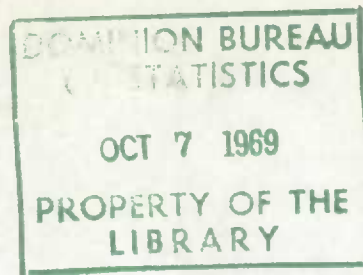


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ANNUAL



# GOLD MINING INDUSTRY

## 1966

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## INTRODUCTION

This report includes statistics for industries:

- 051 – Placer Gold Mines
- 052 – Gold Quartz Mines
- 053 – Copper-Gold-Silver Mines

of the standard Industrial Classification (S.I.C.) Manual (Catalogue No. 12-501).

### Definition of the Industry

Gold Mining in Canada is divided into three principal industries:

- (a) The recovery of gold from the gravels and sands of stream channels or beaches. For statistical purposes, this industry is defined as including establishments primarily engaged in mining gold by placer or hydraulic methods as well as the dressing and beneficiation of the ore and the production of bullion at the site of the mine. In the S.I.C. it corresponds to industry number 051 – Placer Gold Mines (see above).
- (b) The recovery of lode gold from ores in which gold is usually the most important economic constituent and quartz the predominant gangue mineral. For statistical purposes, this industry is defined as including establishments engaged in operating lode mines for gold as well as the dressing and beneficiating of the ore and the production of bullion at the site of the mine (see above).
- (c) Gold is often found in various other mineral deposits, more particularly in those of copper, and for this reason, the review of the Copper-Gold-Silver Mines industry is included here to complete a comprehensive survey of Canadian gold production. For statistical purposes, this industry is defined as including establishments primarily engaged in mining copper-gold-silver ores and in dressing and beneficiating such ores (see above).

Data presented in this report under the heading of Placer Gold Mines and Gold Quartz Mines (Tables 1 - 12)

and under the heading of Copper-Gold-Silver Mines (Tables 30 - 36) reflect the full implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept including an extension of the latter to cover total activities of mining establishments – see Explanatory Notes section of 1964 report. Commodity statistics, relevant technological details, etc. are presented along the same general lines as in earlier issues of this report.

The introduction of the final stage of the establishment concept in the annual Census of Mining resulted in many changes as evidenced in the comparative series of statistics shown in the tables for each industry (Tables 1 and 2, 5 and 6 and 30 and 31) – see Explanatory Notes and particularly the section dealing with Metal Mines. In addition, the tables reflect a reduction in the number of establishments because of the exclusion of non-producers. These latter are no longer being included as establishments under the new definition.

During 1966 the production of gold amounted to 3,319,474 troy ounces valued at \$125,177,364 compared with 3,606,031 ounces valued at \$136,051,943 in 1965. The record production was in 1941 when 5,345,179 ounces were produced at a valuation of \$205,789,392.

Ontario continued to be the leading producer of gold with 50 per cent of the total. Quebec, in second position, produced 28 per cent and Northwest Territories accounted for 13 per cent of the total. The other provinces ranked in the following order: British Columbia, Manitoba, Yukon, Saskatchewan, Newfoundland, New Brunswick, Alberta and Nova Scotia.

The price of gold in Canadian funds averaged \$37.71 per troy ounce. It ranged from \$37.58 per troy ounce in July 1965 to \$37.91 per troy ounce in December. The fluctuations were due to foreign exchange rates. The Royal Canadian Mint purchased gold on the basis of \$(U.S.) 35.00 per troy ounce. The United States dollar rose above par value in June 1961. It had been discounted since March, 1952. In May 1962 the price of the Canadian dollar on foreign exchange was pegged.

## SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- p preliminary figures.
- \* revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.



## PLACER GOLD MINES

This portion of the report includes statistics for industry 051 - Placer Gold Mines of the Standard Industrial Classification Manual (Catalogue No. 12-501).

Most of the placer gold was produced in the Yukon and British Columbia; small quantities were recovered in Alberta.

In 1966 a total of 43,369 troy ounces of fine gold were recovered from crude gold obtained from Canadian alluvial deposits. This represented a decrease from the preceding year. Reviewing the past thirty years, it is noted that the peak of production of placer gold occurred in 1939, and that the lowest annual output was in 1944.

**Quebec.**—After many years of no production there was a recorded output of 38 ounces in 1951 and 39 ounces in 1952, none in 1953, 16 ounces in 1954, nil in 1955-1960, 478 ounces in 1961, 117 ounces in 1962, nil in 1963, 279 ounces in 1964, 442 ounces in 1965 and nil in 1966.

**Saskatchewan and Alberta.**—The small amount of gold, considered as being placer in origin, received at the Royal Canadian Mint, Ottawa, is assumed to have come from along the North Saskatchewan River. There has been activity in this district, in the vicinity of Edmonton, dating from about 1860.

**British Columbia.**—It has been found impractical to obtain complete reports for each individual placer mining operation in British Columbia inasmuch as a considerable quantity of the crude placer gold is recovered annually by prospectors of no fixed abode who, in many instances, market their recoveries through local merchants and banks. Recoveries in 1966 were made chiefly from deposits located in the Atlin and Cariboo districts. Output was estimated at 1,204 troy ounces.

**Yukon.**—About 96 per cent of the placer gold recovered in Canada during 1966 was found in the creeks of the Yukon. Production in 1966 totalled 41,983 troy ounces.

TABLE 1. Principal Statistics, Placer Gold Mines,<sup>1</sup> 1962 - 66

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Year | Estab-<br>lish-<br>ments | Mining activity                   |                       |       |   |   |                                |                | Total activity                 |                  |           |                          |                |
|------|--------------------------|-----------------------------------|-----------------------|-------|---|---|--------------------------------|----------------|--------------------------------|------------------|-----------|--------------------------|----------------|
|      |                          | Production and<br>related workers |                       |       | Cost of<br>fuel and<br>elec-<br>tricity | Cost of<br>materials<br>and<br>supplies | Value<br>of<br>produc-<br>tion | Value<br>added | Working owners<br>and partners |                  | Employees |                          | Value<br>added |
|      |                          | Number                            | Man-<br>hours<br>paid | Wages |   |   |                                |                | Number                         | With-<br>drawals | Number    | Salaries<br>and<br>wages |                |
|      |                          |                                   |                       |       |   |   |                                |                |                                |                  |           |                          |                |
|      | No.                      |                                   | '000                  |       | \$'000                                  |   |                                |                |                                | \$'000           |           | \$'000                   |                |
| 1962 | 24                       | 190                               | 518                   | 1,097 | 108                                     | 402                                     | 2,324                          | 1,814          | 16                             | 58               | 214       | 1,273                    | 1,904          |
| 1963 | 24                       | 204                               | 510                   | 1,101 | 112                                     | 508                                     | 2,558                          | 1,946          | 18                             | 75               | 231       | 1,297                    | 2,042          |
| 1964 | 22                       | 177                               | 495                   | 1,078 | 111                                     | 521                                     | 2,338                          | 1,706          | 18                             | 80               | 205       | 1,263                    | 1,806          |
| 1965 | 21                       | 152                               | 380                   | 889   | 101                                     | 407                                     | 1,863                          | 1,355          | 17                             | 60               | 176       | 1,075                    | 1,447          |
| 1966 | 22                       | 105                               | 260                   | 745   | 93                                      | 344                                     | 1,775                          | 1,339          | 18                             | 82               | 124       | 936                      | 1,628          |

<sup>1</sup> Refer to Explanatory Notes, in 1964 issue of this report, for description of concepts and definitions.

TABLE 2. Employment and Payroll, Placer Gold Mines, 1962 - 66

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Year | Employees                      |        |       |        |                                |        |                        |        |       |        | Salaries and wages             |       |                                |                             |       |
|------|--------------------------------|--------|-------|--------|--------------------------------|--------|------------------------|--------|-------|--------|--------------------------------|-------|--------------------------------|-----------------------------|-------|
|      | Production and related workers |        | Other |        | Adminis-<br>trative and office |        | Sales and distribution |        | Total |        | Production and related workers | Other | Adminis-<br>trative and office | Sales and distri-<br>bution | Total |
|      | Mining                         |        |       |        |                                |        |                        |        |       |        |                                |       |                                |                             |       |
|      | Male                           | Female | Male  | Female | Male                           | Female | Male                   | Female | Male  | Female | Mining                         |       |                                |                             |       |
|      | number                         |        |       |        |                                |        |                        |        |       |        | \$'000                         |       |                                |                             |       |
| 1962 | 186                            | 4      | -     | -      | 18                             | 6      | -                      | -      | 204   | 10     | 1,097                          | -     | 177                            | -                           | 1,273 |
| 1963 | 200                            | 4      | -     | -      | 23                             | 4      | -                      | -      | 223   | 8      | 1,101                          | -     | 196                            | -                           | 1,297 |
| 1964 | 173                            | 4      | -     | -      | 23                             | 5      | -                      | -      | 196   | 9      | 1,078                          | -     | 184                            | -                           | 1,263 |
| 1965 | 150                            | 2      | -     | -      | 18                             | 6      | -                      | -      | 168   | 8      | 889                            | -     | 186                            | -                           | 1,075 |
| 1966 | 103                            | 2      | -     | -      | 14                             | 5      | -                      | -      | 117   | 7      | 745                            | -     | 191                            | -                           | 936   |

See footnote Table 1.

## GOLD QUARTZ MINES

This report includes statistics for industry 052—Gold Quartz Mines of the Standard Industrial Classification Manual (Catalogue No. 12-501).

The greater part of Canada's gold comes from the Canadian Shield, an immense area of precambrian rocks, extending from the Labrador Coast westward almost to the mouth of the Mackenzie River. The area of the Shield is roughly 1,825,000 square miles, almost half of Canada. The deposits of the Shield are of two main types, namely, quartz veins, from

which most of the gold, up to the present time, has been won, and sulphide deposits which produce a smaller but very considerable proportion. The second great source of gold in Canada has been the Western or Cordilleran section, comprising British Columbia and the Yukon Territory, the Gold production from this section including relatively large quantities obtained from alluvial deposits. In Nova Scotia gold was mined as early as 1862 but in late years the production in this province has dwindled to insignificance.

**TABLE 3. Principal Statistics, Gold Quartz Mines, 1962 - 66**  
Basis: Revised Standard Industrial Classification and New Establishment Concept

| Year | Estab-<br>lish-<br>ments | Mining                            |                       |        |   |   |                        |                | Total activity                 |                  |           |                          |                |
|------|--------------------------|-----------------------------------|-----------------------|--------|---|---|------------------------|----------------|--------------------------------|------------------|-----------|--------------------------|----------------|
|      |                          | Production and<br>related workers |                       |        | Cost of<br>fuel and<br>elec-<br>tricity | Cost of<br>materials<br>and<br>supplies | Value of<br>production | Value<br>added | Working owners<br>and partners |                  | Employees |                          | Value<br>added |
|      |                          | Number                            | Man-<br>hours<br>paid | Wages  |   |   |                        |                | Number                         | With-<br>drawals | Number    | Salaries<br>and<br>wages |                |
|      | No.                      |                                   | '000                  |        | \$'000                                  |   |                        |                |                                | \$'000           |           | \$'000                   |                |
| 1962 | 52                       | 13,114                            | 28,800                | 52,663 | 6,851                                   | 37,295                                  | 150,791                | 106,644        | —                              | —                | 15,211    | 64,910                   | 108,243        |
| 1963 | 51                       | 12,456                            | 27,961                | 50,986 | 6,639                                   | 34,728                                  | 145,622                | 104,254        | —                              | —                | 14,408    | 62,436                   | 106,156        |
| 1964 | 49                       | 11,843                            | 26,990                | 51,096 | 6,868                                   | 35,811                                  | 142,703                | 100,025        | —                              | —                | 13,807    | 63,192                   | 102,398        |
| 1965 | 56                       | 11,061                            | 24,329                | 49,183 | 6,914                                   | 36,501                                  | 137,943                | 94,529         | —                              | —                | 12,979    | 61,345                   | 97,875         |
| 1966 | 54                       | 9,758                             | 20,834                | 46,905 | 6,348                                   | 32,914                                  | 132,290                | 93,028         | 4                              | 24               | 11,560    | 58,133                   | 94,123         |

**TABLE 4. Employment and Payroll, Gold Quartz Mines, 1962 - 66**  
Basis: Revised Standard Industrial Classification and New Establishment Concept

| Year and province | Employees                      |        |       |        |                                |        |                        |        |        |        | Salaries and wages             |       |                                |                        |        |
|-------------------|--------------------------------|--------|-------|--------|--------------------------------|--------|------------------------|--------|--------|--------|--------------------------------|-------|--------------------------------|------------------------|--------|
|                   | Production and related workers |        | Other |        | Adminis-<br>trative and office |        | Sales and distribution |        | Total  |        | Production and related workers | Other | Admin-<br>istrative and office | Sales and distribution | Total  |
|                   | Manufacturing                  |        |       |        |                                |        |                        |        |        |        | Manufacturing                  |       |                                |                        |        |
|                   | Male                           | Female | Male  | Female | Male                           | Female | Male                   | Female | Male   | Female | Manufacturing                  |       |                                |                        |        |
|                   | number                         |        |       |        |                                |        |                        |        |        |        | \$'000                         |       |                                |                        |        |
| 1962 . . . . .    | 13,054                         | 60     | —     | —      | 1,923                          | 174    | —                      | —      | 14,977 | 234    | 52,663                         | —     | 12,247                         | —                      | 64,910 |
| 1963 . . . . .    | 12,399                         | 57     | —     | —      | 1,796                          | 156    | —                      | —      | 14,195 | 213    | 50,986                         | —     | 11,449                         | —                      | 62,436 |
| 1964 . . . . .    | 11,775                         | 68     | —     | —      | 1,805                          | 159    | —                      | —      | 13,580 | 227    | 51,096                         | —     | 12,096                         | —                      | 63,192 |
| 1965 . . . . .    | 10,989                         | 72     | 16    | —      | 1,743                          | 159    | —                      | —      | 12,748 | 231    | 49,183                         | 68    | 12,093                         | —                      | 61,345 |
| 1966 . . . . .    | 9,708                          | 50     | 46    | 21     | 1,560                          | 175    | —                      | —      | 11,314 | 246    | 46,905                         | 331   | 10,897                         | —                      | 58,133 |

**TABLE 5. Production and Related Workers, Gold Quartz Mines, 1965 and 1966**

| Year and month | Mine    |        |             | Mill  |        |
|----------------|---------|--------|-------------|-------|--------|
|                | Surface |        | Underground | Male  | Female |
|                | Male    | Female | Male        |       |        |
|                | number  |        |             |       |        |
| 1965           |         |        |             |       |        |
| January        | 2,673   | 63     | 7,727       | 1,167 | 8      |
| February       | 2,710   | 60     | 7,552       | 1,137 | 8      |
| March          | 2,687   | 62     | 7,538       | 1,137 | 8      |
| April          | 2,649   | 64     | 7,471       | 1,179 | 8      |
| May            | 2,690   | 67     | 7,377       | 1,204 | 9      |
| June           | 2,841   | 67     | 7,265       | 1,252 | 10     |
| July           | 2,866   | 67     | 7,169       | 1,287 | 10     |
| August         | 2,760   | 62     | 6,933       | 1,271 | 7      |
| September      | 2,522   | 62     | 6,604       | 1,199 | 8      |
| October        | 2,520   | 65     | 6,661       | 1,184 | 8      |
| November       | 2,464   | 66     | 6,753       | 1,174 | 9      |
| December       | 2,420   | 67     | 6,672       | 1,147 | 9      |
| Averages       | 2,650   | 64     | 7,144       | 1,195 | 8      |
| 1966           |         |        |             |       |        |
| January        | 2,420   | 44     | 6,666       | 1,139 | 1      |
| February       | 2,422   | 47     | 6,708       | 1,139 | 1      |
| March          | 2,400   | 46     | 6,561       | 1,119 | 1      |
| April          | 2,350   | 43     | 6,343       | 1,099 | 1      |
| May            | 2,376   | 44     | 6,284       | 1,101 | 1      |
| June           | 2,498   | 48     | 6,319       | 1,167 | 1      |
| July           | 2,545   | 53     | 6,369       | 1,166 | 1      |
| August         | 2,395   | 50     | 6,196       | 1,140 | 1      |
| September      | 2,171   | 52     | 5,951       | 1,092 | 1      |
| October        | 2,151   | 46     | 5,841       | 1,062 | 1      |
| November       | 2,159   | 49     | 6,018       | 1,032 | 1      |
| December       | 2,137   | 46     | 5,948       | 1,017 | 1      |
| Averages       | 2,335   | 47     | 6,267       | 1,106 | 1      |

TABLE 6. Purchased Fuel and Electricity Used, Gold Quartz Mines, 1965 and 1966

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Description   | 1965              |        | 1966        |        |
|---|-------------------|--------|-------------|--------|
|   | Quantity          | Cost   | Quantity    | Cost   |
|   |                   | \$'000 |             | \$'000 |
| 1. Large establishments reporting commodity detail:             |                   |        |             |        |
| Bituminous coal:  |                   |        |             |        |
| (a) From Canadian mines . . . . .                               | ton 177           | 3      | 97          | 2      |
| (b) Imported . . . . .  | " 7,438           | 131    | 6,225       | 108    |
| Sub-bituminous coal (from Alberta mines only) . . . . .         | —                 | —      | —           | —      |
| Anthracite coal . . . . .                                       | ton 822           | 18     | 39          | 1      |
| Lignite coal . . . . .  | " 21              | —      | —           | —      |
| Coke . . . . .  | " 15              | —      | 1           | —      |
| Gasoline (including gasoline used in cars and trucks) . . . . . | Imp. gal. 331,490 | 137    | 305,820     | 132    |
| Fuel oil including kerosene or coal oil . . . . .               | " 3,974,915       | 840    | 4,375,258   | 867    |
| Wood . . . . .  | cord 1,463        | 18     | 793         | 13     |
| Gas:  |                   |        |             |        |
| (a) Liquefied petroleum gases . . . . .                         | Imp. gal. 24,034  | 7      | 32,692      | 10     |
| (b) Other manufactured gas . . . . .                            | —                 | —      | —           | 10     |
| (c) Natural gas . . . . .                                       | M cu. ft. 248,572 | 147    | 201,719     | 120    |
| Other fuel . . . . .  | —                 | 83     | —           | 53     |
| Electricity purchased . . . . .                                 | kwh. 848,382,374  | 5,528  | 737,041,234 | 5,031  |
| Steam purchased . . . . .                                       | —                 | —      | —           | —      |
| 2. Small establishments not reporting commodity detail:         |                   |        |             |        |
| Estimate for fuel and electricity . . . . .                     | —                 | —      | —           | —      |
| 3. All establishments:  |                   |        |             |        |
| Total fuel and electricity used . . . . .                       | —                 | 6,914  | —           | 6,348  |
| Electricity generated: (a) For own use . . . . .                | kwh. 41,137,358   | —      | 37,225,031  | —      |
| (b) For sale . . . . .  | " 1,621,310       | 87     | 1,575,908   | 109    |

TABLE 7. Materials and Supplies,<sup>1</sup> Gold Quartz Mines, 1965 and 1966

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Description  | Cost   |        |
|--|--------|--------|
|  | 1965   | 1966   |
|  | \$'000 |        |
| Ore or other semi-processed materials purchased and used in mine mill operations . . . . . | 11     | 8      |
| Containers, shipping materials and supplies used . . . . .                                 | 3      | 4      |
| Operating, maintenance and repair supplies used (excluding fuel) . . . . .                 | 25,975 | 22,154 |
| Amount paid out to others for work done on materials owned by establishments:              |        |        |
| To smelters and/or refineries . . . . .  | 1,438  | 1,507  |
| To others (mining, milling etc.) . . . . .   | 9,073  | 9,241  |
| Totals . . . . .   | 36,500 | 32,914 |

<sup>1</sup> Refer to Explanatory Notes, in 1964 issue of this report, for explanation of differences in Tables 11 and 12 with data published in earlier years.

TABLE 8. Value of Production, Gold Quartz Mines, 1965 and 1966

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Description  | Value   |         |
|--|---------|---------|
|  | 1965    | 1966    |
|  | \$'000  |         |
| Value of production . . . . .  | 115,845 | 109,041 |
| Amount received in payment for work done on materials and products owned by others . . . . . | 7,040   | 8,182   |
| Subsidies received . . . . .   | 15,058  | 15,067  |
| Total value of production and work done . . . . .  | 137,943 | 132,290 |



## MINERAL STATISTICS

TABLE 9. Ores Mined and Treated by the Gold Quartz Mines, 1957 - 66

| Year | Ore hoisted | Ore milled <sup>1</sup> | Crude ore shipped to smelters <sup>1</sup> | Low-grade sorted out | Tailings re-treated | Gold recovered as bullion | Gold in crude ore shipped | Gold in Concentrates, slag, etc. shipped |
|------|-------------|-------------------------|--|----------------------|---------------------|---------------------------|---------------------------|--|
|      | tons        |                         |  |                      |                     | troy ounces               |                           |  |
| 1957 | 14,354,879  | 13,894,311              | 253,607                                    | 215,397              | 1,212               | 3,695,666                 | 43,601                    | 26,712                                   |
| 1958 | 14,751,991  | 14,223,343              | 273,204                                    | 175,069              | 465                 | 3,829,460                 | 40,516                    | 51,499                                   |
| 1959 | 14,246,860  | 13,732,277              | 347,203                                    | 188,996              | 329                 | 3,763,954                 | 46,812                    | 40,391                                   |
| 1960 | 14,726,094  | 14,167,243              | 281,077                                    | 262,990              | 276                 | 3,837,743                 | 49,105                    | 50,364                                   |
| 1961 | 14,353,022  | 13,835,364              | 268,690                                    | 270,098              | 332                 | 3,692,596                 | 40,145                    | 33,627                                   |
| 1962 | 13,659,916  | 13,217,174              | 230,946                                    | 204,809              | 30                  | 3,436,481                 | 27,893                    | 25,793                                   |
| 1963 | 12,618,059  | 12,130,935              | 668,627                                    | 253,256              | 400                 | 3,203,763                 | 87,539                    | 21,267                                   |
| 1964 | 12,757,627  | 12,468,340              | 105,730                                    | 176,342              | —                   | 3,111,651                 | 13,156                    | 28,603                                   |
| 1965 | 12,042,354  | 11,734,875              | 92,412                                     | 257,743              | 130,237             | 2,899,122                 | 10,846                    | 42,639                                   |
| 1966 | 11,187,827  | 10,930,311              | 41,591                                     | 228,763              | 98,962              | 2,636,832                 | 5,407                     | 49,227                                   |

<sup>1</sup> Total crude ore treated.

TABLE 10. Shipments from Gold Quartz Mines, 1965 and 1966

|                               | Quantity | Total gross metal content |         |            |                    |
|-------------------------------|----------|---------------------------|---------|------------|--------------------|
|                               |          | Gold                      | Silver  | Copper     | Other <sup>1</sup> |
|                               | tons     | ounces                    |         | pounds     |                    |
| 1965                          |          |                           |         |            |                    |
| To smelters and mills:        |          |                           |         |            |                    |
| Gold ore                      | 92,412   | 10,846                    | —       | —          | —                  |
| Concentrates                  | 15,949   | 23,557                    | 74,645  | 9,647,192  | 13,221             |
| Slags, precipitates, residues | 296      | 19,082                    | 17,857  | 8,668      | —                  |
| Totals                        | 108,657  | 53,485                    | 92,502  | 9,655,860  | 13,221             |
| 1966                          |          |                           |         |            |                    |
| To smelters and mills:        |          |                           |         |            |                    |
| Gold ore                      | 41,591   | 5,407                     | 118     | —          | —                  |
| Concentrates                  | 20,213   | 34,293                    | 213,164 | 11,745,480 | 121,091            |
| Slags, precipitates, residues | 137      | 14,934                    | 38,462  | 13,832     | —                  |
| Totals                        | 61,941   | 54,634                    | 251,744 | 11,759,312 | 121,091            |

<sup>1</sup> Zinc.

TABLE 11. Gold and Silver Content, of Bullion, Produced of Ores, Concentrates, etc., Shipped, with Average Grade of Ore Shipped and Ore Milled at Gold Quartz Mines and the Average Price of Gold and Silver in Canadian Funds, 1957 - 66

| Year | Tonnage treated <sup>1,2</sup> | Gold content <sup>3</sup> | Silver content <sup>3</sup> | Ounces of fine gold per ton | Ounces of fine silver per ton | Average price of gold | Average price of silver |
|------|--------------------------------|---------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------|-------------------------|
|      |                                | fine ounces               |                             |                             |                               | \$ per oz.            |                         |
| 1957 | 14,147,918                     | 3,766,124                 | 643,146                     | .27                         | .05                           | 33.55                 | 0.874                   |
| 1958 | 14,490,652                     | 3,921,475                 | 707,794                     | .27                         | .05                           | 33.98                 | 0.868                   |
| 1959 | 14,079,480                     | 3,851,157                 | 629,465                     | .27                         | .04                           | 33.57                 | 0.878                   |
| 1960 | 14,448,320                     | 3,937,212                 | 887,697                     | .27                         | .06                           | 33.95                 | 0.889                   |
| 1961 | 14,104,054                     | 3,766,368                 | 643,931                     | .27                         | .05                           | 35.46                 | 0.943                   |
| 1962 | 13,448,120                     | 3,490,167                 | 597,778                     | .26                         | .04                           | 37.41                 | 1.165                   |
| 1963 | 12,799,562                     | 3,312,569                 | 572,501                     | .26                         | .04                           | 37.75                 | 1.384                   |
| 1964 | 12,514,070                     | 3,153,410                 | 598,229                     | .25                         | .05                           | 37.75                 | 1.400                   |
| 1965 | 11,827,287                     | 2,952,607                 | 550,717                     | .25                         | .05                           | 37.73                 | 1.400                   |
| 1966 | 10,971,902                     | 2,691,466                 | 662,320                     | .25                         | .06                           | 37.71                 | 1.400                   |

<sup>1</sup> Does not include tailings re-treated, but includes ore milled plus crude ore shipped to smelters.<sup>2</sup> Material discarded by sorting not included.<sup>3</sup> Relatively small quantities of gold and silver contained in concentrates, slags, etc., shipped and in cyanide solution in circuit may have originated in ores treated during the previous year; represents metal content of total bullion produced plus metal in ores or concentrates shipped to smelters.



TABLE 12. Milling Capacity of Operating Canadian Gold Mines, 1957 - 66

| Year                              | Nova Scotia | Quebec | Ontario | Manitoba | British Columbia | Northwest Territories | Yukon | Canada |
|-----------------------------------|-------------|--------|---------|----------|------------------|-----------------------|-------|--------|
| tons of 2,000 pounds per 24 hours |             |        |         |          |                  |                       |       |        |
| 1957                              | —           | 9,530  | 27,358  | 2,550    | 1,204            | 1,500                 | —     | 42,142 |
| 1958                              | —           | 10,500 | 27,292  | 2,550    | 1,264            | 1,500                 | —     | 43,106 |
| 1959                              | —           | 10,100 | 28,057  | 550      | 1,275            | 1,650                 | —     | 41,632 |
| 1960                              | —           | 9,650  | 28,035  | 550      | 1,229            | 1,661                 | —     | 41,125 |
| 1961                              | —           | 10,150 | 27,602  | 550      | 850              | 1,681                 | —     | 40,833 |
| 1962                              | —           | 10,150 | 27,386  | 550      | 850              | 1,691                 | —     | 40,627 |
| 1963                              | —           | 10,530 | 25,870  | 550      | 850              | 1,750                 | —     | 39,550 |
| 1964                              | —           | 9,400  | 26,500  | 550      | 920              | 1,880                 | —     | 39,250 |
| 1965                              | —           | 11,050 | 25,345  | 550      | 900              | 1,950                 | 125   | 39,920 |
| 1966                              | —           | 8,200  | 24,825  | 550      | 950              | 1,960                 | —     | 36,485 |

TABLE 13. Drilling Completed on Gold Quartz Deposits, 1965 and 1966

|  | Footage drilled <sup>1</sup> |            |
|--|------------------------------|------------|
|  | 1965                         | 1966       |
| feet   |                              |            |
| Diamond drilling for exploration (testing):            |                              |            |
| By companies with their own equipment and personnel    | 327,049                      | 237,632    |
| By contractors   | 1,022,949                    | 887,154    |
| Other drilling:  |                              |            |
| Diamond drilling for breaking rock or ore:             |                              |            |
| By companies with their own equipment and personnel    | 41,558                       | 108,939    |
| By contractors   | 52,081                       | 217,873    |
| Drilling by percussion and other machines <sup>2</sup> | 30,464,458 <sup>†</sup>      | 26,355,993 |

<sup>1</sup> Subject to revision as drilling was not reported by some new companies.<sup>2</sup> This is not complete as some companies do not compile these data.

Note: The value of diamonds in all forms (bits, etc.) purchased by gold mining companies in 1965 totalled \$69,678 and \$50,131 in 1966.

TABLE 14. Specified Taxes Paid by Companies engaged in Gold Quartz Mines Operations,<sup>1</sup> 1964 - 66

|   | 1964      | 1965      | 1966      |
|---|-----------|-----------|-----------|
| dollars   |           |           |           |
| Dominion income tax, including tax on non-operating revenue | 2,234,928 | 1,769,344 | 2,632,659 |
| Provincial tax  | 2,054,364 | 1,767,480 | 1,576,852 |
| Municipal tax   | 893,124   | 903,339   | 961,501   |
| Totals  | 5,182,416 | 4,440,163 | 5,171,012 |

<sup>1</sup> Includes related corporate activities associated with operations of gold-quartz mines.TABLE 15. Miscellaneous Expenditures Made by Companies engaged in Gold Quartz Mines Operations,<sup>1</sup> 1966

|  | \$'000 |
|--|--------|
| (a) Workmen's compensation   | 2,720  |
| (b) Silicosis assessment   | 826    |
| (c) Unemployment insurance   | 496    |
| (d) Aggregate cost of structures, roads, machinery, equipment, etc., built by or purchased from outside contractors of suppliers and chargeable to Fixed Assets Account  | 2,556  |
| (a) Book value of fixed assets (new structures, roads, machinery, equipment, etc., including major repairs and alterations) produced by own employees and chargeable to Fixed Assets Account   | 338    |
| (f) Other capital expenditures not reported in (d) and (e)   | 23     |
| (g) Cost of materials and supplies used in the production of machinery and equipment and in the construction of roads and new structures (including major repairs and alterations by own employees and chargeable to Fixed Assets Account) | 213    |
| (h) Cost of office supplies used during the year, not chargeable to Fixed Assets Account excludes cost of stamps and meter expenses  | 233    |

<sup>1</sup> Includes related corporate activities associated with Canadian operations of gold quartz mines not allocable separately elsewhere.

TABLE 16. Production of Gold in Canada, Fifty Years, 1917 - 66

| Year | Troy ounces | Value       | Year | Troy ounces | Value       |
|------|-------------|-------------|------|-------------|-------------|
|      |             | \$          |      |             | \$          |
| 1917 | 738,831     | 15,272,992  | 1942 | 4,841,306   | 186,390,281 |
| 1918 | 699,681     | 14,463,689  | 1943 | 3,651,301   | 140,575,088 |
| 1919 | 766,764     | 15,850,423  | 1944 | 2,922,911   | 112,532,073 |
| 1920 | 765,007     | 15,814,098  | 1945 | 2,696,727   | 103,823,990 |
| 1921 | 926,329     | 19,148,920  | 1946 | 2,832,554   | 104,096,359 |
| 1922 | 1,263,364   | 26,116,050  | 1947 | 3,070,221   | 107,457,735 |
| 1923 | 1,233,341   | 25,495,421  | 1948 | 3,529,608   | 123,536,280 |
| 1924 | 1,525,382   | 31,532,443  | 1949 | 4,123,518   | 148,446,648 |
| 1925 | 1,735,735   | 35,880,826  | 1950 | 4,441,227   | 168,988,687 |
| 1926 | 1,754,228   | 36,263,110  | 1951 | 4,392,751   | 161,872,873 |
| 1927 | 1,852,785   | 38,300,464  | 1952 | 4,471,725   | 153,246,016 |
| 1928 | 1,890,592   | 39,082,005  | 1953 | 4,055,723   | 139,597,985 |
| 1929 | 1,928,308   | 39,861,663  | 1954 | 4,366,440   | 148,764,611 |
| 1930 | 2,102,068   | 43,453,601  | 1955 | 4,541,962   | 156,788,528 |
| 1931 | 2,693,892   | 58,093,396  | 1956 | 4,383,863   | 151,024,080 |
| 1932 | 3,044,387   | 71,479,373  | 1957 | 4,433,894   | 148,757,143 |
| 1933 | 2,949,309   | 84,350,237  | 1958 | 4,571,347   | 155,334,370 |
| 1934 | 2,972,074   | 102,536,553 | 1959 | 4,483,416   | 150,508,275 |
| 1935 | 3,284,890   | 115,595,279 | 1960 | 4,628,911   | 157,151,527 |
| 1936 | 3,748,028   | 131,293,421 | 1961 | 4,473,699   | 158,637,366 |
| 1937 | 4,096,213   | 143,326,493 | 1962 | 4,178,396   | 156,313,794 |
| 1938 | 4,725,117   | 166,205,990 | 1963 | 4,003,127   | 151,118,045 |
| 1939 | 5,094,379   | 184,115,951 | 1964 | 3,835,454   | 144,788,388 |
| 1940 | 5,311,145   | 204,479,083 | 1965 | 3,606,031   | 136,051,943 |
| 1941 | 5,345,179   | 205,789,392 | 1966 | 3,319,474   | 125,177,364 |

Note: The above and subsequent tables include data on commodities produced by operators, which are classified to other industries. As an example: gold is produced by firms classified as, placer gold, gold quartz, copper-gold-silver, nickel-copper, silver-lead-zinc, and other metal mines.

TABLE 17. Production of Gold from Auriferous Quartz and Base Metal Mines, by Months, 1964 - 66

|           | Gold production from base metal mines |         |         | Gold production from auriferous quartz mines and placer deposits |           |           | Gold production from all types of mines |           |           |
|-----------|---------------------------------------|---------|---------|--|-----------|-----------|---|-----------|-----------|
|           | 1964                                  | 1965    | 1966    | 1964   | 1965      | 1966      | 1964                                    | 1965      | 1966      |
|           | troy ounces                           |         |         |  |           |           |   |           |           |
| January   | 52,192                                | 50,100  | 50,544  | 272,102  | 259,942   | 230,388   | 324,294                                 | 310,042   | 278,280   |
| February  | 46,764                                | 47,056  | 51,189  | 252,217  | 233,881   | 230,374   | 298,981                                 | 280,937   | 278,911   |
| March     | 51,755                                | 54,015  | 49,681  | 267,127  | 257,399   | 247,837   | 318,882                                 | 311,414   | 294,866   |
| April     | 53,744                                | 54,400  | 49,070  | 280,667  | 271,033   | 249,481   | 334,411                                 | 325,433   | 295,899   |
| May       | 43,967                                | 51,559  | 50,312  | 269,425  | 247,183   | 249,818   | 313,392                                 | 298,742   | 297,478   |
| June      | 52,178                                | 48,179  | 47,882  | 259,785  | 260,551   | 218,290   | 311,963                                 | 308,730   | 263,699   |
| July      | 50,084                                | 48,778  | 44,567  | 275,059  | 238,107   | 223,358   | 325,143                                 | 286,885   | 266,273   |
| August    | 56,152                                | 51,524  | 42,271  | 268,441  | 249,404   | 223,465   | 324,593                                 | 300,928   | 264,091   |
| September | 52,507                                | 47,471  | 41,993  | 260,167  | 244,481   | 225,233   | 312,674                                 | 291,952   | 271,574   |
| October   | 56,916                                | 50,389  | 45,888  | 273,232  | 251,497   | 217,833   | 330,148                                 | 301,886   | 269,672   |
| November  | 53,545                                | 50,925  | 41,520  | 274,799  | 246,471   | 210,410   | 328,344                                 | 297,396   | 259,751   |
| December  | 51,621                                | 47,463  | 47,972  | 261,008  | 244,223   | 230,098   | 312,629                                 | 291,686   | 278,980   |
| Totals    | 621,425                               | 601,859 | 562,889 | 3,214,029  | 3,004,172 | 2,756,585 | 3,835,454                               | 3,606,031 | 3,319,474 |

See Note under Table 16.

TABLE 18. Production of Gold,<sup>1</sup> by Provinces, 1957 - 66

| Year | Newfoundland |           | Nova Scotia |        | New Brunswick    |           | Quebec      |            | Ontario               |            | Manitoba    |           |
|------|--------------|-----------|-------------|--------|------------------|-----------|-------------|------------|-----------------------|------------|-------------|-----------|
|      | Troy ounces  | Value     | Troy ounces | Value  | Troy ounces      | Value     | Troy ounces | Value      | Troy ounces           | Value      | Troy ounces | Value     |
|      |              | \$        |             | \$     |                  | \$        |             | \$         |                       | \$         |             | \$        |
| 1957 | 9,755        | 327,280   | 45          | 1,510  | 240              | 8,052     | 1,006,895   | 33,781,327 | 2,578,206             | 86,498,811 | 120,008     | 4,026,268 |
| 1958 | 13,381       | 454,686   | 131         | 4,451  | 52               | 1,767     | 1,044,846   | 35,503,867 | 2,716,514             | 92,307,146 | 87,356      | 2,968,357 |
| 1959 | 13,411       | 450,207   | —           | —      | —                | —         | 999,388     | 33,549,455 | 2,683,449             | 90,083,383 | 51,186      | 1,718,314 |
| 1960 | 13,515       | 458,834   | 3           | 102    | —                | —         | 1,035,914   | 35,169,280 | 2,732,673             | 92,774,248 | 52,762      | 1,791,270 |
| 1961 | 14,429       | 511,652   | —           | —      | —                | —         | 1,054,029   | 37,375,868 | 2,637,720             | 93,533,551 | 57,747      | 2,047,709 |
| 1962 | 13,966       | 522,468   | —           | —      | 553              | 20,688    | 993,560     | 37,169,080 | 2,421,249             | 90,578,924 | 68,259      | 2,553,569 |
| 1963 | 12,318       | 465,004   | —           | —      | 1,128            | 42,582    | 917,229     | 34,625,395 | 2,338,854             | 88,291,739 | 53,084      | 2,003,921 |
| 1964 | 16,717       | 631,067   | 63          | 2,378  | 1,623            | 61,268    | 934,769     | 35,287,530 | 2,155,370             | 81,365,217 | 69,986      | 2,641,972 |
| 1965 | 23,657       | 892,555   | —           | —      | 1,659            | 62,592    | 905,380     | 34,159,082 | 1,946,003             | 73,420,747 | 67,685      | 2,553,687 |
| 1966 | 25,667       | 967,903   | 20          | 754    | 1,953            | 73,648    | 935,459     | 35,276,158 | 1,660,750             | 62,626,883 | 64,565      | 2,434,746 |
|      | Saskatchewan |           | Alberta     |        | British Columbia |           | Yukon       |            | Northwest Territories |            |             |           |
|      | Troy ounces  | Value     | Troy ounces | Value  | Troy ounces      | Value     | Troy ounces | Value      | Troy ounces           | Value      |             |           |
|      |              | \$        |             | \$     |                  | \$        |             | \$         |                       | \$         |             |           |
| 1957 | 75,236       | 2,524,168 | 416         | 13,957 | 229,113          | 7,686,741 | 73,962      | 2,481,425  | 340,018               | 11,407,604 |             |           |
| 1958 | 86,590       | 2,942,328 | 282         | 9,582  | 210,612          | 7,156,596 | 67,745      | 2,301,975  | 343,838               | 11,683,615 |             |           |
| 1959 | 78,588       | 2,638,199 | 200         | 6,714  | 184,312          | 6,187,354 | 66,960      | 2,247,847  | 405,922               | 13,626,802 |             |           |
| 1960 | 84,775       | 2,878,111 | 191         | 6,484  | 212,859          | 7,226,563 | 78,115      | 2,652,004  | 418,104               | 14,194,631 |             |           |
| 1961 | 70,784       | 2,510,000 | 171         | 6,064  | 164,467          | 5,832,000 | 66,878      | 2,371,494  | 407,474               | 14,449,028 |             |           |
| 1962 | 66,034       | 2,470,332 | 186         | 6,958  | 159,492          | 5,966,596 | 54,805      | 2,050,255  | 400,292               | 14,974,924 |             |           |
| 1963 | 64,813       | 2,446,691 | 132         | 4,983  | 159,473          | 6,020,106 | 55,211      | 2,084,215  | 400,885               | 15,133,409 |             |           |
| 1964 | 46,185       | 1,743,484 | 59          | 2,227  | 139,959          | 5,283,452 | 57,844      | 2,183,611  | 412,879               | 15,586,182 |             |           |
| 1965 | 46,173       | 1,742,061 | 200         | 7,546  | 117,764          | 4,443,118 | 45,031      | 1,698,975  | 452,479               | 17,071,580 |             |           |
| 1966 | 42,678       | 1,609,387 | 182         | 6,863  | 120,705          | 4,551,786 | 43,466      | 1,639,103  | 424,029               | 15,990,133 |             |           |

<sup>1</sup> From all sources in Canada.

TABLE 19. Production of Gold, by Provinces, according to Nature of Ores, 1966

| Year and province               | Placer gold | Auriferous quartz ores | Copper-gold silver ores | Nickel-copper ores | Silver-lead and other ores | Total     |
|---------------------------------|-------------|------------------------|-------------------------|--------------------|----------------------------|-----------|
|                                 | troy ounces |                        |                         |                    |                            |           |
| 1966                            |             |                        |                         |                    |                            |           |
| Newfoundland . . . . .          | —           | —                      | 18,745                  | —                  | 6,922                      | 25,667    |
| Nova Scotia . . . . .           | —           | 20                     | —                       | —                  | —                          | 20        |
| New Brunswick . . . . .         | —           | —                      | 559                     | —                  | 1,394                      | 1953      |
| Quebec . . . . .                | —           | 595,708                | 319,172                 | 3,956              | 16,623                     | 935,459   |
| Ontario . . . . .               | —           | 1,598,336              | 9,731                   | 51,605             | 1,078                      | 1,660,750 |
| Manitoba . . . . .              | —           | 22,808                 | 37,681                  | 4,076              | —                          | 64,565    |
| Saskatchewan . . . . .          | —           | —                      | 42,667                  | 11                 | —                          | 42,678    |
| Alberta . . . . .               | 182         | —                      | —                       | —                  | —                          | 182       |
| British Columbia . . . . .      | 1,204       | 71,733                 | 43,920                  | —                  | 3,848                      | 120,705   |
| Yukon . . . . .                 | 41,983      | 629                    | —                       | —                  | 854                        | 43,466    |
| Northwest Territories . . . . . | —           | 423,982                | —                       | —                  | 47                         | 424,029   |
| Canada . . . . .                | 43,369      | 2,713,216              | 472,475                 | 59,648             | 30,766                     | 3,319,474 |



TABLE 20. Gold Production by Province and Principal Areas, 1964 - 66

| Province and area                                    | 1964        |             | 1965        |             | 1966        |             |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | Troy ounces | Value       | Troy ounces | Value       | Troy ounces | Value       |
|  |             | \$          |             | \$          |             | \$          |
| Newfoundland . . . . .                               | 16,717      | 631,067     | 23,657      | 892,555     | 25,667      | 967,903     |
| Nova Scotia . . . . .                                | 63          | 2,378       | —           | —           | 20          | 754         |
| New Brunswick . . . . .                              | 1,623       | 61,268      | 1,659       | 62,592      | 1,953       | 73,648      |
| Quebec:  |             |             |             |             |             |             |
| Gold mines . . . . .                                 | 518,817     | 19,585,342  | 526,636     | 19,869,450  | 595,708     | 22,464,148  |
| Base metal mines . . . . .                           | 415,952     | 15,702,188  | 378,744     | 14,289,632  | 339,751     | 12,812,010  |
| Totals . . . . .                                     | 934,769     | 35,287,530  | 905,380     | 34,159,082  | 935,459     | 35,276,158  |
| Ontario:   |             |             |             |             |             |             |
| Gold mines:  |             |             |             |             |             |             |
| Porcupine . . . . .                                  | 981,246     | 37,042,037  | 899,530     | 33,938,367  | 757,430     | 28,562,685  |
| Kirkland Lake . . . . .                              | 238,966     | 9,020,967   | 187,308     | 7,066,944   | 150,953     | 5,692,438   |
| Larder Lake . . . . .                                | 267,976     | 10,116,094  | 222,969     | 8,412,397   | 186,884     | 7,047,396   |
| Matachewan . . . . .                                 | 46          | 1,736       | 1,511       | 57,009      | 2,062       | 77,758      |
| Sudbury . . . . .                                    | 32,035      | 1,209,321   | 36,642      | 1,382,466   | 39,219      | 1,478,948   |
| Thunder Bay . . . . .                                | 127,280     | 4,804,820   | 80,963      | 3,054,653   | 61,916      | 2,334,852   |
| Patricia . . . . .                                   | 447,375     | 16,888,406  | 451,390     | 17,030,493  | 398,285     | 15,019,327  |
| Other mines . . . . .                                | 60,446      | 2,281,836   | 65,690      | 2,478,418   | 64,001      | 2,413,479   |
| Totals . . . . .                                     | 2,155,370   | 81,365,217  | 1,946,003   | 73,420,747  | 1,660,750   | 62,626,883  |
| Manitoba:  |             |             |             |             |             |             |
| Gold mines . . . . .                                 | 28,773      | 1,086,181   | 25,132      | 948,205     | 22,808      | 860,090     |
| Other mines . . . . .                                | 41,213      | 1,555,791   | 42,553      | 1,605,482   | 41,757      | 1,574,656   |
| Totals . . . . .                                     | 69,986      | 2,641,972   | 67,685      | 2,553,687   | 64,565      | 2,434,746   |
| Saskatchewan:  |             |             |             |             |             |             |
| Base metal mines . . . . .                           | 46,185      | 1,743,484   | 46,173      | 1,742,061   | 42,678      | 1,609,387   |
| Alberta (placer) . . . . .                           | 59          | 2,227       | 200         | 7,546       | 182         | 6,863       |
| British Columbia:                                    |             |             |             |             |             |             |
| Gold mines (lode) . . . . .                          | 97,666      | 3,686,892   | 73,756      | 2,782,740   | 71,733      | 2,705,052   |
| Gold mines (placer) . . . . .                        | 1,462       | 55,190      | 664         | 25,052      | 1,204       | 45,403      |
| Other mines . . . . .                                | 40,831      | 1,541,370   | 43,344      | 1,635,326   | 47,768      | 1,801,331   |
| Totals . . . . .                                     | 139,959     | 5,283,452   | 117,764     | 4,443,118   | 120,705     | 4,551,786   |
| Yukon (chiefly placer) . . . . .                     | 57,844      | 2,183,611   | 45,031      | 1,698,975   | 43,466      | 1,639,103   |
| Northwest Territories (chiefly gold mines) . . . . . | 412,879     | 15,586,182  | 452,479     | 17,071,580  | 424,029     | 15,990,133  |
| Totals, Canada . . . . .                             | 3,835,454   | 144,788,388 | 3,606,031   | 136,051,943 | 3,319,474   | 125,177,364 |

TABLE 21. Gold Production according to Method of Computation and Recovery, 1957 - 66

| Year           | In alluvial gold | In crude gold bullion produced at mines | In base bullion produced at lead smelters | In blister and anode copper produced <sup>2</sup> | In ores, matte, slags, etc., exported | Total gold produced |
|----------------|------------------|---|---|---|---------------------------------------|---------------------|
|                |                  |   | per cent                                  |   |                                       | fine ounces         |
| 1957 . . . . . | 1.72             | 83.98                                   | 0.32                                      | 12.40   | 1.58                                  | 4,433,894           |
| 1958 . . . . . | 1.57             | 84.06                                   | 0.20                                      | 12.64   | 1.53                                  | 4,571,347           |
| 1959 . . . . . | 1.63             | 84.47                                   | 0.21                                      | 12.52   | 1.17                                  | 4,483,416           |
| 1960 . . . . . | 1.75             | 83.18                                   | 0.26                                      | 12.82   | 1.99                                  | 4,628,911           |
| 1961 . . . . . | 1.55             | 83.08                                   | 0.22                                      | 13.25   | 1.90                                  | 4,473,699           |
| 1962 . . . . . | 1.38             | 82.73                                   | 0.21                                      | 13.72   | 1.96                                  | 4,178,396           |
| 1963 . . . . . | 1.45             | 82.89                                   | 0.26                                      | 13.24   | 2.16                                  | 4,003,127           |
| 1964 . . . . . | 1.53             | 81.16                                   | 0.13                                      | 14.93   | 2.25                                  | 3,835,454           |
| 1965 . . . . . | 1.24             | 80.90                                   | 0.15                                      | 15.00   | 2.71                                  | 3,606,031           |
| 1966 . . . . . | 1.31             | 80.39                                   | 0.40                                      | 15.11   | 2.79                                  | 3,319,474           |

<sup>1</sup> Includes a small quantity of gold contained in shipments of gold ores, slags, etc., to Canadian smelters.<sup>2</sup> Contains a small quantity of gold recovered from auriferous quartz ores.

TABLE 22. Estimated Average Monthly Mint Value of an Ounce of Fine Gold, Expressed in Canadian Funds, 1952 - 66

| Month           | 1952  | 1953  | 1954  | 1955  | 1956  | 1957  | 1958  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| dollars         |       |       |       |       |       |       |       |
| January         | 35.19 | 33.97 | 34.05 | 33.81 | 34.95 | 33.62 | 34.46 |
| February        | 35.03 | 34.20 | 33.83 | 34.19 | 34.97 | 33.54 | 34.34 |
| March           | 34.85 | 34.44 | 33.98 | 34.45 | 34.95 | 33.46 | 34.21 |
| April           | 34.34 | 34.43 | 34.39 | 34.52 | 34.89 | 33.59 | 33.97 |
| May             | 34.43 | 34.79 | 34.45 | 34.51 | 34.71 | 33.45 | 33.84 |
| June            | 34.26 | 34.80 | 34.34 | 34.45 | 34.48 | 33.36 | 33.67 |
| July            | 33.93 | 34.72 | 34.10 | 34.46 | 34.37 | 33.29 | 33.60 |
| August          | 33.65 | 34.59 | 33.96 | 34.48 | 34.34 | 33.18 | 33.76 |
| September       | 33.59 | 34.45 | 33.94 | 34.57 | 34.22 | 33.56 | 34.19 |
| October         | 33.75 | 34.39 | 33.94 | 34.84 | 34.07 | 33.77 | 33.98 |
| November        | 34.17 | 34.22 | 33.93 | 34.98 | 33.75 | 33.67 | 33.89 |
| December        | 33.97 | 34.06 | 33.88 | 34.98 | 33.62 | 34.22 | 33.76 |
| Yearly averages | 34.27 | 34.42 | 34.07 | 34.52 | 34.45 | 33.55 | 33.98 |
| dollars         |       |       |       |       |       |       |       |
|                 | 1959  | 1960  | 1961  | 1962  | 1963  | 1964  | 1965  |
| January         | 33.84 | 33.36 | 34.76 | 36.58 | 37.70 | 37.81 | 37.58 |
| February        | 34.12 | 33.31 | 34.62 | 36.71 | 37.71 | 37.80 | 37.65 |
| March           | 33.93 | 33.28 | 34.56 | 36.73 | 37.73 | 37.82 | 37.84 |
| April           | 33.73 | 33.70 | 34.61 | 36.76 | 37.69 | 37.83 | 37.77 |
| May             | 33.70 | 34.24 | 34.56 | 37.87 | 37.70 | 37.83 | 37.78 |
| June            | 33.56 | 34.39 | 35.19 | 38.06 | 37.74 | 37.81 | 37.88 |
| July            | 33.51 | 34.24 | 36.19 | 37.76 | 37.79 | 37.84 | 37.92 |
| August          | 33.41 | 33.95 | 36.10 | 37.72 | 37.90 | 37.75 | 37.74 |
| September       | 33.31 | 34.03 | 36.08 | 37.69 | 37.80 | 37.66 | 37.67 |
| October         | 33.17 | 34.24 | 36.07 | 37.66 | 37.73 | 37.63 | 37.63 |
| November        | 33.26 | 34.19 | 36.26 | 37.69 | 37.72 | 37.59 | 37.62 |
| December        | 33.29 | 34.43 | 36.49 | 37.66 | 37.78 | 37.61 | 37.65 |
| Yearly averages | 33.57 | 33.95 | 35.46 | 37.41 | 37.75 | 37.75 | 37.73 |

TABLE 23. Precious Metals Consumed by the Jewellery and Silverware Industry, 1962 - 66

| Material  | Cost at works |       |       |       |       |
|---|---------------|-------|-------|-------|-------|
|   | 1962          | 1963  | 1964  | 1965  | 1966  |
| \$'000  |               |       |       |       |       |
| Fine gold   | 6,176         | 6,197 | 7,229 | 8,324 | 8,993 |
| Gold alloys   | 1,610         | 1,928 | 2,341 | 2,723 | 2,916 |
| Fine silver   | 4,179         | 4,688 | 5,268 | 6,275 | 6,609 |
| Silver alloys and sterling                              | 2,867         | 2,853 | 2,402 | 2,519 | 2,856 |
| Platinum  | 715           | 2,564 | 969   | 1,190 | 2,214 |
| Palladium   | 703           | 965   | 1,045 | 942   | 1,665 |
| Old gold, jewellers' findings, waste and scrap refining | 1,771         | 1,807 | 2,120 | 2,141 | 2,094 |
| Gold-filled wire and stock                              | 270           | 172   | 336   | 297   | 317   |
| Precious and semi-precious stone                        | 3,474         | 3,816 | 4,626 | 5,128 | 5,602 |

TABLE 24. Gold Production of the World,<sup>1</sup> 1962 - 66

| Country                             | 1962        | 1963       | 1964       | 1965       | 1966       |
|-------------------------------------|-------------|------------|------------|------------|------------|
|                                     | fine ounces |            |            |            |            |
| North America:                      |             |            |            |            |            |
| United States <sup>2</sup>          | 1,556,000   | 1,468,750  | 1,469,000  | 1,675,500  | 1,801,600  |
| Canada                              | 4,178,396   | 3,972,047  | 3,810,738  | 3,587,168  | 3,273,905  |
| Mexico                              | 236,753     | 237,948    | 209,976    | 215,796    | 213,610    |
| Totals, North America               | 5,971,149   | 5,678,745  | 5,489,714  | 5,478,464  | 5,289,115  |
| Central America and West Indies     | 234,273     | 217,082    | 240,380    | 209,277    | 208,501    |
| South America:                      |             |            |            |            |            |
| Bolivia (exports)                   | 35,052      | 153,033    | 50,053     | 84,927     | 16,237     |
| Brazil <sup>3</sup>                 | 130,000     | 136,000    | 145,000    | 162,000    | 177,000    |
| Guyana                              | 1,903       | 2,848      | 2,111      | 2,077      | 3,045      |
| Chile                               | 62,500      | 52,400     | 65,620     | 73,818     | 78,223     |
| Columbia                            | 396,825     | 324,514    | 364,991    | 319,362    | 280,823    |
| Ecuador                             | 20,591      | 21,041     | 16,905     | 11,458     | 10,892     |
| French Guiana                       | 5,273       | 6,993      | 4,823      | ...        | 632        |
| Peru                                | 122,985     | 101,019    | 92,503     | 105,183    | 94,978     |
| Surinam                             | 2,604       | 3,537      | 8,231      | 6,269      | 5,159      |
| Venezuela                           | 28,774      | 26,946     | 33,536     | 23,660     | 18,872     |
| Totals, South America               | 806,507     | 828,331    | 783,773    | 788,754    | 685,861    |
| Europe                              | 700,000     | 700,000    | 800,000    | 800,000    | 800,000    |
| Australia:                          |             |            |            |            |            |
| New South Wales                     | 11,234      | 11,395     | 10,569     | 9,640      | 9,078      |
| Queensland                          | 67,729      | 68,586     | 100,937    | 76,964     | 139,202    |
| Victoria                            | 28,262      | 24,668     | 21,284     | 19,246     | 21,005     |
| Western Australia                   | 860,039     | 802,860    | 715,481    | 656,355    | 625,884    |
| Tasmania                            | 32,115      | 36,422     | 34,381     | 32,897     | 36,502     |
| Other Australia                     | 69,458      | 80,039     | 81,182     | 82,541     | 84,126     |
| Totals, Australia (Commonwealth)    | 1,068,837   | 1,023,970  | 963,834    | 877,643    | 915,797    |
| Oceania, other:                     |             |            |            |            |            |
| Fiji                                | 87,354      | 107,262    | 100,493    | 109,095    | 112,567    |
| New Guinea                          | 39,052      | 43,599     | 38,978     | 32,494     | 28,106     |
| New Zealand                         | 21,742      | 14,206     | 8,948      | 12,136     | 8,964      |
| Totals, Oceania, other              | 148,148     | 165,067    | 148,419    | 153,725    | 149,637    |
| Asia:                               |             |            |            |            |            |
| India                               | 163,290     | 138,280    | 147,958    | 130,596    | 120,244    |
| Japan                               | 420,957     | 432,572    | 460,171    | 519,163    | 555,476    |
| Korea, Republic of                  | 107,866     | 90,086     | 75,779     | 62,823     | 60,765     |
| Malaya                              | 6,924       | 9,116      | 7,295      | 3,982      | 2,959      |
| Philippines Republic                | 423,394     | 376,006    | 425,770    | 435,545    | 452,672    |
| Saudi Arabia                        | ...         | ...        | ...        | ...        | ...        |
| Taiwan (Formosa)                    | 24,029      | 31,710     | 17,660     | 32,148     | 41,805     |
| Totals, Asia                        | 1,146,460   | 1,077,770  | 1,134,633  | 1,184,257  | 1,233,921  |
| Africa:                             |             |            |            |            |            |
| Botswana                            | 288         | 142        | 10         | ...        | ...        |
| Cameroons                           | 775         | 1,874      | 739        | 1,286      | 900        |
| Congo, Republic of                  | 3,718       | 2,958      | 3,567      | 3,718      | 4,080      |
| Congo, Republic of the              | 203,707     | 214,574    | 188,339    | 90,408     | 159,821    |
| Ethiopia                            | 25,700      | 25,000     | 25,000     | 24,236     | 24,000     |
| Gabon, Republic of                  | 16,300      | 35,719     | 42,760     | 37,134     | 34,466     |
| Ghana                               | 888,038     | 921,255    | 864,917    | 755,191    | 684,394    |
| Kenya                               | 9,327       | 10,193     | 12,480     | 11,420     | 11,988     |
| Liberia                             | 2,184       | 1,960      | 1,824      | 1,701      | 4,351      |
| Malagasy Republic                   | 325         | 900        | 440        | 598        | 852        |
| Nigeria                             | 384         | 316        | 244        | 80         | 61         |
| Republic of South Africa            | 25,491,993  | 27,431,573 | 29,111,524 | 30,553,874 | 30,879,700 |
| Rhodesia                            | 554,647     | 566,277    | 575,386    | 549,681    | 550,000    |
| Tanzania (exports)                  | 101,972     | 102,917    | 93,040     | 90,819     | 60,473     |
| Uganda                              | 412         | 16         | 24         | 36         | 3          |
| Totals, Africa                      | 27,299,770  | 29,315,674 | 30,920,294 | 32,120,182 | 32,415,089 |
| U.S.S.R. <sup>4</sup>               | 4,800,000   | 5,100,000  | 5,600,000  | 5,030,000  | 5,370,000  |
| World totals as reported            | 42,175,144  | 44,106,639 | 46,081,047 | 46,642,302 | 47,067,921 |
| Estimated world totals <sup>5</sup> | 42,300,000  | 44,200,000 | 46,100,000 | 46,700,000 | 47,100,000 |

<sup>1</sup> In compiling this table, free use has been made of the reports of the Director of the Mint, the U.S. Bureau of Mines and other publications.<sup>2</sup> U.S. Bureau of the Mint.<sup>3</sup> Mined gold only; production of alluvial gold unknown.<sup>4</sup> Conjectural.<sup>5</sup> Other gold producing countries not listed in this table are included in the estimate for the total.

Source: "Annual Report of the American Bureau of Metal Statistics".



## EMERGENCY GOLD MINING ASSISTANCE ACT

(Taken from the "Report on the Administration of the Emergency Gold Mining Assistance Act" of the Department of Mines and Technical Surveys)

## Summary of Operations for Year 1966

The *Emergency Gold Mining Assistance Act* was introduced in 1948 to provide the operators of marginal gold mines with assistance in meeting the rising costs of production.

The price paid for gold by the Royal Canadian Mint is based directly on that offered by the United States Treasury. The United States price has remained fixed at \$35 per fine ounce in United States funds since 1934.

The assistance given has extended the operating life of many gold mines and thereby has allowed their dependent communities to adjust gradually to diminishing economic support.

Rising costs and the depletion of ore reserves have caused a number of gold mines to close and others to curtail their operations in recent years. Seven lode gold mines receiving assistance closed in 1966. In addition, the largest producer of gold from placer deposits in the Yukon Territory ceased operations. Two new lode gold mines started production during the year. Five lode gold mines operated in 1966 without assistance.

The number of lode gold mines eligible for assistance has declined from 87 in 1948 to 44 in 1960 and 42 in 1966. Further closures are expected during 1967 and the following two or three years. It is also anticipated that a few new gold mines will open and be eligible for assistance.

The latest amendment to the Act in 1963 provided for its operation to December 31, 1967. The amending act contained a restriction limiting eligibility for assistance in the case of gold mines which commenced production after June 30, 1965 to those providing direct economic support to an existing mining community. A gold mine is deemed to provide such support if more than half of the persons employed at the mine reside in the established mining communities listed in a schedule to the Act.

The amount of assistance payable to an operator is determined by a formula based on the average cost of production per ounce of gold and the number of ounces produced. Under the current formula the assistance payable to the operator of a gold mine is computed by adding 25 per cent to the product of two factors: the rate of assistance and the number of assistance ounces. The number of assistance ounces is two thirds of the total ounces produced and sold to the Royal Canadian Mint by a mine in a calendar year. The rate-of-assistance factor is two thirds of the amount by which the average cost of production exceeds \$26.50. The rate-of-assistance factor is limited to a maximum of \$12.33 which is reached when the average cost of production rises to \$45 per ounce of gold produced.

When calculated on the basis of all eligible ounces produced, the maximum assistance payable amounts to \$10.27 per ounce.

The average cost of production is determined by dividing the total allowable costs by the total number of ounces produced in the form of bullion from the mine in a calendar year. Only those ounces of gold which have been sold to the Royal Canadian Mint are eligible for inclusion in the assistance-ounces factor.

The cost of production of gold from a mine includes mining, milling, smelting, refining, transportation, and administration costs. Allowances are made for depreciation, preproduction costs and expenditures on exploration and development on the mine property in accordance with the Regulations.

The amounts paid to gold-mine operators to March 31, 1967 for the years 1948 to 1966 inclusive totalled \$231,024,272.60 on a production of 53,380,054.863 fine ounces of gold produced and sold in accordance with the requirements of the Act.

The total assistance payable for gold produced and sold in the calendar year 1966 is estimated to be \$15.6 million. For the year 1966, the total assistance paid to March 31, 1967 was \$11,777,816.65. This sum represents about 90 per cent of the assistance payable on applications received to that date. The remaining 10 per cent holdback is payable after an audit has been completed on the accounts of the applicants.

Payments amounting to \$14,826,633.78 have been made to March 31, 1967 on gold produced in the calendar year 1965. The addition of holdback payments is expected to bring the total for the year to approximately \$15.6 million.

Applicants for assistance have been received from 38 lode gold mines for the calendar year 1966. In addition, applications from operators of placer gold mines in British Columbia and the Yukon Territory will be submitted. In 1965, twenty-two operators of placer mines applied for assistance.

The annual average of the weekly buying prices in Canadian funds by the Royal Canadian Mint in 1966 was \$37.71 per ounce of fine gold. The price of gold in Canadian funds is governed by the fixed buying price of \$35 per fine ounce in United States funds by the United States Treasury and the exchange rate between the Canadian and United States dollars. Since May 1962 the value of the Canadian dollar has been set at \$0.925 United States funds. At parity the Mint buying price for gold is \$37.84 per ounce in Canadian funds. The market value of the Canadian dollar may be permitted to fluctuate by one per cent either side of parity. Thus the Mint buying price in Canadian funds may vary between \$37.46 and \$38.22 per ounce.

## Conditions Governing Eligibility for Assistance

A mine, to be classified as a gold mine for purposes of the Act and Regulations, must fulfil the following conditions:

1. The value of gold produced must be 70 per cent or more of the total value of the output of the mine.
2. The mine must produce at least 50 troy ounces of fine gold in a designated year.
3. Ore reserves of commercial significance must be developed and there must be a reasonable possibility of attaining production of gold on a commercial basis within a reasonable time.

The operator of a mine must also conform to the following requirements to be eligible for assistance payments:

1. Application in prescribed form for assistance payments for a designated quarter or year must be received by the Department of Energy, Mines and Resources within six months after the end of the designated period. Advance payments may be made for a calendar year or for quarterly periods beginning with the first day of the months of January, April, July or October. Schedules I and II are to be used in making application for assistance.
2. The average cost of production per ounce of gold, computed on all ounces of gold produced from the mine during the designated period, must exceed \$26.50.
3. Assistance payments are made only for those ounces of gold produced from the mine during the designated period which are:
  - a. sold in the form of bullion to the Royal Canadian Mint by the operator; or
  - b. sold in the form of ore or concentrate to a domestic smelter, provided the smelter operator certifies that a number of ounces equivalent to those paid for by the smelter have been sold to the Royal Canadian Mint as soon as is practicable after the shipment of the ore or concentrate and the separation of the gold therefrom; or
  - c. exported and sold in the form of ore or concentrate to a foreign smelter.
4. The operator of a mine applying for assistance for the first time must submit a declaration of ownership of the mine on Schedule III.
5. A new gold mine, which is operated by an incorporated company, must be declared in production in accordance with Section 83(5) of the Income Tax Act. Status as a new mine may be obtained through application to the Taxation Division, Department of National Revenue, Ottawa.

## The Gold Export Act and Disposal of Canadian Gold

## Act and Amendments

The Gold Export Act, passed in 1932, authorized the Governor in Council to make regulations regarding the export of gold from Canada. On March 21, 1956, the regulations, which prohibited the export in any form except under licence issued by the Minister of Finance, were revoked. Thus, since March 1956, producers have been free to sell their gold wherever they wish.

## Administration

The Act is administered under the direction of the Assistant Deputy Minister (Mineral Development), Department of Energy, Mines and Resources. Inspection engineers annually visit each mine receiving assistance for the purpose of determining the exploration and development expenditures which will be classified as capital expenditures for inclusion in allowable costs on a deferred basis, and for reporting upon the operations conducted at the mine insofar as they affect the payment of assistance.

Assistance applications are generally submitted at the end of each quarter. If found to be completed and in accordance with the Act and the Regulations, they are approved and an advance payment is forwarded to the operator. The Regulations provide that the advance payment shall not exceed 90 per cent of the assistance payable under the application. When the final audit of the accounts has been completed, the remaining holdback is approved for payment.

The Department has received the proficient assistance and co-operation of the Audit Services Branch, Office of the Comptroller of the Treasury, in the examination of applications and in the verification of information received by an audit of the accounts of the operators.

1. The Act received Royal Assent on May 14, 1948, and came into force by proclamation on June 15, 1948.
2. Chapter 20, 13 George VI (second session) received Royal Assent, December 10, 1949.
3. Chapter 49, 15 George VI (first session), received Royal Assent, June 30, 1951.
4. Chapter 25, 1 Elizabeth II, received Royal Assent, June 18, 1952.
5. Chapter 32, 1-2 Elizabeth II, received Royal Assent, May 14, 1953.
6. Chapter 26, 2-3 Elizabeth II, received Royal Assent, March 31, 1954.
7. Chapter 19, 3-4 Elizabeth II, received Royal Assent, May 26, 1955.
8. Chapter 20, 4-5 Elizabeth II, received Royal Assent, June 26, 1956.
9. Chapter 28, 7 Elizabeth II, received Royal Assent, September 6, 1958.
10. Chapter 28, 8-9 Elizabeth II, received Royal Assent, July 7, 1960.
11. Chapter 25, 12 Elizabeth II, received Royal Assent, December 12, 1963.

## Regulations and Amendments

1. The Regulations made by the Governor in Council under the Authority of Section 6 of the Act were approved by Order in Council, P.C. 2664, June 11, 1948.
2. Order in Council, P.C. 1753, April 12, 1950.
3. Order in Council, P.C. 3925, July 31, 1951.
4. Order in Council, P.C. 1954-379, March 19, 1954.
5. Order in Council, P.C. 1954-863, June 10, 1954.
6. Order in Council, P.C. 1956-11, January 5, 1956.
7. Order in Council, P.C. 1960-1162, August 24, 1960.
8. Order in Council, P.C. 1965-1889, October 25, 1965.

TABLE 25. Emergency Gold Mining Assistance Act - Estimated Assistance Payable, 1959 - 66

| Province              | 1959       | 1960       | 1961       | 1962       | 1963       | 1964       | 1965       | 1966       |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                       | dollars    |            |            |            |            |            |            |            |
| Quebec                | 3,027,080  | 3,025,354  | 2,917,683  | 3,454,353  | 3,198,240  | 3,349,643  | 3,559,739  | 3,868,460  |
| Ontario               | 7,814,793  | 8,713,404  | 9,105,418  | 9,903,925  | 9,766,710  | 10,379,491 | 10,126,337 | 9,997,746  |
| Manitoba              | 217,106    | 209,027    | 250,232    | 164,268    | 246,771    | 295,642    | 256,559    | 222,253    |
| British Columbia      | 718,641    | 360,557    | 319,395    | 417,290    | 573,070    | 750,554    | 726,637    | 655,050    |
| Yukon                 | 186,477    | 54,176     | 73,931     | 245,649    | 276,888    | 201,829    | 215,843    | 55,846     |
| Northwest Territories | 37,656     | —          | —          | 169,528    | 258,078    | 442,441    | 556,845    | 581,901    |
| Canada                | 12,001,753 | 12,362,518 | 12,666,659 | 14,355,013 | 14,319,757 | 15,419,600 | 15,441,960 | 15,381,256 |

## COPPER-GOLD-SILVER MINES

This portion of the report includes Statistics for industry 053—Copper-Gold-Silver mines of the Standard Industrial Classification Manual (Catalogue No. 12-501).

During the year "copper-gold-silver" mines operated in Newfoundland, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, British Columbia and Northwest Territories. It is to be noted that, in addition to the copper recovered from ores of this type, there is a very large quantity of the metal obtained in the smelting and refining of the copper-nickel

ores mined in the Sudbury area of Ontario; important quantities of gold and silver are also being extracted from these copper-nickel ores. The lead-zinc-copper ores of Newfoundland also contribute to the production of copper, gold and silver.

The statistics as herein shown under the copper-gold-silver mining industry refer only to mines and mills and do not include data pertaining to the operation of smelters and refineries. Statistics relating to the reduction of non-ferrous ores are recorded under the smelting and refining industry.

TABLE 26. Principal Statistics, Copper-Gold-Silver Mines, 1962 - 66

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Year | Estab-<br>lish-<br>ments | Mining activity                   |                       |        |   |   |                        | Total activity |                                |                  |           |                          |
|------|--------------------------|-----------------------------------|-----------------------|--------|---|---|------------------------|----------------|--------------------------------|------------------|-----------|--------------------------|
|      |                          | Production and<br>related workers |                       |        | Cost of<br>fuel and<br>elec-<br>tricity | Cost of<br>materials<br>and<br>supplies | Value of<br>production | Value<br>added | Working owners<br>and partners |                  | Employees |                          |
|      |                          | Number                            | Man-<br>hours<br>paid | Wages  |   |   |                        |                | Number                         | With-<br>drawals | Number    | Salaries<br>and<br>wages |
|      | No.                      |                                   | '000                  |        |   | '000                                    |                        |                |                                | '000             |           | '000                     |
| 1962 | 33                       | 8,500                             | 18,058                | 40,835 | 6,621                                   | 86,881                                  | 248,114                | 154,612        | —                              | —                | 10,189    | 50,726                   |
| 1963 | 30                       | 8,874                             | 18,658                | 43,627 | 7,118                                   | 88,522                                  | 249,872                | 154,231        | —                              | —                | 10,754    | 55,128                   |
| 1964 | 30                       | 8,815                             | 18,478                | 44,671 | 7,384                                   | 96,985                                  | 282,031                | 177,662        | —                              | —                | 10,716    | 56,534                   |
| 1965 | 35                       | 9,116                             | 19,458                | 48,157 | 8,373                                   | 106,130                                 | 321,620                | 207,117        | —                              | —                | 11,086    | 61,049                   |
| 1966 | 43                       | 9,986                             | 21,502                | 57,442 | 9,535                                   | 121,532                                 | 408,082                | 277,015        | —                              | —                | 12,467    | 73,461                   |



TABLE 27. Employment and Payroll, Copper-Gold-Silver Mines, 1962 - 66

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Year   | Employees                      |        |       |        |                                |        |                        |        |        |        | Salaries and wages             |       |                                |                             |        |
|--------|--------------------------------|--------|-------|--------|--------------------------------|--------|------------------------|--------|--------|--------|--------------------------------|-------|--------------------------------|-----------------------------|--------|
|        | Production and related workers |        |       |        | Adminis-<br>trative and office |        | Sales and distribution |        | Total  |        | Production and related workers |       | Adminis-<br>trative and office | Sales and distrib-<br>ution | Total  |
|        | Mining                         |        | Other |        |                                |        |                        |        |        |        |                                |       |                                |                             |        |
|        | Male                           | Female | Male  | Female | Male                           | Female | Male                   | Female | Male   | Female | Mining                         | Other |                                |                             |        |
| number |                                |        |       |        |                                |        |                        |        |        | \$'000 |                                |       |                                |                             |        |
| 1962   | 8,454                          | 46     | 30    | —      | 1,465                          | 194    | —                      | —      | 9,949  | 240    | 40,835                         | 165   | 9,727                          | —                           | 50,726 |
| 1963   | 8,840                          | 34     | 31    | —      | 1,627                          | 222    | —                      | —      | 10,498 | 256    | 43,627                         | 159   | 11,342                         | —                           | 55,128 |
| 1964   | 8,779                          | 34     | 58    | —      | 1,623                          | 220    | —                      | —      | 10,460 | 254    | 44,671                         | 259   | 11,604                         | —                           | 56,534 |
| 1965   | 9,073                          | 43     | 25    | —      | 1,727                          | 218    | —                      | —      | 10,825 | 261    | 48,157                         | 80    | 12,812                         | —                           | 61,049 |
| 1966   | 9,947                          | 39     | 141   | 3      | 2,074                          | 261    | 2                      | —      | 12,164 | 303    | 57,442                         | 518   | 15,490                         | 11                          | 73,461 |

TABLE 28. Production and Related Workers, Copper-Gold-Silver Mines, 1965 and 1966

|                     | Mine    |        |              | Mill  |        |
|---------------------|---------|--------|--------------|-------|--------|
|                     | Surface |        | Under ground | Male  | Female |
|                     | Male    | Female | Male         |       |        |
| 1965                | number  |        |              |       |        |
| January . . . . .   | 2,344   | 22     | 4,681        | 1,785 | 18     |
| February . . . . .  | 2,350   | 22     | 4,699        | 1,790 | 17     |
| March . . . . .     | 2,352   | 22     | 4,764        | 1,792 | 18     |
| April . . . . .     | 2,398   | 22     | 4,688        | 1,814 | 17     |
| May . . . . .       | 2,495   | 22     | 4,771        | 1,903 | 20     |
| June . . . . .      | 2,720   | 23     | 4,894        | 1,984 | 21     |
| July . . . . .      | 2,790   | 24     | 4,826        | 2,045 | 21     |
| August . . . . .    | 2,726   | 24     | 4,809        | 2,019 | 21     |
| September . . . . . | 2,536   | 22     | 4,713        | 1,866 | 19     |
| October . . . . .   | 2,440   | 24     | 4,594        | 1,678 | 18     |
| November . . . . .  | 2,498   | 22     | 4,667        | 1,671 | 18     |
| December . . . . .  | 2,418   | 24     | 4,685        | 1,692 | 18     |
| Averages . . . . .  | 2,506   | 23     | 4,732        | 1,835 | 19     |
| 1966                |         |        |              |       |        |
| January . . . . .   | 2,562   | 17     | 4,910        | 1,866 | 19     |
| February . . . . .  | 2,575   | 17     | 4,894        | 1,836 | 19     |
| March . . . . .     | 2,588   | 17     | 4,887        | 1,855 | 19     |
| April . . . . .     | 2,619   | 17     | 4,923        | 2,059 | 21     |
| May . . . . .       | 2,767   | 17     | 5,072        | 2,127 | 22     |
| June . . . . .      | 3,032   | 17     | 5,211        | 2,216 | 24     |
| July . . . . .      | 3,166   | 18     | 5,298        | 2,249 | 25     |
| August . . . . .    | 3,066   | 18     | 5,209        | 2,243 | 25     |
| September . . . . . | 2,870   | 18     | 4,982        | 2,127 | 21     |
| October . . . . .   | 2,887   | 18     | 4,963        | 2,092 | 21     |
| November . . . . .  | 2,936   | 18     | 5,047        | 2,189 | 21     |
| December . . . . .  | 2,879   | 18     | 4,992        | 2,183 | 22     |
| Averages . . . . .  | 2,829   | 18     | 5,032        | 2,087 | 22     |



TABLE 29. Purchased Fuel and Electricity Used, Copper-Gold-Silver Mines, 1965 and 1966

| Description   | 1965      |             | 1966     |               |       |
|---|-----------|-------------|----------|---------------|-------|
|   | Quantity  | Cost        | Quantity | Cost          |       |
|   |           | \$'000      |          | \$'000        |       |
| Large establishments reporting commodity detail:                |           |             |          |               |       |
| Bituminous coal:  |           |             |          |               |       |
| (a) From Canadian mines . . . . .                               | ton       | 220         | 5        | 166           | 4     |
| (b) Imported . . . . .  | "         | 750         | 13       | 974           | 19    |
| Sub-bituminous coal (from Alberta mines only) . . . . .         |           | —           | —        | —             | —     |
| Anthracite coal . . . . .                                       | ton       | 40          | --       | 28            | ..    |
| Lignite coal . . . . .  | "         | --          | —        | 9             | ..    |
| Coke . . . . .  | "         | 52          | 2        | 35            | 1     |
| Gasoline (including gasoline used in cars and trucks) . . . . . | Imp. gal. | 703,889     | 268      | 840,588       | 326   |
| Fuel oil including kerosene or coal oil . . . . .               | "         | 8,897,451   | 1,746    | 10,609,041    | 1,985 |
| Wood . . . . .  |           | —           | —        | —             | —     |
| Gas:  |           |             |          |               |       |
| (a) Liquefied petroleum gases . . . . .                         | Imp. gal. | 683,814     | 102      | 772,106       | 118   |
| (b) Other manufactured gas . . . . .                            |           | —           | —        | ...           | 8     |
| (c) Natural gas . . . . .                                       | M cu. ft. | 25,399      | 12       | 62,268        | 38    |
| Other fuel . . . . .  |           | ...         | 55       | ...           | 56    |
| Electricity purchased . . . . .                                 | kwh.      | 883,498,081 | 6,114    | 1,138,271,545 | 6,916 |
| Steam purchased . . . . .                                       |           | ...         | 56       | ...           | 64    |
| Total fuel and electricity used . . . . .                       |           | ...         | 8,373    | ...           | 9,535 |
| Electricity generated:  |           |             |          |               |       |
| (a) For own use . . . . .                                       | kwh.      | 101,844,539 | ...      | 103,968,655   | ...   |
| (b) For sale . . . . .  | "         | 1,122,394   | ..       | 1,109,270     | 121   |

TABLE 30. Materials and Supplies, Copper-Gold-Silver Mines, 1965 and 1966

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Description  | Cost           |                |
|--|----------------|----------------|
|  | 1965           | 1966           |
|  | \$'000         |                |
| Ore or other semi-processed materials purchased and used in mine/mill operations . . . . . | 547            | 1,838          |
| Containers, shipping materials and supplies used . . . . .                                 | 9              | 45             |
| Operating, maintenance and repair supplies used (excluding fuel) . . . . .                 | 35,022         | 41,344         |
| Amount paid out to others for work done on materials owned by establishments:              |                |                |
| To smelters and/or refineries . . . . .  | 56,843         | 63,136         |
| To others (mining, milling, etc.) . . . . .  | 13,709         | 15,169         |
| <b>Totals . . . . .</b>  | <b>106,130</b> | <b>121,532</b> |

Note: Refer to concepts and definitions, 1964 issue of this report, for explanation or differences in Tables 36 and 37 with data published in earlier years.

TABLE 31. Value of Production, Copper-Gold-Silver Mines, 1965 and 1966

Basis: Revised Standard Industrial Classification and New Establishment Concept

| Description  | Value          |                |
|--|----------------|----------------|
|  | 1965           | 1966           |
|  | \$'000         |                |
| Value of production . . . . .  | 321,019        | 406,175        |
| Amount received in payment for work done on materials and products owned by others . . . . . | 601            | 1,907          |
| <b>Total value of production and work done . . . . .</b>                                     | <b>321,620</b> | <b>408,082</b> |

TABLE 32. Shipments from Copper-Gold-Silver Mines, 1965 and 1966

|   | Quantity         | Total metal content as determined by settlement assay <sup>1</sup> |                  |                    |                   |                    |                      |
|---|------------------|--|------------------|--------------------|-------------------|--------------------|----------------------|
|   |                  | Gold   | Silver           | Copper             | Lead              | Zinc               | Sulphur              |
|   | tons             | fine ounces  |                  | lb.                |                   |                    | tons                 |
| <b>1965</b>                                       |                  |  |                  |                    |                   |                    |                      |
| To Canadian plants:                               |                  |  |                  |                    |                   |                    |                      |
| Ores . . . . .                                    | 818,113          | 73,839   | 205,003          | 22,694,800         | —                 | —                  | —                    |
| Copper concentrates . . . . .                     | 1,271,193        | 346,788  | 6,450,070        | 495,379,296        | —                 | 22,256,198         | —                    |
| Zinc concentrates . . . . .                       | 113,435          | 5,104  | 140,658          | 1,406,595          | 907,480           | 196,480,783        | —                    |
| Lead concentrates . . . . .                       | 6,022            | 2,648  | 166,097          | 337,809            | 5,863,303         | 1,033              | —                    |
| Molybdenum concentrates . . . . .                 | 23               | —  | —                | —                  | —                 | —                  | 25,213 <sup>2</sup>  |
| Pyrite concentrates . . . . .                     | 4,192            | —  | —                | —                  | —                 | —                  | 1,963                |
| Residues, bullion and gold precipitates . . . . . | 72               | 30,934   | 190,738          | 43,236             | —                 | 10,367             | —                    |
| Tailings . . . . .                                | 45,807           | —  | —                | —                  | —                 | —                  | —                    |
| To foreign plants:                                |                  |  |                  |                    |                   |                    |                      |
| Copper concentrates . . . . .                     | 201,257          | 45,230   | 1,207,819        | 105,647,253        | 1,227,194         | 2,032,776          | —                    |
| Zinc concentrates . . . . .                       | 165,410          | —  | —                | —                  | —                 | 171,295,586        | —                    |
| Lead concentrates . . . . .                       | 2,127            | —  | 119,978          | 126,874            | 2,127,229         | —                  | —                    |
| Molybdenum concentrates . . . . .                 | 488              | —  | —                | —                  | —                 | —                  | 525,855 <sup>2</sup> |
| Pyrite concentrates . . . . .                     | 378,568          | —  | —                | —                  | —                 | —                  | 184,996              |
| Iron concentrates . . . . .                       | 93,312           | —  | —                | —                  | —                 | —                  | —                    |
| Silver concentrates . . . . .                     | 140              | —  | 335,221          | —                  | —                 | —                  | —                    |
| Precipitates . . . . .                            | 200              | —  | —                | 152,953            | —                 | —                  | —                    |
| <b>Totals . . . . .</b>                           | <b>3,100,359</b> | <b>504,543</b>   | <b>8,815,584</b> | <b>625,788,815</b> | <b>10,125,206</b> | <b>392,076,743</b> | <b>738,027</b>       |
| <b>1966</b>                                       |                  |  |                  |                    |                   |                    |                      |
| To Canadian plants:                               |                  |  |                  |                    |                   |                    |                      |
| Ores . . . . .                                    | 814,585          | 66,320   | 173,658          | 18,798,000         | —                 | —                  | —                    |
| Copper concentrates . . . . .                     | 1,300,809        | 324,985  | 6,605,890        | 518,159,308        | —                 | 20,894,082         | —                    |
| Zinc concentrates . . . . .                       | 189,977          | 9,826  | 257,118          | 3,455,542          | —                 | 152,447,121        | —                    |
| Lead concentrates . . . . .                       | 3,279            | 2,966  | 84,037           | 237,976            | 3,070,923         | —                  | —                    |
| Molybdenum concentrates . . . . .                 | 3                | —  | —                | —                  | —                 | —                  | 3,529 <sup>2</sup>   |
| Pyrite concentrates . . . . .                     | 2,457            | —  | —                | —                  | —                 | —                  | 1,150                |
| Residues, bullion and gold precipitates . . . . . | 51               | 27,822   | 163,890          | 43,951             | —                 | 10,483             | —                    |
| Tailings . . . . .                                | 65,915           | —  | —                | —                  | —                 | —                  | —                    |
| To foreign plants:                                |                  |  |                  |                    |                   |                    |                      |
| Copper concentrates . . . . .                     | 252,665          | 43,919   | 1,649,867        | 131,030,382        | 1,323,865         | 2,827,297          | —                    |
| Zinc concentrates . . . . .                       | 218,821          | 231  | 89,823           | 49,577             | —                 | 217,467,749        | —                    |
| Lead concentrates . . . . .                       | 2,587            | 35   | 185,990          | 310,371            | 1,921,626         | 257,108            | —                    |
| Molybdenum concentrates . . . . .                 | 15               | —  | —                | —                  | —                 | —                  | 13,850 <sup>2</sup>  |
| Pyrite concentrates . . . . .                     | 324,497          | —  | —                | —                  | —                 | —                  | 161,150              |
| Iron concentrates . . . . .                       | 73,361           | —  | —                | —                  | —                 | —                  | —                    |
| Silver concentrates . . . . .                     | 220              | —  | 649,724          | —                  | —                 | —                  | —                    |
| Tailings . . . . .                                | 30,100           | —  | —                | —                  | —                 | —                  | —                    |
| Precipitates . . . . .                            | 429              | —  | —                | 299,791            | —                 | —                  | —                    |
| <b>Totals . . . . .</b>                           | <b>3,279,771</b> | <b>476,104</b>   | <b>9,859,997</b> | <b>672,384,898</b> | <b>6,316,414</b>  | <b>393,903,840</b> | <b>179,679</b>       |

<sup>1</sup> In addition cadmium, bismuth, tellurium and selenium are recovered from these ores.<sup>2</sup> Pounds of molybdenum content.

TABLE 33. Ores Mined, Milled, and Concentrates Produced, by the Copper-Gold-Silver Mines, 1957 - 66

| Year | Ore mined  | Ore milled | Copper concentrates produced <sup>1</sup> | Zinc concentrates produced | Iron pyrite concentrates produced | Lead concentrates produced |
|------|------------|------------|---|----------------------------|-----------------------------------|----------------------------|
|      | tons       |            |   |                            |                                   |                            |
| 1957 | 10,570,801 | 10,009,694 | 1,135,664                                 | 229,514                    | 528,388                           | —                          |
| 1958 | 11,484,960 | 11,274,297 | 1,106,733                                 | 229,962                    | 782,828                           | —                          |
| 1959 | 12,436,105 | 11,577,414 | 1,135,190                                 | 231,959                    | 674,450                           | —                          |
| 1960 | 13,973,786 | 13,316,340 | 1,266,757                                 | 270,705                    | 573,340                           | 2,040                      |
| 1961 | 15,008,993 | 14,411,758 | 1,259,871                                 | 299,806                    | 508,854                           | 6,762                      |
| 1962 | 17,744,713 | 16,980,625 | 1,433,264                                 | 343,922                    | 322,636                           | 12,438                     |
| 1963 | 19,640,423 | 18,745,756 | 1,389,336                                 | 317,923                    | 476,899                           | 16,535                     |
| 1964 | 20,196,539 | 19,494,495 | 1,460,128                                 | 324,794                    | 360,801                           | 9,392                      |
| 1965 | 20,016,849 | 19,586,915 | 1,470,264                                 | 360,073                    | 461,410                           | 7,619                      |
| 1966 | 23,085,616 | 22,830,688 | 1,562,775                                 | 425,612                    | 374,688                           | 6,208                      |

<sup>1</sup> Exclusive of copper precipitates.TABLE 34. Specified Expenditures by Companies engaged in Copper-Gold-Silver Operations,<sup>1</sup> 1966

|  | \$'000 |
|--|--------|
| (a) Workmen's compensation   | 2,334  |
| (b) Silicosis assessment   | 148    |
| (c) Unemployment insurance   | 543    |
| (d) Aggregate cost of structures, roads, machinery, equipment, etc., built by or purchased from outside contractors or suppliers and chargeable to Fixed Assets Account  | 79,093 |
| (e) Book value of fixed assets (new structures, roads, machinery, equipment, etc., including major repairs and alterations) produced by own employees and chargeable to Fixed Assets Account   | 7,284  |
| (f) Other capital expenditures not reported in (d) and (e)   | 1,337  |
| (g) Cost of materials and supplies used in the production of machinery and equipment and in the construction of roads and new structures (including major repairs and alterations by own employees and chargeable to Fixed Assets Account) | 3,308  |
| (h) Cost of office supplies used during the year, not chargeable to Fixed Assets Account. Excludes cost of stamps and meter expenses   | 358    |

<sup>1</sup> Includes smelting and refining operations and other related corporate activities associated with Canadian copper-gold-silver mines not allocable separately elsewhere.

TABLE 35. Taxes Paid by Companies engaged in Copper-Gold-Silver Operations, 1966

| Taxes paid  | \$'000 |
|---|--------|
| Dominion income tax, including tax on non-operating revenue | 18,866 |
| Provincial tax  | 12,690 |
| Municipal tax   | 2,775  |
| Grand total taxes paid                                      | 34,331 |

TABLE 36. Drilling Completed on Copper-Gold-Silver Deposits, 1965 and 1966

|  | Footage drilled |            |
|--|-----------------|------------|
|  | 1965            | 1966       |
| Diamond drilling for exploration (testing only):           |                 |            |
| By mining companies with their own personnel and equipment | 13,050          | —          |
| By diamond drilling contractors                            | 1,173,531       | 1,120,874  |
| Other diamond drilling:                                    |                 |            |
| Blast hole diamond drilling:                               |                 |            |
| By mining companies with their own personnel and equipment | 152,749         | 131,411    |
| By diamond drilling contractors                            | 348             | 168,971    |
| Drilling by percussion or other machines <sup>1</sup>      | 25,711,543      | 30,891,243 |

<sup>1</sup> Not complete as these data are not recorded by some operators.

Note: Value of diamonds in all forms (stones, bits, etc.) used during the year 1966 was \$170,940.



TABLE 37. Copper Production (Recoverable) according to Nature of Ore, and by Provinces, 1965 and 1966

| Province              | From copper-gold-silver ores | From nickel-copper ores | From other ores | Total   |
|-----------------------|------------------------------|-------------------------|-----------------|---------|
| tons                  |                              |                         |                 |         |
| 1965                  |                              |                         |                 |         |
| Newfoundland          | 11,981                       | —                       | 2,842           | 14,823  |
| Nova Scotia           | —                            | —                       | 187             | 187     |
| New Brunswick         | 8,976                        | —                       | 1,106           | 10,082  |
| Quebec                | 157,939                      | 2,050                   | 13,949          | 173,938 |
| Ontario               | 47,201                       | 161,259                 | 7,812           | 216,272 |
| Manitoba              | 20,994                       | 9,813                   | —               | 30,807  |
| Saskatchewan          | 18,732                       | —                       | —               | 18,732  |
| British Columbia      | 39,304                       | 850                     | 2,411           | 42,565  |
| Yukon                 | —                            | —                       | —               | —       |
| Northwest Territories | 471                          | —                       | —               | 471     |
| Canada                | 305,598                      | 173,972                 | 28,307          | 507,877 |
| 1966                  |                              |                         |                 |         |
| Newfoundland          | 16,746                       | —                       | 2,648           | 19,394  |
| Nova Scotia           | —                            | —                       | 115             | 115     |
| New Brunswick         | 6,752                        | —                       | 337             | 7,089   |
| Quebec                | 157,119                      | 2,020                   | 12,859          | 171,998 |
| Ontario               | 53,926                       | 140,425                 | 8,625           | 202,976 |
| Manitoba              | 22,490                       | 8,825                   | —               | 31,315  |
| Saskatchewan          | 19,549                       | 12                      | —               | 19,561  |
| British Columbia      | 49,812                       | 774                     | 2,294           | 52,880  |
| Yukon                 | —                            | —                       | —               | —       |
| Northwest Territories | 664                          | —                       | 84              | 748     |
| Canada                | 327,058                      | 152,056                 | 26,962          | 506,076 |

TABLE 38. Production of Refined Copper,<sup>1</sup> 1957 - 66

| Year | Short tons | Year | Short tons |
|------|------------|------|------------|
| 1957 | 323,540    | 1962 | 382,868    |
| 1958 | 329,239    | 1963 | 380,075    |
| 1959 | 365,366    | 1964 | 407,942    |
| 1960 | 417,029    | 1965 | 434,133    |
| 1961 | 406,359    | 1966 | 433,004    |

<sup>1</sup> In all forms and from all sources, including scrap.

TABLE 39. Silver Production (Recoverable) according to Nature of Ore, by Provinces, 1966

| Province              | Crude placer gold | Auriferous quartz ores | Copper-gold-silver ores | Nickel-copper ores | Silver-lead-zinc ores | Silver-cobalt and other ores | Total      |
|-----------------------|-------------------|------------------------|-------------------------|--------------------|-----------------------|------------------------------|------------|
| troy ounces           |                   |                        |                         |                    |                       |                              |            |
| Newfoundland          | —                 | —                      | 102,688                 | —                  | 994,737               | —                            | 1,097,425  |
| Nova Scotia           | —                 | 2                      | —                       | —                  | 540,661               | —                            | 540,663    |
| New Brunswick         | —                 | —                      | 64,210                  | —                  | 3,044,459             | —                            | 3,108,669  |
| Quebec                | —                 | 83,848                 | 3,573,955               | 25,963             | 1,524,880             | 5,500                        | 5,214,146  |
| Ontario               | —                 | 313,426                | 2,679,411               | 1,639,566          | 688,518               | 5,579,283                    | 10,900,204 |
| Manitoba              | —                 | 4,735                  | 498,045                 | 45,017             | —                     | —                            | 547,797    |
| Saskatchewan          | —                 | —                      | 603,163                 | 195                | —                     | —                            | 603,358    |
| Alberta               | 17                | —                      | —                       | —                  | —                     | —                            | 17         |
| British Columbia      | 218               | 176,976                | 513,692                 | —                  | 4,857,937             | —                            | 5,548,823  |
| Yukon                 | 9,368             | 179                    | —                       | —                  | 4,185,033             | —                            | 4,194,580  |
| Northwest Territories | —                 | 71,323                 | 1,590,468               | —                  | —                     | 401                          | 1,662,192  |
| Canada                | 9,603             | 650,489                | 9,625,632               | 1,710,741          | 15,836,225            | 5,585,184                    | 33,417,874 |

TABLE 40. Selenium and Tellurium Recoverable from Canadian Ores, 1957 - 66

| Year   | From copper-gold-silver ores |           | From nickel-copper ores |           | Total    |           |
|--------|------------------------------|-----------|-------------------------|-----------|----------|-----------|
|        | Selenium                     | Tellurium | Selenium                | Tellurium | Selenium | Tellurium |
| pounds |                              |           |                         |           |          |           |
| 1957   | 234,933                      | 24,609    | 86,459                  | 6,915     | 321,392  | 31,524    |
| 1958   | 216,695                      | 31,558    | 90,295                  | 6,692     | 306,990  | 38,250    |
| 1959   | 266,707                      | 6,123     | 101,400                 | 6,900     | 368,107  | 13,023    |
| 1960   | 377,138                      | 37,232    | 144,500                 | 7,450     | 521,638  | 44,682    |
| 1961   | 265,812                      | 69,559    | 164,800                 | 8,050     | 430,612  | 77,609    |
| 1962   | 344,151                      | 51,714    | 142,915                 | 7,011     | 487,066  | 58,725    |
| 1963   | 373,672                      | 69,137    | 95,100                  | 7,705     | 468,772  | 76,842    |
| 1964   | 360,841                      | 69,882    | 104,905                 | 7,900     | 465,746  | 77,782    |
| 1965   | 388,902                      | 60,479    | 123,175                 | 9,315     | 512,077  | 69,794    |
| 1966   | 464,482                      | 63,239    | 111,000                 | 9,000     | 575,482  | 72,239    |

TABLE 41. Zinc Production (Recoverable) according to Nature of Ore, and by Provinces, 1965 and 1966

| Year and province               | Recoverable from<br>copper-gold-silver<br>ores | Recoverable from<br>silver-lead-zinc<br>and other ores | Total   |
|---------------------------------|--|--|---------|
|                                 | tons (2,000 pounds)                            |  |         |
| 1965                            |  |  |         |
| Newfoundland . . . . .          | 1,637  | 34,550   | 36,187  |
| Nova Scotia . . . . .           | —  | 299  | 299     |
| New Brunswick . . . . .         | 12,968 <sup>r</sup>                            | 110,627 <sup>r</sup>                                   | 123,595 |
| Quebec . . . . .                | 74,353   | 198,530  | 272,883 |
| Ontario . . . . .               | 19,525   | 41,150   | 60,675  |
| Manitoba . . . . .              | 40,763   | —  | 40,763  |
| Saskatchewan . . . . .          | 27,983   | —  | 27,983  |
| British Columbia . . . . .      | 311  | 158,025  | 158,336 |
| Yukon . . . . .                 | —  | 6,624  | 6,624   |
| Northwest Territories . . . . . | —  | 94,690   | 94,690  |
| Canada . . . . .                | 177,540 <sup>r</sup>                           | 644,495 <sup>r</sup>                                   | 822,035 |
| 1966                            |  |  |         |
| Newfoundland . . . . .          | 2,193  | 31,967   | 34,160  |
| Nova Scotia . . . . .           | —  | 678  | 678     |
| New Brunswick . . . . .         | 11,947   | 130,448  | 142,395 |
| Quebec . . . . .                | 85,190   | 207,957  | 293,147 |
| Ontario . . . . .               | 20,709   | 61,686   | 82,395  |
| Manitoba . . . . .              | 34,967   | —  | 34,967  |
| Saskatchewan . . . . .          | 28,910   | —  | 28,910  |
| British Columbia . . . . .      | 1,003  | 151,559  | 152,562 |
| Yukon . . . . .                 | —  | 5,725  | 5,725   |
| Northwest Territories . . . . . | —  | 189,167  | 189,167 |
| Canada . . . . .                | 184,919  | 779,187  | 964,106 |

TABLE 42. Refined Zinc Produced, from all Sources, 1957 - 66

| Year           | Short tons | Year           | Short tons |
|----------------|------------|----------------|------------|
| 1957 . . . . . | 247,316    | 1962 . . . . . | 280,159    |
| 1958 . . . . . | 252,093    | 1963 . . . . . | 284,021    |
| 1959 . . . . . | 255,306    | 1964 . . . . . | 337,734    |
| 1960 . . . . . | 260,968    | 1965 . . . . . | 358,498    |
| 1961 . . . . . | 268,007    | 1966 . . . . . | 382,605    |

TABLE 43. World Copper Production by Countries of Origin of Ore<sup>1</sup>

| Country                             | 1962                | 1963      | 1964      | 1965      | 1966      |
|-------------------------------------|---------------------|-----------|-----------|-----------|-----------|
|                                     | tons (2,000 pounds) |           |           |           |           |
| United States . . . . .             | 1,223,978           | 1,208,197 | 1,251,216 | 1,356,275 | 1,407,937 |
| Mexico . . . . .                    | 51,945              | 61,576    | 57,877    | 76,237    | 82,007    |
| Canada . . . . .                    | 465,446             | 461,823   | 486,900   | 509,792   | 508,300   |
| Cuba <sup>2</sup> . . . . .         | 6,100               | 6,600     | 6,600     | 6,600     | 6,600     |
| Haiti . . . . .                     | 6,738               | 6,553     | 6,208     | 6,500     | 11,007    |
| Nicaragua . . . . .                 | 8,016               | 8,028     | 10,185    | 10,881    | 10,763    |
| Bolivia <sup>3</sup> . . . . .      | 2,646               | 3,300     | 5,160     | 5,215     | 6,285     |
| Brazil . . . . .                    | 1,800               | 1,700     | 3,100     | 3,100     | 3,100     |
| Chile . . . . .                     | 646,064             | 662,126   | 685,259   | 645,227   | 701,456   |
| Peru . . . . .                      | 183,853             | 195,608   | 192,328   | 198,784   | 194,439   |
| Totals, America . . . . .           | 2,596,586           | 2,615,511 | 2,704,833 | 2,818,611 | 2,931,894 |
| Austria . . . . .                   | 2,186               | 2,078     | 1,725     | 1,678     | 2,043     |
| Finland . . . . .                   | 37,657              | 36,777    | 34,379    | 32,760    | 29,774    |
| France . . . . .                    | 441                 | 441       | 331       | 441       | 670       |
| Germany, Federal Republic . . . . . | 2,202               | 2,515     | 1,759     | 1,184     | 1,386     |
| Italy . . . . .                     | 973                 | 1,100     | 887       | 837       | 1,268     |
| Norway . . . . .                    | 17,124              | 15,724    | 16,439    | 16,574    | 16,333    |
| Portugal . . . . .                  | 3,742               | 3,627     | 4,812     | 4,187     | 4,117     |
| Spain <sup>4</sup> . . . . .        | 20,580              | 26,275    | 28,698    | 27,054    | 30,767    |
| Sweden . . . . .                    | 21,034              | 19,029    | 17,846    | 17,402    | 16,736    |
| Yugoslavia . . . . .                | 57,008              | 68,446    | 69,648    | 68,950    | 68,588    |
| Totals, Europe . . . . .            | 162,947             | 176,012   | 176,524   | 171,067   | 171,682   |

See footnote(s) at end of table.

TABLE 43. World Copper Production by Countries of Origin of Ore<sup>1</sup> — Concluded

| Country                                      | 1962                | 1963             | 1964             | 1965             | 1966             |
|--|---------------------|------------------|------------------|------------------|------------------|
|  | tons (2,000 pounds) |                  |                  |                  |                  |
| Japan  | 114,198             | 118,185          | 117,036          | 118,020          | 123,104          |
| India  | 10,914              | 11,034           | 10,740           | 10,400           | 10,583           |
| Israel                                       | 5,768               | 6,087            | 10,948           | 9,126            | 11,194           |
| Korea, Republic of                           | 473                 | 542              | 536              | 978              | 929              |
| Turkey                                       | 28,127              | 32,189           | 34,925           | 35,000           | 37,000           |
| Philippines                                  | 60,327              | 70,201           | 66,654           | 69,806           | 81,303           |
| Cyprus <sup>4</sup>                          | 27,735              | 29,000           | 18,514           | 21,515           | 27,269           |
| <b>Totals, Asia</b>                          | <b>247,542</b>      | <b>267,238</b>   | <b>259,353</b>   | <b>264,845</b>   | <b>291,382</b>   |
| Congo, Republic of the                       | 322,974             | 297,537          | 304,877          | 318,128          | 349,098          |
| Rhodesia                                     | 15,146              | 18,489           | 18,341           | 19,800           | 19,000           |
| South West Africa                            | 25,873              | 30,709           | 35,887           | 32,007           | 37,597           |
| Uganda                                       | 17,173              | 17,875           | 20,129           | 18,894           | 18,800           |
| South Africa, Republic of                    | 51,115              | 60,792           | 75,579           | 66,640           | 137,400          |
| Zambia                                       | 619,856             | 648,238          | 709,754          | 766,976          | 687,174          |
| <b>Totals, Africa</b>                        | <b>1,052,137</b>    | <b>1,073,640</b> | <b>1,154,567</b> | <b>1,222,445</b> | <b>1,249,069</b> |
| <b>Australia</b>                             | <b>118,646</b>      | <b>119,470</b>   | <b>110,350</b>   | <b>95,785</b>    | <b>116,484</b>   |
| U.S.S.R. <sup>2</sup>                        | 550,000             | 600,000          | 675,000          | 710,000          | 770,000          |
| Bulgaria <sup>2</sup>                        | 14,000              | 18,000           | 20,200           | 22,500           | 25,000           |
| Germany, East <sup>2</sup>                   | 27,500              | 30,000           | 30,900           | 30,900           | 31,000           |
| Poland <sup>2</sup>                          | 15,100              | 14,600           | 16,000           | 16,600           | 17,700           |
| China <sup>2</sup>                           | 50,000              | 60,000           | 80,000           | 85,000           | 85,000           |
| <b>Totals, Soviet Sphere</b>                 | <b>656,600</b>      | <b>722,600</b>   | <b>822,100</b>   | <b>865,000</b>   | <b>928,700</b>   |
| <b>World totals, as reported<sup>5</sup></b> | <b>4,834,458</b>    | <b>4,974,471</b> | <b>5,227,727</b> | <b>5,437,753</b> | <b>5,689,211</b> |

<sup>1</sup> Includes copper contents or recoverable contents of ores or concentrates smelted in country of origin and/or shipped to other countries for smelting.<sup>2</sup> Conjectural.<sup>3</sup> Exports.<sup>4</sup> Excludes copper content of iron pyrites which may or may not have been recovered.<sup>5</sup> In addition there is production in Argentina, Ecuador, Burma, Taiwan, Algeria and Morocco; the total of all these countries is estimated to be about 5,800 tons in 1966.

Source: "American Bureau of Metal Statistics Yearbook".

TABLE 44. Cadmium Production (Recoverable) from Canadian Ores, 1957 - 66

| Year | From copper-gold-silver ores | From silver-lead-zinc ores | Total     |
|------|------------------------------|----------------------------|-----------|
|      | pounds                       |                            |           |
| 1957 | 286,044                      | 2,082,086                  | 2,368,130 |
| 1958 | 355,602                      | 1,400,448                  | 1,756,050 |
| 1959 | 334,029                      | 1,826,334                  | 2,160,363 |
| 1960 | 466,200                      | 1,891,297                  | 2,357,497 |
| 1961 | 307,757                      | 1,914,193                  | 2,221,950 |
| 1962 | 405,317                      | 2,199,656                  | 2,604,973 |
| 1963 | 389,185                      | 2,086,300                  | 2,475,485 |
| 1964 | 673,317                      | 2,099,667                  | 2,772,984 |
| 1965 | 783,132                      | 972,793                    | 1,755,925 |
| 1966 | 802,449                      | 2,434,413                  | 3,236,862 |

TABLE 45. Average Annual Metal Prices in Canadian Dollars, 1957 - 66

| Year | Gold           | Silver         | Copper    | Lead      | Zinc      |
|------|----------------|----------------|-----------|-----------|-----------|
|      | Per troy ounce | Per troy ounce | Per pound | Per pound | Per pound |
|      | dollars        |                |           |           |           |
| 1957 | 33.55          | 0.8737         | 0.2895    | 0.1396    | 0.1209    |
| 1958 | 33.98          | 0.8681         | 0.2542    | 0.1136    | 0.1088    |
| 1959 | 33.57          | 0.8778         | 0.2961    | 0.1061    | 0.1224    |
| 1960 | 33.95          | 0.8891         | 0.3029    | 0.1068    | 0.1335    |
| 1961 | 35.46          | 0.9426         | 0.2919    | 0.1021    | 0.1259    |
| 1962 | 37.41          | 1.1650         | 0.3100    | 0.0992    | 0.1210    |
| 1963 | 37.75          | 1.3840         | 0.3150    | 0.1100    | 0.1278    |
| 1964 | 37.75          | 1.4000         | 0.3340    | 0.1344    | 0.1417    |
| 1965 | 37.73          | 1.4000         | 0.3760    | 0.1550    | 0.1510    |
| 1966 | 37.71          | 1.3990         | 0.4490    | 0.1494    | 0.1510    |



## TRANSACTIONS IN GOLD BULLION AT THE ROYAL CANADIAN MINT

(From the Annual Report of the Royal Canadian Mint)

Four thousand one hundred and sixty-three deposits of gold bullion were received during the year from Canadian Mining Companies and Sundry Persons. In addition, eight hundred and ninety-three deposits of silver bullion and medals were received from the Department of Veterans Affairs and Crown Assets Disposal Corporation.

The net value paid to depositors was \$88,403,548.91. In addition the amount of fine gold issued to depositors was 361,583.743 ounces.

The following table shows the disposition of the fine gold produced in various forms (trade bars, granulated gold, sweep, medals, etc.):

|   | Ounces fine   |
|---|---------------|
| 5,663 Trade bars transferred to Exchange Fund |               |
| Account of Minister of Finance                | 2,263,011.363 |
| Depositors—granulated and bars:               |               |
| Gold purchase                                 | 2,918.296     |
| Gold storage                                  | 358,665.447   |
|   | 361,583.743   |
| Sales of fine gold                            | 1,000         |
| Trial Plate for assay purposes                | 2,051         |
| Medals, etc.                                  | 33,532        |
| Sweep   | 6,768.493     |
|   | 2,631,400.182 |

This total shows a decrease of 395,574.175 ounces fine issued as compared with the year 1965.

## Comparative Statement Showing Details of Gold and Silver Deposits Received for 1965 and 1966

|                                   | Number of deposits received |           |          |          | Gross ounces       |           |          |          |
|-----------------------------------|-----------------------------|-----------|----------|----------|--------------------|-----------|----------|----------|
|                                   | 1965                        | 1966      | Increase | Decrease | 1965               | 1966      | Increase | Decrease |
| Sale to Her Majesty               | 3,836                       | 3,405     | —        | 431      | 3,139,284          | 2,810,113 | —        | 329,171  |
| For storage                       | 645                         | 552       | —        | 93       | 531,858            | 452,667   | —        | 79,191   |
| Jewellery and miscellaneous       | 174                         | 206       | 32       | —        | 12,584             | 14,565    | 1,981    | —        |
| Totals                            | 4,655                       | 4,163     | —        | 492      | 3,683,726          | 3,277,345 | —        | 406,381  |
| Silver deposits from:             |                             |           |          |          |                    |           |          |          |
| Crown Assets Disposal Corporation | 6                           | 10        | 4        | —        | 31,109             | 3,951     | —        | 27,158   |
| Department of Veterans Affairs    | —                           | 883       | 883      | —        | —                  | 724,122   | 724,122  | —        |
| Total received                    | 4,661                       | 5,056     | 395      | —        | 3,714,835          | 4,005,418 | 290,583  | —        |
|                                   | Fine gold ounces            |           |          |          | Fine silver ounces |           |          |          |
|                                   | 1965                        | 1966      | Increase | Decrease | 1965               | 1966      | Increase | Decrease |
| Sale to Her Majesty               | 2,582,621                   | 2,321,664 | —        | 260,957  | 410,306            | 342,937   | —        | 67,369   |
| For storage                       | 403,370                     | 348,400   | —        | 54,970   | —                  | —         | —        | —        |
| Jewellery and miscellaneous       | 5,459                       | 6,338     | 879      | —        | —                  | —         | —        | —        |
| Totals                            | 2,991,450                   | 2,676,402 | —        | 315,048  | 410,306            | 342,937   | —        | 67,369   |
| Silver deposits from:             |                             |           |          |          |                    |           |          |          |
| Crown Assets Disposal Corporation | —                           | —         | —        | —        | 19,307             | 3,686     | —        | 15,621   |
| Department of Veterans Affairs    | —                           | —         | —        | —        | —                  | 599,270   | 599,270  | —        |
| Total received                    | 2,991,450                   | 2,676,402 | —        | 315,048  | 429,613            | 945,893   | 516,280  | —        |

Details of origin of the bullion deposited, for sale to Her Majesty, and for storing during the year 1966 as shown in the following table:

| From Canadian mines and refineries       | Sale to Her Majesty |               | Gold storage |             | Total         |               | Total fine silver |
|--|---------------------|---------------|--------------|-------------|---------------|---------------|-------------------|
|  | Gross weight        | Fine gold     | Gross weight | Fine gold   | Gross weight  | Fine gold     |                   |
|  | ounces              |               |              |             |               |               |                   |
| Ontario                                  | 1,673,678.263       | 1,412,353.690 | 161,894.067  | 138,072.953 | 1,835,572.330 | 1,550,426.643 | 167,267.47        |
| Quebec                                   | 697,405.660         | 570,825.482   | —            | —           | 697,405.660   | 570,825.482   | 80,830.81         |
| British Columbia                         | 85,729.840          | 70,001.874    | —            | —           | 85,729.840    | 70,001.874    | 12,060.26         |
| Manitoba                                 | 31,364.560          | 22,808.222    | —            | —           | 31,364.560    | 22,808.222    | 4,735.10          |
| Yukon Territory                          | 53,300.020          | 42,097.374    | —            | —           | 53,300.020    | 42,097.374    | 9,399.65          |
| Northwest Territories                    | 268,407.072         | 203,382.203   | 290,772.678  | 210,326.778 | 559,179.750   | 413,708.981   | 67,289.96         |
| Alberta                                  | 211.400             | 182.241       | —            | —           | 211.400       | 182.241       | 16.96             |
| Nova Scotia                              | 16.220              | 13.487        | —            | —           | 16.220        | 13.487        | 1.98              |
| Total from Canadian mines and refineries | 2,810,113.035       | 2,321,664.573 | 452,666.745  | 348,399.731 | 3,262,779.780 | 2,670,064.304 | 341,602.19        |
| From jewellery and miscellaneous         | 14,565.310          | 6,338.002     | —            | —           | 14,565.310    | 6,338.002     | 1,334.70          |
| Totals                                   | 2,824,678.345       | 2,328,002.575 | 452,666.745  | 348,399.731 | 3,277,345.090 | 2,676,402.306 | 342,936.89        |
| Silver deposits from:                    |                     |               |              |             |               |               |                   |
| Crown Assets Disposal Corporation        | —                   | —             | —            | —           | 3,951.250     | —             | 3,685.76          |
| Department of Veterans Affairs           | —                   | —             | —            | —           | 724,122.020   | —             | 599,270.51        |
| Totals                                   | 3,552,751.615       | 2,328,002.575 | 452,666.745  | 348,399.731 | 4,005,418.360 | 2,676,402.306 | 945,893.16        |

The following table gives details of fine bullion produced during the year:

| Produced                               | Number | Gross Weight  | Fine Weight   | Average assay |
|--|--------|---------------|---------------|---------------|
|  |        | ounces        |               |               |
| Fine gold trade bars . . . . .         | 5,801  | 2,323,595.850 | 2,317,876.500 | 997.5         |
| Granulated gold . . . . .              | —      | 2,445.830     | 2,445.585     | 999.9         |
| Fine silver bars . . . . .             | 293    | 312,561.29    | 312,492.37    | 999.8         |
| Granulated silver . . . . .            | —      | 31,598.30     | 31,593.08     | 999.8         |
| Gold trial plate . . . . .             | —      | —             | 2.051         | —             |
| Finishing and plating medals . . . . . | —      | —             | .370          | —             |
| Storage — Fine bars . . . . .          | 589    | 235,861.901   | 235,287.383   | 997.6         |
| Granulated gold . . . . .              | —      | 112,766.630   | 112,755.163   | 999.9         |
| Sweeps sold — Gold . . . . .           | —      | —             | 6,768.493     | —             |
| Silver . . . . .                       | —      | —             | 43,370.05     | —             |
| Medal bar — Gold . . . . .             | —      | —             | 209.394       | —             |
| Silver . . . . .                       | —      | —             | 2,305.34      | —             |

| Special processes            | Number | Gross weight          |
|------------------------------|--------|-----------------------|
|                              |        | ounces                |
| Remelts . . . . .            | 61     | 31,201.170            |
| Toughenings . . . . .        | 7      | 1,551.650             |
|                              |        | pounds<br>avoirdupois |
| Chloride reduction . . . . . | —      | 58,399                |
| Sweeps . . . . .             | —      | 77,511                |

### GOLD STORAGE

During the year two mines deposited gold bullion at the Mint under the terms of the Regulations prescribing the circumstances under which the conditions upon which gold will be accepted at the Royal Canadian Mint for storage.

The fine gold content of the bullion deposited under this heading during 1966 amounted to 348,399.731 ounces. Fine bullion amounting to 358,665.447 ounces was issued on behalf of the mines for export and to various processors for domestic use.

Summary of transactions in Gold Bullion of the Ottawa Branch of the Royal Mint from its opening on January 2, 1908, to its disestablishment on November 30, 1931, and of the Royal Canadian Mint from December 1, 1931, to December 31, 1966.

| Year                | Gold received   |                 | Gold issued |                 |
|---------------------|-----------------|-----------------|-------------|-----------------|
|                     | Gross weight    | Fine gold       | Coin        | Bullion         |
|                     | ounces          |                 | ounces fine |                 |
| 1908 - 56 . . . . . | 150,839,456.478 | 121,596,452.501 | 383,319.096 | 121,157,039.394 |
| 1957 . . . . .      | 4,798,296.343   | 3,896,083.563   | —           | 3,776,710.677   |
| 1958 . . . . .      | 4,868,066.405   | 3,958,458.747   | —           | 4,088,706.348   |
| 1959 . . . . .      | 4,805,493.520   | 3,908,640.185   | —           | 3,836,679.842   |
| 1960 . . . . .      | 4,970,726.079   | 4,024,625.964   | —           | 4,014,771.105   |
| 1961 . . . . .      | 4,745,639.352   | 3,800,137.419   | —           | 3,812,054.286   |
| 1962 . . . . .      | 4,363,972.339   | 3,488,974.332   | —           | 3,520,405.598   |
| 1963 . . . . .      | 4,319,975.360   | 3,457,091.639   | —           | 3,467,554.159   |
| 1964 . . . . .      | 3,959,021.466   | 3,188,867.542   | —           | 3,173,572.886   |
| 1965 . . . . .      | 3,683,726.452   | 2,991,450.347   | —           | 3,026,974.357   |
| 1966 . . . . .      | 3,277,345.090   | 2,676,402.306   | —           | 2,631,400.182   |
| Totals . . . . .    | 194,631,718.884 | 156,987,184.545 | 383,319.096 | 156,505,868.834 |



## CURRENCY, MINT AND EXCHANGE FUND ACT

## Gold Bullion Regulations, 1959

AT THE GOVERNMENT HOUSE AT OTTAWA

P.C. 1959-100

Thursday, the 29th day of January, 1959.

Present:

His Excellency the Governor General in Council

His Excellency the Governor General in Council, on the recommendation of the Minister of Finance, pursuant to the Currency, Mint and Exchange Fund Act, is pleased hereby to revoke the Gold Bullion Regulations made by Order in Council P.C. 1954-1584 of 19th October, 1954,<sup>1</sup> and the Mint Custom Refining and Storing Regulations made by Order in Council P.C. 1956-450 of 22nd March, 1956,<sup>2</sup> and to make the annexed Regulations Respecting the Handling of Gold Bullion at the Royal Canadian Mint in Substitution therefor.

REGULATIONS RESPECTING THE HANDLING OF  
GOLD BULLION AT THE ROYAL CANADIAN MINT

## Short Title

1. These Regulations may be cited as the Gold Bullion Regulations, 1959.

## Interpretation

2. In these Regulations,

- (a) "deposit" means a parcel of bullion or other material containing gold;
- (b) "Master" means the Master of the Mint;
- (c) "Minister" means the Minister of Finance; and
- (d) "Mint" means the Royal Canadian Mint.

## Deposits

3. (1) The Master may accept for assaying, refining, storing or any other purpose, a deposit that is delivered free of all charges to the Mint if the deposit contains

- (a) newly mined Canadian gold,
- (b) old jewellery or dental scrap that has not been melted or otherwise treated to prevent its origin being readily recognized,
- (c) scrap resulting from processes carried out by manufacturers and refiners in the ordinary course of their business, or
- (d) gold coin that is not legal tender in Canada.

(2) The Master shall not accept

- (a) a deposit of a kind not described in subsection (1) unless he is authorized to do so by the Minister,
- (b) an ingot exceeding one thousand and two hundred ounces troy, gross weight, or
- (c) a deposit that appears to him to be unsuitable for treatment by the refining processes in use at the Mint.

(3) The Master is not obliged to accept any deposit and before accepting a deposit he may require the depositor to furnish evidence satisfactory to him as to the origin of the deposit.

4. (1) Where a deposit is delivered to the Mint for the purpose of selling the gold content thereof to Her Majesty, the Minister may, on behalf of Her Majesty, buy the gold content of that deposit.

(2) It is a condition under which a deposit is accepted at the Mint that the silver content thereof belongs to Her Majesty, subject to payment by the Minister in accordance with these Regulations for that part of the silver content of the deposit that is in excess of one per cent of the weight of the deposit after melting.

5. (1) Each parcel of bullion for which a separate assay is required shall be regarded as a separate deposit and all deposits accepted by the Master shall be valued in the order in which they are received.

(2) As soon as possible after a deposit has been accepted by the Master, the content of the deposit shall be determined and valued on the report of the Assay Division of the Mint.

(3) Gold shall be reported on the Assay Division Report to the one-four-thousandth part (one-quarter millieme), except that when the gold millesimal fineness of the bullion exceeds nine hundred and ninety, the gold shall be reported to the one-ten-thousandth part (one-tenth millieme), and silver shall be reported to the one-thousandth part (1 millieme), but only that part of the silver content of the deposit that is in excess of one per cent of the weight of the deposit after melting shall be reported.

(4) Where it is determined that a deposit contains less than two hundred parts of gold in one thousand by assay, or that a deposit is unsuitable for treatment by the refining process in use at the Mint, the Master shall, upon payment by the depositor of the Mint charges for melting and assaying, deliver the deposit at the Mint counter to the depositor.

(5) On the completion of the valuation of a deposit the Master shall, unless the deposit is to be returned to the depositor in accordance with subsection (4), furnish the depositor with a memorandum in duplicate of the outturn of his deposit.

(6) The memorandum mentioned in subsection (5) shall state

- (a) the weight of the deposit before and after melting,
- (b) the assay report,
- (c) the fine gold and the fine silver content of the deposit,
- (d) the gross value of the fine content at the price applicable to the deposit calculated in accordance with sections 6 and 7,
- (e) the Mint charges applicable to the deposit,
- (f) where the deposit was delivered to the Mint for the purpose of selling the gold content thereof to Her Majesty, the net value of the fine gold and fine silver contents of the deposit, being the gross value minus the Mint charges, and
- (g) where the deposit was delivered to the Mint for a purpose other than that of selling the gold content thereof to Her Majesty, the net value of the fine silver content of the deposit, being the gross value thereof minus the Mint charges.

(7) Where a deposit was delivered to the Mint for the purpose of selling the gold content thereof to Her Majesty, the Minister shall, at the same time as the memorandum mentioned in subsection (5) is furnished to the depositor, pay to the depositor as the full purchase price of the fine gold and fine silver contents of the deposit an amount equal to the net value of the fine contents of the deposit as stated in the memorandum.

<sup>1</sup> SOR/54-181, CANADA GAZETTE PART II, Vol. 88, No. 21, Nov. 10, 1954, p. 1430 and Statutory Orders and Regulations Consolidation 1955, Vol. 1, p. 683.

<sup>2</sup> SOR/56-117, CANADA GAZETTE PART II, Vol. 90, No. 7, April 11, 1956.



(8) Where a deposit was delivered to the Mint for a purpose other than that of selling the gold content thereof to Her Majesty, the Minister shall, at the same time as memorandum mentioned in subsection (5) is furnished to the depositor, pay to the depositor, as the full purchase price of the silver content of the deposit, an amount equal to the net value of the fine silver content of the deposit as stated in the memorandum.

6. The price payable by the Minister for the gold content of a deposit is the market price of gold in the country to which the Government of Canada is, at the time the deposit is received, exporting gold, converted into Canadian funds at the average of the rates of exchange for the currency of that country, reported to the Minister by the Bank of Canada on the days Monday to Friday, inclusive, of the week in which the deposit is delivered to the Master such price hereinafter referred to as the "Mint buying price".

7. The price payable by the Minister for the silver content of a deposit is the price that is one quarter of one cent below the average of the official New York daily quotation for fine silver for the days Monday to Friday, inclusive, of the week in which the deposit is delivered to the Master, converted into Canadian funds at the average of the rates of exchange for United States funds reported to the Minister by the Bank of Canada on the days Monday to Friday, inclusive, of that week.

#### Mint Charges

8. (1) The Mint charge payable by a depositor to the Master in respect of a deposit shall be calculated as follows on the gross weight of the deposit after melting:

- (a) for melting and assaying, three dollars for the first one thousand ounces or part thereof and thirty cents for each additional one hundred ounces or part thereof; and
- (b) for refining,
  - (i) when the deposit contains not more than five per cent base metal, nine cents per ounce,
  - (ii) when the deposit contains over five per cent base metal but not over ten per cent base metal, ten cents per ounce,
  - (iii) when the deposit contains over ten per cent base metal but not over fifteen per cent base metal, eleven cents per ounce,
  - (iv) when the deposit contains over fifteen per cent base metal but not over twenty per cent base metal, twelve cents per ounce, and
  - (v) when the deposit contains over twenty per cent base metal, or requires toughening or other special treatment in order to obtain concordant assays, such charge, not exceeding eighteen cents per ounce, as determined by the Master after taking into account the cost of treatment.

(2) The charge for refining provided in paragraph (b) of subsection (1) applies in respect of all deposits containing, by assay, less than nine hundred and ninety-five parts fine gold in one thousand.

(3) To cover the cost of marketing outside Canada a depositor shall pay to the Master a handling charge of eleven cents per fine ounce of gold for every deposit that is delivered to the Mint for the purpose of selling the gold content thereof to Her Majesty.

(4) In respect of every deposit that is delivered to the Mint for the purpose of storing the gold content thereof, the depositor shall pay the following charges:

- (a) a storage charge of five cents for each fine ounce of gold held in Mint storage for more than sixty days (including the day on which the deposit is received at the Mint) in respect of each additional thirty days or fraction thereof (excluding the day on which it is shipped from the Mint) payable upon application for the release of the gold or when billed, whichever is the earlier,
- (b) a service charge of two cents for each fine ounce of gold shipped from the Mint, payable at the time of application for the release of the gold, and

(c) a handling charge of eleven cents for each fine ounce of gold released from storage for sale to Her Majesty, payable at the time of sale.

(5) In respect of every deposit that is delivered to the Mint for a purpose not described in subsection (3) or (4), and packing of fine gold is involved, the depositor shall pay at the time of shipment one dollar for the first fifty ounces of fine gold or part thereof, and two cents for each additional ounce or part thereof that is packed at the Mint for shipment.

(6) It is a condition under which a deposit is accepted at the Mint that the Master may retain a portion of the fine gold content thereof in payment of the Mint charges in respect of that deposit.

#### Release of Gold

9. The fine gold content of a deposit held in storage at the Mint shall be released only upon application therefor in the form prescribed by the Minister.

10. Every deposit is accepted at the Mint subject to the condition that the fine gold content thereof shall be released in a form that is at least .995 fine.

#### Sale of Gold

11. (1) The Master may, with the approval of the Minister, sell fine gold from the Mint that belongs to Her Majesty.

(2) The price at which each fine ounce of gold shall be sold is the Mint buying price per fine ounce for the week immediately preceding the week in which the gold is sold plus ten cents.

#### General

12. (1) Deposits may be delivered to the Mint on Monday to Friday, inclusive, between the hours of 9:30 a.m. and 4:30 p.m. unless such a day is a holiday mentioned in or authorized pursuant to the Civil Service Act.

(2) Where a deposit is delivered to the Mint, it shall be withheld from treatment until an invoice setting out the description and weight of the contents thereof has been received by the Master, and where there is a discrepancy between the actual and invoice weights of a deposit, the deposit shall not be further dealt with until the Master has notified the depositor of the discrepancy and has received further instructions from the depositor.

(3) All gold shipped from the Mint shall be delivered at the Mint counter to the purchaser of the gold, to the depositor or his authorized agent.

13. It is a condition under which newly mined gold is accepted at the Mint for storage that the depositor prepare and mail to the Minister within thirty days of the last day of each month a report for that month in the form prescribed by the Minister showing, *inter alia*,

- (a) fine gold held by him or on his behalf at the beginning of the month
  - (i) at the Mint, and
  - (ii) at places other than the Mint and the location of those places;
- (b) refined gold produced during the month;
- (c) sales made during the month indicating,
  - (i) the name and address of the purchaser,
  - (ii) the amount in ounces sold to each purchaser,
  - (iii) the value, in Canadian funds, of the gold sold to each purchaser, and
  - (iv) the price paid, in Canadian funds, for each fine ounce of gold so sold; and
- (d) fine gold held by him or on his behalf at the end of the month
  - (i) at the Mint, and
  - (ii) at places other than the Mint and the location of those places.

## List of Establishments classified to This Industry, 1966

(Does not include establishments classified to other industries which recover Gold as a secondary activity)

| Name  | Head or executive office address        | Location                          |
|---|---|-----------------------------------|
| <b>(a) Placer Gold Mines</b>                          |   |                                   |
| <b>Alberta:</b>                                       |   |                                   |
| Parke, J.L.   | 4216-104A Ave., Edmonton                | Onoway                            |
| <b>British Columbia:</b>                              |   |                                   |
| Rensch, Reinhold                                      | Kamloops                                | Lillouet                          |
| Spanish Placers Ltd.                                  | Likely                                  | Cariboo                           |
| Whittle, Raymond                                      | Garden Bay                              | Cariboo                           |
| <b>Yukon:</b>   |   |                                   |
| Ballarat Mines Ltd.                                   | Dawson                                  | Dominion Creek and Eldorado Creek |
| Bardusan Placers Ltd.                                 | Mayo                                    | Mayo                              |
| Bleiler, E.   | Mayo                                    | Mayo                              |
| Boutillier, H.C. & D.F.                               | Dawson                                  | Bonanza Creek                     |
| Burgelman, Mrs. Nellie                                | Dawson                                  | Cariboo Creek                     |
| Burwash Mining Co.                                    | Whitehorse                              | Burwash Creek                     |
| Chudy Placers   | Dawson                                  | Dawson                            |
| Djukastein Placers                                    | Mayo                                    | Mayo                              |
| Franklin Enterprises Ltd.                             | Dawson                                  | Dawson                            |
| Fry, A.T.   | Dawson                                  | Bonanza Creek                     |
| Heitman, G.   | Dawson                                  | Dawson                            |
| K. & S. Placers                                       | Dawson                                  | All Gold Creek                    |
| Lamontagne, J.A.                                      | Dawson                                  | Bedrock Creek                     |
| Lunde, Ole  | Dawson                                  | Dawson                            |
| Ross, L.M. (Kirkman Creek Placers)                    | Dawson                                  | Kirkman Creek                     |
| Spruce Creek Placers Ltd.                             | Mayo                                    | Mayo                              |
| Taylor, Fred W.                                       | Mayo                                    | Dublin Gulch                      |
| Yukon Consolidated Gold Corp. Ltd.                    | Dawson                                  | Dawson                            |
| <b>(b) Gold Quartz Mines</b>                          |   |                                   |
| <b>Quebec:</b>  |   |                                   |
| Barnat Mines Ltd.                                     | 112 King St. W., Toronto, Ontario       | Malartic                          |
| Carnflo Mines Ltd.                                    | 11 King St. W., Toronto 1, Ontario      | Malartic and Fournière Twp.       |
| Chimo Gold Mines Ltd.                                 | 11 King St. W., Toronto 1, Ontario      | Vauquelin Twp.                    |
| East Malartic Mines Ltd.                              | 112 King St. W., Toronto, Ontario       | Fournière Twp.                    |
| Lamaque Gold Mines Ltd.                               | 11 Adelaide St. W., Toronto, Ontario    | Bourlamaque                       |
| Little Long Lac Gold Mines Ltd.                       | 400 - 112 King St. W., Toronto, Ontario | Dubuisson Twp.                    |
| Malartic Goldfields (Quebec) Ltd.                     | 112 King St. W., Toronto, Ontario       | Fournière and Dubuisson Twps.     |
| Marban Gold Mines Ltd.                                | 112 King St. W., Toronto, Ontario       | Dubuisson and Fournière Twps.     |
| Norbeau Mines (Quebec) Ltd.                           | 112 King St. W., Toronto, Ontario       | McKenzie Twp.                     |
| Peel-Elder Ltd.                                       | 44 King St. W., Toronto, Ontario        | Noranda                           |
| Sigma Mines (Quebec) Ltd.                             | 360 Bay St., Toronto, Ontario           | Bourlamaque                       |
| Sullivan Consolidated Mines Ltd.                      | Sullivan                                | Dubuisson Twp.                    |
| Wasamac Mines Ltd.                                    | 112 King St. W., Toronto 1, Ontario     | Arntfield                         |
| Willroy Mines Ltd. (Norlartic Division)               | 112 King St. W., Toronto 1, Ontario     | Malartic and Vassan Twps.         |
| <b>Ontario:</b>                                       |   |                                   |
| <b>Porcupine District</b>                             |   |                                   |
| Aunor Gold Mines Ltd.                                 | 44 King St. W., Toronto                 | Timmins                           |
| Dome Mines Ltd.                                       | South Porcupine                         | Tisdale Twp.                      |
| Hallnor Mines Ltd.                                    | 44 King St. W., Toronto                 | Whitney Twp.                      |
| Hollinger Consolidated Gold Mines Ltd.                | Timmins                                 | Hislop and Tisdale Twps.          |
| McIntyre Porcupine Mines Ltd.                         | 25 King St. W., Toronto 1               | Schumacher                        |
| Pamour Porcupine Mines Ltd.                           | 44 King St. W., Toronto                 | Whitney Twp.                      |
| Porcupine Paymaster Ltd.                              | Box 100, South Porcupine                | South Porcupine                   |
| Preston Mines Ltd.                                    | 125 Adelaide St. W., Toronto 1          | South Porcupine                   |
| <b>Kirkland Lake District</b>                         |   |                                   |
| Lake Shore Mines Ltd.                                 | 112 King St. W., Toronto                | Kirkland Lake                     |
| Lamaque Mining Co. Ltd. (Teck-Hughes Mining Division) | 11 Adelaide St. W., Toronto 1           | Teck Twp.                         |
| Macassa Gold Mines Ltd. (Macassa Division)            | 112 King St. W., Toronto                | Kirkland Lake                     |
| Upper Beaver Mines Ltd.                               | 250 University Ave., Toronto 1          | Gauthier Twp.                     |
| Upper Canada Mines Ltd.                               | 250 University Ave., Toronto 1          | Gauthier Twp.                     |
| <b>Larder Lake District</b>                           |   |                                   |
| Kerr-Addison Gold Mines Ltd.                          | 44 King St. W., Toronto 1               | McGarry Twp.                      |
| <b>Matachewan District</b>                            |   |                                   |
| Stairs Exploration & Mining Co. Ltd.                  | Box 189, Matachewan                     | Matachewan                        |
| <b>Sudbury District</b>                               |   |                                   |
| Renabie Mines Ltd.                                    | 112 King St. W., Toronto                | Sudbury                           |
| <b>Thunder Bay District</b>                           |   |                                   |
| Consolidated Mosher Mines Ltd.                        | 112 King St. W., Toronto                | Long Lac                          |
| MacLeod-Cockshutt Gold Mines Ltd.                     | 112 King St. W., Toronto                | Geraldton                         |
| <b>Kenora District</b>                                |   |                                   |
| Sapawe Gold Mines Ltd.                                | 1015 Beaver Hall Hill, Montreal, Quebec | Rainy River                       |
| <b>Patricia District</b>                              |   |                                   |
| Anco Mines Ltd.                                       | 2200 Yonge St., Toronto 12              | Red Lake                          |
| Campbell Red Lake Mines Ltd.                          | 360 Bay St., Toronto                    | Balmer Twp.                       |
| Cochonour Wilans Gold Mines Ltd.                      | 2200 Yonge St., Toronto                 | Dome Twp.                         |



## Establishments classified to This Industry, 1966 - Concluded

| Name   | Head or executive office address                           | Location               |
|--|--|------------------------|
| (b) Gold Quartz Mines - Concluded                                |  |                        |
| <b>Ontario - Concluded:</b>                                      |  |                        |
| <b>Patricia District - Concluded:</b>                            |  |                        |
| Dickenson Mines Ltd. . . . .                                     | 25 Adelaide St. W., Toronto . . . . .                      | Balmer Twp.            |
| Kostynuk Bros. Ltd. . . . .                                      | Red Lake . . . . .   | Red Lake               |
| McKenzie Red Lake Gold Mines Ltd. . . . .                        | 112 King St., Toronto . . . . .                            | McKenzie Island        |
| Madsen Red Lake Gold Mines Ltd. . . . .                          | 55 Yonge St., Toronto . . . . .                            | Heyson and Baird Twps. |
| Pickle Crow Gold Mines, Ltd. . . . .                             | 11 Adelaide St. W., Toronto . . . . .                      | Connell Twp.           |
| <b>Manitoba:</b>   |  |                        |
| San Antonio Gold Mines Ltd. (Forty-Four Mines Ltd.) . . . . .    | 67 Yonge St., Toronto . . . . .                            | Bissett                |
| <b>British Columbia:</b>   |  |                        |
| Bralorne Pioneer Mines Ltd. . . . .                              | 320-355 Burrard St., Vancouver . . . . .                   | Bralorne               |
| Cariboo Gold Quartz Mining Co. Ltd. . . . .                      | 675 W. Hastings St., Vancouver . . . . .                   | Cariboo                |
| Silbak Premier Mines Ltd. . . . .                                | 355 Burrard St., Vancouver 1 . . . . .                     | Stewart                |
| <b>Northwest Territories:</b>                                    |  |                        |
| Cominco Ltd. (Con Mine) . . . . .                                | Trail, British Columbia . . . . .                          | Yellowknife            |
| Cominco Ltd. (Rycon Mines Ltd.) . . . . .                        | Trail, British Columbia . . . . .                          | Yellowknife            |
| Discovery Mines Ltd. . . . .                                     | 2200 Yonge St., Toronto 7, Ontario . . . . .               | Discovery              |
| Giant Yellowknife Mines Ltd. . . . .                             | 7 King St. W., Toronto, Ontario . . . . .                  | Yellowknife            |
| Lolor Mines Ltd. . . . .   | 7 King St. W., Toronto, Ontario . . . . .                  | Yellowknife            |
| Supercrest Mines Ltd. . . . .                                    | 7 King St. W., Toronto, Ontario . . . . .                  | Yellowknife            |
| Tundra Gold Mines Ltd. . . . .                                   | 2200 Yonge St., Toronto, Ontario . . . . .                 | Matthews Lake          |
| Vol Mines Ltd. . . . .   | Trail . . . . .  | Yellowknife            |
| (c) Copper-Gold-Silver Mines                                     |  |                        |
| <b>Newfoundland:</b>   |  |                        |
| Atlantic Coast Copper Corp. Ltd. . . . .                         | 330 Bay St., Toronto, Ontario . . . . .                    | Springdale             |
| British Newfoundland Exploration Ltd. . . . .                    | 1980 Sherbrooke St. W., Montreal 25, Quebec . . . . .      | Springdale             |
| Consolidated Rambler Mines Ltd. . . . .                          | 908 - 330 Bay St., Toronto 1, Ontario . . . . .            | White Bay              |
| First Maritime Mining Corp., Ltd. . . . .                        | 330 Bay St., Toronto, Ontario . . . . .                    | Tilt Cove              |
| <b>New Brunswick:</b>  |  |                        |
| Cominco Ltd. . . . .   | 630 Dorchester Ave., Montreal, Quebec . . . . .            | Wedge Mine             |
| <b>Quebec:</b>   |  |                        |
| Campbell Chibougamau Mines Ltd. . . . .                          | 55 Yonge St. Toronto, Ontario . . . . .                    | Obalski Twp.           |
| Cupra Mines Ltd. . . . .   | 1403 - 507 Place d'Armes, Montréal . . . . .               | Stratford Twp.         |
| Gaspé Copper Mines Ltd. . . . .                                  | 44 King St. W., Toronto, Ontario . . . . .                 | Murdochville           |
| Lake Dufault Mines Ltd. . . . .                                  | 7 King St. W., Toronto, Ontario . . . . .                  | Dufresnoy Twp.         |
| Merrill Island Mining Corporation Ltd. . . . .                   | 621 Craig St. W., Montréal 5 . . . . .                     | McKenzie Twp.          |
| Mines de Poirier Inc. . . . .                                    | Amos . . . . .   | Poirier Twp.           |
| New Hosco Mines Ltd. . . . .                                     | 906 - 357 Bay St., Toronto, Ontario . . . . .              | Daniel Twp.            |
| Noranda Mines Ltd. . . . .                                       | 44 King St. W., Toronto, Ontario . . . . .                 | Noranda                |
| Normetal Mining Corp. Ltd. . . . .                               | 1800 - 44 King St. W., Toronto, Ontario . . . . .          | Desmeloizes Twp.       |
| Opemiska Copper Mines Ltd. . . . .                               | 7 King St. E., Toronto, Ontario . . . . .                  | Levy Twp.              |
| Patino Mining Corp. (The) . . . . .                              | 7 King St. E., Toronto, Ontario . . . . .                  | Chibougamau            |
| Queumont Mining Corp. Ltd. . . . .                               | 1700 - 44 King St. W., Toronto, Ontario . . . . .          | Rouyn-Noranda          |
| Solbec Copper Mines Ltd. . . . .                                 | 1403 - 507 Place d'Armes, Montreal . . . . .               | Stratford Twp.         |
| Sullico Mines Ltd. . . . .                                       | 1403 - 507 Place d'Armes, Montreal . . . . .               | Val d'Or               |
| United Obalski Mining Co. Ltd. . . . .                           | 911 - 1155 Dorchester Blvd. W., Montreal . . . . .         | Obalski Twp.           |
| <b>Ontario:</b>  |  |                        |
| Broulan Reef Mines Ltd. . . . .                                  | 105 Adelaide St. W., Toronto . . . . .                     | Whitney                |
| Canadian Jamieson Mines Ltd. . . . .                             | Timmins . . . . .  | Timmins                |
| Copperfields Mining Corp. Ltd. . . . .                           | 11 Adelaide St. W., Toronto . . . . .                      | Algoma                 |
| Ethel Copper Mines Ltd. . . . .                                  | 80 Richmond St. W., Toronto . . . . .                      | Elk Lake               |
| Geo Division (Noranda Mines Ltd.) . . . . .                      | 1715 - 44 Adelaide St. W., Toronto . . . . .               | Algoma                 |
| Kam Kotia Mines Ltd. . . . .                                     | 25 Adelaide St. W., Toronto . . . . .                      | Robb Twp.              |
| North Coldstream Mines Ltd. . . . .                              | 44 King St. W., Toronto . . . . .                          | Burchell Lake          |
| Rio Algom Mines Ltd. (Pater Mine) . . . . .                      | 120 Adelaide St. W., Toronto . . . . .                     | Sprague Twp.           |
| Sheridan Geophysics Ltd. . . . .                                 | 1606 - 4 King St. W., Toronto 1 . . . . .                  | Ryan Twp.              |
| Texas Gulf Sulphur Co. . . . .                                   | 155 Pine St. S., Timmins . . . . .                         | Porcupine              |
| <b>Manitoba:</b>   |  |                        |
| Hudson Bay Mining & Smelting Company Ltd. . . . .                | 4th Floor, 333 Broadway Ave., Winnipeg . . . . .           | Flin Flon, Snow Lake   |
| <b>Saskatchewan:</b>   |  |                        |
| Anglo-Rouyn Mines Ltd. . . . .                                   | 120 Adelaide St. W., Toronto, Ontario . . . . .            | La Ronge               |
| Hudson Bay Mining & Smelting Co. Ltd. . . . .                    | 4th Floor, 333 Broadway Ave., Winnipeg, Manitoba . . . . . | Flin Flon, Phil Lake   |
| <b>British Columbia:</b>   |  |                        |
| Anaconda Company (Canada) Ltd. (The) (Britannia Mine) . . . . .  | 8th Ave., New Toronto, Ontario . . . . .                   | Britannia Beach        |
| Bethlehem Copper Corp. Ltd. . . . .                              | 355 Burrard St., Vancouver . . . . .                       | Highland Valley        |
| Coast Copper Company Limited . . . . .                           | Trail . . . . .  | Benson Lake            |
| Cowichan Copper Co. Ltd. . . . .                                 | River Jordan . . . . .                                     | River Jordan           |
| Craigmont Mines Ltd. . . . .                                     | 700 Burrard Bldg., Vancouver . . . . .                     | Merritt                |
| Granby Mining Company Ltd. (The) (Phoenix Copper Div.) . . . . . | 1111 West Georgia St., Vancouver . . . . .                 | Phoenix                |
| Granisle Copper Ltd. . . . .                                     | 1111 West Georgia St., Vancouver . . . . .                 | Smithers               |
| Minoca Mines Ltd. . . . .  | 311 - 543 Granville St. Vancouver . . . . .                | Comox                  |
| Mount Washington Milling Co. Ltd. . . . .                        | 204 - 569 Howe St., Vancouver . . . . .                    | Courtenay              |
| <b>Northwest Territories:</b>                                    |  |                        |
| Echo Bay Mines Ltd. . . . .                                      | 8540 - 109th St., Edmonton, Alberta . . . . .              | Echo Bay               |

Note: Small quantities of gold and silver are produced by a few companies not counted as establishments in the Gold Mining Industry.







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