51,797	5,226	31,990
Structural tile, hollow blocks	.....	145,512	.....	191,016	.....	171,481	.....	60,273	.....	123,469
Drain-tile, sewer-pipe, flue-linings	.....	265,098	.....	428,418	.....	410,206	.....	468,110	.....	627,097
Pottery—glazed or unglazed	.....	5,176	.....	5,860	.....	4,695	.....	6,536	.....	30,012
Other clay products	.....	9,676	.....	11,335	.....	10,393	.....	11,296	.....	19,267
Cement	.....	3,209,425	.....	3,088,296	.....	3,311,439	.....	3,603,273	.....	5,071,260
Lime and limestone ..... tons	179,400	1,295,087	221,454	1,133,776	241,723	1,251,327	321,710	1,552,772	338,005	1,357,958
Rubble, riprap, crushed rock ..... tons	1,112,272	916,841	1,164,049	990,257	972,178	1,145,072	739,504	982,792	770,415	1,122,516
Sand and gravel	.....	3,967,132	.....	3,723,487	.....	3,355,693	.....	3,839,965	.....	4,388,594
Stone ..... tons	2,287	44,345	26,758	188,675	4,837	309,350	122,308	434,964	2,611	78,252
Totals	.....	9,955,890	.....	10,246,939	.....	10,606,048	.....	11,596,961	.....	13,555,038
Fuel										
Coal[1] ..... tons	1,621,268	10,549,924	1,574,006	10,119,303	1,573,572	10,169,617	1,402,347	9,729,739	1,384,138	9,528,279
Provincial totals	.....	132,956,254	.....	139,837,689	.....	176,330,205	.....	171,309,429	.....	153,193,544

[1] The quantity of coal is that sold and used.

TABLE III.—QUANTITY AND VALUE OF MINERAL PRODUCTS FOR YEARS 1949 TO 1958—*Continued*

Description	1954		1955		1956		1957		1958	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Principal Metals		$		$		$		$		$
Gold—placer, crude ..... oz.	8,684	238,967	7,666	217,614	3,865	109,450	2,936	80,990	5,650	157,871
,, lode, fine ..... oz.	258,388	8,803,279	242,477	8,370,306	191,743	6,603,628	222,506	7,465,076	194,354	6,604,149
Silver ..... oz.	9,825,153	8,153,108	7,902,145	6,942,113	8,404,600	7,511,443	8,129,971	7,077,708	7,040,416	6,086,299
Copper ..... lb.	50,150,087	14,599,693	44,328,031	16,932,549	43,360,575	17,251,872	29,318,494	7,631,897	12,658,649	2,964,529
Lead ..... lb.	332,474,456	45,482,505	302,567,640	45,161,245	283,718,073	44,702,619	281,603,346	39,568,086	294,573,159	34,627,075
Zinc ..... lb.	334,124,560	34,805,755	429,198,565	52,048,909	443,853,004	58,934,801	449,448,607	50,225,881	432,002,790	43,234,839
Totals		112,083,307		129,672,736		135,113,813		112,049,638		93,674,762
Miscellaneous Metals										
Antimony ..... lb.	1,302,333	382,104	2,021,721	667,776	2,140,432	768,843	1,360,731	577,344	858,633	284,208
Bismuth ..... lb.	225,351	493,519	160,767	356,903	156,753	346,424	145,634	314,569	154,034	308,068
Cadmium ..... lb.	680,734	1,123,211	1,593,591	2,677,233	1,937,927	3,236,338	1,946,397	3,172,627	1,425,108	2,166,164
Indium ..... oz.	477	1,281	104,774	232,389	363,192	795,390	384,360	693,770	75,434	117,677
Iron ore concentrates ..... tons	535,746	3,733,891	610,930	3,228,756	369,955	2,190,847	357,342	2,200,637	630,271	4,193,442
Mercury ..... lb.	.....	.....	75	250	.....	.....	.....	.....	.....	.....
Nickel ..... lb.	.....	.....	.....	.....	.....	.....	.....	.....	1,408,490	996,507
Platinum ..... oz.	4	408	.....	.....	.....	.....	.....	.....	4	260
Tin ..... lb.	587,528	280,437	391,228	311,613	756,934	637,792	709,102	555,936	795,496	625,260
Tungsten (WO_3) ..... lb.	2,206,443	5,851,558	1,914,000	5,460,967	2,264,775	6,351,376	1,921,483	5,240,479	690,976	1,884,209
Totals		11,866,409		12,935,887		14,327,010		12,755,362		10,575,795
Industrial Minerals										
Asbestos ..... tons	8,599	2,920,751	17,187	4,265,971	20,356	6,620,060	31,714	9,245,800	30,078	8,203,384
Barite ..... tons	5,056	115,337	9,465	238,825	11,436	287,626	20,072	433,200	16,144	341,700
Diatomite ..... tons	.....	.....	14	280	40	800	120	2,400	27	540
Flux (quartz, limestone) ..... tons	39,897	40,804	111,759	208,198	176,311	392,429	137,433	442,204	90,635	311,630[1]
Granules (quartz, limestone, granite) ..... tons	4,541	65,507	6,355	73,858	13,220	173,214	17,295	221,864	22,674	284,330
Gypsum and products ..... tons	175,480	421,734	149,719	383,934	72,973	391,919	66,499	142,751	70,498	211,494
Mica ..... lb.	284,000	5,326	505,300	2,861	200,000	1,100	180,000	1,200	.....	.....
Sulphur ..... tons	219,999	2,308,422	216,520	2,624,171	212,885	2,523,190	226,550	2,872,332	211,300	2,410,395
Totals		5,877,881		7,798,098		10,390,338		13,361,751		11,763,473
Structural Materials										
Brick—common ..... No.	1,289,911	35,550	4,853,940	232,139	2,248,447	75,767	663,828	24,345	427,550	15,125
,, face, paving, sewer ..... No.	5,651,262	316,676	3,901,866	248,913	6,913,682	485,176	4,660,231	345,081	4,871,562	344,133
,, firebrick, blocks ..... No.	.....	372,528	.....	578,578	.....	600,753	.....	658,873	.....	405,485
Clays ..... tons	6,609	36,425	8,033	46,757	7,985	47,101	3,849	29,495	4,105	12,579
Structural tile, hollow blocks ..... tons	.....	122,903	.....	114,460	.....	129,257	.....	200,216	.....	122,877
Drain-tile, sewer-pipe, flue-linings	.....	753,297	.....	801,019	.....	696,385	.....	697,611	.....	639,173
Pottery—glazed or unglazed	.....	31,081	.....	38,035	.....	38,385	.....	47,612	.....	68,387
Other clay products	.....	32,697	.....	55,514	.....	69,659	.....	38,868	.....	32,416
Cement	.....	4,935,298	.....	5,474,875	.....	6,339,071	.....	7,078,108	.....	6,755,619
Lime and limestone ..... tons	317,976	1,555,002	318,152	1,711,348	396,012	1,220,792	334,303	1,494,578	269,747	997,819
Rubble, riprap, crushed rock ..... tons	920,707	1,253,856	890,613	962,272	2,028,143	2,210,315	2,364,301	4,272,768	1,866,950	2,098,952
Sand and gravel ..... tons	.....	4,850,469	.....	4,886,890	.....	8,535,348	.....	10,503,274	.....	8,442,676
Stone ..... tons	3,055	99,392	26,079	148,454	35,266	139,150	2,403	236,110	2,141	64,335
Totals		14,395,174		15,299,254		20,587,159		25,626,939		19,999,576
Fuels										
Coal[2] ..... tons	1,308,284	9,154,544	1,332,874	8,986,501	1,417,209	9,346,518	1,085,657	7,340,339	796,413	5,937,860
Natural gas ..... M s.c.f.	60,883	6,545	168,651	18,130	187,846	20,143	8,274,942	366,867	64,051,785	3,915,239
Petroleum, crude[3] ..... bbls.	.....	.....	.....	.....	148,454	299,321	340,945	763,721	512,359	1,008,376
Totals		9,161,089		9,004,631		9,665,982		8,470,927		10,861,475
Provincial totals		153,383,860		174,710,606		190,084,302		172,264,617		146,875,081

[1] Includes 32 tons of fluorspar mined in 1958.

[2] The quantity of coal is that sold and used.

[3] For test purposes, 582 barrels were produced in 1955, no commercial value assigned.

TABLE IV.—MINERAL PRODUCTION VALUE, 1895–1958

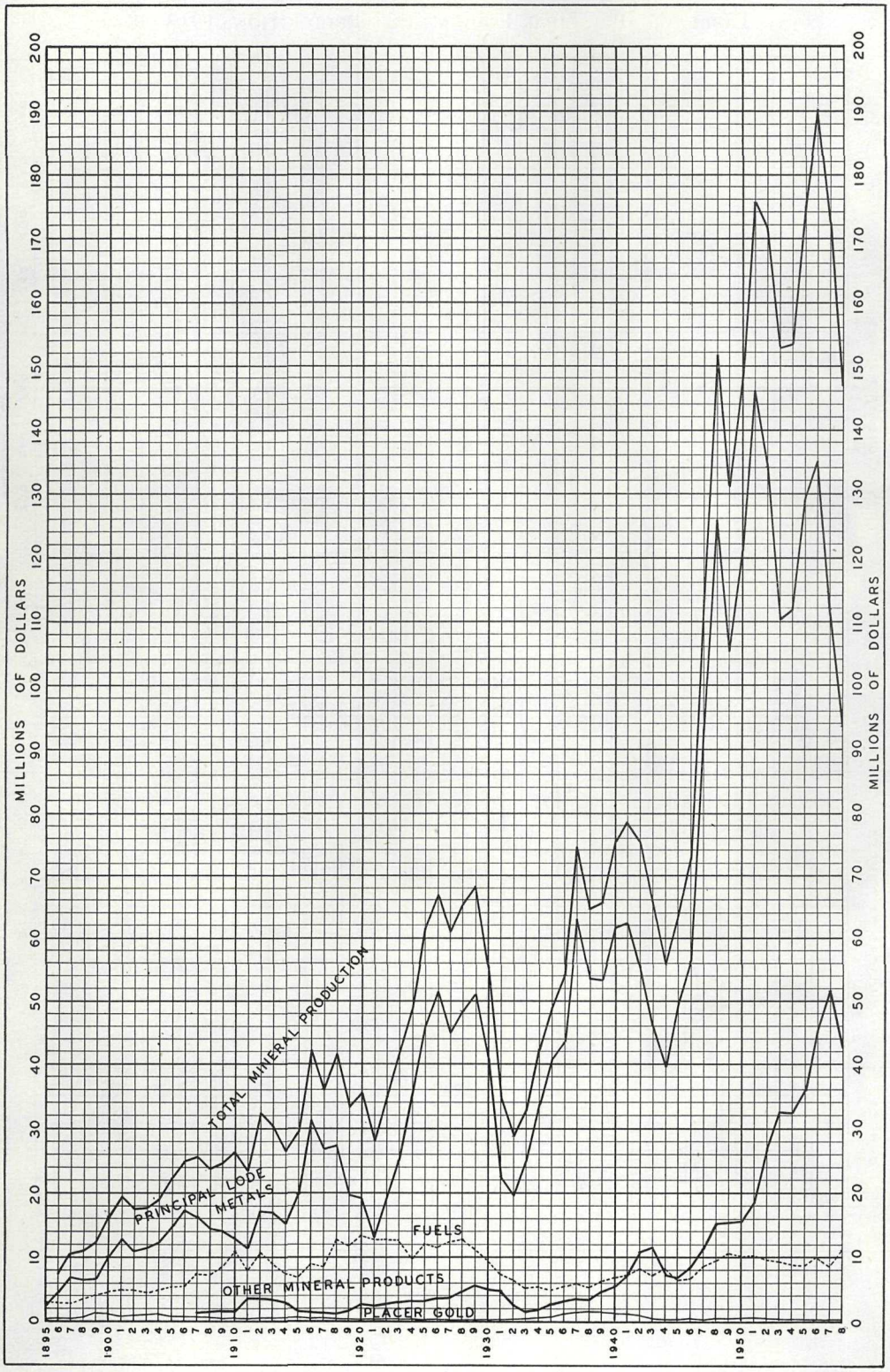

TABLE V.—PRINCIPAL LODE-METALS PRODUCTION, 1913–58

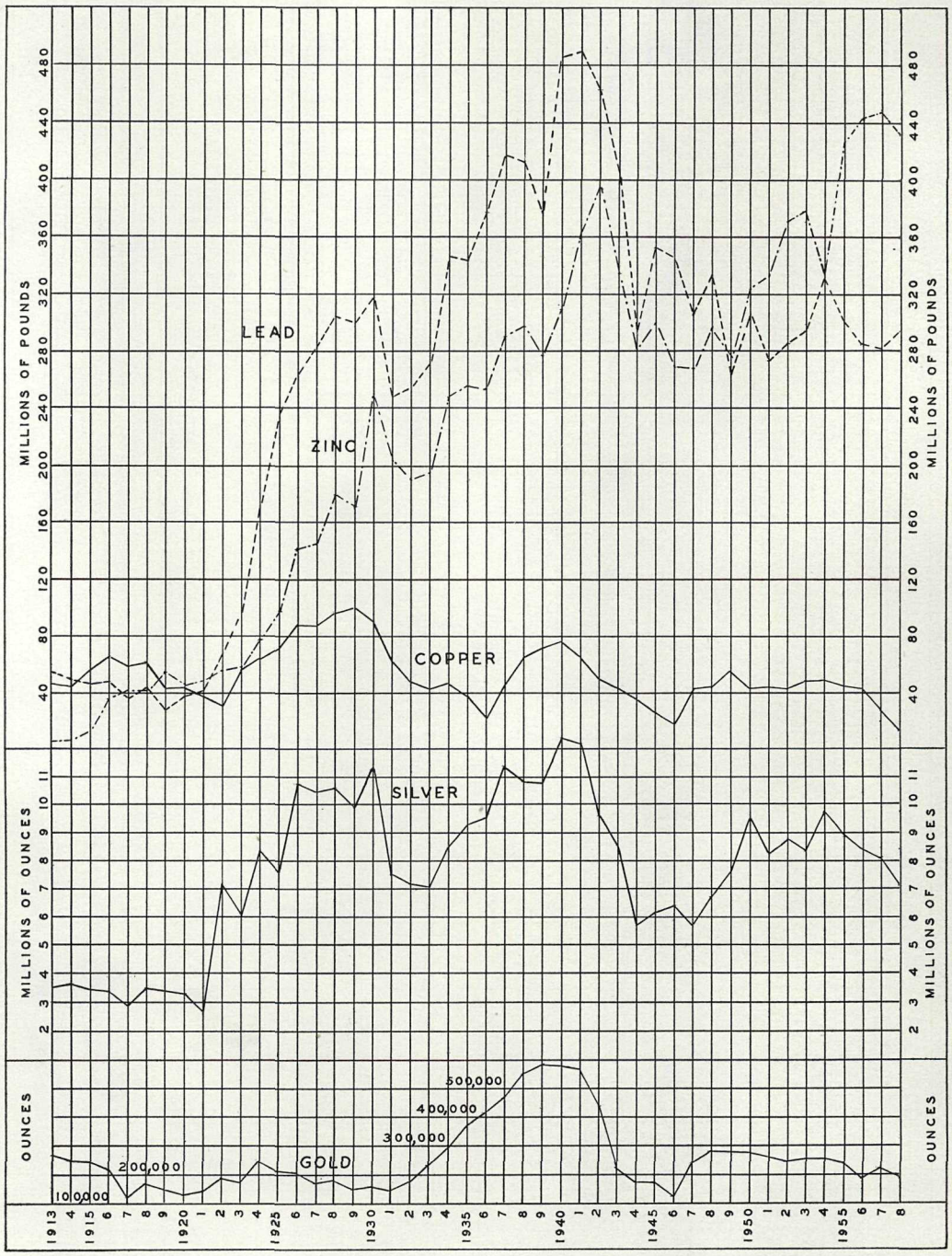

TABLE VI.—PRODUCTION OF PRINCIPAL METALS, 1858–1958

Year	Placer Gold		Gold		Silver		Copper		Lead[3]		Zinc[3 4]		Total Value
	Quantity[1]	Value	Quantity[2]	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	Oz.	$	Oz.	$	Oz.	$	Lb.	$	Lb.	$	Lb.	$	$
1858–86, incl.	3,105,775	52,798,364	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52,798,364
1887	40,810	693,709	.....	.....	17,690	17,331	.....	.....	204,800	9,216	.....	.....	720,256
1888	36,280	616,731	.....	.....	79,780	75,000	.....	.....	674,500	29,813	.....	.....	721,544
1889	34,640	588,923	.....	.....	53,192	47,873	.....	.....	165,100	6,498	.....	.....	643,294
1890	29,080	494,436	.....	.....	70,427	73,948	.....	.....	.....	.....	.....	.....	568,384
1891	25,280	429,811	.....	.....	4,500	4,000	.....	.....	.....	.....	.....	.....	433,811
1892	23,500	399,526	.....	.....	77,160	66,935	.....	.....	808,420	33,064	.....	.....	499,525
1893	20,950	356,131	1,170	23,404	227,000	195,000	.....	.....	2,135,023	78,996	.....	.....	653,531
1894	23,850	405,516	6,252	125,014	746,379	470,219	324,680	16,234	5,662,523	169,875	.....	.....	1,186,858
1895	28,330	481,683	39,270	785,400	1,496,522	977,229	952,840	47,642	16,475,464	532,255	.....	.....	2,824,209
1896	32,000	544,026	62,259	1,244,180	3,135,343	2,100,689	3,818,556	190,926	24,199,977	721,384	.....	.....	4,801,205
1897	30,210	513,520	106,141	2,122,820	5,472,971	3,272,836	5,325,180	266,258	38,841,135	1,390,517	.....	.....	7,565,951
1898	37,840	643,346	110,061	2,201,217	4,292,401	2,375,841	7,271,678	874,781	31,693,559	1,077,581	.....	.....	7,172,766
1899	79,110	1,344,900	138,315	2,857,573	2,939,413	1,663,708	7,722,591	1,351,453	21,862,436	878,870	.....	.....	8,096,504
1900	75,220	1,278,724	167,153	3,453,381	3,958,175	2,309,200	9,997,080	1,615,289	63,358,621	2,691,887	.....	.....	11,348,481
1901	57,060	970,100	210,384	4,348,605	4,396,447	2,462,008	27,603,746	4,446,963	51,582,906	2,010,260	.....	.....	14,237,936
1902	63,130	1,073,140	236,491	4,888,269	3,917,917	1,941,328	29,636,057	3,446,673	22,536,381	824,832	.....	.....	12,174,242
1903	62,380	1,060,420	232,831	4,812,616	2,996,204	1,521,472	34,359,921	4,547,535	18,089,283	689,744	.....	.....	12,631,787
1904	65,610	1,115,300	222,042	4,589,608	3,222,481	1,719,516	35,710,128	4,578,037	36,646,244	1,421,874	.....	.....	13,424,335
1905	57,020	969,300	238,660	4,933,102	3,439,417	1,971,818	37,692,251	5,876,222	56,580,703	2,399,022	.....	139,200	16,288,664
1906	55,790	948,400	224,027	4,630,639	2,990,262	1,897,320	42,990,488	8,288,565	52,408,217	2,667,578	.....	17,100	18,449,602
1907	48,710	828,000	196,179	4,055,020	2,745,448	1,703,825	40,832,720	8,166,544	47,738,703	2,291,458	.....	46,100	17,090,947
1908	38,060	647,000	255,582	5,282,880	2,631,389	1,321,483	47,274,614	6,240,249	43,195,733	1,632,799	.....	99,296	15,223,707
1909	28,060	477,000	238,224	4,924,090	2,532,742	1,239,270	45,597,245	5,918,522	44,396,346	1,709,259	8,500,000	400,000	14,668,141
1910	31,760	540,000	267,701	5,533,380	2,450,241	1,245,016	38,243,934	4,871,512	34,658,746	1,386,350	4,184,192	192,473	13,768,731
1911	25,060	426,000	228,617	4,725,513	1,892,364	958,293	36,927,656	4,571,644	26,872,397	1,069,521	2,634,544	129,092	11,880,063
1912	32,680	555,500	257,496	5,322,442	3,132,108	1,810,045	51,456,537	8,408,513	44,871,454	1,805,627	5,358,280	316,139	18,218,266
1913	30,000	510,000	272,254	5,627,490	3,465,856	1,968,606	46,460,305	7,094,489	55,364,677	2,175,832	6,758,768	324,421	17,700,838
1914	33,240	565,000	247,170	5,109,004	3,602,180	1,876,736	45,009,699	6,121,319	50,625,048	1,771,877	7,866,467	346,125	15,790,061
1915	45,290	770,000	250,021	5,167,934	3,366,506	1,588,991	56,918,405	9,835,500	46,503,590	1,939,200	12,982,440	1,460,524	20,762,149
1916	34,150	580,500	221,932	4,587,334	3,301,923	2,059,739	65,379,364	17,784,494	48,727,516	3,007,462	37,168,980	4,043,985	32,063,514
1917	29,180	496,000	114,523	2,367,190	2,929,216	2,265,749	59,007,565	16,038,256	37,307,465	2,951,020	41,848,513	3,166,259	27,284,474
1918	18,820	320,000	164,674	3,403,812	3,498,172	3,215,870	61,483,754	15,143,449	43,899,661	2,928,107	41,772,916	2,899,040	27,910,278
1919	16,850	286,500	152,426	3,150,645	3,403,119	3,592,673	42,459,339	7,939,896	29,475,968	1,526,855	56,737,651	3,540,429	20,036,998
1920	13,040	221,600	120,048	2,481,392	3,377,849	3,235,980	44,887,676	7,832,899	39,331,218	2,816,115	47,208,268	3,077,979	19,665,965
1921	13,720	233,200	135,663	2,804,154	2,673,389	1,591,201	39,036,993	4,879,624	41,402,288	1,693,354	49,419,372	1,952,065	13,153,598
1922	21,690	368,800	197,856	4,089,684	7,101,311	4,554,781	32,359,896	4,329,754	67,447,985	3,480,316	57,146,548	2,777,322	19,600,657
1923	24,710	420,000	179,245	3,704,994	6,032,986	3,718,129	57,720,290	8,323,266	96,663,152	6,321,770	58,343,462	3,278,903	25,767,062

TABLE VI.—PRODUCTION OF PRINCIPAL METALS, 1858–1958—*Continued*

Year	Placer Gold		Gold		Silver		Copper		Lead[3]		Zinc[3] [4]		Total Value
	Quantity[1]	Value	Quantity[2]	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	Oz.	$	Oz.	$	Oz.	$	Lb.	$	Lb.	$	Lb.	$	$
1924	24,750	420,750	247,716	5,120,535	8,341,768	5,292,184	64,845,393	8,442,870	170,384,481	12,415,917	79,130,970	4,266,741	35,958,997
1925	16,476	280,092	209,719	4,335,269	7,654,844	5,286,818	72,306,432	10,153,269	237,899,199	18,670,329	98,257,099	7,754,450	46,480,227
1926	20,912	355,503	201,427	4,163,859	10,748,556	6,675,606	89,339,768	12,324,421	263,023,937	17,757,535	142,876,947	10,586,610	51,863,534
1927	9,191	156,247	178,001	3,679,601	10,470,185	5,902,043	89,202,871	11,525,011	282,996,423	14,874,292	145,225,443	8,996,135	45,133,329
1928	8,284	143,208	188,087	3,888,097	10,627,167	6,182,461	97,908,316	14,265,242	305,140,792	13,961,412	181,763,147	9,984,613	48,425,033
1929	6,983	118,711	145,387	3,005,411	9,960,172	5,278,194	102,793,669	18,612,850	307,999,153	15,555,189	172,096,841	9,268,792	51,839,147
1930	8,955	152,235	160,853	3,325,126	11,328,263	4,322,185	92,362,240	11,990,466	321,803,725	12,638,198	250,479,310	9,017,005	41,445,215
1931	17,176	291,992	146,133	3,020,837	7,550,331	2,254,979	64,134,746	5,365,690	261,902,236	7,097,812	202,071,702	5,160,911	23,192,221
1932	20,400	395,542	181,651	4,263,349	7,150,655	2,264,729	50,608,036	3,228,892	252,007,574	5,326,432	192,120,091	4,621,641	20,100,585
1933	23,928	562,787	223,589	6,394,645	7,021,754	2,656,526	43,149,460	3,216,701	271,689,217	6,497,719	195,963,751	6,291,416	25,619,794
1934	25,181	714,431	297,216	10,253,952	8,613,977	4,088,280	49,651,733	3,683,662	347,366,967	8,461,859	249,152,403	7,584,199	34,786,383
1935	30,929	895,058	365,343	12,856,419	9,269,944	6,005,996	39,428,208	3,073,428	344,268,444	10,785,930	256,239,446	7,940,860	41,557,691
1936	43,389	1,249,940	404,578	14,172,367	9,547,124	4,308,330	21,671,711	2,053,828	377,971,618	14,790,029	254,581,393	8,439,373	45,013,867
1937	54,153	1,558,245	460,781	16,122,727	11,308,685	5,075,451	46,057,584	6,023,411	419,118,371	21,416,949	291,192,278	14,274,245	64,471,028
1938	57,759	1,671,015	557,522	19,613,624	10,861,578	4,722,288	65,769,906	6,558,575	412,979,182	13,810,024	298,497,295	9,172,822	55,548,348
1939	49,746	1,478,492	587,336	21,226,957	10,821,393	4,381,365	73,254,679	7,392,862	378,743,763	12,002,390	278,409,102	8,544,375	55,026,441
1940	39,067	1,236,928	583,416	22,461,516	12,327,944	4,715,315	77,980,223	7,865,085	466,849,112	15,695,467	312,020,671	10,643,025	62,617,336
1941	43,775	1,385,962	571,026	21,984,501	12,175,700	4,658,545	66,435,583	6,700,693	456,840,454	15,358,976	367,869,579	12,548,031	62,636,708
1942	32,904	1,041,772	444,518	17,113,943	9,677,881	4,080,775	50,097,716	5,052,856	507,199,704	17,052,054	387,236,469	13,208,636	57,550,036
1943	14,600	462,270	224,403	8,639,516	8,526,310	3,858,496	42,307,510	4,971,132	439,155,635	16,485,902	336,150,455	13,446,018	47,863,334
1944	11,433	361,977	186,632	7,185,332	5,705,334	2,453,293	36,300,589	4,356,070	292,922,888	13,181,530	278,063,373	11,956,725	39,494,927
1945	12,589	398,591	175,373	6,751,860	6,157,307	2,893,934	25,852,366	3,244,472	336,976,468	16,848,823	294,791,635	18,984,581	49,122,261
1946	15,729	475,361	117,612	4,322,241	6,365,761	5,324,959	17,500,538	2,240,070	345,862,680	23,345,731	274,269,956	21,420,484	57,128,846
1947	6,969	200,585	243,282	8,514,870	5,707,691	4,109,538	41,783,921	8,519,741	313,733,089	42,887,313	253,006,168	28,412,593	92,644,640
1948	20,332	585,200	286,230	10,018,050	6,718,122	5,038,592	43,025,388	9,616,174	320,037,525	57,734,770	270,310,195	37,654,210	120,646,996
1949	17,886	529,524	288,396	10,382,256	7,636,053	5,669,769	54,856,808	10,956,550	265,378,899	41,929,866	288,188,620	38,176,346	107,644,311
1950	19,134	598,717	283,983	10,805,553	9,507,225	7,666,151	42,212,133	9,889,458	284,024,522	41,052,905	290,344,227	43,769,392	113,782,176
1951	23,691	717,911	261,274	9,627,947	8,215,884	7,768,118	43,249,658	11,980,155	273,456,604	50,316,015	337,511,324	67,164,754	147,574,900
1952	17,554	494,756	251,393	8,615,238	8,796,720	7,315,088	42,005,512	13,054,893	284,949,396	45,936,692	372,871,717	59,189,656	134,606,323
1953	14,245	403,230	253,553	8,727,294	8,376,953	7,017,709	49,021,013	14,869,544	297,634,712	39,481,244	382,300,862	40,810,618	111,309,639
1954	8,684	238,967	258,388	8,803,279	9,825,153	8,153,108	50,150,087	14,599,693	332,474,456	45,482,505	334,124,560	34,805,755	112,083,307
1955	7,666	217,614	242,477	8,370,306	7,902,145	6,942,113	44,238,031	16,932,549	302,567,640	45,161,245	429,198,565	52,048,909	129,672,736
1956	3,865	109,450	191,743	6,603,628	8,404,600	7,511,443	43,360,575	17,251,872	283,718,073	44,702,619	443,853,004	58,934,801	135,113,813
1957	2,936	80,990	222,506	7,465,076	8,129,971	7,077,708	29,318,494	7,631,897	281,603,346	39,568,086	449,448,607	50,225,881	112,049,638
1958	5,650	157,871	194,354	6,604,149	7,040,416	6,086,299	12,658,649	2,964,529	294,573,159	34,627,075	432,002,790	43,234,839	93,674,762
Totals	5,205,946	96,113,030	15,330,565	441,792,116	410,144,046	246,148,046	2,929,310,734	479,655,119	12,577,660,683	911,051,022	10,259,550,396	816,745,894	2,991,505,227

[1] Ounces of crude gold.

[2] Ounces of fine gold.

[3] Revisions have been made in 1958 to some yearly totals for lead and zinc to bring them into agreement with the best records of recoveries of lead and zinc from slags treated at the Trail smelter.

[4] For 1905–08, inclusive, records show shipments of a combined total of 18,847 tons of zinc ore and zinc concentrates of unstated zinc content.

TABLE VIIa.—PRODUCTION, 1957 AND 1958, BY MINING DIVISIONS—SUMMARY

Division	Year	Placer Gold		Principal Lode Metals	Miscellaneous Metals	Industrial Minerals	Structural Materials	Fuels						Division Totals
								Coal		Petroleum		Natural Gas		
		Quantity[1]	Value					Quantity	Value	Quantity	Value	Quantity	Value	
		Oz.	$	$	$	$	$	Tons	$	Bbls.	$	M S.C.F.	$	$
Alberni	1957	.....	.....	410	.....	.....	171,477	.....	.....	.....	.....	.....	.....	171,887
	1958	**3**	**84**	**1,144**	.....	.....	**54,594**	.....	.....	.....	.....	.....	.....	**55,822**
Atlin	1957	1,300	35,861	4,832,486	104,160	.....	23,034	.....	.....	.....	.....	.....	.....	4,995,541
	1958	**965**	**26,964**	.....	.....	.....	**26,102**	.....	.....	.....	.....	.....	.....	**53,066**
Cariboo	1957	1,360	37,516	1,304,316	.....	3,600	396,333	.....	.....	.....	.....	.....	.....	1,741,765
	1958	**4,189**	**117,048**	**950,953**	.....	**540**	**536,095**	.....	.....	.....	.....	.....	.....	**1,604,636**
Clinton	1957	21	579	.....	.....	.....	14,500	.....	.....	.....	.....	.....	.....	15,079
	1958	**9**	**251**	.....	.....	.....	**15,483**	.....	.....	.....	.....	.....	.....	**15,734**
Fort Steele	1957	2	55	48,577,717	555,936	842,580	594,873	895,118	5,310,835	.....	.....	.....	.....	55,881,996
	1958	**20**	**559**	**48,889,971**	**625,450**	**663,861**	**153,770**	**633,557**	**4,241,619**	.....	.....	.....	.....	**54,575,230**
Golden	1957	.....	.....	2,478,986	19,930	575,951	153,515	.....	.....	.....	.....	.....	.....	3,228,382
	1958	.....	.....	**2,431,487**	**82,814**	**553,194**	**133,262**	.....	.....	.....	.....	.....	.....	**3,200,757**
Greenwood	1957	.....	.....	1,115,868	5,307	23,126	12,100	.....	.....	.....	.....	.....	.....	1,156,401
	1958	**5**	**140**	**936,360**	**6,553**	.....	**12,400**	.....	.....	.....	.....	.....	.....	**955,453**
Kamloops	1957	7	193	.....	.....	.....	1,636,953	.....	.....	.....	.....	.....	.....	1,637,146
	1958	**7**	**195**	.....	.....	.....	**1,205,153**	.....	.....	.....	.....	.....	.....	**1,205,348**
Liard	1957	6	165	.....	.....	9,245,800	241,980	2,758	28,421	340,945	763,721	8,274,942	366,867	10,646,954
	1958	.....	.....	.....	.....	**8,203,384**	**206,174**	**3,194**	**28,738**	**512,359**	**1,008,376**	**64,051,785**	**3,915,239**	**13,361,911**
Lillooet	1957	58	1,600	4,900,877	.....	.....	59,920	.....	.....	.....	.....	.....	.....	4,962,397
	1958	**72**	**2,012**	**5,102,133**	.....	.....	**155,898**	.....	.....	.....	.....	.....	.....	**5,260,043**
Nanaimo	1957	.....	.....	.....	2,200,637	20,337	1,786,533	164,013	1,849,306	.....	.....	.....	.....	5,856,813
	1958[2]	.....	.....	**416,810**	**4,193,442**	**23,806**	**995,759**	**154,296**	**1,615,490**	.....	.....	.....	.....	**7,245,307**
Nelson	1957	65	1,793	12,455,726	6,015,573	.....	95,760	.....	.....	.....	.....	.....	.....	18,568,852
	1958	**2**	**56**	**11,598,949**	**2,609,068**	.....	**83,535**	.....	.....	.....	.....	.....	.....	**14,291,608**
New Westminster	1957	52	1,434	.....	.....	129,419	6,933,381	.....	.....	.....	.....	.....	.....	7,064,234
	1958	**14**	**391**	**160,916**	**996,507**	**143,945**	**4,175,832**	.....	.....	.....	.....	.....	.....	**5,477,591**
Nicola	1957	.....	.....	.....	.....	.....	20,523	1,081	11,615	.....	.....	.....	.....	32,138
	1958	**4**	**112**	.....	.....	.....	**62,670**	**543**	**5,919**	.....	.....	.....	.....	**68,589**
Omineca	1957	37	1,021	1,543,272	36,929	.....	648,068	4,991	47,414	.....	.....	.....	.....	2,276,704
	1958	**71**	**1,984**	**327,290**	**17,839**	.....	**537,292**	**4,677**	**44,972**	.....	.....	.....	.....	**929,377**
Osoyoos	1957	.....	.....	79,573	.....	479,866	11,370	.....	.....	.....	.....	.....	.....	570,809
	1958	.....	.....	**301,666**	.....	**428,209**	**603**	.....	.....	.....	.....	.....	.....	**730,478**
Revelstoke	1957	1	28	1,351,326	33,555	.....	54,185	.....	.....	.....	.....	.....	.....	1,439,094
	1958	.....	.....	**546,082**	.....	.....	**78,757**	.....	.....	.....	.....	.....	.....	**624,839**
Similkameen	1957	27	745	1,932,983	.....	.....	118,250	17,696	92,748	.....	.....	.....	.....	2,144,726
	1958	**30**	**838**	**16,845**	**260**	.....	**82,950**	**146**	**1,122**	.....	.....	.....	.....	**102,015**
Skeena	1957	.....	.....	1,669,039	4,742	.....	1,390,868	.....	.....	.....	.....	.....	.....	3,064,649
	1958	.....	.....	**1,311,276**	.....	.....	**278,797**	.....	.....	.....	.....	.....	.....	**1,590,073**
Slocan	1957	.....	.....	9,997,915	219,198	.....	58,574	.....	.....	.....	.....	.....	.....	10,275,687
	1958	**2**	**56**	**8,055,865**	**183,395**	.....	**60,967**	.....	.....	.....	.....	.....	.....	**8,300,283**
Trail Creek	1957	.....	.....	97,745	.....	.....	132,808	.....	.....	.....	.....	.....	.....	230,553
	1958	.....	.....	**22,662**	.....	.....	**127,461**	.....	.....	.....	.....	.....	.....	**150,123**
Vancouver	1957	.....	.....	6,386,323	48,051	353,352	2,782,322	.....	.....	.....	.....	.....	.....	9,570,048
	1958	.....	.....	**1,355,525**	**19,783**	**75,501**	**4,614,786**	.....	.....	.....	.....	.....	.....	**6,065,595**
Vernon	1957	.....	.....	.....	.....	.....	192,406	.....	.....	.....	.....	.....	.....	192,406
	1958	**257**	**7,181**	.....	.....	.....	**224,249**	.....	.....	.....	.....	.....	.....	**231,430**
Victoria	1957	.....	.....	252,784	.....	.....	8,097,206	.....	.....	.....	.....	.....	.....	8,349,990
	1958	.....	.....	**1,023,801**	.....	.....	**6,176,987**	.....	.....	.....	.....	.....	.....	**7,200,788**
Not assigned	1957	.....	.....	12,991,302	3,511,344	1,687,720	.....	.....	.....	.....	.....	.....	.....	18,190,366
	1958	.....	.....	**10,067,156**	**1,840,684**	**1,671,033**	.....	.....	.....	.....	.....	.....	.....	**13,578,873**
Totals	1957	2,936	80,990	111,968,648	12,755,362	13,361,751	25,626,939	1,085,657	7,340,339	340,945	763,721	8,274,942	366,867	172,264,617
	1958	**5,650**	**157,871**	**93,516,891**	**10,575,795**	**11,763,473**	**19,999,576**	**796,413**	**5,937,860**	**512,359**	**1,008,376**	**64,051,785**	**3,915,239**	**146,875,081**

[1] Crude gold.

[2] Nanaimo 1958 figures for gold, silver, copper, and total value include 1957 production as follows: Gold, 261 oz.; silver, 9,011 oz.; copper, 640,555 lb.; total value, $141,133.

TABLE VIIB.—PRODUCTION, 1957 AND 1958, BY MINING DIVISIONS—PRINCIPAL LODE METALS

Division	Year	Lode Gold		Silver		Copper		Lead		Zinc	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		Oz.	$	Oz.	$	Lb.	$	Lb.	$	Lb.	$
Alberni	1957	12	403	8	7	.....	.....	.....	.....	.....	.....
	1958	**33**	**1,121**	**27**	**23**	.....	.....	.....	.....	.....	.....
Atlin	1957	15,426	517,542	584,969	509,257	3,870,199	1,007,451	4,857,885	682,581	18,932,040	2,115,655
	1958	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cariboo	1957	38,759	1,300,364	4,540	3,952	.....	.....	.....	.....	.....	.....
	1958	**27,892**	**947,770**	**3,682**	**3,183**	.....	.....	.....	.....	.....	.....
Clinton	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Steele	1957	279	9,360	2,491,430	2,168,964	.....	.....	164,060,122	23,052,088	208,924,430	23,347,305
	1958	**314**	**10,670**	**3,041,368**	**2,629,202**	.....	.....	**195,172,210**	**22,942,493**	**232,889,745**	**23,307,606**
Golden	1957	5	168	106,383	92,614	72,354	18,834	6,909,862	970,905	12,496,334	1,396,465
	1958	**60**	**2,039**	**138,194**	**119,466**	**151,688**	**35,524**	**6,134,534**	**721,115**	**15,521,013**	**1,553,343**
Greenwood	1957	2,207	74,045	711,983	619,831	1,140,562	296,900	468,703	65,857	530,066	59,235
	1958	**496**	**16,854**	**884,971**	**765,040**	.....	.....	**692,605**	**81,416**	**729,917**	**73,050**
Kamloops	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liard	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lillooet	1957	145,289	4,874,446	30,360	26,431	.....	.....	.....	.....	.....	.....
	1958	**149,347**	**5,074,811**	**31,596**	**27,314**	.....	.....	**50**	**6**	**15**	**2**
Nanaimo	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958[2]	**1,564**	**53,145**	**19,523**	**16,877**	**1,480,797**	**348,788**	.....	.....	.....	.....
Nelson	1957	118	3,959	127,667	111,143	32,909	8,567	24,488,582	3,440,891	79,563,010	8,891,166
	1958	**105**	**3,568**	**151,680**	**131,124**	.....	.....	**31,368,216**	**3,687,334**	**77,707,063**	**7,776,923**
New Westminster	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958	**33**	**1,121**	**504**	**436**	**680,470**	**159,359**	.....	.....	.....	.....
Nicola	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Omineca	1957	1,131	37,945	795,172	692,253	44,868	11,680	3,767,228	529,333	2,434,551	272,061
	1958	**273**	**9,277**	**178,855**	**154,617**	**17,605**	**4,123**	**534,394**	**62,818**	**963,780**	**96,455**
Osoyoos	1957	2,367	79,413	184	160	.....	.....	.....	.....	.....	.....
	1958	**8,762**	**297,733**	**4,370**	**3,778**	.....	.....	**718**	**84**	**714**	**71**
Revelstoke	1957	2,210	74,145	275,617	239,944	43,699	11,375	3,909,848	549,373	4,263,885	476,489
	1958	**1,136**	**38,601**	**141,017**	**121,906**	.....	.....	**1,813,785**	**213,210**	**1,722,268**	**172,365**
Similkameen	1957	2,616	87,767	35,524	30,926	6,969,729	1,814,290	.....	.....	.....	.....
	1958	**441**	**14,985**	**146**	**126**	**7,403**	**1,734**	.....	.....	.....	.....
Skeena	1957	357	11,977	1,650,598	1,436,961	.....	.....	1,499,780	210,734	83,819	9,367
	1958	**250**	**8,495**	**1,310,282**	**1,132,713**	.....	.....	**1,439,596**	**169,225**	**8,423**	**843**
Slocan	1957	443	14,863	1,097,841	955,747	.....	.....	37,145,715	5,219,344	34,075,711	3,807,961
	1958	**241**	**8,189**	**922,308**	**797,317**	.....	.....	**36,058,520**	**4,238,679**	**30,092,729**	**3,011,680**
Trail Creek	1957	1,089	36,536	1,389	1,209	230,223	59,929	369	52	170	19
	1958	**649**	**22,053**	**225**	**194**	.....	.....	**2,809**	**330**	**848**	**85**
Vancouver	1957	10,005	335,668	94,614	82,368	14,448,884	3,761,189	2,005,673	281,817	17,228,467	1,925,281
	1958	**2,585**	**87,838**	**18,406**	**15,912**	**4,016,258**	**940,567**	**85,842**	**10,091**	**3,008,766**	**301,117**
Vernon	1957	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1958	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Victoria	1957	.....	.....	4,532	3,945	955,933	248,839	.....	.....	.....	.....
	1958	.....	.....	**23,328**	**20,167**	**4,285,555**	**1,003,634**	.....	.....	.....	.....
Not assigned[1]	1957	193	6,475	117,160	101,996	1,509,134	392,843	32,489,579	4,565,111	70,916,124	7,924,877
	1958	**173**	**5,879**	**169,934**	**146,904**	**2,018,873**	**472,800**	**21,269,880**	**2,500,274**	**69,357,509**	**6,941,299**
Totals	1957	222,506	7,465,076	8,129,971	7,077,708	29,318,494	7,631,897	281,603,346	39,568,086	449,448,607	50,225,881
	1958	**194,354**	**6,604,149**	**7,040,416**	**6,086,299**	**12,658,649**	**2,964,529**	**294,573,159**	**34,627,075**	**432,002,790**	**43,234,839**

[1] Gold, silver, copper, and some lead "not assigned" were recovered at the Tacoma smelter from dross shipped from the Trail smelter. The zinc and most of the lead were recovered at the Trail smelter by fuming current and reclaimed slag. [2] *See* footnote 2 of Table VIIA.

TABLE VIIc.—PRODUCTION, 1957 AND 1958, BY MINING DIVISIONS—MISCELLANEOUS METALS

Division	Year	Antimony[1]		Bismuth		Cadmium[2]		Indium		Iron Ore		Nickel		Tin		Tungsten (WO_3)		Division Totals
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
		Lb.	$	Lb.	$	Lb.	$	Oz.	$	Tons	$	Lb.	$	Lb.	$	Lb.	$	$
Atlin	1957					63,902	104,160											104,160
	1958																	
Fort Steele	1957													709,102	555,936			555,936
	1958					**125**	**190**							**795,496**	**625,260**			**625,450**
Golden	1957					12,227	19,930											19,930
	1958					**54,483**	**82,814**											**82,814**
Greenwood	1957					3,256	5,307											5,307
	1958					**4,311**	**6,553**											**6,553**
Lillooet	1957																	
	1958																	
Nanaimo	1957									357,342	2,200,637							2,200,637
	1958									**630,271**	**4,193,442**							**4,193,442**
Nelson	1957					469,116	783,424									1,921,483	5,240,479	6,015,573
	1958					**476,881**	**724,859**									**690,976**	**1,884,209**	**2,609,068**
New Westminster	1957																	
	1958											**1,408,490**	**996,507**					**996,507**
Omineca	1957					22,656	36,929											36,929
	1958					**11,736**	**17,839**											**17,839**
Revelstoke	1957					20,586	33,555											33,555
	1958																	
Similkameen	1957																	
	1958																	**[4]260**
Skeena	1957					2,909	4,742											4,742
	1958																	
Slocan	1957					134,477	219,198											219,198
	1958					**120,655**	**183,395**											**183,395**
Vancouver	1957					29,479	48,051											48,051
	1958					**13,015**	**19,783**											**19,783**
Not assigned [1 2 3]	1957	1,360,731	577,344	145,634	314,569	1,181,387	1,925,661	384,360	693,770									3,511,344
	1958	**858,633**	**284,208**	**154,034**	**308,068**	**743,902**	**1,130,731**	**75,434**	**117,677**									**1,840,684**
Totals	1957	1,360,731	577,344	145,634	314,569	1,946,397	3,172,627	384,360	693,770	357,342	2,200,637			709,102	555,936	1,921,483	5,240,479	12,755,362
	1958	**858,633**	**284,208**	**154,034**	**308,068**	**1,425,108**	**2,166,164**	**75,434**	**117,677**	**630,271**	**4,193,442**	**1,408,490**	**996,507**	**795,496**	**625,260**	**690,976**	**1,884,209**	**10,575,795**

[1] Antimony assigned to individual mining divisions is the reported content of concentrates exported to foreign smelters. Antimony "not assigned" is the antimony content of antimonial lead or of other antimony products recovered at the Trail smelter.

[2] Cadmium assigned to individual mining divisions is the reported content of customs shipments to the Trail smelter and to foreign smelters. Cadmium "not assigned" is the remainder of the reported estimated recovery at the Trail smelter from British Columbia concentrates.

[3] Bismuth and indium recovered at the Trail smelter are not assigned to mining divisions and may include some metal from sources outside British Columbia.

[4] Includes 4 ounces of platinum valued at $260.

TABLE VIId.—PRODUCTION, 1957 AND 1958, BY MINING DIVISIONS—INDUSTRIAL MINERALS

Division	Year	Asbestos		Barite		Diatomite		Fluxes (Limestone and Quartz)		Granules (Quartz, Limestone, and Granite)		Gypsum and Products		Mica		Sulphur		Division Totals
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
		Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Lb.	$	Tons	$	$
Cariboo	1957					120	2,400							180,000[1]	1,200[1]			3,600
	1958					**27**	**540**											**540**
Fort Steele	1957															36,401	842,580	842,580
	1958															**38,845**	**663,861**	**663,861**
Golden	1957			20,072	433,200							66,499	142,751					575,951
	1958			**16,144**	**341,700**							**70,498**	**211,494**					**553,194**
Greenwood	1957							23,126	23,126									23,126
	1958																	
Liard	1957	31,714	9,245,800[2]															9,245,800
	1958	**30,078**	**8,203,384**[2]															**8,203,384**
Nanaimo	1957							18,606	20,337									20,337
	1958							**23,457**	**23,806**									**23,806**
New Westminster	1957									10,495	129,419							129,419
	1958									**11,623**	**143,945**							**143,945**
Osoyoos	1957							95,701	398,741	6,130	81,125							479,866
	1958							**67,178**	**287,824**[3]	**11,051**	**140,385**							**428,209**
Vancouver	1957									670	11,320					21,377	342,032	353,352
	1958															**5,965**	**75,501**	**75,501**
Not assigned	1957															168,772	1,687,720	1,687,720
	1958															**166,490**[4]	**1,671,033**	**1,671,033**
Totals	1957	31,714	9,245,800	20,072	433,200	120	2,400	137,433	442,204	17,295	221,864	66,499	142,751	180,000	1,200	226,550	2,872,332	13,361,751
	1958	**30,078**	**8,203,384**	**16,144**	**341,700**	**27**	**540**	**90,635**	**311,630**	**22,674**	**284,330**	**70,498**	**211,494**			**211,300**	**2,410,395**	**11,763,473**

[1] Estimated.
[2] Does not include value of containers.
[3] Includes 32 tons of fluorspar, worth $1,386.
[4] Includes approximately 1,500 tons of elemental sulphur, worth $20,813.

TABLE VIIe.—PRODUCTION, 1957 AND 1958, BY MINING DIVISIONS—STRUCTURAL MATERIALS

Division	Year	Cement	Lime and Limestone	Building-stone	Rubble, Riprap, and Crushed Rock	Sand and Gravel	Brick (Common)	Face, Paving, and Sewer Brick	Fire-bricks, Blocks	Clays	Structural Tile (Hollow Blocks), Roof-tile, Floor-tile	Drain-tile and Sewer-pipe	Pottery (Glazed or Unglazed)	Other Clay Products	Division Totals
		$	$	$	$	$	$	$	$	$	$	$	$	$	$
Alberni	1957	.....	.....	.....	5,142	166,335	.....	.....	.....	.....	.....	.....	.....	.....	171,477
	1958	.....	.....	.....	**6,802**	**47,792**	.....	.....	.....	.....	.....	.....	.....	.....	**54,594**
Atlin	1957	.....	.....	.....	1,092	21,942	.....	.....	.....	.....	.....	.....	.....	.....	23,034
	1958	.....	.....	.....	**2,948**	**23,154**	.....	.....	.....	.....	.....	.....	.....	.....	**26,102**
Cariboo	1957	.....	.....	.....	720	395,613	.....	.....	.....	.....	.....	.....	.....	.....	396,333
	1958	.....	.....	.....	**165,326**	**370,769**	.....	.....	.....	.....	.....	.....	.....	.....	**536,095**
Clinton	1957	.....	.....	.....	.....	14,500	.....	.....	.....	.....	.....	.....	.....	.....	14,500
	1958	.....	.....	.....	.....	**15,483**	.....	.....	.....	.....	.....	.....	.....	.....	**15,483**
Fort Steele	1957	.....	.....	.....	437,348	157,525	.....	.....	.....	.....	.....	.....	.....	.....	594,873
	1958	.....	.....	.....	**28,155**	**125,615**	.....	.....	.....	.....	.....	.....	.....	.....	**153,770**
Golden	1957	.....	.....	.....	500	153,015	.....	.....	.....	.....	.....	.....	.....	.....	153,515
	1958	.....	.....	.....	**1,825**	**131,437**	.....	.....	.....	.....	.....	.....	.....	.....	**133,262**
Greenwood	1957	.....	.....	.....	7,100	5,000	.....	.....	.....	.....	.....	.....	.....	.....	12,100
	1958	.....	.....	.....	**7,400**	**5,000**	.....	.....	.....	.....	.....	.....	.....	.....	**12,400**
Kamloops	1957	.....	.....	.....	1,186,908	450,045	.....	.....	.....	.....	.....	.....	.....	.....	1,636,953
	1958	.....	.....	.....	**822,714**	**382,439**	.....	.....	.....	.....	.....	.....	.....	.....	**1,205,153**
Liard	1957	.....	.....	.....	2,166	239,814	.....	.....	.....	.....	.....	.....	.....	.....	241,980
	1958	.....	.....	.....	**85**	**206,089**	.....	.....	.....	.....	.....	.....	.....	.....	**206,174**
Lillooet	1957	.....	.....	.....	5,000	54,920	.....	.....	.....	.....	.....	.....	.....	.....	59,920
	1958	.....	.....	.....	**8,250**	**147,648**	.....	.....	.....	.....	.....	.....	.....	.....	**155,898**
Nanaimo	1957	.....	1,306,434	189,195	4,845	286,059	.....	.....	.....	.....	.....	.....	.....	.....	1,786,533
	1958	.....	**849,702**	.....	**5,013**	**141,044**	.....	.....	.....	.....	.....	.....	.....	.....	**995,759**
Nelson	1957	.....	.....	.....	835	94,925	.....	.....	.....	.....	.....	.....	.....	.....	95,760
	1958	.....	.....	.....	**26,972**	**56,563**	.....	.....	.....	.....	.....	.....	.....	.....	**83,535**
New Westminster	1957	.....	132,144	.....	2,366,125	2,630,953	14,581	309,307	595,003	29,495	154,769	637,084	35,000	28,920	6,933,381
	1958	.....	**109,667**	.....	**541,426**	**2,112,365**	**13,625**	**291,607**	**360,835**	**12,579**	**76,292**	**573,453**	**60,725**	**23,258**	**4,175,832**
Nicola	1957	.....	.....	.....	.....	20,523	.....	.....	.....	.....	.....	.....	.....	.....	20,523
	1958	.....	.....	.....	**3,000**	**59,670**	.....	.....	.....	.....	.....	.....	.....	.....	**62,670**
Omineca	1957	.....	.....	.....	150,484	497,584	.....	.....	.....	.....	.....	.....	.....	.....	648,068
	1958	.....	.....	.....	**162,367**	**374,925**	.....	.....	.....	.....	.....	.....	.....	.....	**537,292**
Osoyoos	1957	.....	.....	.....	10,000	1,370	.....	.....	.....	.....	.....	.....	.....	.....	11,370
	1958	.....	.....	.....	.....	**603**	.....	.....	.....	.....	.....	.....	.....	.....	**603**
Revelstoke	1957	.....	.....	.....	.....	54,185	.....	.....	.....	.....	.....	.....	.....	.....	54,185
	1958	.....	.....	.....	**23,395**	**55,362**	.....	.....	.....	.....	.....	.....	.....	.....	**78,757**
Similkameen	1957	.....	.....	.....	25,000	93,250	.....	.....	.....	.....	.....	.....	.....	.....	118,250
	1958	.....	.....	.....	.....	**82,950**	.....	.....	.....	.....	.....	.....	.....	.....	**82,950**
Skeena	1957	.....	44,400	.....	32,345	1,314,123	.....	.....	.....	.....	.....	.....	.....	.....	1,390,868
	1958	.....	**25,900**	.....	**97,871**	**155,026**	.....	.....	.....	.....	.....	.....	.....	.....	**278,797**
Slocan	1957	.....	.....	.....	.....	58,574	.....	.....	.....	.....	.....	.....	.....	.....	58,574
	1958	.....	.....	.....	.....	**60,967**	.....	.....	.....	.....	.....	.....	.....	.....	**60,967**
Trail Creek	1957	.....	.....	1,650	12,000	119,158	.....	.....	.....	.....	.....	.....	.....	.....	132,808
	1958	.....	.....	**3,500**	**12,500**	**111,461**	.....	.....	.....	.....	.....	.....	.....	.....	**127,461**
Vancouver	1957	.....	.....	45,265	14,367	2,615,045	8,236	35,774	53,687	.....	.....	.....	.....	9,948	2,782,322
	1958	**1,560,000**	.....	**60,835**	**155,967**	**2,741,294**	.....	**52,526**	**35,006**	.....	.....	.....	.....	**9,158**	**4,614,786**
Vernon	1957	.....	.....	.....	5,000	187,406	.....	.....	.....	.....	.....	.....	.....	.....	192,406
	1958	.....	.....	.....	**3,780**	**220,469**	.....	.....	.....	.....	.....	.....	.....	.....	**224,249**
Victoria	1957	7,078,108	11,600	.....	5,791	871,410	1,528	.....	10,183	.....	45,447	60,527	12,612	.....	8,097,206
	1958	**5,195,619**	**12,550**	.....	**23,156**	**814,551**	**1,500**	.....	**9,644**	.....	**46,585**	**65,720**	**7,662**	.....	**6,176,987**
Totals	1957	7,078,108	1,494,578	236,110	4,272,768	10,503,274	24,345	345,081	658,873	29,495	200,216	697,611	47,612	38,868	25,626,939
	1958	**6,755,619**	**997,819**	**64,335**	**2,098,952**	**8,442,676**	**15,125**	**344,133**	**405,485**	**12,579**	**122,877**	**639,173**	**68,387**	**32,416**	**19,999,576**

TABLE VIIIA.—PRODUCTION TO DATE BY MINING DIVISIONS—SUMMARY

Division	Placer Gold[1]		Principal Lode Metals	Miscellaneous Metals	Industrial Minerals	Structural Materials	Fuels						Division Totals
							Coal		Petroleum[2]		Natural Gas		
	Quantity	Value					Quantity	Value	Quantity	Value	Quantity	Value	
	Oz.	$	$	$	$	$	Tons	$	Bbls.	$	M S.C.F.	$	$
Alberni	1,613	33,136	11,658,636	.....	9,398	944,904	.....	.....	.....	.....	.....	.....	12,646,074
Atlin	729,122	17,197,198	37,482,188	387,814	20,325	214,122	.....	.....	.....	.....	.....	.....	55,301,647
Cariboo	2,594,321	53,705,745	37,641,149	23,730	163,220	3,478,688	290	1,100	.....	.....	.....	.....	95,013,632
Clinton	10,093	240,834	847,454	900	162,867	110,928	.....	.....	.....	.....	.....	.....	1,362,983
Fort Steele	20,445	465,922	1,437,747,113	8,839,536	3,381,482	4,183,581	53,415,431	216,499,468	.....	.....	.....	.....	1,671,117,102
Golden	469	11,268	35,514,559	364,687	2,856,256	1,308,563	.....	.....	.....	.....	.....	.....	40,055,333
Greenwood	5,056	115,136	115,626,046	54,946	2,323,897	739,841	.....	.....	.....	.....	.....	.....	118,859,866
Kamloops	27,526	602,789	3,044,836	65,678	6,528,308	7,051,096	14,995	59,765	.....	.....	.....	.....	17,352,472
Liard	50,082	1,245,186	6,312	79	32,267,682	1,149,209	89,837	606,290	1,002,340	2,071,418	72,744,107	4,326,924	41,673,100
Lillooet	91,723	1,888,849	113,312,084	48,350	5,129	1,080,616	.....	.....	.....	.....	.....	.....	116,335,028
Nanaimo	866	19,300	6,297,743	28,752,522	687,010	28,498,462	79,867,359	295,835,663	.....	.....	.....	.....	360,090,700
Nelson	3,575	88,705	139,021,684	37,293,219	64,126	2,576,972	.....	.....	.....	.....	.....	.....	179,044,706
New Westminster	11,545	241,845	288,150	1,084,231	445,245	55,095,306	.....	.....	.....	.....	.....	.....	57,154,777
Nicola	234	4,764	571,128	.....	9,610	401,781	2,928,915	11,071,191	.....	.....	.....	.....	12,058,474
Omineca	52,439	1,388,539	17,276,774	15,329,133	11,460	2,604,253	411,757	2,535,143	.....	.....	.....	.....	39,145,302
Osoyoos	190	4,142	50,446,121	1,020	2,637,076	971,997	1,122	5,008	.....	.....	.....	.....	54,065,364
Revelstoke	7,574	164,251	10,775,731	159,853	.....	1,170,423	.....	.....	.....	.....	.....	.....	12,270,258
Similkameen	12,136	287,876	120,020,611	128,661	18,558	2,175,342	4,652,979	19,532,872	.....	.....	.....	.....	142,163,920
Skeena	4,603	105,569	208,963,667	274,317	1,240,215	6,481,541	.....	.....	.....	.....	.....	.....	217,065,309
Slocan	364	9,342	165,686,544	1,265,274	.....	715,555	.....	.....	.....	.....	.....	.....	167,676,715
Trail Creek	848	24,176	82,703,415	35,564	.....	1,561,354	.....	.....	.....	.....	.....	.....	84,324,509
Vancouver	182	5,306	194,052,953	535,028	5,942,484	33,378,675	.....	.....	.....	.....	.....	.....	233,914,446
Vernon	2,651	70,769	188,310	.....	3,978	2,197,004	.....	.....	.....	.....	.....	.....	2,460,061
Victoria	628	15,680	6,616,865	24,508	190,451	99,341,980	.....	.....	.....	.....	.....	.....	106,189,484
Not assigned[3]	1,577,661	18,176,703	99,061,823	45,806,261	29,258,318	11,264,251	.....	.....	.....	.....	.....	.....	203,567,356
Totals	5,205,946	96,113,030	2,894,851,896	140,475,311	88,227,095	268,696,444	141,382,685	546,146,500	1,002,340	2,071,418	72,744,107	4,326,924	4,040,908,618

[1] Quantity of placer gold is given in ounces of crude gold. The year of first recorded production for the major placer-producing mining divisions was: Atlin, 1898; Cariboo, 1858; Lillooet, 1874; Quesnel, 1858.

[2] Includes 582 barrels produced for test purposes in 1955, no value assigned.

[3] *Re* "not assigned," *see* footnotes under Tables VIIIB and VIIIC.

NOTE.—Full details for placer gold are given in this table. The columns headed "Principal Lode Metals," "Miscellaneous Metals," "Industrial Minerals," and "Structural Materials" give the total value only, details being set forth in Tables VIIIB, VIIIC, VIIID, and VIIIE. The quantity of coal is gross output; *see* footnotes to Tables IXA, IXB, and IXC.

TABLE VIIIB.—PRODUCTION TO DATE BY MINING DIVISIONS—PRINCIPAL LODE METALS

Division	Lode Gold		Silver		Copper		Lead[1]		Zinc[1]		Division Totals
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	Oz.	$	Oz.	$	Lb.	$	Lb.	$	Lb.	$	$
Alberni	300,136	11,233,123	161,254	77,522	2,290,699	343,518	112,894	4,473	.....	.....	11,658,636
Atlin	344,163	12,125,578	3,375,330	2,893,940	24,777,597	8,160,266	23,765,211	3,437,907	91,067,749	10,864,497	37,482,188
Cariboo	1,043,637	37,561,963	117,771	74,523	2,352	920	24,560	3,724	505	19	37,641,149
Clinton	23,390	827,328	31,564	14,214	57,548	5,905	193	7	.....	.....	847,454
Fort Steele	4,239	115,267	194,306,280	108,484,179	28,592	6,193	10,815,325,736	757,945,950	7,734,969,871	570,895,524	1,437,747,113
Golden	165	4,710	2,761,673	1,998,139	779,693	253,709	196,227,874	18,116,430	202,060,413	15,141,571	35,514,559
Greenwood	1,136,115	24,473,744	31,120,844	18,305,985	442,394,706	70,810,683	14,019,289	1,043,830	14,707,236	991,804	115,626,046
Kamloops	47,868	1,608,328	304,512	181,984	6,411,583	1,179,668	538,097	45,030	438,023	29,826	3,044,836
Liard	114	4,120	540	446	56	22	10,102	1,724	.....	.....	6,312
Lillooet	3,231,133	112,832,497	793,402	476,996	400	41	62,513	2,548	15	2	113,312,084
Nanaimo	85,573	1,973,143	589,848	353,158	23,616,232	3,971,442	.....	.....	.....	.....	6,297,743
Nelson	1,328,892	41,555,120	7,765,745	4,607,993	14,798,370	1,682,270	233,592,849	28,304,889	501,982,548	62,871,412	139,021,684
New Westminster	4,449	113,528	13,884	6,616	708,637	166,406	28,425	1,119	12,755	481	288,150
Nicola	8,525	234,914	267,419	126,588	555,712	108,513	2,235,428	90,516	320,683	10,597	571,128
Omineca	25,038	772,610	9,518,667	7,558,863	6,750,202	1,545,334	27,697,350	3,516,230	31,357,063	3,883,737	17,276,774
Osoyoos	1,630,723	49,652,895	588,768	387,403	2,783,966	399,900	125,982	5,454	7,773	469	50,446,121
Revelstoke	36,742	1,068,988	4,104,635	2,763,861	153,740	51,037	36,250,885	3,843,129	25,087,535	3,048,716	10,775,731
Similkameen	183,456	6,308,351	4,218,739	2,581,651	601,110,859	111,113,285	382,544	13,360	72,275	3,964	120,020,611
Skeena	2,393,205	60,231,837	67,514,033	42,910,342	687,106,270	98,025,648	58,893,974	5,307,636	16,798,460	2,488,204	208,963,667
Slocan	15,435	443,239	68,876,641	43,832,242	229,696	43,512	804,037,434	63,767,246	611,014,309	57,600,305	165,686,544
Trail Creek	2,949,445	62,577,502	3,620,966	2,066,235	121,141,623	18,034,726	132,723	10,650	119,048	14,302	82,703,415
Vancouver	439,932	14,008,395	4,731,781	2,868,101	922,305,508	150,146,772	17,820,294	1,791,557	194,287,477	25,238,128	194,052,953
Vernon	5,223	176,048	12,823	8,084	654	100	24,914	2,932	10,816	1,146	188,310
Victoria	37,663	812,730	838,926	473,470	28,476,845	5,026,894	210,097	19,848	3,568,709	283,923	6,616,865
Not assigned[2]	55,204	1,069,683	4,508,001	3,095,511	42,824,194	8,578,355	321,622,907	22,953,075	831,606,894	63,365,199	99,061,823
Totals	15,330,465	441,785,641	410,144,046	246,148,046	2,929,305,734	479,655,119	12,553,142,365	910,229,264	10,259,489,937	816,733,826	2,894,851,896

[1] *See* footnote 3 to Table VI.

[2] Includes zinc and lead recovered at the Trail smelter from current and reclaimed slags and also metals recovered at the Tacoma smelter from dross shipped by the Trail smelter.

TABLE VIIIc.—PRODUCTION TO DATE BY MINING DIVISIONS—MISCELLANEOUS METALS

Division	Antimony		Bismuth		Cadmium		Chromite		Cobalt		Indium		Iron Ore		Magnesium		Manganese	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Lb.	$	Lb.	$	Lb.	$	Tons	$	Lb.	$	Oz.	$	Tons	$	Lb.	$	Tons	$
Atlin					233,875	387,454												
Cariboo																		
Clinton							126	900										
Fort Steele					2,543	5,345												
Golden	40,062	14,906			161,805	261,597									204,632	88,184		
Greenwood					14,584	23,551	670	31,395										
Kamloops													17,109	59,883				
Liard																		
Lillooet	13,466	4,321																
Nanaimo													4,565,426	28,752,522				
Nelson					1,975,206	3,275,144												
New Westminster																		
Omineca	104,489	15,217			127,417	213,533			1,730	420								
Osoyoos																	16[1]	
Revelstoke	9,394	3,455			88,092	150,711												
Similkameen																		
Skeena					123,258	253,577							1,200	6,000				
Slocan	31,865	8,133			722,700	1,248,981											541	8,160
Trail Creek													550	1,925				
Vancouver					256,968	535,028												
Victoria																	1,167	24,508
Not assigned[2 3 4]	35,920,159	8,879,374	4,732,134	7,807,222	19,477,627	27,242,410					942,087	1,877,255						
Totals	36,119,435	8,925,406	4,732,134	7,807,222	23,184,075	33,597,331	796	32,295	1,730	420	942,087	1,877,255	4,584,087	28,820,330	204,632	88,184	1,724	32,668

[1] Estimated manganese content of about 40 tons of ore shipped for testing purposes by Olalla Mines Ltd. in 1956.

[2] Antimony assigned to individual mining divisions is the reported content of concentrates exported to foreign smelters. Antimony "not assigned" is the antimony content of antimonial lead or of other antimony products recovered at the Trail smelter.

[3] Cadmium assigned to individual mining divisions is the reported content of custom shipments to the Trail smelter and to foreign smelters. Cadmium "not assigned" is the remainder of the reported estimated recovery at the Trail smelter from British Columbia concentrates.

[4] Bismuth and indium recovered at the Trail smelter are not assigned to mining divisions and may include some metal from sources outside British Columbia.

Year of first recorded production: Antimony, 1907; bismuth, 1929; chromite, 1918; indium, 1942; iron ore, 1885; magnesium, 1941; manganese, 1918.

TABLE VIIIc.—PRODUCTION TO DATE BY MINING DIVISIONS—MISCELLANEOUS METALS—*Continued*

Division	Mercury		Molybdenite		Nickel		Palladium		Platinum		Selenium		Tin		Tungsten (WO_3)		Division Totals
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	Lb.	$	Lb.	$	Lb.	$	Oz.	$	Oz.	$	Lb.	$	Lb.	$	Lb.	$	$
Atlin															273	360	387,814
Cariboo									59	2,299					27,698	21,431	23,730
Clinton																	900
Fort Steele													11,330,022	8,834,191			8,839,536
Golden																	364,687
Greenwood																	54,946
Kamloops	10,987	5,795															65,678
Liard									2	79							79
Lillooet	1,783	3,555	2,448	2,440					3	113					32,353	37,921	48,350
Nanaimo																	28,752,522
Nelson			25,058	18,378											13,774,219	33,999,697	37,293,219
New Westminster					1,689,943	1,084,231											1,084,231
Omineca	4,150,892	10,400,259	1,600	1,840					3	154					2,210,892	4,697,710	15,329,133
Osoyoos			1,020	1,020													1,020
Revelstoke															7,784	5,687	159,853
Similkameen									1,280	128,661							128,661
Skeena			13,022	13,020							731	1,389			366	331	274,317
Slocan																	1,265,274
Trail Creek							749	30,462	53	3,177							35,564
Vancouver																	535,028
Victoria																	24,508
Not assigned																	45,806,261
Totals	4,163,662	10,409,609	43,148	36,698	1,689,943	1,084,231	749	30,462	1,400	134,483	731	1,389	11,330,022	8,834,191	16,053,585	38,763,137	140,475,311

Year of first recorded production: Mercury, 1895; molybdenite, 1914; nickel, 1936; pailadium, 1928; platinum, 1887; selenium, 1931; tin, 1941; tungsten, 1937.

TABLE VIIID.—PRODUCTION TO DATE BY MINING DIVISIONS—INDUSTRIAL MINERALS

Division	Arsenious Oxide		Asbestos		Barite		Bentonite		Diatomite		Fluorspar		Flux (Quartz and Limestone)		Granules (Quartz, Limestone, and Granite)		Gypsum and Gypsite		Hydromagnesite	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Lb.	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$
Alberni																				
Atlin																			1,450	20,325
Cariboo									1,570	35,035					48	168				
Clinton																	983	6,676	803	7,211
Fort Steele					8	80											112,827	298,824		
Golden					125,415	1,718,406					40,165	783,578	1,790,502	1,540,319			371,840	1,136,584		
Greenwood																				
Kamloops			111,055	32,267,682													1,246,918	6,323,178		
Liard																				
Lillooet													640,647	687,010						
Nanaimo													7,601	8,174	2	51				
Nelson															37,381	445,245				
New Westminster																	2,297	9,610		
Nicola																				
Omineca	16,997	340																		
Osoyoos	22,002,423	272,861									32	1,386	413,527	1,946,429	28,704	369,162				
Similkameen							791	16,858									250	1,700		
Skeena													601,019	1,050,722						
Vancouver															29,538	422,645				
Vernon																				
Victoria													50	760	9,702	159,471				
Totals	22,019,420	273,201	111,055	32,267,682	125,423	1,718,486	791	16,858	1,570	35,035[1]	40,197	784,964	3,453,379	5,233,414	105,375	1,396,742	1,735,115	7,776,572	2,253	27,536

[1] *Includes 30 tons of volcanic ash, worth $300.*

Year of first recorded production: Arsenious oxide, 1917; asbestos, 1952; barite, 1940; bentonite, 1926; diatomite, 1928; fluorspar, 1918; flux, 1911; granules, 1930; gypsum and gypsite, 1911; hydromagnesite, 1904.

TABLE VIIID.—PRODUCTION TO DATE BY MINING DIVISIONS—INDUSTRIAL MINERALS—*Continued*

Division	Iron Oxide and Ochre		Magnesium Sulphate		Mica		Natro-alunite		Perlite		Phosphate Rock		Sodium Carbonate		Sulphur		Talc		Division Totals
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	Tons	$	Tons	$	Lb.	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	$
Alberni							522	9,398											9,398
Atlin																			20,325
Cariboo					9,643,800	128,017													163,220[1]
Clinton			1,923	39,085									9,524	109,895					162,867
Fort Steele											3,842	16,894			168,236[2]	3,065,684			3,381,482
Golden	27	920															5	346	2,856,256
Greenwood																			2,323,897
Kamloops			8,742	193,967	424,700	2,075							968	9,088					6,528,308
Liard																			32,267,682
Lillooet																	296	5,129	5,129
Nanaimo																			687,010
Nelson	7,292	55,901																	64,126
New Westminster																			445,245
Nicola																			9,610
Omineca									1,112	11,120									11,460
Osoyoos			3,229	21,300	1,588,800	25,938													2,637,076
Similkameen																			18,558
Skeena					634,250	10,815									41,624	178,678			1,240,215
Vancouver	10,669	97,389													593,516	5,422,450			5,942,484
Vernon					160,500	3,978													3,978
Victoria	120	840															1,504	29,380	190,451
Not assigned															2,940,188	29,258,318			29,258,318
Totals	18,108	155,050	13,894	254,352	12,452,050	170,823	522	9,398	1,112	11,120	3,842	16,894	10,492	118,983	3,743,564	37,925,130	1,805	34,855	88,227,095

[1] Includes 30 tons of volcanic ash, worth $300.

[2] Recovery in 1953 and subsequent years.

Year of first recorded production: Iron oxide and ochre, 1918; magnesium sulphate, 1915; mica, 1932; natro-alunite, 1912; perlite, 1953; phosphate rock, 1927; sodium carbonate, 1921; sulphur, 1916; talc, 1916.

TABLE VIIIE.—PRODUCTION TO DATE BY MINING DIVISIONS—STRUCTURAL MATERIALS

Division	Cement	Lime and Limestone	Building-stone	Rubble, Riprap, and Crushed Rock	Sand and Gravel	Brick (Common)	Face, Paving, and Sewer Brick	Fire-bricks, Blocks	Clays	Structural Tile (Hollow Blocks), Roof-tile, Floor-tile	Drain-tile and Sewer-pipe	Pottery (Glazed or Unglazed)	Other Clay Products	Division Totals
	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Alberni				51,867	893,037									944,904
Atlin		1,108		68,391	144,623									214,122
Cariboo		7,500		487,575	2,952,536	1,193	184	4,651	15,807				9,242	3,478,688
Clinton				1,606	109,322									110,928
Fort Steele		5,350	71,941	924,822	3,173,668	7,800								4,183,581
Golden		1,000	24,000	86,506	1,197,057									1,308,563
Greenwood		102,442	30,500	143,540	342,076	114,361			6,922					739,841
Kamloops		12,000	18,000	3,616,910	3,331,807	72,379								7,051,096
Liard				26,310	1,122,899									1,149,209
Lillooet		100	2,000	289,361	789,155									1,080,616
Nanaimo		22,213,273	3,184,532	62,740	1,858,925	1,104,295	38,939		35,758					28,498,462
Nelson		34,543	356,679	283,666	1,880,110	19,110	2,864							2,576,972
New Westminster		883,104		7,745,088	18,374,536	1,416,337	3,982,450	9,841,559	795,363	2,545,578	9,056,189	197,233	257,869	55,095,306
Nicola			8,000	77,061	316,720									401,781
Omineca		3,077		543,215	2,052,687	5,274								2,604,253
Osoyoos		32,070	14,850	145,557	779,520									971,997
Revelstoke		1,000	5,575	313,773	850,075									1,170,423
Similkameen	10,500	11,571	24,000	509,044	1,606,872				1,363				11,992	2,175,342
Skeena		1,302,244	144,000	1,108,241	3,913,807				4,925				8,324	6,481,541
Slocan		1,000	115,143	70,014	529,398									715,555
Trail Creek		28,000	50,050	202,042	1,281,262									1,561,354
Vancouver	1,895,718	40,885	3,756,726	7,549,564	19,146,612	132,194	175,636	520,702	17,633			54,701	88,304	33,378,675
Vernon		46,499	81,052	178,389	1,729,810	131,467	6,202	1,011	5	18,224	4,325		20	2,197,004
Victoria	84,173,064	752,747		439,192	10,463,400	1,806,487	23,052	28,833		691,995	824,502	127,705	11,003	99,341,980
Not assigned		315,498	505,018	282,455										11,264,251[1]
Totals	86,079,282	25,795,011	8,392,066	25,206,929	78,839,914	4,810,897	4,229,327	10,396,756	877,776	3,255,797	9,885,016	379,639	386,754	268,696,444[2]

[1] Structural materials that so far cannot be assigned to mining divisions include the three items shown, an amount of $3,150,828 for clay products, and a further $7,010,452 that cannot be allotted to a particular class of material.

[2] Includes items noted in footnote 1.

TABLE IXA.—QUANTITY (GROSS[1]) AND VALUE OF COAL PER YEAR TO DATE

Year	Tons (2,000 Lb.)	Value	Year	Tons (2,000 Lb.)	Value
1836–59	41,871	$149,548	1910	3,515,944	$11,108,335
1860	15,956	56,988	1911	2,573,444	8,071,747
1861	15,427	55,096	1912	3,388,795	10,786,812
1862	20,292	72,472	1913	2,879,251	9,197,460
1863	23,906	85,380	1914	2,426,399	7,745,847
1864	32,068	115,528	1915	2,209,290	7,114,178
1865	36,757	131,276	1916	2,783,849	8,900,675
1866	28,129	100,460	1917	2,686,561	8,484,343
1867	34,988	124,956	1918	2,888,170	12,833,994
1868	49,286	176,020	1919	2,698,022	11,975,671
1869	40,098	143,208	1920	3,020,387	13,450,169
1870	33,424	119,372	1921	2,877,995	12,836,013
1871	55,458[2]	164,612	1922	2,890,625	12,880,060
1872	55,458[2]	164,612	1923	2,848,146	12,678,548
1873	55,459[2]	164,612	1924	2,226,037	9,911,935
1874	91,334	244,641	1925	2,737,607	12,168,905
1875	123,362	330,435	1926	2,609,640	11,650,180
1876	155,895	417,576	1927	2,748,286	12,269,135
1877	172,540	462,156	1928	2,829,906	12,633,510
1878	191,348	522,538	1929	2,521,402	11,256,260
1879	270,257	723,903	1930	2,113,586	9,435,650
1880	299,708	802,785	1931	1,912,501	7,684,155
1881	255,760	685,171	1932	1,719,172	6,523,644
1882	315,997	846,417	1933	1,416,516	5,375,171
1883	238,895	639,897	1934	1,508,741	5,725,133
1884	441,358	1,182,210	1935	1,330,524	5,048,864
1885	409,468	1,096,788	1936	1,508,048	5,722,502
1886	365,832	979,908	1937	1,618,051	6,139,920
1887	462,964	1,240,080	1938	1,466,559	5,565,069
1888	548,017	1,467,903	1939	1,655,217	6,280,956
1889	649,411	1,739,490	1940	1,867,966	7,088,265
1890	759,518	2,034,420	1941	2,018,635	7,660,000
1891	1,152,590	3,087,291	1942	2,170,737	8,237,172
1892	925,495	2,479,005	1943	2,040,253	7,742,030
1893	1,095,690	2,934,882	1944	2,165,676	8,217,966
1894	1,134,509	3,038,859	1945	1,700,914	6,454,360
1895	1,052,412	2,824,687	1946	1,639,277	6,732,470
1896	1,002,268	2,693,961	1947	1,923,573	8,680,440
1897	999,372	2,734,522	1948	1,809,018	9,765,395
1898	1,263,272	3,582,595	1949	1,917,296	10,549,924
1899	1,435,314	4,126,803	1950	1,756,667	10,119,303
1900	1,781,000	4,744,530	1951	1,824,384	10,169,617
1901	1,894,544	5,016,398	1952	1,650,619	9,729,739
1902	1,838,621	4,832,257	1953	1,576,105	9,528,279
1903	1,624,742	4,332,297	1954	1,447,608	9,154,544
1904	1,887,981	4,953,024	1955	1,484,066	8,986,501
1905	2,044,931	5,511,861	1956	1,589,398	9,346,518
1906	2,126,965	5,548,044	1957	1,221,766	7,340,339
1907	2,485,961	7,637,713	1958	882,962	5,937,860
1908	2,362,514	7,356,866			
1909	2,688,672	8,574,884	Totals	141,382,685	$546,146,500

TABLE IXB.—COAL PRODUCTION (GROSS[1]) BY DISTRICTS AND MINING DIVISIONS

District and Mining Division	Total to Date			1957		1958	
	Period	Quantity	Value	Quantity	Value	Quantity	Value
Vancouver Island District		Tons	$	Tons	$	Tons	$
Nanaimo Mining Division	1836–1958	79,867,359	295,835,663	200,205	1,849,306	182,304	1,615,490
Nicola-Princeton District							
Kamloops Mining Division	1893–1945	14,995	59,765				
Nicola Mining Division	1907–1958	2,928,915	11,071,191	1,081	11,615	543	5,919
Osoyoos Mining Division	1926–1927	1,122	5,008				
Similkameen Mining Division	1909–1958	4,652,979	19,532,872	17,696	92,748	146	1,122
District totals	1893–1958	7,598,011	30,668,836	18,777	104,363	689	7,041
Northern District							
Cariboo Mining Division	1942–1944	290	1,100				
Liard Mining Division	1923–1958	89,837	606,290	3,158	28,421	3,094	28,738
Omineca Mining Division	1918–1958	411,757	2,535,143	4,991	47,414	5,233	44,972
District totals	1918–1958	501,884	3,142,533	8,149	75,835	8,327	73,710
East Kootenay District							
Fort Steele Mining Division	1898–1958	53,415,431	216,499,468	994,635	5,310,835	691,642	4,241,619
Provincial totals	1836–1958	141,382,685	546,146,500	1,221,766	7,340,339	882,962	5,937,860

[1] Gross mine output, including washery loss and coal used in making coke (*see* Table X and discussion under "Fuel," page A 12).

[2] A combined total for 1871, 1872, and 1873 has previously been noted in Annual Reports and the above breakdown is estimated.

TABLE IXc.—QUANTITY[1] AND VALUE OF COAL SOLD AND USED,[2] 1948–58

Year	District and Mining Division	Total Sales[2]*	Used under Companies' Boilers[2]†	Used in Making Coke[2]‡	Total Sold and Used[2]		District Totals, 1958	
		Tons	Tons	Tons	Tons	$	Tons	$
	Vancouver Island						154,296	1,615,490
1948	Nanaimo	365,328	2,801		368,129	3,219,868		
1949	"	451,074	3,925		454,999	4,055,572		
1950	"	472,690	4,329		477,019	4,060,337		
1951	"	391,687	3,425		395,112	3,486,615		
1952	"	267,346	2,986		270,332	2,749,206		
1953	"	204,931	1,798		206,729	2,059,828		
1954	"	181,534	536		182,070	2,029,099		
1955	"	173,861	465		174,326	1,769,682		
1956	"	172,140	389		172,529	1,629,168		
1957	"	163,574	439		164,013	1,849,306		
1958	"	**153,892**	**404**		**154,296**	**1,615,490**		
	Nicola-Princeton						689	7,041
1948	Nicola	1,777			1,777	15,281		
1949	"	1,672			1,672	14,809		
1950	"	1,125			1,125	9,926		
1951	"	899			899	8,640		
1952	"	1,139			1,139	11,493		
1953	"	1,040			1,040	10,400		
1954	"	1,256			1,256	12,769		
1955	"	1,259			1,259	12,904		
1956	"	1,170			1,170	12,092		
1957	"	1,081			1,081	11,615		
1958	"	**543**			**543**	**5,919**		
1948	Similkameen	49,859			49,859	299,387		
1949	"	49,906			49,906	298,293		
1950	"	16,784			16,784	87,483		
1951	"	3,941			3,941	28,094		
1952	"	6,306			6,306	48,760		
1953	"	7,047			7,047	51,012		
1954	"	29,713			29,713	138,080		
1955	"	73,475			73,475	379,511		
1956	"	72,102			72,102	366,820		
1957	"	17,696			17,696	92,748		
1958	"	**146**			**146**	**1,122**		
	Northern						7,871	73,710
1948	Liard	8,570	60		8,630	52,721		
1949	"	12,364			12,364	76,697		
1950	"	12,250			12,250	82,258		
1951	"	3,199			3,199	26,095		
1952	"	3,854			3,854	42,606		
1953	"	4,815	20		4,835	50,895		
1954	"	4,359			4,359	33,079		
1955	"	3,650			3,650	32,850		
1956	"	4,642			4,642	38,211		
1957	"	2,758			2,758	28,421		
1958	"	**3,194**			**3,194**	**28,738**		
1948	Omineca	10,920	66		10,986	85,981		
1949	"	11,468	63		11,531	92,865		
1950	"	13,037	62		13,099	104,790		
1951	"	27,904			27,904	206,799		
1952	"	37,270			37,270	285,732		
1953	"	42,079			42,079	324,986		
1954	"	36,572			36,572	292,862		
1955	"	30,015			30,015	227,010		
1956	"	8,553			8,553	71,234		
1957	"	4,991			4,991	47,414		
1958	"	**4,677**			**4,677**	**44,972**		
	East Kootenay						633,557	4,241,619
1948	Fort Steele	990,530	20,227	154,342	1,165,099	6,092,157		
1949	"	842,979	19,025	228,792	1,090,796	6,011,688		
1950	"	825,315	15,196	213,218	1,053,729	5,774,509		
1951	"	889,669	15,977	236,871	1,142,517	6,413,374		
1952	"	822,071	15,813	245,528	1,083,412	6,591,942		
1953	"	878,865	12,729	230,814	1,122,408	7,031,158		
1954	"	820,081	15,310	218,923	1,054,314	6,648,655		
1955	"	803,125	16,560	230,464	1,050,149	6,564,544		
1956	"	890,100	19,518	248,595	1,158,213	7,228,993		
1957	"	677,534	17,830	199,754	895,118	5,310,835		
1958	"	**401,875**	**7,274**	**224,408**	**633,557**	**4,241,619**		
1948	Provincial totals	1,426,984	23,154	154,342	1,604,480	9,765,395		
1949	"	1,369,463	23,013	228,792	1,621,268	10,549,924		
1950	"	1,341,201	19,587	213,218	1,574,006	10,119,303		
1951	"	1,317,299	19,402	236,871	1,573,572	10,169,617		
1952	"	1,137,986	18,799	245,528	1,402,313	9,729,739		
1953	"	1,138,777	14,547	230,814	1,384,138	9,528,279		
1954	"	1,073,515	15,846	218,923	1,308,284	9,154,544		
1955	"	1,085,385	17,025	230,464	1,332,874	8,986,501		
1956	"	1,148,707	19,907	248,595	1,417,209	9,346,518		
1957	"	867,634	18,269	199,754	1,085,657	7,340,339		
1958	"	**564,327**	**7,678**	**224,408**	**796,413**	**5,937,860**	**796,413**	**5,937,860**

[1] For differences between gross mine output and coal sold refer to table "Production and Distribution by Collieries and by Districts" in section headed "Coal" or "Coal-mining" in Annual Reports of the Minister of Mines.

[2] *The totals "sold and used" include:—*

* Sales to retail and wholesale dealers, industrial users, and company employees.

† Coal used in company boilers, including steam locomotives.

‡ Coal used in making coke.

See also discussion under "Fuel," page A 12.

TABLE X.—COKE AND BY-PRODUCTS PRODUCTION FOR YEARS 1895 TO 1925 AND 1926 TO 1958

Year	Coal Used in Making Coke		Coke Made in Bee-hive Ovens		Coke Made in By-product Ovens		Coke Made in Gas Plants		Total Coke Made		Gas Sold and Used	Tar Produced	Other By-products[1]	Total Production Value of Coke Industry
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value				
	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	$	$	$	$
1895–1925	7,955,795	25,673,600	4,920,457	25,673,600	———	———	———	———	4,920,457	25,673,600	———	———	———	25,673,600
1926	299,839	1,338,565	105,227	795,841	42,209	244,469	42,468	221,600	189,904	1,261,910	1,009,613	50,035	45,772	2,367,330
1927	269,482	1,290,760	95,281	595,504	35,900	327,215	39,464	178,682	170,645	1,101,401	1,222,379	44,402	18,080	2,386,262
1928	210,207	940,668	68,734	429,590	32,322	263,781	41,711	187,882	142,767	881,253	1,313,407	45,313	14,036	2,254,009
1929	226,363	950,243	75,426	574,279	33,339	308,867	46,573	214,732	155,338	1,097,878	1,461,445	61,084	39,203	2,659,610
1930	225,325	1,002,684	73,708	558,801	31,904	298,004	45,751	232,917	151,363	1,089,722	1,547,092	65,770	11,935	2,714,519
1931	211,334	924,279	73,248	548,550	27,717	236,537	41,836	210,470	142,801	995,557	1,541,454	66,506	32,603	2,636,120
1932	151,750	710,432	33,090	247,615	25,436	217,221	44,645	237,174	103,171	702,010	1,589,656	54,771	14,109	2,360,546
1933	107,400	554,152	6,097	44,813	24,263	213,750	34,156	214,454	64,516	473,017	1,473,433	45,610	3,666	1,995,726
1934	141,384	571,167	24,840	154,105	23,512	213,653	51,184	198,217	99,536	565,975	1,439,287	43,939	4,756	2,053,957
1935	127,776	494,492	27,066	160,565	14,911	109,684	46,111	160,694	88,088	430,943	1,430,057	44,876	3,081	1,908,957
1936	125,810	436,595	34,009	191,843	———	———	48,859	138,787	82,868	330,630	1,422,783	38,872	———	1,792,285
1937	166,124	570,250	48,393	277,726	———	———	59,141	330,821	107,534	608,547	1,746,047	46,698	———	2,401,292
1938	176,877	623,649	54,602	315,294	———	———	58,643	345,790	113,245	661,084	1,770,839	44,324	———	2,476,247
1939	171,242	569,945	50,153	286,491	7,196	37,015	55,395	325,435	112,744	648,941	1,768,977	44,108	———	2,462,026
1940	184,160	577,706	37,845	220,211	29,124	151,931	60,726	303,421	127,695	675,563	1,810,083	54,379	3,060	2,543,085
1941	235,809	717,584	64,707	392,473	86,656	467,440	8,378	43,758	159,741	903,671	1,925,270	63,569	1,716	2,894,226
1942	255,862	866,795	66,824	439,464	96,428	608,521	6,528	54,307	169,780	1,102,292	2,165,888	86,113	22,028	3,376,321
1943	260,334	983,910	42,766	291,843	43,895	274,402	93,714	647,482	180,375	1,213,727	2,453,592	96,249	18,321	3,781,889
1944	212,883	1,439,891	36,966	301,201	47,401	347,245	88,430	565,393	172,797	1,213,839	2,562,610	56,476	19,046	3,851,971
1945	230,868	1,211,584	13,464	117,369	59,098	434,876	91,682	577,479	164,244	1,129,724	2,721,690	83,828	20,756	3,955,998
1946	251,954	1,441,415	20,542	178,556	53,525	423,025	101,094	648,297	175,161	1,249,878	3,079,009	88,947	53,097	4,470,931
1947	284,049	1,682,602	44,517	427,330	59,638	531,114	91,755	579,635	195,910	1,538,079	3,390,713	124,885	25,780	5,079,457
1948	235,297	1,440,415	47,461	559,735	57,112	630,390	57,678	455,096	162,251	1,645,221	4,520,886	153,130	19,489	6,338,726
1949	323,899	1,979,138	66,407	690,045	89,268	1,018,288	67,449	496,933	223,124	2,205,266	4,148,124	194,728	27,406	6,575,524
1950	333,955	2,027,470	23,703	269,728	127,477	997,200	92,704	686,871	243,884	1,953,799	4,298,161	277,138	27,944	6,557,042
1951	332,416	1,949,117	32,598	387,796	138,051	1,552,764	72,215	571,161	242,864	2,511,721	4,263,754	277,786	22,132	7,075,393
1952	323,922	1,972,918	35,110	440,756	142,156	1,729,924	64,906	525,384	242,172	2,696,064	4,625,747	252,070	25,639	7,599,520
1953	310,431	2,005,551	———	———	177,790	2,090,147	60,407	525,411	238,197	2,615,558	4,857,116	238,771	21,046	7,732,491
1954	302,052	2,052,641	———	———	168,982	2,032,902	67,108	566,660	236,090	2,599,562	5,113,334	226,824	20,586	7,960,306
1955	314,994	2,122,303	———	———	177,031	2,180,516	70,387	594,482	247,418	2,774,998	5,407,842	292,984	18,369	8,494,193
1956	328,805	2,277,402	———	———	180,263	2,270,167	78,185	738,292	258,448	3,008,459	5,145,851	287,437	20,961	8,462,708
1957	199,654	1,284,833	———	———	153,493	2,005,570	———	———	153,493	2,005,570	14,600	121,849	———	2,142,019
1958	224,158	1,420,328	———	———	173,920	2,253,102	———	———	173,920	2,253,102	14,600	97,803	———	2,365,505
Totals	15,712,210	64,105,084	6,223,241	35,571,124	2,360,017	24,469,720	1,829,283	11,777,717	10,411,638	71,818,561	83,255,339	3,771,274	554,617	159,399,791

[1] "Other by-products" total includes ammonium sulphate, $52,492; ammonia liquor, $103,850; light oils, $16,571; motor fuel, $7,009; naphthalene, $4,077; creosote, $34; benzol (thinning), $312; solvent naphtha, $644; cinders, $344,682; pitch, $5,131; sulphuric acid, $6,658; tar-paint, $2,330; and miscellaneous, $10,827.

TABLE XI.—DIVIDENDS PAID BY MINING COMPANIES, 1897–1958

Dividends Paid during 1957 and 1958

	1957	1958
Bralorne Mines Ltd	$374,100	$374,100
Canadian Collieries Resources Ltd.	176,666	----------
Cassiar Asbestos Corporation Ltd.	----------	760,000
Consolidated Mining and Smelting Co. of Canada, Ltd.	22,113,425	13,104,257
Crow's Nest Pass Coal Co. Ltd	372,708	372,708
Highland-Bell Ltd.	78,293	78,293
Pioneer Gold Mines of B. C. Ltd.	218,968	----------
Reeves MacDonald Mines Ltd.	292,250	292,250
Others	621,010	14,515
Totals	$24,247,420	$14,996,123

Dividends Paid Yearly, 1917 to 1958, Inclusive

Year	Amount Paid	Year	Amount Paid
1917	$3,269,494	1939	$11,865,698
1918	2,704,469	1940	14,595,530
1919	2,494,283	1941	16,598,110
1920	1,870,296	1942	13,627,104
1921	736,629	1943	11,860,159
1922	3,174,756	1944	11,367,732
1923	2,983,570	1945	10,487,395
1924	2,977,276	1946	15,566,047
1925	5,853,419	1947	27,940,213
1926	8,011,137	1948	37,672,319
1927	8,816,681	1949	33,651,096
1928	9,572,536	1950	34,399,330
1929	11,263,118	1951	40,921,238
1930	10,543,500	1952	32,603,956
1931	4,650,857	1953	22,323,089
1932	2,786,958	1954	25,368,262
1933	2,471,735	1955	35,071,583
1934	4,745,905	1956	36,262,682
1935	7,386,070	1957	24,247,420
1936	10,513,705	1958	14,996,123
1937	15,085,293		
1938	12,068,875	Total	$605,405,648

TABLE XI.—DIVIDENDS PAID BY MINING COMPANIES, 1897–1958—*Continued*

Lode-gold Mines[1]

Company or Mine	Locality	Class	Amount Paid
Arlington	Erie	Gold	$94,872
Athabasca	Nelson	Gold	25,000
Bayonne	Tye Siding	Gold	25,000
Bralorne Mines Ltd.	Bridge River	Gold	17,760,125
Belmont-Surf Inlet	Princess Royal Island	Gold	1,437,500
Cariboo Gold Quartz Mining Co. Ltd.	Wells	Gold	1,679,976
Cariboo-McKinney Con. M. & M. Co.	Camp McKinney	Gold	565,588
Canadian Pacific Exploration (Porto Rico)	Nelson	Gold	37,500
Centre Star	Rossland	Gold-copper	472,255
Fairview Amalgamated	Oliver	Gold	5,254
Fern Gold Mining & Milling Co. Ltd.	Nelson	Gold	9,375
Gold Belt Mining Co. Ltd.	Sheep Creek	Gold	668,595[2]
Goodenough (leasers)	Ymir	Gold	13,731
Hedley Mascot Gold Mines Ltd.	Hedley	Gold	1,290,553
Island Mountain Mines Ltd.	Wells	Gold	2,491,236[2]
I.X.L.	Rossland	Gold	134,025
Jewel-Denero	Greenwood	Gold	11,751
Kelowna Exploration Co. Ltd. (Nickel Plate)	Hedley	Gold	2,040,000
Kelowna Mines Hedley Ltd.	Hedley	Gold	780,000[3]
Kootenay Belle Gold Mines Ltd.	Sheep Creek	Gold	357,856
Le Roi Mining Co.	Rossland	Gold-copper	1,475,000
Le Roi No. 2 Ltd.	Rossland	Gold-copper	1,574,640
Lorne (later Bralorne)	Bridge River	Gold	20,450
Motherlode	Sheep Creek	Gold	163,500
Mount Zeballos Gold Mines Ltd.	Zeballos	Gold	165,000
Nickel Plate (Hedley Gold Mining Co. Ltd.)	Hedley	Gold	3,423,191
Pioneer Gold Mines of B.C. Ltd.	Bridge River	Gold	10,048,914
Poorman	Nelson	Gold	25,000
Premier Gold Mining Co. Ltd.	Premier	Gold	18,858,075[4]
Privateer Mine Ltd.	Zeballos	Gold	1,914,183
Queen (prior to Sheep Creek Gold Mines Ltd.)	Sheep Creek	Gold	98,674
Relief Arlington Mines Ltd. (Second Relief)	Erie	Gold	308,000[2]
Reno Gold Mines Ltd.	Sheep Creek	Gold	1,433,640[2]
Sheep Creek Gold Mines Ltd.[6]	Sheep Creek	Gold	3,609,375[5]
Silbak Premier Mines Ltd.	Premier	Gold	2,425,000[4]
Spud Valley Gold Mines Ltd.	Zeballos	Gold	168,000
Sunset No. 2	Rossland	Gold-copper	115,007
Surf Inlet Consolidated Gold Mines Ltd.	Surf Inlet	Gold	120,279
War Eagle	Rossland	Gold-copper	1,245,250
Ymir Gold	Ymir	Gold	300,000
Ymir Yankee Girl	Ymir	Gold	415,002[2]
Miscellaneous mines		Gold	108,623
Total, lode-gold mines			$77,674,997

[1] The gold-copper properties of Rossland are included in this table.

[2] Includes " return of capital " and " liquidating " payments.

[3] Former Kelowna Exploration Company Limited; changed in January, 1951.

[4] Up to and including 1936, dividends paid by Premier Gold Mining Company Limited were derived from operations of the company in British Columbia. Subsequent dividends paid by Premier Gold Mining Company Limited have been derived from the operations of subsidiary companies in British Columbia and elsewhere and are not included in the figure given. In 1936, Silbak Premier, a subsidiary of Premier Gold Mining Company, took over the former gold operations of that company in British Columbia. Dividends paid by Silbak Premier are given above.

[5] In several years, preceding 1953, company revenue has included profits from operations of the Lucky Jim zinc-lead mine.

[6] Since March, 1956, company name is Sheep Creek Mines Ltd.

TABLE XI.—DIVIDENDS PAID BY MINING COMPANIES, 1897–1958—*Continued*

Silver-Lead-Zinc Mines

Company or Mine	Locality	Class	Amount Paid
Antoine	Rambler	Silver-lead-zinc	$10,000
Base Metals Mining Corporation Ltd. (Monarch and Kicking Horse)	Field	Silver-lead-zinc	586,143[1]
Beaverdell-Wellington	Beaverdell	Silver-lead-zinc	97,200
Beaver Silver Mines Ltd.	Greenwood	Silver-lead-zinc	48,000
Bell	Beaverdell	Silver-lead-zinc	388,297
Bosun (Rosebery-Surprise)	New Denver	Silver-lead-zinc	25,000
Canadian Exploration Ltd.	Salmo	Silver-lead-zinc	11,175,400
Capella	New Denver	Silver-lead-zinc	5,500
Consolidated Mining and Smelting Co. of Canada, Ltd.	Trail	Silver-lead-zinc	468,796,379[2]
Couverapee	Field	Silver-lead-zinc	5,203
Duthie Mines Ltd.	Smithers	Silver-lead-zinc	50,000
Florence Silver	Ainsworth	Silver-lead-zinc	35,393
Giant Mascot Mines Ltd.	Spillimacheen	Silver-lead-zinc	179,263
Goodenough	Cody	Silver-lead-zinc	45,668
H.B. Mining Co.	Hall Creek	Silver-lead-zinc	8,904
Highland Lass Ltd.	Beaverdell	Silver-lead-zinc	132,464
Highland-Bell Ltd.	Beaverdell	Silver-lead-zinc	1,554,611
Horn Silver	Similkameen	Silver-lead-zinc	6,000
Idaho-Alamo	Sandon	Silver-lead-zinc	400,000
Iron Mountain (Emerald)	Salmo	Silver-lead-zinc	20,000
Jackson	Retallack	Silver-lead-zinc	20,000
Last Chance	Three Forks	Silver-lead-zinc	213,000
Lone Bachelor	Sandon	Silver-lead-zinc	50,000
Lucky Jim	Three Forks	Silver-lead-zinc	80,000
Mercury	Sandon	Silver-lead-zinc	6,000
Meteor	Slocan City	Silver-lead-zinc	10,257
Monitor and Ajax	Three Forks	Silver-lead-zinc	70,500
Mountain Con	Cody	Silver-lead-zinc	71,387
McAllister	Three Forks	Silver-lead-zinc	45,088
Noble Five	Cody	Silver-lead-zinc	72,859
North Star	Kimberley	Silver-lead-zinc	497,901
No. One	Sandon	Silver-lead-zinc	6,754
Ottawa	Slocan City	Silver-lead-zinc	110,429
Payne	Sandon	Silver-lead-zinc	1,438,000
Providence	Greenwood	Silver-lead-zinc	142,238[3]
Queen Bess	Alamo	Silver-lead-zinc	25,000
Rambler-Cariboo	Rambler	Silver-lead-zinc	467,250
Reeves MacDonald Mines Ltd.	Remac	Silver-lead-zinc	2,338,000
Reco	Cody	Silver-lead-zinc	334,992
Ruth Mines Ltd.	Sandon	Silver-lead-zinc	125,490
St. Eugene	Moyie	Silver-lead-zinc	566,000
Sheep Creek Mines Ltd.	Invermere	Silver-lead-zinc	93,750
Silversmith and Slocan Star[4]	Sandon	Silver-lead-zinc	1,267,600
Silver Standard Mines Ltd.	Hazelton	Silver-lead-zinc	1,715,333
Spokane-Trinket	Ainsworth	Silver-lead-zinc	10,365
Standard Silver Lead	Silverton	Silver-lead-zinc	2,734,688
Sunset and Trade Dollar	Retallack	Silver-lead-zinc	88,000
Sunshine Lardeau Mines Ltd.	Beaton	Silver-lead-zinc	164,000
Torbrit Silver Mines Ltd.	Alice Arm	Silver-lead-zinc	390,000
Utica	Kaslo	Silver-lead-zinc	64,000
Violamac Mines (B.C.) Ltd.	New Denver	Silver-lead-zinc	850,000
Wallace Mines Ltd. (Sally)	Beaverdell	Silver-lead-zinc	135,000
Washington	Rambler Station	Silver-lead-zinc	20,000
Western Exploration Co. Ltd.	Silverton	Silver-lead-zinc	30,867
Whitewater	Retallack	Silver-lead-zinc	592,515
Yale Lead and Zinc Mines Ltd.	Ainsworth	Silver-lead-zinc	278,620
Miscellaneous mines			70,239
Total, silver-lead-zinc mines			$498,765,637

[1] Includes $466,143 " return of capital " distribution prior to 1949.
[2] Earnings of several company mines, and customs smelter at Trail.
[3] Includes $10,504 paid in 1944 but not included in the yearly figure.
[4] These two properties were amalgamated as Silversmith Mines Limited in August, 1939.

TABLE XI.—DIVIDENDS PAID BY MINING COMPANIES, 1897–1958—*Continued*

Copper Mines

Company or Mine	Locality	Class	Amount Paid
Britannia M. & S. Co.[1]	Britannia Beach	Copper	$18,803,772
Canada Copper Corporation	Greenwood	Copper	615,399
Cornell	Texada Island	Copper	8,500
Granby Cons. M.S. & P. Co.[2]	Copper Mountain	Copper	29,873,226
Marble Bay	Texada Island	Copper	175,000
Hall Mines	Nelson	Copper	233,280
Miscellaneous mines		Copper	261,470
Total, copper mines			$49,970,647

[1] The Britannia Mining and Smelting Co. Limited, a wholly owned subsidiary of the Howe Sound Company (Maine), paid the dividends shown to its parent company. On June 30th, 1958, consolidation between the Howe Sound Company (Maine) and Haile Mines Inc. became effective, bringing into existence Howe Sound Company (Delaware). The Britannia mine became a division of the new Howe Sound Company, and in August Britannia Mining and Smelting Co. was liquidated voluntarily.

[2] The Granby Consolidated Mining Smelting and Power Company dividends commenced in 1904 and cover all company activities in British Columbia to date. The figure includes all dividends, capital distributions, and interim liquidating payments, the latter being $4,500,000, paid, in 1936, prior to reorganization.

Coal Mines

Company or Mine	Locality	Class	Amount Paid
Wellington Collieries Ltd.	Nanaimo	Coal	$16,000,000
Bulkley Valley Collieries Ltd.	Telkwa	Coal	24,000
Crow's Nest Pass Coal Co. Ltd.	Fernie	Coal	16,719,198
Canadian Collieries Resources Ltd.	Nanaimo	Coal	828,271
Total, coal mines			$33,571,469

Aggregate of All Classes

Lode-gold mining	$77,674,997
Silver-lead-zinc mining and smelting	498,765,637
Copper-mining	49,970,647
Coal-mining	33,571,469
Miscellaneous, structural, and placer gold	7,675,670
Total	$667,658,420

NOTE.—The term "miscellaneous" noted in each class of dividend covers all payments of $5,000 and under, together with payments made by companies or individuals requesting that the item be not disclosed.

In compiling the foregoing table of dividends paid, the Department wishes to acknowledge the kind assistance given by companies, individuals, and trade journals in giving information on the subject.

TABLE XII.—PRINCIPAL ITEMS OF EXPENDITURE, REPORTED FOR OPERATIONS OF ALL CLASSES

Class	Salaries and Wages	Fuel and Electricity	Process Supplies
Lode-mining	$32,284,917	$4,485,205	$10,553,781
Placer-mining	9,887	554	2,100
Fuels—coal, coke and gas plants, petroleum and natural gas	7,592,307	623,826	2,414,734
Miscellaneous metals and industrial minerals	4,276,071	851,638	934,417
Structural materials industry	4,770,378	2,119,766	1,148,004
Totals, 1958	**$48,933,560**	**$8,080,989**	**$15,053,036**
Totals, 1957	56,409,056	8,937,567	24,257,177
1956	57,266,026	9,762,777	22,036,839
1955	51,890,246	9,144,034	21,131,572
1954	48,702,746	7,128,669	19,654,724
1953	55,543,490	8,668,099	20,979,411
1952	62,256,631	8,557,845	27,024,500
1951	52,607,171	7,283,051	24,724,101
1950	42,738,035	6,775,998	17,500,663
1949	41,023,786	7,206,637	17,884,408
1948	38,813,506	6,139,470	11,532,121
1947	32,160,338	5,319,470	13,068,948
1946	26,190,200	5,427,458	8,367,705
1945	22,620,975	7,239,726	5,756,628
1944	23,131,874	5,788,671	6,138,084
1943	26,051,467	7,432,585	6,572,317
1942	26,913,160	7,066,109	6,863,398
1941	26,050,491	3,776,747	7,260,441
1940	23,391,330	3,474,721	6,962,162
1939	22,357,035	3,266,000	6,714,347
1938	22,765,711	3,396,106	6,544,500
1937	21,349,690	3,066,311	6,845,330
1936	17,887,619	2,724,144	4,434,501
1935	16,753,367	2,619,639	4,552,730
Grand totals, 1935–58	$863,807,510	$148,282,527	$311,859,643

NOTE.—"Process Supplies" include explosives, chemicals, drill-steel, lubricants, etc.

TABLE XIII.—AVERAGE NUMBER EMPLOYED IN THE MINING INDUSTRY, 1901–58

Year	Placer-mining	Lode-mining			In Concentrators	In Smelters	Coal-mining			Structural Materials		Miscellaneous	Total[1]
		Under	Above	Total			Under	Above	Total	Quarries and Pits	Plants		
1901	.....	2,736	1,212	3,948	.....	.....	3,041	931	3,974	.....	.....	.....	7,922
1902	.....	2,219	1,126	3,345	.....	.....	3,101	910	4,011	.....	.....	.....	7,356
1903	.....	1,662	1,088	2,750	.....	.....	3,137	1,127	4,264	.....	.....	.....	7,014
1904	.....	2,143	1,163	3,306	.....	.....	3,278	1,175	4,453	.....	.....	.....	7,759
1905	.....	2,470	1,240	3,710	.....	.....	3,127	1,280	4,407	.....	.....	.....	8,117
1906	.....	2,680	1,303	3,983	.....	.....	3,415	1,390	4,805	.....	.....	.....	8,788
1907	.....	2,704	1,239	3,943	.....	.....	2,862	907	3,769	.....	.....	.....	7,712
1908	.....	2,567	1,127	3,694	.....	.....	4,432	1,641	6,073	.....	.....	.....	9,767
1909	.....	2,184	1,070	3,254	.....	.....	4,713	1,705	6,418	.....	.....	.....	9,672
1910	.....	2,472	1,237	3,709	.....	.....	5,903	1,855	7,758	.....	.....	.....	11,467
1911	.....	2,435	1,159	3,594	.....	.....	5,212	1,661	6,873	.....	.....	.....	10,467
1912	.....	2,472	1,364	3,837	.....	.....	5,275	1,855	7,130	.....	.....	.....	10,967
1913	.....	2,773	1,505	4,278	.....	.....	4,950	1,721	6,671	.....	.....	.....	10,949
1914	.....	2,741	1,433	4,174	.....	.....	4,267	1,465	5,732	.....	.....	.....	9,906
1915	.....	2,709	1,435	4,144	.....	.....	3,708	1,283	4,991	.....	.....	.....	9,135
1916	.....	3,357	2,036	5,393	.....	.....	3,694	1,366	5,060	.....	.....	.....	10,453
1917	.....	3,290	2,198	5,488	.....	.....	3,760	1,410	5,170	.....	.....	.....	10,658
1918	.....	2,626	1,764	4,390	.....	.....	3,658	1,769	5,247	.....	.....	.....	9,637
1919	.....	2,513	1,746	4,259	.....	.....	4,145	1,821	5,966	.....	.....	.....	10,225
1920	.....	2,074	1,605	3,679	.....	.....	4,191	2,158	6,349	.....	.....	.....	10,028
1921	.....	1,355	975	2,330	.....	.....	4,722	2,163	6,885	.....	.....	.....	9,215
1922	.....	1,510	1,239	2,749	.....	.....	4,712	1,932	6,644	.....	.....	.....	9,393
1923	.....	2,102	1,516	3,618	.....	.....	4,342	1,807	6,149	.....	.....	.....	9,767
1924	.....	2,353	1,680	4,033	.....	.....	3,894	1,524	5,418	.....	.....	.....	9,451
1925	.....	2,298	2,840	5,138	.....	.....	3,828	1,615	5,443	.....	.....	.....	10,581
1926	299	2,606	1,735	4,341	808	2,461	3,757	1,565	5,322	493	324	124	14,172
1927	415	2,671	1,916	4,587	854	2,842	3,646	1,579	5,225	647	138	122	14,830
1928	355	2,707	2,469	5,176	911	2,748	3,814	1,520	5,334	412	368	120	15,424
1929	341	2,926	2,052	4,978	966	2,948	3,675	1,353	5,028	492	544	268	15,565
1930	425	2,316	1,260	3,576	832	3,197	3,389	1,256	4,645	843	344	170	14,032
1931	688	1,463	834	2,297	581	3,157	2,957	1,125	4,082	460	526	380	12,171
1932	874	1,355	900	2,255	542	2,036	2,628	980	3,608	536	329	344	10,524
1933	1,134	1,786	1,335	3,121	531	2,436	2,241	853	3,094	376	269	408	11,369
1934	1,122	2,796	1,729	4,525	631	2,890	2,050	843	2,893	377	187	360	12,985
1935	1,291	2,740	1,497	4,237	907	2,771	2,145	826	2,971	536	270	754	13,737
1936	1,124	2,959	1,840	4,799	720	2,678	2,015	799	2,814	931	288	825	14,179
1937	1,371	3,603	1,818	5,421	1,168	3,027	2,286	867	3,153	724	327	938	16,129
1938	1,303	3,849	2,266	6,115	919	3,158	2,088	874	2,962	900	295	369	16,021
1939	1,252	3,905	2,050	5,955	996	3,187	2,167	809	2,976	652	311	561	15,890
1940	1,004	3,923	2,104	6,027	1,048	2,944	2,175	699	2,874	827	334	647	15,705
1941	939	3,901	1,823	5,724	1,025	3,072	2,229	494	2,723	766	413	422	15,084
1942	489	2,920	1,504	4,424	960	3,555	1,892	468	2,360	842	378	262	13,270
1943	212	2,394	1,699	4,093	891	2,835	2,240	611	2,851	673	326	567	12,448
1944	255	1,896	1,825	3,721	849	2,981	2,150	689	2,839	690	351	628	12,314
1945	209	1,933	1,750	3,683	822	2,834	1,927	503	2,430	921	335	586	11,820
1946	347	1,918	1,817	3,735	672	2,813	1,773	532	2,305	827	555	679	11,933
1947	360	3,024	2,238	5,262	960	3,461	1,694	731	2,425	977	585	869	14,899
1948	348	3,143	2,429	5,572	1,126	3,884	1,594	872	2,466	1,591	656	754	16,397
1949	303	3,034	2,724	5,758	1,203	3,763	1,761	545	2,306	2,120	542	626	16,621
1950	327	3,399	2,415	5,814	1,259	3,759	1,745	516	2,261	1,916	616	660	16,612
1951	205	3,785	3,695	7,480	1,307	4,044	1,462	463	1,925	1,783	628	491	17,863
1952	230	4,171	3,923	8,094	1,516	4,120	1,280	401	1,681	1,530	557	529	18,257
1953	132	3,145	2,589	5,734	1,371	3,901	1,154	396	1,550	1,909	559	634	15,790
1954	199	2,644	2,520	5,164	1,129	3,119	1,076	358	1,434	1,861	638	584	14,128
1955	103	2,564	2,553	5,117	1,091	3,304	1,100	378	1,478	1,646	641	722	14,102
1956	105	2,637	2,827	5,464	1,043	3,339	968	398	1,366	1,598	770	854	14,539
1957	67	2,393	2,447	4,840	838	3,328	1,020	360	1,380	1,705	625	474	13,257
1958	**75**	**1,919**	**1,809**	**3,728**	**625**	**3,081**	**826**	**260**	**1,086**	**1,483**	**677**	**446**	**11,201**

[1] The average number employed in the industry is the sum of the averages for individual companies. The average for each company is obtained by taking the sum of the numbers employed each month and dividing by 12, regardless of the number of months worked.

TABLE XIV.—LODE-METAL MINES—TONNAGE, NUMBER OF MINES, NET AND GROSS VALUE OF PRINCIPAL METALS,[4] 1901–58

Year	Tonnage[1]	Number of Shipping Mines	Number of Mines Shipping over 100 Tons	Gross Value as Reported by Shipper[2]	Freight and Treatment[2]	Net Value to Shipper[3]	Gross Value of Lode Metals Produced[4]
1901	926,162	119	78	.....	.....	.....	$13,287,947
1902	1,009,016	124	75	.....	.....	.....	11,136,162
1903	1,288,466	125	74	.....	.....	.....	11,579,382
1904	1,461,609	142	76	.....	.....	.....	12,309,035
1905	1,706,679	146	79	.....	.....	.....	15,180,164
1906	1,963,872	154	77	.....	.....	.....	17,484,102
1907	1,805,614	147	72	.....	.....	.....	16,222,097
1908	2,083,606	108	59	.....	.....	.....	14,477,411
1909	2,057,713	89	52	.....	.....	.....	14,191,141
1910	2,216,428	83	50	.....	.....	.....	13,228,731
1911	1,770,755	80	45	.....	.....	.....	11,454,063
1912	2,688,532	86	51	.....	.....	.....	17,662,766
1913	2,663,809	110	58	.....	.....	.....	17,190,838
1914	2,175,971	98	56	.....	.....	.....	15,225,061
1915	2,720,669	132	59	.....	.....	.....	19,992,149
1916	3,229,942	169	81	.....	.....	.....	31,483,014
1917	2,797,368	193	87	.....	.....	.....	26,788,474
1918	2,912,516	175	80	.....	.....	.....	27,595,278
1919	2,146,920	144	74	.....	.....	.....	19,756,648
1920	2,215,445	121	60	.....	.....	.....	19,451,725
1921	1,586,428	80	35	.....	.....	.....	12,925,448
1922	1,592,163	98	33	.....	.....	.....	19,228,257
1923	2,447,672	77	28	.....	.....	.....	25,348,399
1924	3,413,912	86	37	.....	.....	.....	35,538,247
1925	3,849,269	102	40	.....	.....	.....	46,200,135
1926	4,775,327	138	55	.....	.....	$38,558,613	51,508,031
1927	5,416,411	132	52	.....	.....	27,750,364	44,977,082
1928	6,241,672	110	49	.....	.....	29,070,075	48,281,825
1929	6,977,903	106	48	.....	.....	34,713,887	51,720,436
1930	6,804,276	68	32	.....	.....	21,977,688	41,292,980
1931	5,549,622	44	22	.....	.....	10,513,931	22,900,229
1932	4,354,904	75	29	.....	.....	7,075,393	19,705,043
1933	4,063,775	109	47	.....	.....	13,976,358	25,057,007
1934	5,141,744	145	69	.....	.....	20,243,278	34,071,955
1935	4,927,204	177	72	.....	.....	25,407,914	40,662,633
1936	4,381,173	168	70	.....	.....	30,051,207	43,813,898
1937	6,145,244	185	113	$48,617,920	$4,663,843	43,954,077	62,950,536
1938	7,377,117	211	92	40,222,237	4,943,754	35,278,483	53,878,093
1939	7,212,171	217	99	45,133,788	4,416,919	40,716,869	53,554,092
1940	7,949,736	216	92	50,004,909	6,334,611	43,670,298	61,735,604
1941	8,007,937	200	96	52,354,870	5,673,048	46,681,822	62,607,882
1942	6,894,844	126	76	50,494,041	5,294,637	45,199,404	59,694,192
1943	5,786,864	48	32	37,234,070	3,940,367	33,293,703	52,651,868
1944	4,879,851	51	31	29,327,114	2,877,706	26,449,408	39,369,738
1945	4,377,722	36	27	34,154,917	2,771,292	31,383,625	48,724,001
1946	3,705,594	50	32	48,920,971	2,904,130	46,016,841	56,653,485
1947	5,011,271	75	33	81,033,093	4,722,010	76,311,087	93,124,847
1948	5,762,321	97	51	118,713,859	18,585,183	100,128,727	121,696,891
1949	6,125,460	118	54	99,426,678	19,613,185	79,814,604	107,775,413
1950	6,802,482	112	58	108,864,792	22,113,431	86,751,361	113,464,619
1951	6,972,400	119	64	142,590,427	25,096,743	117,493,684	147,646,989
1952	9,174,617	95	58	140,070,389	30,444,575	106,601,451	144,151,515
1953	9,660,281	80	48	94,555,069	27,815,152	66,739,892	123,619,837
1954	8,513,865	63	40	106,223,833	29,135,673	77,088,160	120,829,789
1955	9,126,902	53	34	119,039,285	30,696,044	88,343,241	138,145,095
1956	8,827,037	70	40	125,043,590	31,933,681	93,110,262	143,546,586
1957	7,282,436	59	40	95,644,930	30,273,900	65,370,185	119,409,764
1958	**6,402,198**	**47**	**28**	**83,023,111**	**28,068,396**	**54,955,069**	**100,591,049**

[1] Includes ores of iron, mercury, nickel, tungsten, and silica (flux).

[2] Data not collected before 1937.

[3] Previous to 1937 the shipper reported "Net Value at Shipping Point," no indication being given as to how the net value was computed. From 1937 on, the shipper has reported "Gross Value," from which deduction of freight and treatment gives "Net Value."

[4] Gross value calculated by valuing gold, silver. copper, lead, zinc, mercury (1938–44, 1955), and nickel (1936–37, 1958) at yearly average prices, and iron (1901–03, 1907, 1918–23, 1928, 1948–58) and tungsten (1939–45, 1947–58) at values given by operators.

TABLE XV.—LODE-METAL PRODUCTION IN 1958

Property or Operator	Location of Mine	Owner or Agent	Ore Shipped or Treated	Product Shipped	Gross Metal Contents					
					Gold	Silver	Copper	Lead	Zinc	Cadmium
NORTHERN BRITISH COLUMBIA										
Atlin Mining Division			Tons		Oz.	Oz.	Lb.	Lb.	Lb.	Lb.
Nil										
Liard Mining Division										
Nil										
CENTRAL BRITISH COLUMBIA										
Cariboo Mining Division										
Cariboo Gold Quartz and Aurum	Wells	The Cariboo Gold Quartz Mining Co. Ltd., Vancouver	66,880	Bullion	27,892	3,682				
Clinton Mining Division										
Nil										
Omineca Mining Division										
Cronin Babine	Smithers	New Cronin Babine Mines Ltd., Vancouver	123	Crude ore, 123 tons; lead concentrates, 9 tons	6	6,169		70,481	68,143	
Silver Standard	Hazelton	Silver Standard Mines Ltd., Vancouver	5,044	Lead concentrates, 543 tons; zinc concentrates, 970 tons	267	178,347	17,837	492,040	1,065,717	16,766
COAST AND ISLANDS										
Alberni Mining Division										
Buccaneer and Musketeer	Tofino	Bedwell River Gold Mines Ltd., Vancouver	100[1]	Concentrates, 5 tons	33	29	31	470		
Nanaimo Mining Division										
Merry Widow No. 5 and Kingfisher	Benson Lake	Empire Development Co. Ltd., Vancouver	572,404	Iron-ore concentrates, 272,495 tons						
Prescott, Paxton, Yellow Kid, Yellow Jacket	Texada Island	Texada Mines Ltd., Vancouver	709,731	Iron-ore concentrates, 357,776 tons; copper concentrates, 3,338 tons	948	11,035	873,639			

[1] Estimate.

TABLE XV.—LODE-METAL PRODUCTION IN 1958—*Continued*

Property or Operator	Location of Mine	Owner or Agent	Ore Shipped or Treated	Product Shipped	Gross Metal Contents					
					Gold	Silver	Copper	Lead	Zinc	Cadmium
New Westminster Mining Division			Tons		Oz.	Oz.	Lb.	Lb.	Lb.	Lb.
Pride of Emory	Choate	Western Nickel Ltd., Vancouver	131,133	Nickel concentrates, 7,598 tons containing 1,776,183 lb. nickel; copper concentrates, 729 tons	.....	.....	744,657	.....	.....	.....
Skeena Mining Division										
Silbak Premier	Premier	Silbak Premier Mines Ltd., Vancouver	.....	Salvage—concentrates, 100 tons	250	1,032	.....	8,515	9,910	.....
Toric	Kitsault River	Torbrit Silver Mines Ltd., Toronto	135,892	Silver-lead concentrates, 1,872 tons; silver bullion	.....	1,331,088	.....	1,506,849	.....	.....
Vancouver Mining Division										
Britannia	Britannia Beach	Britannia Mining & Smelting Co. Ltd., Britannia Beach (placed in voluntary liquidation, August 8, 1958)	66,863	Copper concentrates and precipitates, 6,882 tons; zinc concentrates, 3,048 tons; iron pyrite concentrates, 12,042 tons	2,585	19,302	4,485,078	171,685	3,496,446	18,593
Victoria Mining Division										
Blue Grouse	Cowichan Lake	Cowichan Copper Co. Ltd., Lake Cowichan	96,029	Copper concentrates, 7,778 tons	.....	25,608	4,363,335	.....	.....	.....
SOUTH CENTRAL BRITISH COLUMBIA										
Greenwood Mining Division										
Highland-Bell	Beaverdell	Highland-Bell Ltd., Vancouver	18,729	Lead concentrates, 1,698 tons; zinc concentrates, 637 tons; jig concentrates, 217 tons	487	900,669	.....	728,142	858,071	6,158
Providence	Greenwood	S. J. and J. S. Kleman, Greenwood	13	Crude ore	8	2,363	.....	916	655	.....
Kamloops Mining Division										
Nil	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lillooet Mining Division										
Bralorne	Bridge River	Bralorne Mines Ltd., Vancouver	146,358	Bullion; gold concentrates, 3,009 tons	99,489	21,119	.....	.....	.....	.....
Elizabeth Group	Yalakom River	W. H. White, Vancouver	9	Crude ore	5	5	.....	53	18	.....
Pioneer	Bridge River	Pioneer Gold Mines of B.C. Ltd., Vancouver	105,442	Bullion	49,853	10,799	.....	.....	.....	.....
Nicola Mining Division										
Nil	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Osoyoos Mining Division										
Fairview	Oliver	Consolidated Mining & Smelting Co. of Canada, Ltd., Trail	35,708	Silica flux						
French	Hedley	French Mines Ltd., Vancouver	13,820	Bullion	8,607	657				
Horn Silver	Keremeos	Canada Radium Corporation Ltd., Toronto	54	Siliceous ore	15	3,684		718	714	
Nickel Plate	Hedley	W. B. Graham, Hedley, lessee, from Kelowna Mines Hedley Ltd.		Salvage—concentrates, 16 tons	140	31	131			
Similkameen Mining Division										
Copper Mountain	Copper Mountain	Granby Cons. M.S. & P. Co. Ltd., Copper Mountain		Mill clean-up, 108 tons	441	154	8,483			
Vernon Mining Division										
Nil										
SOUTHEASTERN BRITISH COLUMBIA										
Fort Steele Mining Division										
Estella	Wasa	United Estella Ltd., Vancouver		Lead concentrates, 29 tons; zinc concentrates, 57 tons clean-up		486		31,032	66,900	179
Sullivan	Kimberley	Consolidated Mining & Smelting Co. of Canada, Ltd., Trail	2,443,884	Lead concentrates, 121,198 tons; zinc concentrates, 285,936 tons; tin concentrates, 610 tons	314	3,102,951	428,600	205,413,400	273,913,600	
Golden Mining Division										
L.T.	Invermere	E. L. Tegart, Invermere	4	Crude ore (dump)		177		3,913	185	
Mineral King and Paradise	Toby Creek	Sheep Creek Mines Ltd., Nelson	192,426	Lead concentrates, 5,225 tons; zinc concentrates, 16,115 tons		98,966	178,456	6,452,482	18,104,313	77,834
Ptarmigan	Horsethief Creek	Selkirk Ptarmigan Mines Ltd., Edgewater	181	Crude ore	60	41,871		1,010	1,580	
Nelson Mining Division										
Arlington	Erie	G. D. Fox and R. W. Linn, Trail	30	Mill clean-up; crude ore and siliceous ore, 29 tons	22	63		1,258	1,408	
Emerald-Feeney-Dodger	Salmo	Canadian Exploration Ltd., Vancouver	64,114	**Tungsten concentrates, 34,549 units WO_3**						
Gold Belt	Salmo	A. Endersby, Fruitvale	217	Siliceous ore	30	104		693	434	
H.B.	Salmo	Consolidated Mining & Smelting Co. of Canada, Ltd., Trail	458,213	Lead concentrates, 5,892 tons; zinc concentrates, 36,162 tons		83,024		8,308,920	40,764,400	353,206
Jersey	Salmo	Canadian Exploration Ltd., Vancouver	383,458	Lead concentrates, 10,296 tons; zinc concentrates, 18,488 tons		47,772		16,541,417	22,102,831	172,115
Kootenay Belle	Salmo	M. Arishenkoff, Shoreacres	15	Crude ore	1	36		290	29	
Nugget	Salmo	A. Endersby, Sr., and A. Endersby, Jr., Fruitvale	154	Siliceous ore	38	57		363	464	
Reeves MacDonald	Remac	Reeves MacDonald Mines Ltd., Vancouver	417,076	Lead concentrates, 5,168 tons; zinc concentrates, 25,901 tons		23,520		7,973,619	28,220,124	155,937
Silver King	Nelson	A. Burgess, Ymir	18	Crude ore	1	194		2,187	1,578	
Sun group	Nelson	W. Rozan and R. Gautier, Nelson	6	Crude ore	13	4		25	25	

TABLE XV.—LODE-METAL PRODUCTION IN 1958—*Continued*

Property or Operator	Location of Mine	Owner or Agent	Ore Shipped or Treated	Product Shipped	Gross Metal Contents					
					Gold	Silver	Copper	Lead	Zinc	Cadmium
Revelstoke Mining Division			Tons		Oz.	Oz.	Lb.	Lb.	Lb.	Lb.
Spider, Eclipse	Camborne	Sunshine Lardeau Mines Ltd., Vancouver	11,889	Lead concentrates, 1,256 tons; zinc concentrates, 1,544 tons; crude ore, 470 tons	1,136	143,894		1,909,247	2,016,995	
Slocan Mining Division										
Black Diamond	Ainsworth	G. Hobbs and J. Hawes, Ainsworth	3	Crude ore		253		3,506	648	
Bluebell	Riondel	Consolidated Mining & Smelting Co. of Canada, Ltd., Trail	255,859	Lead concentrates, 18,759 tons; zinc concentrates, 31,344 tons		363,156	320,757	27,545,899	31,792,649	149,421
Caledonia	Blaylock	Caledonia Mines Ltd., Kaslo	157	Lead concentrates, 14 tons; zinc concentrates, 8 tons; crude ore, 5 tons	1	2,010		24,970	12,476	40
Fisher Maiden	Silverton	F. Mills and F. Dewis, Silverton	216	Crude ore		2,373		9,169	28,795	203
Highlander	Ainsworth	Yale Lead & Zinc Mines Ltd., Ainsworth	51,460	Lead concentrates, 3,996 tons; zinc concentrates, stockpiled, 995 tons	21	88,847		6,052,922	170,343	
Laura M.	Ainsworth	M. B. Sirak, Ainsworth	1,074	Lead concentrates, 108 tons; zinc concentrates, 36 tons; crude ore, 124 tons		3,782		272,867	6,219	167
Little Phil	Ainsworth	T. Lane, Ainsworth	13	Crude ore		288		10,447	1,398	
Lucky Jim	Zincton	Lucky Four Leasers, New Denver	658	Lead concentrates, 28 tons; zinc concentrates, 53 tons; crude ore 7 tons	1	2,851		43,643	64,054	374
McAllister	Silverton	M. Tarnowski and E. De Rosa, Silverton	2	Crude ore from dump		225		57	25	
Noonday-Curley	Silverton	K. Millar, Silverton	88	Lead concentrates, 6 tons; zinc concentrates, 12 tons; crude ore, 4 tons		670		9,099	14,993	529
Ottawa	Slocan	Yukon Western Mining & Prospecting Co. Ltd., Edmonton	28	Crude ore	1	4,200		342	204	
Silversmith, Ruth-Hope, Slocan Star	Sandon	Lessees from Carnegie Mining Corporation, Sandon	640	Lead concentrates, 26 tons; zinc concentrates, 70 tons; crude ore, 109 tons	5	16,478		157,614	99,770	553
Silver Mountain	Sandon	Silver Mountain Mines Ltd., Sandon	10	Crude ore		736		11,903	393	
Spokane	Ainsworth	T. Lane, Ainsworth	3	Crude ore		22		2,130	826	
Mammoth, Monarch	Silverton	Western Exploration Co. Ltd., Silverton, and lessees	13,326	Lead concentrates, 1,041 tons; zinc concentrates, 1,232 tons	41	204,675		1,423,405	1,471,671	11,220

Utica	Kaslo Creek	J. A. Cooper, Kaslo; Lajo Mines Ltd., Vancouver	150	Lead concentrates, 71 tons; zinc concentrates, 63 tons	1	10,435	.....	30,218	92,176	396
Van Roi, Hewitt	Silverton	Slocan Van Roi Mines Ltd. and lessees	364	Lead concentrates, 31 tons; zinc concentrates, 50 tons; crude ore, 15 tons	2	9,940	.....	51,895	63,659	457
Victor	Sandon	Violamac Mines Ltd., New Denver	9,037	Lead concentrates, 1,409 tons; zinc concentrates, 1,147 tons; crude ore, 177 tons	165	217,489	.....	2,264,970	1,433,740	8,891
Westmont	Silverton	Chexdeco Mining Ltd., Silverton; Silver King Mining Co. Ltd., Silverton	445	Lead concentrates, 17 tons; zinc concentrates, 11 tons; crude ore, 218 tons	4	13,215	.....	41,283	61,283	113
Trail Creek Mining Division										
W.D.	Trail	E. Wells and F. Donelly, Trail	1,140	Crude ore	649	230	.....	2,957	997	.....

TABLE XVI.—LODE-METAL MINES EMPLOYING AN AVERAGE OF TEN OR MORE MEN DURING 1958[1]

Name of Mine or Operator	Days Operating		Tons		Average Number Employed	
	Mine	Mill	Mined	Milled	Mine	Mill
Shipping Mines						
Cariboo Gold Quartz Mining Co. Ltd.	280	365	66,880	66,880	175	13
Silver Standard Mines Ltd.	105	89	5,044	5,044	24	5
Torbrit Silver Mines Ltd.	365	365	135,892	135,892	98	22
Britannia Mining and Smelting Co. Ltd.	66	57	66,863	66,863	107	5
Highland-Bell Ltd.	259	259	18,729	18,729	34	6
Bralorne Mines Ltd.	365	365	146,358	146,358	358	27
Pioneer Gold Mines of B.C. Ltd.	365	365	105,442	105,442	235	18
French Mines Ltd.	284	364	13,820	13,820	14	8
Copper Mountain (Granby Cons. M.S. & P. Co. Ltd.)	.....	.....	(2)	(2)	46[2]	.....
Bluebell (Cons. M. & S. Co. of Canada, Ltd.)	253	348	255,859	255,859	268	19
Highlander (Yale Lead & Zinc Mines Ltd.)	250	250	51,460	51,460	36	8
Western Exploration Co. Ltd.	(3)	(3)	13,326	13,326	2	7
Victor (Violamac Mines Ltd.)	365	.....	9,037	.....	21	.....
H.B. (Cons. M. & S. Co. of Canada, Ltd.)	365	365	458,213	458,213	106	13
Jersey (Canadian Exploration Ltd.)	365	365	383,458	383,458	118	11
Emerald-Feeney-Dodger (Canadian Exploration Ltd.)	204	212	64,114	64,114	82	8
Reeves MacDonald Mines Ltd.	252	352	417,076	417,076	103	25
Sullivan (Cons. M. & S. Co. of Canada, Ltd.	254	254	2,443,884	2,443,884	1,123	333
Mineral King (Sheep Creek Mines Ltd.)	307	358	192,426	192,426	83	11
Spider (Sunshine Lardeau Mines Ltd.)	101	135	11,889	11,419	20	5
Blue Grouse (Cowichan Copper Co. Ltd.)	253	268	96,029	96,029	89	12
Western Nickel Mines Ltd.	213	213	131,133	131,133	125	19
Empire Development Co. Ltd.	266	266	572,404	572,404	(3)	(3)
Texada Mines Ltd.	266	366	715,182	709,731	112	34
Non-shipping Mines						
Ecstall Mining Co. Ltd.	.....	.....	.....	.....	10	.....
Noranda Exploration Co. Ltd.	.....	.....	.....	.....	19	.....
Granduc Mines Ltd.	.....	.....	.....	.....	21	.....
Northwestern Explorations Ltd.	.....	.....	.....	.....	25	.....
Phoenix Copper Co. Ltd.	.....	.....	.....	.....	12	.....
Rexspar Uranium & Metals Mining Co. Ltd.	.....	.....	.....	.....	10	.....
Sunro (Cons. M. & S. Co. of Canada, Ltd.)	.....	.....	.....	.....	14	.....
Birkett Creek Mine Operators Ltd.	.....	.....	.....	.....	18	.....
Britannia Mine Division (Howe Sound Company)	.....	.....	.....	.....	31	.....

[1] The average number employed includes wage-earners and salaried employees. The average is obtained by adding the monthly figures and dividing by 12, irrespective of the number of months worked.

[2] One hundred and eight tons of clean-up material shipped to Tacoma smelter, and employment represents all clean-up operations, including salvage of equipment and machinery.

[3] Not available.

Departmental Work

DEPUTY MINISTER

John Fortune Walker, who had been Deputy Minister of Mines for twenty-two years, retired on September 30th, 1958. He was born in Binbrook, Ont., on September 17th, 1893, and is a veteran of World War I, a graduate of the University of British Columbia in geological engineering, and a Ph.D. from Princeton University in geology. He had served as an officer of the Geological Survey of Canada for ten years, working in various areas in British Columbia, when he left that service to become Provincial Mineralogist in the British Columbia Department of Mines in 1934 and continued in that position until he was appointed Deputy Minister in 1937.

Patrick Joseph Mulcahy, who had been in the service of the Government of British Columbia for thirty-nine years, was appointed Deputy Minister of Mines, effective October 1st, 1958. He was born in Victoria in 1901. He entered the service of the Government of British Columbia in the Department of the Attorney-General in 1919, and transferred to the Department of Mines in 1924. Since then he has served continuously in Victoria, except when he was Mining Recorder at Barkerville in 1931 and at Hope in 1932 and set up the central records office in Vancouver in 1942. Until his appointment as Deputy Minister he had been Chief Gold Commissioner since 1942 and Chief Petroleum and Natural Gas Commissioner since 1952.

ADMINISTRATION BRANCH

The Administration Branch is responsible for the administration of the Provincial laws regarding the acquisition of rights to mineral and to coal, petroleum and natural gas, and deals with other departments of the Provincial service for the Department or for any branch.

Upon the retirement of John F. Walker, P. J. Mulcahy was appointed to the position of Deputy Minister. K. B. Blakey, who had been acting in the capacity of Deputy Chief Gold Commissioner and Deputy Chief Commissioner, Petroleum and Natural Gas, was appointed as Chief Gold Commissioner and Chief Commissioner, Petroleum and Natural Gas. R. H. McCrimmon and R. E. Moss were appointed to the positions of Deputy Chief Gold Commissioner and Deputy Chief Commissioner, Petroleum and Natural Gas, respectively, effective October 1st, 1958.

Gold Commissioners, Mining Recorders, and Sub-Mining Recorders, whose duties are laid down in the " Mineral Act " and the " Placer-mining Act," administer these Acts and other Acts relating to mining. Mining Recorders, in addition to their own functions, may also exercise the powers conferred upon Gold Commissioners with regard to mineral claims within the mining division for which they have been appointed. Similar duties may be performed by Mining Recorders with regard to placer claims but not in respect of placer-mining leases. Recording of location and of work upon a mineral claim as required by the " Mineral Act " and upon a placer claim or a placer-mining lease as required by the " Placer-mining Act " must be made at the office of the Mining Recorder for the mining division in which the claim or lease is located. Information concerning claims and leases and concerning the ownership and standing of claims and leases in any mining division may be obtained from the Mining Recorder for the mining division in which the property is situated or from the Department's offices at Victoria, and Room 104, 739 West Hastings Street, Vancouver. Officials in the offices of the Gold Commissioner at Victoria and the Gold Commissioner at Vancouver act as Sub-Mining Recorders for all mining divisions. Sub-Mining Recorders, who act as forwarding

agents, are appointed at various places throughout the Province. They are authorized to accept documents and fees, and forward them to the office of the Mining Recorder for the correct mining division. Officials and their offices in various parts of the Province are listed in the table on page A 50.

Central Records Offices (Victoria and Vancouver)

The transcripts of all recordings made in Mining Recorders' offices throughout the Province are sent to the office of the Chief Gold Commissioner in Victoria twice each month, and include the names of lessees of reverted Crown-granted mineral claims. These records and maps showing the approximate positions of mineral claims held by record and of placer-mining leases may be consulted by the public during office hours at Victoria and at the office of the Gold Commissioner at Vancouver, Room 104, 739 West Hastings Street. The maps conform in geographical detail, size, and number to the reference and mineral reference maps issued by the Legal Surveys Branch of the Department of Lands and Forests, and the approximate positions of mineral claims held by record and of placer-mining leases are plotted from details supplied by the locators. Provision has been made to supply the general public, on request to the office of the Chief Gold Commissioner, with copies of the maps. The charge for these maps is $1 plus 5 per cent tax for each sheet.

List of Gold Commissioners and Mining Recorders in the Province

Mining Division	Location of Office	Gold Commissioner	Mining Recorder
Alberni	Alberni	T. G. O'Neill	T. G. O'Neill.
Atlin	Atlin	L. P. Lean	L. P. Lean.
Cariboo	Quesnel	F. E. P. Hughes	F. E. P. Hughes.
Clinton	Clinton	W. E. McLean	W. E. McLean.
Fort Steele	Cranbrook	E. L. Hedley	E. L. Hedley.
Golden	Golden	R. E. Manson	R. E. Manson.
Greenwood	Grand Forks	R. Macgregor	R. Macgregor.
Kamloops	Kamloops	D. Dalgleish	D. Dalgleish.
Liard	Victoria	R. H. McCrimmon.	
Lillooet	Lillooet	E. B. Offin	E. B. Offin.
Nanaimo	Nanaimo	W. H. Cochrane	W. H. Cochrane.
Nelson	Nelson	K. D. McRae	K. D. McRae.
New Westminster	New Westminster	J. F. McDonald	G. C. Kimberley.
Nicola	Merritt	T. S. Dobson	T. S. Dobson.
Omineca	Smithers	G. H. Beley	G. H. Beley.
Osoyoos	Penticton	T. S. Dalby	T. S. Dalby.
Revelstoke	Revelstoke	W. T. McGruder	W. T. McGruder.
Similkameen	Princeton	B. Kennelly	B. Kennelly.
Skeena	Prince Rupert	T. H. W. Harding	T. H. W. Harding.
Slocan	Kaslo		F. R. Carmichael.
Trail Creek	Rossland	W. L. Draper	W. L. Draper.
Vancouver	Vancouver	J. Egdell	Miss S. Hyham (Deputy).
Vernon	Vernon	G. F. Forbes	G. F. Forbes.
Victoria	Victoria	R. H. McCrimmon	E. J. Bowles.

Gold Commissioners' and Mining Recorders' Office Statistics, 1958

Mining Division	Free Miners' Certificates				Lode-mining						Placer-mining					Revenue		
	Individual	Company	Special	Provisional (Placer)	Mineral Claims Recorded	Certificates of Work	Cash in Lieu	Certificates of Improvements	Bills of Sale, etc.	Leases	Placer Claims Recorded	Placer Leases Granted	Certificates of Work, Placer Leases	Cash in Lieu	Bills of Sale, etc.	Free Miners' Certificates	Mining Receipts	Total
Alberni	74	2	4	—	163	312	$300.00	—	23	4	—	2	6	—	—	$524.50	$2,347.75	$2,872.25
Atlin	161	2	1	—	127	5	1,000.00	—	17	—	8	37	34	$1,750.00	21	1,293.00	7,813.00	9,106.00
Cariboo	974	13	7	—	502	355	6,100.00	—	57	4	4	154	288	3,250.00	116	4,802.25	24,495.75	29,298.00
Clinton	40	—	1	—	128	155	1,800.00	—	35	—	—	3	6	—	4	190.25	3,271.25	3,461.50
Fort Steele	239	4	5	—	227	621	1,600.00	—	35	2	—	20	57	—	21	1,453.75	6,306.75	7,760.50
Golden	113	5	—	1	243	190	2,700.00	32	22	—	—	9	1	—	—	928.00	6,446.25	7,374.25
Greenwood	138	1	1	—	373	330	900.00	—	57	8	—	5	10	—	—	675.50	4,646.45	5,321.95
Kamloops	423	6	14	3	2,928	1,964	1,100.00	9	470	10	—	13	5	—	1	2,404.25	11,183.00	13,587.25
Liard	289	—	7	—	592	767	2,300.00	9	141	—	—	9	17	—	—	1,375.50	11,645.00	13,020.50
Lillooet	158	2	1	—	219	279	500.00	7	11	5	—	4	34	250.00	5	894.25	3,879.00	4,773.25
Nanaimo	124	3	—	—	150	287	4,700.00	—	35	7	—	1	—	—	2	743.00	6,394.00	7,137.00
Nelson	310	8	7	4	260	324	300.00	22	18	12	6	—	4	—	1	2,256.25	3,106.75	5,363.00
New Westminster	376	3	8	17	451	117	10,200.00	—	215	2	3	6	13	—	1	1,931.25	13,035.00	14,966.25
Nicola	309	—	2	—	4,494	1,122	100.00	—	516	1	—	—	1	—	—	989.00	17,424.76	18,413.76
Omineca	315	3	2	—	401	796	2,100.00	—	119	4	2	17	40	5,450.00	14	1,532.00	13,423.10	14,955.10
Osoyoos	160	1	6	—	249	163	1,600.00	3	31	6	—	—	—	—	—	808.25	3,199.95	4,008.20
Revelstoke	131	1	6	—	147	343	6,800.00	—	36	2	—	16	17	375.00	36	638.75	10,746.25	11,385.00
Similkameen	156	3	4	3	565	182	4,800.00	—	151	7	2	8	36	—	11	978.25	8,583.50	9,561.75
Skeena	239	4	1	—	128	358	3,500.00	—	53	19	—	1	—	—	—	1,317.25	7,091.75	8,409.00
Slocan	165	5	4	—	196	728	2,100.00	—	42	6	—	4	—	—	—	1,329.75	5,331.25	6,661.00
Trail Creek	104	3	2	—	16	55	—	—	3	1	—	—	—	—	—	712.50	241.75	954.25
Vancouver	1,792	186	46	—	390	117	1,400.00	1	29	3	3	—	1	—	—	24,267.25	3,382.37	27,649.62
Vernon	228	1	4	10	160	35	100.00	—	23	1	11	7	10	—	3	1,139.00	1,186.25	2,325.25
Victoria	325	22	—	—	350	452	200.00	—	36	2	—	—	18	—	—	3,474.50	3,300.25	6,774.75
Totals for Province 1958	7,343	278	133	38	13,459	10,057	$56,200.00	83	2,175	106	39	316	598	$11,075.00	236	$56,658.25	$178,481.13	$235,139.38
Totals for Province, 1957	7,641	289	162	37	12,110	13,781	$53,100.00	108	2,820	165	21	180	690	$10,075.00	162	$62,651.75	$158,362.90	$221,014.65

Coal, Petroleum, and Natural Gas

The Administration Branch is responsible for the administration of the "Petroleum and Natural Gas Act" and for the "Coal Act." Information concerning applications for permits and leases issued under the "Petroleum and Natural Gas Act" and concerning the ownership and standing of them may be obtained upon application to the office of the Chief Commissioner, Department of Mines, Victoria, B.C. Similar information may be obtained respecting licences and leases issued under the "Coal Act." Maps showing the locations of permits and leases under the "Petroleum and Natural Gas Act" are available, and copies may be obtained upon application to the office of the Department of Mines, Victoria, B.C. Monthly reports listing additions and revisions to permit-location maps and listing changes in title to permits, licences, and leases and related matters are available from the office of the Chief Commissioner upon application and payment of the required fee.

Petroleum and Natural-gas Statistics, 1958

Permits—	
Issued	87
In good standing	442
Assigned	122
Natural-gas licences—Issued	12
Drilling reservations—Issued	4
Leases—	
Issued	539
In good standing	842
Assigned	73

Petroleum and Natural-gas Revenue, 1958

Permits—		
Fees	$146,250.00	
Rental	3,135,141.48	
Penalties and cash in lieu of work	26,590.47	
		$3,307,981.95
Drilling reservations—		
Fees	$750.00	
Rental	4,146.80	
		4,896.80
Licences—		
Fees	$400.00	
Rental	9,757.29	
		10,157.29
Leases—		
Fees	$13,125.00	
Rental	977,257.50	
		990,382.50
Tender bonus		4,510,123.14
Royalties—		
Gas	$433,545.81	
Oil	140,158.48	
Processed products	62,104.77	
		635,809.06

Operators' licences	$10,520.00
Assignment fees	1,800.00
Miscellaneous	550.00
	$9,472,220.74

Coal Revenue, 1958

Licences—		
Fees	$450.00	
Rental	3,669.50	
		$4,119.50
Leases—		
Fees	$400.00	
Rental	535.95	
Cash in lieu of work	400.00	
		1,335.95
		$5,455.45

Mining Laws and Laws Related to the Mineral Industry

Synopses of mining laws and of laws related to mining, and the titles of the various Acts and the prices charged for each are available on application.

ANALYTICAL AND ASSAY BRANCH

By S. W. Metcalfe, Chief Analyst and Assayer

Rock Samples

During 1958 the chemical laboratory in Victoria issued reports on 3,929 samples from prospectors* and Departmental engineers. A laboratory examination of a prospector's sample generally consists of the following: (1) A spectrographic analysis to determine if any base metals are present in interesting percentages; (2) assays for precious metals and for base metals shown by the spectrographic analysis to be present in interesting percentages. The degree of radioactivity is measured on all samples submitted by prospectors and Departmental engineers; these radiometric assays are not listed in the table below.

The laboratory reports were distributed in the following manner among prospectors who were not grantees, prospectors who were grantees under the "Prospectors' Grubstake Act," and Departmental engineers:—

	Samples	Spectrographic Analyses	Assays
Prospectors (not grantees)	973	26	2,692
Prospectors (grantees)	275	1	660
Departmental engineers	213	27	577
Totals	1,461	54	3,929

Mineralogical specimens submitted for identification and rocks for classification are examined by the Mineralogical Branch of the Department.

* A reasonable number of samples are assayed, without charge, for a prospector who makes application for free assays and who satisfies the Chief Analyst that prospecting is his principal occupation during the summer months. A form for use in applying for free assays may be obtained from the office of any Mining Recorder.

Coal, Petroleum, and Gas Samples

Forty-three samples were analysed. Of these, fourteen were samples of formation water from wells being drilled for oil and gas in the Province; seventeen were samples of coal for proximate analysis and calorific value; two were waters tested for oil seepage; three were natural gases; and seven were samples of condensates from oil and gas wells in the Province.

Police and Coroners' Exhibits

Ninety-one cases of a chemical-legal nature were completed for the Attorney-General's Department. Twenty-eight cases involved analyses for poisons generally. Eighteen were for alcohol in blood and body fluids, and six were for carbon monoxide and alcohol in blood. Six cases involved narcotics, and six cases analyses of animal organs for poison. Eleven cases were analyses for liquor under the " Government Liquor Act " and the " Indian Act." In four cases, analyses were made in connection with charges of murder. In addition, there were four analyses of gasoline for colouring matter added in accordance with the regulations in the " Coloured Gasoline Tax Act." The remaining cases involved drugs and food for suspected poisoning, possession of explosives, breaking and entering, and wilful damage. On ten occasions, evidence was presented in Court.

Analytical work of this nature was discontinued by the laboratory at the end of the year.

Miscellaneous Samples

For the Purchasing Commission, specification tests were made on eight samples of anti-freeze, and two blankets were examined.

For the Taxation Branch of the Department of Finance, two gasolines and one gasoline marker dyestuff were examined.

For the Department of Agriculture, four marls were analysed for lime and magnesia, one soil was examined for boron, two samples of hay and two of soil were analysed for molybdenum, and two samples of gypsum were examined.

For the Department of Highways, one water sample was examined.

For the British Columbia Power Commission, two partly decomposed wooden pegs from power-poles were examined for nitrates.

For the Department of Mining and Metallurgy at the University of British Columbia, one sand was analysed for titanium and iron, and one sample of sponge iron for total iron and free iron.

For the Royal Canadian Mounted Police, sixteen samples consisting of placer gold and gravel were assayed for their gold contents. Evidence was given in Court.

For residents of the Province, two water samples were examined.

Examinations for Assayers

Provincial Government examinations for certificates of competency and licence to practise assaying in British Columbia were held at Victoria in April and May, and at Trail in December. In April and May, two candidates were examined and both passed. In December, ten candidates were examined; three passed, three were granted supplementals, and four failed.

INSPECTION BRANCH

Organization and Staff

Inspectors and Resident Engineers

J. W. Peck, Chief Inspector ..... Victoria
Robert B. Bonar, Deputy Chief Inspector of Mines ..... Victoria
L. Wardman, Senior Electrical Inspector of Mines ..... Victoria

E. R. Hughes, Senior Inspector of Mines.....Victoria
Robert B. King, Inspector and Resident Engineer.....Vancouver
A. R. C. James, Inspector and Resident Engineer.....Vancouver
J. E. Merrett, Inspector and Resident Engineer.....Nelson
D. R. Morgan, Inspector and Resident Engineer.....Fernie
David Smith, Inspector and Resident Engineer.....Prince Rupert

The Inspectors are stationed at the places listed and inspect coal mines, metalliferous mines, and quarries in their respective districts. They also examine prospects, mining properties, and roads and trails.

E. R. Hughes supervised the Department's roads and trails programme and prospectors' grub-stakes.

Instructors, Mine-rescue Stations

Arthur Williams.....Cumberland Station
T. H. Robertson.....Princeton Station
Joseph J. Haile.....Fernie Station
W. H. Childress.....Nelson Station

Staff Changes

H. C. Hughes, Chief Inspector of Mines, retired on January 31st, 1958, after twenty years of service with the Department. He joined the staff on January 15th, 1938, as Inspector of Mines at Nelson.

J. W. Peck, Inspector and Resident Engineer at Nelson, was appointed Chief Inspector of Mines on February 15th, 1958.

Board of Examiners for Coal-mine Officials

Robert B. Bonar, Chairman and Secretary.....Victoria
A. R. C. James, Member.....Vancouver
D. R. Morgan, Member.....Fernie

R. B. Bonar, A. R. C. James, D. R. Morgan, and the mine-rescue instructors for the district in which an examination is being held form the Board for granting certificates of competency to coal-miners.

An Inspector is empowered to grant provisional certificates to coal-miners for a period not exceeding sixty days between regular examinations.

MINERALOGICAL BRANCH

Field work by officers of the Mineralogical Branch includes geological mapping and examination of mineral deposits, and studies related to ground-water and engineering geology. The results are published partly in the Annual Report of the Minister of Mines and partly in a series of bulletins. The Mineralogical Branch supplies information regarding mineral deposits and the mineral industry, in response to inquiries received in great number. The activities of the Branch also include identification of rock and mineral specimens submitted directly by prospectors and others, or through the Analytical Branch.

Professional Staff

On December 31st, 1958, the professional staff included the following engineers classified as geologists or mineral engineers: H. Sargent, Chief of the Mineralogical Branch; M. S. Hedley, S. S. Holland, J. W. McCammon, N. D. McKechnie, G. E. P. Eastwood, J. T. Fyles, A. Sutherland Brown, J. M. Carr, H. W. Nasmith, A. F. Shepherd, and J. E. Hughes. H. W. Nasmith resigned at the end of December. J. E. Hughes was granted leave in October to continue postgraduate studies at McGill University.

Technical editing of the Annual Report of the Minister of Mines and of other publications was directed by M. S. Hedley. Copy for printing was prepared by and under the direction of the editor for English, which post was occupied until August by Mrs. C. C. Savage and from October by Mrs. Rosalyn J. Moir. Messrs. Hedley and Holland assisted in directing and supervising field work. Most of the other members of the professional staff are assigned to mapping the geology of selected areas and of mineral deposits. Mr. McCammon is responsible for studies of industrial minerals and structural materials and Mr. Shepherd for records and library.

Field Work

Systematic field work was done by nine members of the permanent staff, and by one geologist retained for the field season. They were assisted by thirteen temporary field assistants.

A. Sutherland Brown began the geological mapping of Moresby Island in the Queen Charlotte Group.

J. M. Carr continued geological mapping in the Highland Valley area, including detailed mapping of workings at several properties, and made a preliminary study of a small area that contains the Craigmont property northwest of Merritt.

J. T. Fyles devoted the first part of the field season to reconnaissance mapping along the Columbia River from a point near Donald to Nagle Creek near Mica Creek in the western side of the Big Bend.

J. T. Fyles devoted the latter part of the field season and G. E. P. Eastwood devoted most of the season to finalizing mapping in the part of the Lardeau area between the head of Gainer Creek and the heads of Trout and Beaton Creeks.

J. E. Hughes completed field studies along the John Hart Highway between the West Pine bridge and Commotion Creek.

S. S. Holland examined operating mines and prospects in Bridge River and Wells areas, the area between Prince George and Smithers, the North Thompson River, and the Revelstoke area, and devoted two weeks to problems of engineering geology on the Fraser and Peace Rivers.

J. W. McCammon made studies of industrial-mineral occurrences, including limestone in the Cache Creek and Merritt areas, silica at Sicamous, Oliver, and Golden, barite in the Columbia-Windermere Valley, and pegmatites in part of the North Thompson area. He also assisted in setting up a geological display in " Nature House " at Manning Park.

N. D. McKechnie examined properties on Vancouver Island, near Hope, and near Merritt, and began a study of ultrabasic rocks in the Kamloops-Princeton-Grand Forks area.

H. W. Nasmith made a ground-water study in the Bulkley Valley and a preliminary investigation in the Prince George area. His work in the field of engineering geology included a study of water seepage at the Whatshan Dam, landslides at Golden and Prince Rupert, seepage pressures at a highway tunnel near Yale, a study of bridge foundations near Quesnel, and studies of Pleistocene sediments near Peachland and Naramata and on the Big Bend of the Columbia River.

H. P. Trettin was employed for the field season to complete mapping begun in 1957 of the area along the Fraser River from Lillooet to Big Bar ferry. This work was under the general direction of Professor K. C. McTaggart, retained as consultant.

PETROLEUM AND NATURAL GAS BRANCH

Staff

J. D. Lineham, Chief of the Petroleum and Natural Gas Branch	Victoria
R. R. McLeod, Senior Petroleum Engineer and Chairman of the Board of Arbitration	Victoria
A. N. Lucie-Smith, Senior Petroleum Engineer and Chairman of the Conservation Committee	Victoria
W. L. Ingram, Petroleum Engineer	Victoria
K. C. Gilbart, Petroleum Engineer	Victoria
S. S. Cosburn, Mineral Engineer (Geology)	Victoria
D. L. Griffin, Mineral Engineer (Geology)	Victoria
T. A. Mackenzie, Engineering Assistant	Victoria
P. K. Huus, Engineering Assistant	Victoria
G. E. Blue, Petroleum Engineer	Dawson Creek
R. N. Thompson, Petroleum Engineer	Dawson Creek
H. B. Fulton, Assistant Geologist	Dawson Creek
H. A. Sharp, Engineering Assistant	Dawson Creek
E. N. Jernslet, Field Survey Assistant	Dawson Creek

The following are in charge of certain sections within the Branch: R. R. McLeod, reservoir engineering; A. N. Lucie-Smith, reserves; W. L. Ingram, development engineering; S. S. Cosburn, geology; T. A. Mackenzie, well information and statistics; G. E. Blue, field office.

Staff Changes

H. A. Sharp joined the field staff as an engineering assistant on March 31st and R. N. Thompson as a petroleum engineer on May 1st.

D. L. Griffin joined headquarters staff as a geologist on June 11th.

W. L. Ingram was transferred to Victoria from Dawson Creek on July 28th, and E. N. Jernslet was transferred from Victoria to the field staff on November 24th.

The Petroleum and Natural Gas Branch is responsible for the administration of the "Regulation Governing the Drilling of Wells and the Production and Conservation of Oil and Natural Gas" made pursuant to the "Petroleum and Natural Gas Act, 1954."

The regulation provides for the use of efficient and safe practices in the drilling, completion, and abandonment of wells; for the orderly development of fields discovered within the Province; and for the conservation and prevention of waste of oil and natural gas within the reservoir and during production operations.

The Branch, in addition to continuous field inspection of drilling and producing operations, makes studies relative to conservation.

Board of Arbitration

Chairman: R. R. McLeod, engineer. Members: A. W. Hobbs, solicitor; S. G. Preston, agrologist.

The Board of Arbitration, responsible to the Minister of Mines, held hearings in 1958 at Fort St. John and Pouce Coupe.

Seventeen applications, concerning right of entry came before the Board. Of these, one application was not processed because the operator did not effect entry; three were settled by private agreement; one was adjourned at the request of the land-owner; one was settled by a Board award order with the agreement and consent of both parties; six were settled by award orders of the Board; and five award orders were pending at the end of the year.

R. R. McLeod, of the Department of Mines, was, at his request, replaced as Chairman of the Board on November 28th by A. W. Hobbs, of the Department of the Attorney-General. Mr. McLeod remained as a member of the Board.

Conservation Committee

Chairman: A. N. Lucie-Smith, engineer. Members: N. D. McKechnie, geologist; M. H. A. Glover, economist.

During 1958 the Conservation Committee considered two major matters which had been referred to it by the Minister:—

(1) Whether production of gas from the Buick Creek sandstone at West Buick Creek should be allowed while there was apparently an accumulation of commercial oil in the same horizon down dip on the northeast flank; and

(2) Whether the allowable production of a gas well may, in certain instances, be increased over the limit in force of 25 per cent of its open-flow potential by the application of the so-called "Alberta formula."

With regard to the first problem, conditional permission had been given on November 13th, 1957, to start producing gas from the crestal wells at West Buick Creek so that static bottom hole pressures could be taken continually in the oil wells, which had been shut in for that purpose. Gas production commenced on November 30th, 1957, and, with the co-operation of the operator, Pacific Petroleums Ltd., it was established at the beginning of March, 1958, that there was definite communication between the oil wells on the northeast flank and the gas wells on the crest of the structure; also, by this time, a well on the upper part of the southwest flank had started producing some oil with the gas and condensate. The Minister, acting on the advice of the Committee, ordered, on May 29th, all Buick Creek sandstone gas wells in the West Buick Creek field to be shut in, pending further information which might become available from further drilling. A well subsequently drilled between two of the oil wells on the northeast flank showed the formation to lack porosity, and by this time the production of the oil wells, which had been put back on the pump after the gas wells had been shut in, had declined considerably, both of which facts cast some doubt as to the extent of the oil accumulation. In view of this the operator was allowed to reopen the gas wells on September 5th on condition that two additional wells were drilled on the southwest flank at locations to be selected by the Committee to investigate the reservoir conditions there. The results of this additional drilling showed that the oil probably occurs in small patches around the perimeter of the structure with impermeable areas between, and that the reserve would probably be negligible compared with that of the gas. The Committee recommended that West Buick Creek, as far as the Buick Creek sandstone was concerned, should be produced as a gasfield and not an oilfield.

With regard to the second matter, the Committee recommended that the 25-per-cent rule should continue to apply to all gas wells, as there was still insufficient reservoir data available to allow the application of a formula, and no formula had yet been unreservedly accepted by any regulatory body.

GRUB-STAKING PROSPECTORS

Under authority of the "Prospectors' Grub-stake Act" the Department of Mines has provided grub-stakes each year since 1943 to a limited number of applicants able to qualify. An amendment to the Act in 1958 authorized an increase in the maximum allowable grub-stake to $400, with an additional amount up to $300 for travelling expenses.

To qualify at the present time the Department requires that the applicant shall be a physically fit male British subject, holder of a valid free miner's certificate, who has

been resident in the Province during the year preceding his application for a grub-stake, or who has been honourably discharged from Her Majesty's services, who is between the ages of 18 and 70, and who can identify common rocks and minerals.

It is required that in order to obtain the maximum grub-stake, he agree to spend at least sixty days actually prospecting in the area of his choice in British Columbia considered favourably by officers of the Department of Mines. If he prospects a lesser time, the grant will be reduced proportionately. In the past, rebates have been recovered from grantees to whom payments have exceeded the proper amount for the time and effort devoted to prospecting.

The grantee must not accept pay from any other source for services rendered during the period credited to the grub-stake. At the end of the season he shall provide the Department with a diary and maps outlining his activities while working under the grub-stake. Any discoveries made, staked, and recorded are exclusively his own property.

Statistical information covering the grub-stake programme since its inception is given in the following table:—

GRUB-STAKE STATISTICS

Field Season	Approximate Expenditure	Men Grub-staked	Samples and Specimens Received at Department Laboratory	Mineral Claims Recorded
1943	$18.500	90	773	87
1944	27,215	105	606	135
1945	27,310	84	448	181
1946	35.200	95	419	162
1947	36,230	91	469	142
1948	35,975	92	443	138
1949	31.175	98	567	103
1950	26,800	78	226	95
1951	19.385	63	255	137
1952	19,083	50	251	95
1953	17,850	41	201	141
1954	19,989	48	336	123
1955	21,169	47	288	183
1956	20,270	47	163	217
1957	22,000	46	174	101
1958	24,850	47	287	211

Samples and specimens received from grub-staked prospectors are spectrographed, assayed, and tested for radioactivity. Mineralogical identifications are made on request.

Of the forty-seven grantees in 1958, twenty-four were given grants for the first time and eight of these proved unsatisfactory. Two grantees who had received previous grub-stakes were also struck from the list for unsatisfactory work. Five grantees, who for various reasons were unable to fulfil the terms and conditions of the grant, received only partial payment. Grub-staked prospectors worked in seventeen out of the twenty-four mining divisions.

D. H. Rae again gave able service in interviewing applicants and supervising grantees in the field. The following notes have been largely compiled from Mr. Rae's own observations while in the field and from information provided in the diaries of the grantees.

Atlin Mining Division.—Some work was done near Ash Mountain west of Tuya Lake, where the surface was found to be heavily drift covered. Some of this work extended into the Liard Mining Division. On both sides of Edasp Lake, outcrops of granite were encountered. Nothing of interest was reported in the Tuya and Stikine Ranges. Some small pegmatite dykes were found along the westerly contact of the Cassiar Batholith. More work will be done here. Work was also done in the Eaglehead Lake area, where barren quartz veins were found in limestone intruded by granodiorite. A large exposure of serpentine was found, but no asbestos was observed. South of the lake narrow stringers of asbestos were found in a peridotite zone.

Cariboo Mining Division.—West of Kleena Kleene some prospecting was done in the vicinity of Perkins Peak. In a wide exposure of argillite some rusty sulphides were found in cracks and fissures, along with some green and blue copper stain. Samples taken failed to show commercial values. About 20 miles southwest of McLeod Lake some prospecting was done but nothing of interest was reported.

Clinton Mining Division.—Some work was done in several areas between Tatla and Tatlayoko Lakes. A diorite-greenstone contact was prospected between Potato and Skinner Mountains. Nothing of interest was found. Some work was also done around the headwaters of Churn Creek. Nothing important was found. At the headwaters of Ruby, Bear, and Garnet Creeks more work was done. Scattered exposures of diorite showing considerable feldspar and hornblende and several large outcrops of serpentine were reported.

Golden Mining Division.—Work was continued in the Brewer Creek-Dutch Creek areas west of Canal Flats. At Thorald Creek narrow quartz veins cutting altered sedimentary rocks were prospected and sampled but no values were found. Nothing of interest was reported from work done in the Ben Abel Lake area.

Kamloops Mining Division.—Considerable work was done in the area between Lakeview and Eagle Creeks and some valuable gold-bearing quartz was found. Several heavily oxidized outcrops were investigated and found to be worth further prospecting. On Shuswap Lake some prospecting was done close to both Blind and Eagle Bays. The exposed rock is mainly andesite, chlorite schist, and limestone showing some scattered pyrite, but having no economic value. Some work was also done between Blind Bay, White Lake, Charcoal Creek, Blanc Creek, and around Pement and Wallensteen Lakes, but nothing of interest was reported.

Liard Mining Division.—Some work was done around Tuchodi Lakes and in the Tetsa River valley, where some copper float was found. Prospecting was carried on as far as 5 miles north and northeast of Tuya Lake, and in the Mount McGavin area. Considerable lava, coarse granodiorite, mica schist, and serpentine was encountered, but nothing of economic importance was reported. Some more work was also done near the headwaters of Blue River, near Jennings Lakes, and near Tootsee Lake. In the Rosella Creek area, outcrops of limestone, schist, and barite were investigated, and at Poorman Lake some green copper stain was found, and fine colours of gold panned in a small creek. Nothing of geological importance was found in ground explored at the head of Moody Creek, near Snow Creek, or on the Horseranch Range of mountains. The ground between McDonald Creek and Racing River received some further attention. This area is all the more interesting since Magnum mines started work in the district. Adjacent to the Tetsa Range, quartz, hematite, and magnetite along with small amounts of copper were found, although nothing proved to be of commercial importance. At Nine Mile Creek northeast of Telegraph Creek some inconclusive work was done, and from a base camp established near Adsit Lake a large area was prospected, and some basic rocks, narrow dykes, and granitic rocks were noted.

Lillooet Mining Division.—Some prospecting was done in the Bridge River area, extending from Pearson Pond to Spruce Lake, and continuing on to Cardtable Mountain. Some attention was paid to an exposure of limestone and altered sediments, but nothing of importance was reported.

Nanaimo Mining Division.—Prospecting was continued in the Menzies Bay area north of Campbell River. Small outcrops of copper-bearing quartz were explored, but nothing of commercial value was reported. Inconclusive work was carried on around Wolf Mountain, Bonell Creek, and the old O.K. mine. Several samples were turned in containing good values in gold.

Nelson Mining Division.—At the south end of Kootenay Lake, prospecting was continued northwest of the old Bayonne mine, up the west fork of Goat River, and at the

headwaters of Cameron Creek. Interesting geological conditions were reported, but nothing of importance was found.

New Westminster Mining Division.—In the high, logged-off area adjacent to the northeast side of Weaver Lake numerous narrow mineralized veins containing copper, lead, and zinc minerals were found scattered through the exposed granite. These were thoroughly prospected, but no continuity or increase in width was found to exist. Several good exposures of copper ore were prospected on Agassiz Mountain, and further work is warranted in this area. Near the Alexandra Bridge in the Fraser Canyon an exposure of micaceous schist showing scattered mineralization of molybdenite received some attention. The values were too low to be of importance. A small amount of work was done several miles west of the Fraser River between Spuzzum and Clear Creeks. The area is very rugged, and no mineralization of interest was reported. East of Boston Bar, on the Anderson River, some inconclusive work was done. Exposures of slate, diorite, limestone, and serpentine were reported. Between Harrison Lake and the head of Spuzzum Creek much scattered molybdenite was found, but there was not enough concentration to make the area interesting.

Nicola Mining Division.—Some good work was done over an extensive area extending from Juliet westerly to the headwaters of Anderson River. Narrow pegmatites, gneissic granite, and considerable faulting were observed in the Murray Lake area. A feldspathetic dyke containing pyrites and some manganese minerals was observed near Alexander Lake, and at the headwaters of Anderson River many fine-grained andesitic and rhyolitic dykes were reported. No important mineral occurrences were found, but excellent prospecting was done. Some work was done on rusty outcrops between Stump and Napier Lakes, near Brookmere, east of Aspen Grove, and at the north end of Mamit Lake. Nothing of interest was reported.

Omineca Mining Division.—A great deal of prospecting was done in this mining division. In the Fraser Lake area, outcrops of granite and volcanics were prospected, and a small deposit of kaolin was reported to have been discovered. Some time was spent in the Dog Creek valley near Germansen Lake, in the Tarnezell Creek area, at the north end of Trembleur Lake, and adjacent to the portage on Stuart Lake, but nothing of interest was reported. At the end of the northwesterly arm of Stuart Lake some cinnabar float was found. Several narrow veins containing manganese were uncovered on McKelvey Island and on the adjacent mainland, but these were not of commercial value. On the north shore of Pinchi Lake, east of the old Pinchi Lake mercury mine, a large heavily faulted zone was given considerable attention. Some work was also done on and adjacent to the south shore, near the centre of Trembleur Lake.

Several other areas around Manson Creek and Old Hogem received considerable attention. These included Jackfish Creek, Twenty Mile Creek at the road crossing, Osilinka River to Steele Creek, Groundhog Creek valley, Wolverine Lake area, headwaters of Granite Creek, and southeast end of Manson Lakes. Some interesting float was found, and several areas showing interesting geological conditions were mapped for further attention. Some prospecting was done in the Cheztainya Lake and Humphrey Lake areas, which are mainly underlain by altered conglomerates with some surface exposures of volcanics and granite. Nothing of interest was found in the whole area.

From a base camp on the north side of Nation Lake, 6 miles from Nation River outlet, an extensive area was prospected. This work was finally concentrated on an exposure of low-grade copper mineralization close to the lake. Assays of samples taken here were not commercial. Some work was also done near the centre of the south shore of Tchentlo Lake, where outcrops of agglomerate, argillite, and serpentine were reported.

From the north end of Uslika Lake, extending northwesterly for 20 miles, a great deal of prospecting was done, and several new discoveries of copper mineralization were explored.

Similkameen Mining Division.—East of the Hope–Princeton Highway, in the Friday Creek area, a great deal of work was done prospecting successfully around some old workings. Narrow but high-grade exposures of bornite occur over a large area. More work will be done here. Some work was also done in the Railroad Creek valley and in the Coquihalla River area, including the valleys of Divide and Podunk Creeks, and much of the Sowaqua River valley. Rhyolite, argillite, iron-stained schist, some granodiorite, and dark-coloured serpentine were observed, and some stringers of brittle fibre asbestos up to 2 inches long were found in the serpentine. More work is warranted in this area.

Skeena Mining Division.—Some attention was paid to areas close to Diana Lake, Prudhomme Lake, and Rainbow Lake, where considerable magnetite was found. At Diana Lake some float carrying high values in silver and lead was picked up, but nothing was found in place. Sims Harbour on Porcher Island was investigated, and some narrow veins containing pyrite and chalcopyrite were found in granite but proved to be non-commercial. Close to Claxton some work was done along a granite-sedimentary contact, where a quartz vein containing iron pyrites was uncovered. On Kumealon Inlet a large area underlain by a pure variety of limestone was prospected extensively, and this is being investigated for use in the pulp industry.

Some work was also done on the Queen Charlotte Islands (Lyell Island), where the source of placer gold in a stream was under investigation. On Pitt Island one man continued his 1957 prospecting and turned in an excellent report of his findings over a large area. The area reported on included Elbow Point area, McCauley Island, Mink Trap Bay, Curtis Inlet, Union Passage, and Fin Island. This area shows a large variation in the nature of the underlying rock, viz.: Quartz-diorite, granodiorite, coarse limestone, biotite schist, gabbro, basalt, and monzonite. Nothing of commercial interest was reported.

Some work was also done around Alice Arm, Roundy Creek, Larcom Island, head of Hastings Arm, Donahue Creek, Lime Creek, and the south end of Porcher Island. Nothing of interest was reported.

Slocan Mining Division.—Work was continued in the vicinity of Burton, including Shannon Creek, Wilson Creek, Rodd Creek, Cariboo Creek, Bonanza Creek, Mosquito Creek, Rossland Creek, Scalping Knife Mountain, and Snow Creek. Some small showings of molybdenite in granite were reported from the Snow Creek area. Nothing of further interest was found.

Vancouver Mining Division.—Some work was done on the Toba River 8 miles from the head of Toba Inlet. Several high assays were obtained from float material, but no definite geological information is available. On Redonda Island further prospecting was done in the vicinity of a discovery of molybdenite made last year. Small exposures were found to be of commercial value, but no continuity was maintained in the deposit. In the steep mountainous country behind Woodfibre a great deal of work was done in trying to trace the Britannia shear zone. No important zones were found.

Victoria Mining Division.—Some work was done around Brow Creek, near Port Renfrew, and Harris Creek. The result of this work was inconclusive.

MUSEUMS

The Department has a large exhibit of mineral rock specimens in the Douglas Building, Victoria; collections are also displayed in the joint office in Vancouver and in the offices of the Inspectors of Mines in Nelson and Prince Rupert.

Specimens from the collection in Victoria, accumulated in a period of more than sixty years, are displayed in cases on the fourth floor of the Douglas Building. The collection includes specimens from many of the mines and prospects in the Province, and also specimens of type rocks and special minerals from British Columbia and elsewhere.

British Columbia material includes specimens collected by officers of the Department of Mines and specimens donated by property-owners. The collection also includes type specimens purchased from distributors. Other valued specimens or groups of specimens have been donated or loaned to the museum.

ROCK AND MINERAL SPECIMENS

Information regarding collections of specimens of rocks and minerals available to prospectors and schools in British Columbia may be obtained from the Chief of the Mineralogical Branch.

PUBLICATIONS

Annual Reports of the Minister of Mines, bulletins, and other publications of the Department, with prices charged for them, are listed in the Department of Mines List of Publications available from the Chief of the Mineralogical Branch.

Publications may be obtained from the offices of the Department in Victoria and elsewhere in the Province. They are also available for reference use in the Department's library (Mineralogical Branch) at Victoria, in the joint office in Vancouver, and in the offices of the Inspectors of Mines in Nelson and Prince Rupert, as well as in public libraries.

MAPS SHOWING MINERAL CLAIMS, PLACER CLAIMS, AND PLACER-MINING LEASES

From the details supplied by the locators, the approximate positions of mineral claims held by record and of placer-mining leases are shown on maps that may be inspected in the central records offices of the Department of Mines in Victoria and in Vancouver. Copies of these maps may be obtained on request. The boundaries of surveyed claims and leases are shown on the reference maps and other maps of the British Columbia Department of Lands and Forests.

JOINT OFFICES OF THE BRITISH COLUMBIA DEPARTMENT OF MINES AND THE DEPARTMENT OF MINES AND TECHNICAL SURVEYS, CANADA.

The Provincial Department's Inspector and Resident Engineer, the Gold Commissioner and Mining Recorder for the Vancouver Mining Division, and the officers of the Federal Geological Survey occupy one suite of offices. All official information relating to mining is now available to the public in the one suite of offices in Vancouver.

The services offered to the public include technical information on mining, the identification of mineral specimens, distribution of Federal and Provincial mining publications, a reference library, a display of rocks and minerals, and a central records office.

Topographic Mapping and Air Photography

A satisfactory year of accomplishment in surveys and mapping was had by the Surveys and Mapping Branch of the British Columbia Department of Lands and Forests, and by the Departments of Mines and Technical Surveys and of National Defence of the Canadian Government.

The British Columbia Government surveys for the final demarcation of the northern boundary of the Province were successfully concluded in 1958.

The Legal Surveys Division of the Surveys and Mapping Branch is responsible for cadastral surveys of all Crown lands in the Province and issued 608 sets of instructions for surveys spread over the populated area. Notable amongst these is an area of 4,170 acres in the Peace River district from Hudson Hope east to the Beatton River road. Forty-nine and one-half miles were surveyed for rights-of-way for new highways in the vicinity of Yahk to Kingsgate, West Summerland to Peachland, Burns Lake, Allison Lake, and Arras to Dawson Creek. In the course of such surveys, 251 old lot corners were replaced by permanent monuments.

The Air Division of the Surveys and Mapping Branch, experiencing ideal flying weather during the season, covered 20,000 square miles with narrow-angle 1-inch-to-20-chains scale vertical photography for the British Columbia Forest Service, and an additional 2,500 lineal miles of various types of photography for other Government branches. These record operations added 26,000 photographs to the Air Photo Library, bringing the total number of air photographs (Federal and Provincial) now on file at Victoria to 453,553.

The Interim Mapping Section of the Air Division completed approximately 30,000 square miles of 1-inch-to-40-chains scale mapping showing planimetry, watershed boundaries, and cadastral surveys, bringing the total area of the Province covered by this series to 224,000 square miles.

In the 1958 programme of operations the Topographic Division of the Surveys and Mapping Branch nearly doubled its 1957 programme by completing field control for twenty standard National Topographic map-sheets covering 7,600 square miles located in the following areas: Mabel Lake, Clinton, Tatlayoko, Taseko and Chilco Lakes, and an area east of Bella Coola.

Control was established for 1,315 square miles by sixty-one multiplex extensions for 1-inch-to-500-feet mapping with 10-foot contours in the vicinity of Vernon, and forty-eight extensions for 1-inch-to-1,000-feet mapping with 20-foot contours in the Chemainus and Nanaimo River areas.

The Multiplex Section of the Topographic Division completed eleven projects covering 3,042 square miles.

Map compilation and reproduction by the Geographic Division of the Surveys and Mapping Branch resulted in the publishing of thirteen maps, seven of which are new editions. Prominently featured during the year was the much requested two-sheet wall map of the Province—No. 1A—scale 1:1,000,000 (approximately 1 inch to 16 miles). Other new editions included four of the popular National Topographic series at 1-inch-to-2-miles scale, i.e., 82 E/NE—Upper Kettle River, 92 G/SE—Langley, 92 I/NW—Ashcroft, and 92 I/SW—Lytton, also two regional maps, i.e., 2C—Northerly Vancouver Island—scale 1 inch to 4 miles and 3H—Tête Jaune—scale 1 inch to 3 miles.

The Canadian Government Departments of Mines and Technical Surveys and of National Defence at Ottawa, working in close co-operation with Provincial agencies during 1958, completed the field work for sixty-two half-sheets of the National Topographic 1:50,000 series in the Province.

The 1958 Annual Report of the Deputy Minister of Lands contains key maps indicating coverage by air photographs and by topographic, interim, and lithographed maps. Further information concerning these and the corresponding Federal mapping may be obtained from the Director, Surveys and Mapping Branch, Department of Lands and Forests, Victoria.

Department of Mines and Technical Surveys

The Canadian Government Department of Mines and Technical Surveys, created by an Act of Parliament introduced in November, 1949, took over most of the branches and functions related to mining of the former Department of Mines and Resources. The Mines Branch, Geological Survey of Canada, and Surveys and Mapping Branch are the three branches of the Department of the most direct interest to the mining industry. Brief reference to the work of the Surveys and Mapping Branch in British Columbia is made in the preceding note headed "Topographic Mapping and Air Photography." A note on the Geological Survey of Canada follows this paragraph and is followed by a note on the Mines Branch.

GEOLOGICAL SURVEY OF CANADA

By an arrangement made at the time the Province of British Columbia entered Confederation, geological investigations and mapping in the Province are carried on by the Geological Survey of Canada. Several geological parties are in the field each year. Many excellent reports and maps covering areas of British Columbia have been issued by the Geological Survey of Canada, and they have made available a great amount of information that has been of much benefit to the mining and prospecting activities in British Columbia.

A branch office of the Geological Survey of Canada is maintained in Vancouver. Maps and reports on British Columbia can be obtained there. J. E. Armstrong is in charge of this office.

Field Work by Geological Survey of Canada in British Columbia, 1958

H. H. Bostock began the geological mapping of Squamish (92 G, W. ½) map-area.

H. Frebold studied Jurassic fauna and stratigraphy in the Tyaughton Lake area and south of Nelson.

J. G. Fyles completed the field study and mapping of the surficial deposits on the east coast of Vancouver Island between Cumberland and Campbell River (lowland parts of 92 F/10, 11, 13, and 14 and K/3 and 4).

H. Gabrielse conducted stratigraphic studies and geological reconnaissance of Kechika (94 L) and Rabbit River (94 M) map-areas.

H. W. Little began the revision of geological mapping in the Kettle River West Half (82 E, W. ½) map-area.

D. C. McGregor collected flora from Lower Cretaceous and adjacent strata in the foothills of Alberta and British Columbia.

B. R. Pelletier and W. B. Brady began and completed field work in the Tetsa River (94 K/9) map-area.

R. A. Price began geological mapping of the Fernie East Half (82 G, E. ½) map-area. This map-area extends into Alberta.

J. E. Reesor continued his study of granitic rocks, making detailed field studies within the Burton (82 F/13) and Passmore (82 F/12) map-areas.

E. F. Roots completed field work required to fill in gaps from Operation Stikine within Bowser Lake (104 A), Spatsizi (104 H), and Dease Lake (104 J) map-areas.

J. G. Souther completed similar work in Iskut River (104 B) map-area and in addition made a geological reconnaissance of Sumdum (104 F) map-area and the southern half of Tulsequah (104 K) map-area.

D. F. Stott completed stratigraphic studies of Cretaceous strata in the foothills of Alberta and British Columbia.

H. W. Tipper completed all but the northeast corner of Quesnel (93 B) map-area.

Publications of the Geological Survey

A total of fifteen publications of the Geological Survey of Canada relating to British Columbia was received by the British Columbia Department of Mines in 1958. A list of the fifteen publications will be supplied on request.

MINES BRANCH

The Mines Branch has branches dealing with mineral resources, mineral dressing and process metallurgy, physical metallurgy, radioactivity, and fuels and explosives. A total of six publications of the Mines Branch pertaining to British Columbia were received in 1958 by the British Columbia Department of Mines. A list of these publications will be supplied on request. They included tabular pamphlets dealing with coal mines, gold mines, stone quarries, petroleum refineries, and milling plants in Canada.