

# Gold

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**T**his report is dedicated to an historical review of gold in Canada. It begins with a summary of Canadian developments in 1999, followed by a chronological record of significant events beginning in 1654 when a gold concession on Cape Breton Island was first granted by Louis XIV. The review highlights gold's central role in opening Canada's frontier from the Klondike gold rush to the rich mines of the Precambrian greenstone belts in Ontario and Quebec. It also touches on global events that shaped the structure of today's industry, including the importance of gold in the balance of payments during the second world war and the devolution of gold's central role in monetary systems beginning in the late 1960s. Gold production in Canada was first officially recorded in 1858 and Canada has produced over 9000 t (289 million oz) valued at over \$47 885 million to the end of 1999.

## **DEVELOPMENTS IN 1999**

Canada's gold output decreased by 4% to 158 t in 1999. The value of Canadian gold shipments declined by about 8% to \$2.1 million. Ontario produced 48% of Canada's output followed by Quebec (24%), British Columbia (16%) and Manitoba (5%), with the Yukon, Northwest Territories, Saskatchewan, Newfoundland, Alberta and New Brunswick contributing a total of 7%. Canada remained the world's fourth largest producer behind South Africa, the United States and Australia.

Low gold prices or reserve depletion were responsible for 13 mine closures during 1999. However, three gold mines opened leaving 33 operating mines by year-end. Gold mines accounted for 88% of Canada's output while 19 base-metal mines and numerous placer operations were responsible for 10% and 2% of production, respectively.

Price volatility dominated the gold market in 1999. The London (a.m. fix) price for gold began the year at US\$288/oz and fell to a 20-year low of \$252.90/oz in July before rebounding to a two-year high of \$326.25/oz in October. Concerns and speculation about substantial sales of gold reserves by the official sector during the first half of the year were quieted in the third quarter when European central banks agreed to limit gold sales to 2000 t over four years and not increase gold lending. The International Monetary Fund (IMF) also announced that it would revalue part of its reserves through an off-market transaction. The gold price ended the year at \$290.85/oz.

Greater transparency in official sector sales combined with reduced producer hedging will likely contribute to price stability and financial conditions more conducive to investment in the short to medium term. Previously suspended operations, such as the Lupin mine in Canada's new territory of Nunavut, are expected to re-open. However, the discovery of new grass-roots prospects may be limited if producers focus exploration on improving reserves at existing operations and junior mining companies find it difficult to compete with the high-tech sector for investment capital.

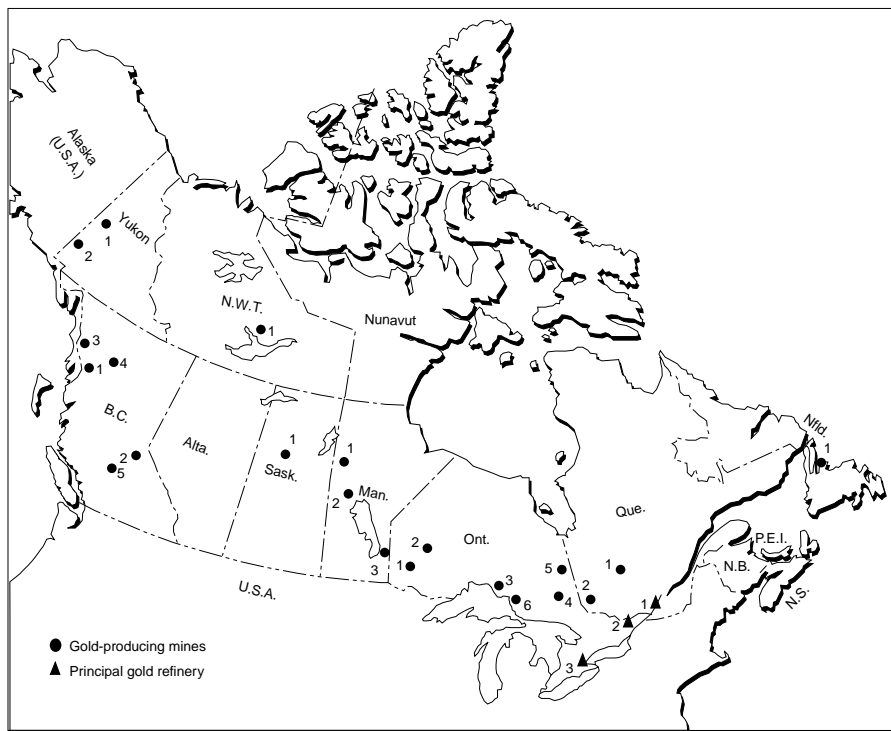
## **Quebec**

The new 3-1 zone began production during the first quarter at Barrick Gold Corporation's Bousquet mine near Cadillac. Total cash costs declined to US\$180/oz as annual production increased approximately 14% to 204 000 oz; year-end reserves were reported at 518 000 oz.

Inmet Mining Corporation's Troilus mine expanded mill capacity and continued development of the open pit in order to optimize pit geometry and increase ore reserves.

An initial open-pit mining operation produced 22 230 oz of gold at McWatters Mining Inc.'s new East Amphi mine between January and August. Mining was then suspended while the company prepares for underground development of 183 000 oz of probable reserves.

**Figure 1**  
**Primary Canadian Gold Mines and Principal Gold Refineries, 1999**



Numbers refer to locations on map above.

### PRIMARY GOLD MINES

#### Yukon

1. Viceroy Resources Corporation – Brewery Creek mine
2. B.Y.G. Natural Resources Inc. – Mt. Nansen mine

#### Northwest Territories

1. Royal Oak Mines Inc. – Giant mine  
Miramar Mining Corporation – Con mine

#### British Columbia

1. Homestake Mining Company – Eskay Creek mine
2. Imperial Metals Corporation/Sumitomo Corp. – Mount Polley mine
3. Homestake Mining Company – Snip mine  
North American Metals Corp. – Golden Bear mine
4. Royal Oak Mines – Kerness Mine
5. Claimstaker Resources Ltd. – Blackdome mine

#### Saskatchewan

1. La Ronge Area  
Claude Resources – Seabee mine

#### Manitoba

1. Black Hawk Mining Inc. – Keystone mine
2. TVX Gold Inc./High River Gold Mines Ltd. – New Britannia mine
3. Harmony Gold Mining Company – Bissett mine

#### Ontario

1. Red Lake Area  
Placer Dome Inc. – Campbell mine  
Goldcorp Inc. – Red Lake mine  
Claude Resources Inc. – Madsen mine
2. Pickle Lake Area  
Placer Dome Inc./TVX Gold Inc. – Musselwhite mine
3. Hemlo Area  
Homestake Mining Company/Teck Corporation – Williams mine  
Battle Mountain Gold Company – Golden Giant mine  
Homestake Mining Company/Teck Corporation – David Bell mine

#### PRIMARY GOLD MINES, Ontario (cont'd)

4. Timmins – Kirkland Lake Area  
Placer Dome Inc. – Dome mine  
Royal Oak Mines Inc. – Pamour, Hoyle and Nighthawk Lake mines  
Kinross Gold Corporation – Hoyle Pond mine  
Kinross Gold Corporation – Macassa mine  
Barrick Gold Corporation – Holt-McDermott mine  
Battle Mountain Gold Company/Teddy Bear Valley Mines, Limited – Holloway mine  
Exall Resources Limited/Glimmer Resources Inc. – Glimmer mine  
St. Andrew Goldfields Ltd. – Stock mine
5. Placer Dome Inc. – Detour Lake mine
6. River Gold Mines Ltd. – Eagle River and Edwards mines

#### Quebec

1. Desmaraisville – Chibougamau Area  
Meston Resources Inc. – Joe Mann mine  
Inmet Mining Corporation – Troilus mine
2. Rouyn-Noranda – Val-d'Or Area  
Barrick Gold Corporation – Bousquet mine  
Agnico-Eagle Mines Limited – LaRonde mine  
McWatters Mining Inc. – Sigma, Kierna and East Amphi mines  
Cambior inc./Aurizon Mines Ltd. – Sleeping Giant mine  
Cambior inc. – Doyon and Mouska mines  
Richmont Mines Inc. – Francœur mine  
Western Quebec Mines Inc. – Joubi mine  
Aurizon Mines Ltd./Louvem Mines Inc. – Beaufor mine

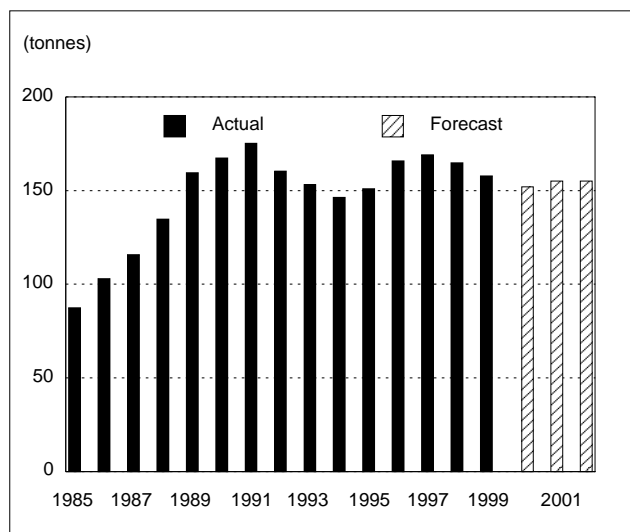
#### Newfoundland

1. Richmont Mines Inc. – Nugget Pond mine

### PRINCIPAL GOLD REFINERIES

1. Noranda Inc., CCR Division
2. Royal Canadian Mint
3. Johnson Matthey Limited

**Figure 2**  
**Canadian Gold Production, 1985-2002**



Source: Natural Resources Canada.

Open-pit mining was increased to take advantage of surface reserves discovered in 1998 at McWatter's Sigma-Lamaque operations. By the end of 1999, surface reserves were estimated at 1.57 million oz. The company expects to increase open-pit production to 140 000 oz/y of gold following the completion of a mill expansion. The property has produced close to 10 million oz of gold over 65 years of underground mining.

Volatile market conditions during the fourth quarter resulted in some financial institutions declining to roll over their hedging positions with Cambior. Cambior negotiated a restructuring agreement on its hedging program that required the company to repay and refinance about \$225 million by the end of 2000, including an interim payment of \$75 million by June 30, 2000.

Western Quebec Mines Inc. closed the Joubi gold mine near Val-d'Or, which produced 62 300 oz during its 10 years of operation.

Ground condition problems and excessive dilution resulted in higher operating costs and the temporary suspension of operations at Campbell Resources Inc.'s Joe Mann gold-copper mine during the third quarter. A new mining plan using cut-and-fill methods was introduced in November.

In September, Richmond Mines Inc. suspended production at the Francoeur mine because of low gold prices. The mine resumed production in February 2000.

## Ontario

Shaft deepening at Barrick Gold Corporation's Holt-McDermott mine near Timmins was completed in June 1999. Approximately 108 000 oz of gold were produced at a total cash cost of US\$140/oz in 1999. Year-end reserves were reported at 497 000 oz. The company expects production to decline to 92 000 oz due to reduced grades and greater emphasis on development work during 2000.

Placer Dome Inc., the largest producer of gold in Canada, suspended its hedging program with an expectation that the price of gold will rise as producer hedging decreases and market sentiment improves. Placer Dome also closed the Detour Lake mine due to ore reserve exhaustion. In November, the company completed construction of the Reid shaft at the Campbell mine. This state-of-the-art shaft with two skips travelling at 10 metres per second will help increase annual production to between 280 000 and 300 000 oz of gold.

St. Andrew Goldfields Ltd. began open-pit production at the Hislop mine in the third quarter.

Homestake Mining Company, the second largest producer of gold in Canada, achieved a record production of 905 900 equivalent oz of gold from its gold-silver mines in Canada at an average cash cost of US\$157/oz.

Homestake and TECK-GOLD closed the 1100-t/d mill at the David Bell mine in June when the 8000-t/d Williams mine/mill began treating ore from both mines. The two Hemlo area mines have produced a total of 9 million oz of gold since they began operating in 1985 and have approximately 10 years of reserves remaining at current production rates.

River Gold Mines Ltd. expanded its milling capacity by 50% to 1000 t/d at its Eagle River and Edwards mines in the Wawa area. The mines produced a total of 87 400 oz of gold grading 10.45 g/t gold. Year-end reserves were estimated at 645 000 oz.

In May, Goldcorp Inc. commenced construction and underground development of the Red Lake mine with an expected start-up in November 2000. Estimated reserves at the high-grade mine (average, diluted, cutoff grade of 46.97 g/t or 1.37 oz/t) are 2.9 million oz.

## British Columbia

Better grades and ore tonnage at the Golden Bear mine, owned by North American Metals Corp., resulted in record production of 71 289 oz of gold during 1999, double 1998's level. The mine is scheduled to close in 2002 when ore reserves are exhausted.

The company also acquired the Red Mountain gold property from the interim receiver of bankrupt Royal Oak Mines Inc. in early 2000. Red Mountain reportedly contains a mineralized resource of 13 238 000 t grading 0.074 oz/t gold, or 918 000 oz of gold.

A rock fall caused the death of two miners at the Blackdome mine in February, and milling operations ceased in response to low gold prices in May. Underground development work continued, along with the installation of a newly reconditioned crusher.

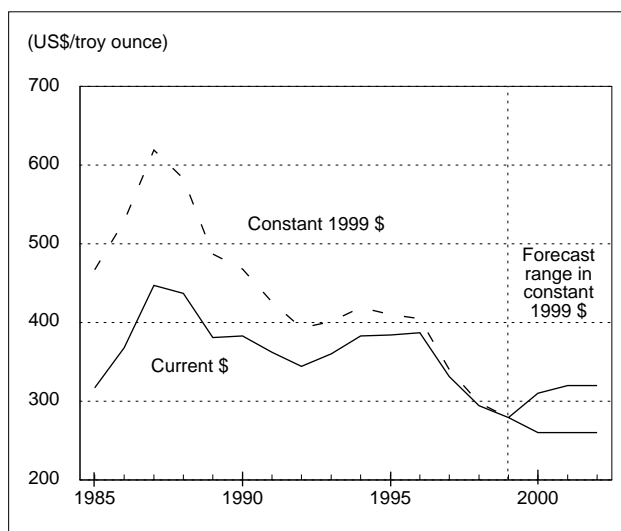
Homestake's Snip mine closed due to exhaustion of ore reserves in May. Most reclamation and mill clean-up work was completed by the end of September. The mine produced over 1 million oz of gold since it began operating in 1991.

### The Territories

Royal Oak Mines Inc., owner of the Giant gold mine in Yellowknife, declared bankruptcy in April. In December, the court vested the property to Canada's Department of Indian Affairs and Northern Development (DIAND). Later in December, Miramar Mining Corporation's subsidiary, Miramar Giant Mine Ltd., acquired the mine from DIAND.

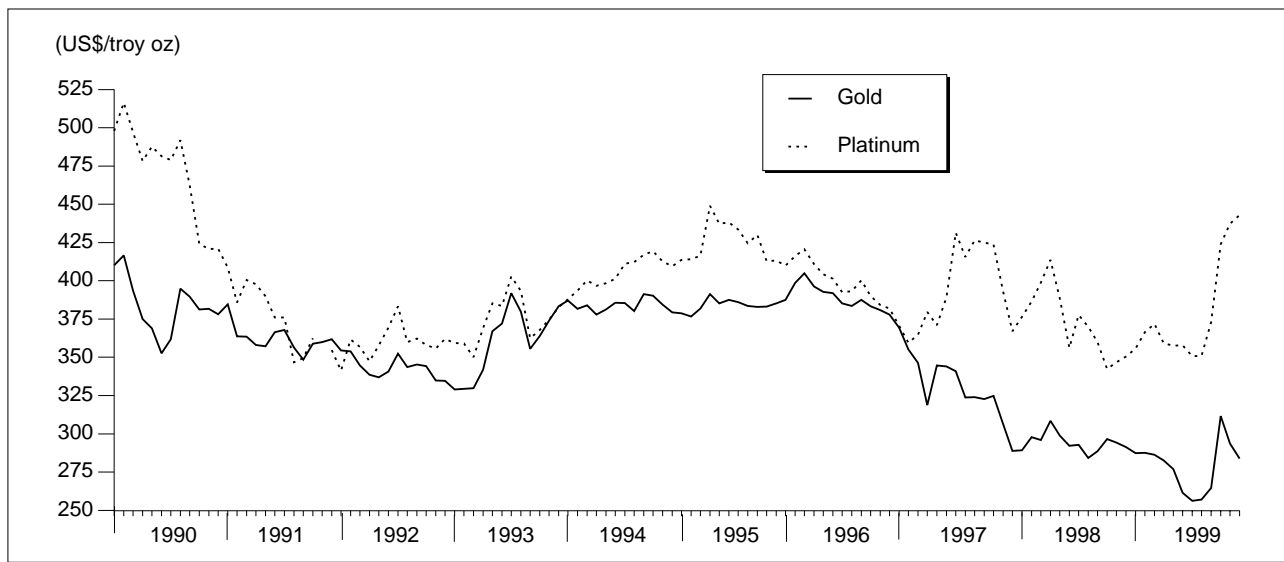
Miramar's Con mine, in Yellowknife, resumed production in July following the settlement of a one-year labour dispute in April. Operations had been suspended since May 1998. Miramar also acquired a 50% interest in the promising Hope Bay gold property in Nunavut, Canada's newest territory.

**Figure 3**  
Gold Prices, Annual Average, 1985-2002



Source: Natural Resources Canada.

**Figure 4**  
Precious Metal Prices, Monthly Averages, 1990-99



Sources: London Bullion Market Association; Johnson Matthey Public Limited Company.

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## CHRONOLOGICAL RECORD OF EVENTS RELATING TO CANADIAN GOLD PRODUCTION, 1654-1998

### 1654

- Louis XIV granted a concession to Nicholas Denys to mine gold, silver, copper and other minerals on Cape Breton Island.

### 1823

- Placer gold was discovered on the Chaudière River in Quebec.

### 1826

- A general mining association was formed in Nova Scotia.

### 1843

- The Geological Survey of Canada was instituted under Sir William Edmund Logan.

### 1852

- Free gold was discovered in quartz at Mitchell Harbour, Queen Charlotte Islands, causing the first auriferous quartz rush in British Columbia.

### 1853

- Governor Douglas, as Lieutenant Governor of Queen Charlotte Islands, Crown Colony, issued in Victoria the first proclamation relating to mining in British Columbia.

### 1855

- Placer gold was found at the mouth of the Pend d'Oreille River in British Columbia by ex-servants of the Hudson's Bay Company at Fort Colville.

### 1857

- Placer gold was reported at the junction of the Fraser and Thompson rivers in British Columbia.
- James Douglas issued a proclamation regarding the working of gold mines located chiefly in the Kamloops, Ashcroft and Vernon areas of British Columbia.

### 1858

- The Canadian decimal currency was introduced.
- Canada's gold production was officially recorded for the first time. The annual production was 34 104 oz.
- The Nova Scotia Legislature obtained possession and control of mines and minerals in the province.
- The discovery of placer gold in the lower reaches of the Fraser River in British Columbia caused a rush to Yale, Hope and Canyon by miners from California and other foreign parts.

### 1859

- The *Goldfields Act* was passed in British Columbia.
- Placer miners penetrated into Cariboo and Quesnel, British Columbia.

### 1860

- John Pulsiver discovered gold in the Tangier district, Halifax County, Nova Scotia.
- The Pete Toy bar was discovered at the Parsnip and Findlay rivers in British Columbia.

### 1861

- Gold was discovered in the Oldham district, Halifax County, Nova Scotia.

### 1862

- Gold was discovered in the Lawrencetown, Isaacs Harbour and Renfrew districts of Nova Scotia.
- Gold was first mined in Nova Scotia.

**1863**

- Miners from the State of Washington ascending the Kootenay established the Wildhorse Creek diggings in British Columbia.
- A comprehensive Geology of Canada was issued under Sir William Logan.

**1864**

- Placer gold was located at Leech Creek in British Columbia.

**1865**

- The Dewdney Trail to Wildhorse from Hope, British Columbia, was completed, enabling gold escorts to reach Victoria on British territory.
- Placer claims were staked on the Big Bend area of the Columbia River in British Columbia by former Cariboo miners.
- Gold was discovered in the Mount Uniacke district of Nova Scotia.
- The Eustis mine opened in the Eastern Townships of Quebec.

**1866**

- The first discovery of gold in Canada's Precambrian Shield near Madoc, Hastings County, Ontario, known as the Richardson mine, was made by a Dutch prospector named Powell and associates.

**1866**

- Alfred Bernard Nobel discovered the method of making dynamite.

**1869**

- Gold was discovered in the Fifteen Mile Stream district of Nova Scotia.
- Gold was discovered in the Yukon River.

**1871**

- The Dominion Lands Survey Branch was created.

**1873**

- The Dease Lake areas of British Columbia were staked for placer gold; the first staker was W.H. Smith.
- The Omineca placer mining area began to open up and the Manson creek settlement was established.

**1877**

- The Geological Survey of Canada was recognized by an Act of Parliament.

**1878**

- Gold was discovered at Lake of the Woods, Ontario.

**1880**

- The Geological Survey of Canada offices and museum moved from Montréal to Ottawa.

**1881**

- The Quebec Technical Mines Branch was formed as a division of the Crown Lands Department.

**1883**

- Miners penetrated into the West Kootenay district of British Columbia, locating mines on the Kootenay River and Kootenay Lake.

**1885**

- The Canadian Pacific Railway was completed.
- John Chance staked Granite Creek placer deposits in British Columbia.
- Cayoosh Creek placers were staked in British Columbia.

**1886**

- The first complete statistical returns were issued by the Geological Survey of Canada.
- The first stakings in the Boundary Creek area of British Columbia were done by W.T. Smith.

**1887**

- R.W. MacArthur and Wm. Forest discovered the cyanide process for gold extraction at Glasgow, Scotland.

**1888**

- The Monarch mine on the Canadian Pacific Railway at Field, British Columbia, opened.

**1889**

- The Rossland camp at the head of Trail Creek, British Columbia, was opened by staking of the Lily May claim by Joe Bourjouis.

**1891**

- The first shipments from Rossland, British Columbia, to Colorado Smelting Works in Butte, Montana, were made.
- The Sultana mine, Lake of Wood district, Ontario, opened and closed in 1906.
- The Bureau of Mines in Ontario was organized.

**1893**

- The Mikado mine, Lake of Wood district, Ontario, was discovered.

**1896**

- Placer gold was discovered in Klondike, Yukon.
- The Hall mine's smelter at Nelson, British Columbia, opened.
- British Columbia Smelting and Refining Company started smelting Rossland ores at Trail in February (Promoters: D.C. Corbin and August Heinze).

**1897**

- The Pioneer mine in British Columbia was located by William Allen.

**1898**

- The Atlin goldfields in British Columbia were discovered by prospectors turning aside from the Klondike gold rush.

**1898**

- The Pioneer and other claims were staked on Cadwallader Creek in British Columbia.

**1899**

- Granby Consolidated Mining, Smelting and Power Co. of British Columbia was incorporated.

**1900**

- Klondike gold production reached its maximum level.
- The Granby smelter at Grand Forks, British Columbia, began operating.
- The Bonanza mine at Observatory Inlet, British Columbia, was discovered by Donahue and H.C. Flewin.
- The Granby smelter, at the Greenwood Camp in British Columbia, was blown in on August 21.

**1901**

- Hidden Creek mine at Observatory Inlet, British Columbia, was discovered by McMillan, Rudge and H.C. Flewin.
- The Boundary Falls smelter in British Columbia started up.
- The Tyce smelter in British Columbia began operations.

**1902**

- The Marysville smelter in British Columbia was constructed.

**1903**

- The St. Anthony mine at Sturgeon Lake began production.
- The Alaska Boundary dispute was settled.
- Mining began at Hedley, British Columbia.

**1904**

- Copper-gold ores were discovered in the Chibougamou district of Quebec.

**1906**

- The *Ontario Mining Act* was passed.
- Gold was discovered by Ollier and Renault on Lake Fortune (Lake Fortune mine), Quebec.
- Gold was discovered at Larder Lake, Ontario.

**1907**

- The *Supplementary Revenue Act* imposed tax on mining profits in Ontario.
- A federal Department of Mines was created under a Minister of Mines.

**1908**

- Gold was first discovered in the Porcupine area of Ontario by H.F. Hunter.
- A branch of the Royal Mint was established at Ottawa, Ontario.

**1909**

- The Hollinger mine gold veins were discovered by Benjamin Hollinger, John Miller and Alex Gillies.
- The McIntyre mine veins at Porcupine, Ontario, were discovered by Alex McIntyre.
- The Dome mine deposits at Porcupine, Ontario, were discovered by John Wilson and associates.
- The cyanidation of low-grade ores began at the O'Brien mine at Cobalt, Ontario.

**1910**

- The Premier mine in British Columbia was discovered by Bunting Bros. and Wm. Dilsworth.

**1911**

- The first gold discovery in the vicinity of Kirkland Lake, Ontario, was made by W.H. Wright on what is now known as the Wright-Hargreaves mine.
- The Porcupine camp was destroyed by fire with heavy loss of life.
- Gold was discovered by J.J. Sullivan and H. Authier in Dubuisson Township, Quebec.
- The first recorded discovery of gold in Manitoba was made by Major E.A. Pelletier at Rice Lake.

**1912**

- The Hollinger mine at Porcupine, Ontario, began its first milling operations.
- Harry Oakes staked ground later known as the Lake Shore mine at Kirkland Lake, Ontario.

**1913**

- The Tough-Oakes mine at the Kirkland Lake camp in Ontario shipped high-grade cobbled ore.
- Gold was discovered on the Kirkland Lake properties, later known as the Lake Shore, Teck-Hughes, Kirkland Lake and Sylvanite mines.

**1914**

- The *Supplementary Revenue Act* in Ontario was changed to the *Mining Tax Act*.
- The Granby copper smelter at Anyox, British Columbia, was blown in.
- Cyanidation was first used in the Kirkland Lake camp at the Tough-Oakes mine.

**1915**

- The Siscoe mine claims were staked in Quebec by S.E. Siscoe.
- The Flin Flon ore deposits were discovered by Thos. Creighton, representing the Hammell-Currie-Fasken syndicate.

**1916**

- The Pioneer mine in British Columbia began drilling operations.

**1917**

- The Teck-Hughes mine in Kirkland Lake started milling.

**1918**

- The Tough-Oakes mine temporarily closed.
- The Premier mine in British Columbia came into production.



**1919**

- The Lake Shore, Wright-Hargreaves and Kirkland Lake mills commenced operations.
- The Ontario Department of Mines was formed.
- Last-year gold coins were struck in Canada because of limited interest in gold coins as a medium of exchange.

**1921**

- The Noranda ore deposits in Quebec were staked by Ed. Horne.

**1922**

- The Amulet mine claims in Quebec were staked by McDonough Bros.
- Rod mills began to appear as milling equipment in Canadian mining plants.

**1923**

- The Granada mine claims in Rouyn, Quebec, were staked by R.C. Gamble et al.

**1925**

- Gold was discovered in the Red Lake district by Lorne Howey on what was later known as the Howey mine.
- The Waite-Ackerman-Montgomery mine claims were staked by H. Montgomery.

**1927**

- The Noranda mine commenced shipping; its smelter operated for the first time.
- The Central Manitoba mine operated its mill for the first time.

**1928**

- The Worthington mine collapsed.
- The Waite-Ackerman-Montgomery mine started shipping.
- The Coniaurum mill at the Porcupine camp in Ontario commenced production in July.
- The March mine at the Porcupine camp in Ontario came into production.
- There was a disastrous underground fire at the Hollinger mine in the Porcupine camp in Ontario in which 39 lives were lost.
- Argonaut and Associated Goldfields suspended gold mining operations in Ontario.
- The Tough-Oakes-Burnside mine closed.

**1929**

- The Siscoe gold mine in Quebec started production.
- The Monarch mine's new 300-ton mill in British Columbia started producing.
- The Dome mine/mill at the Porcupine camp in Ontario was destroyed by fire in October.
- The McIntyre mine at Porcupine, Ontario, erected a small flotation plant.

**1930**

- Canada attained the position of the world's second largest gold producer.
- The Royal Canadian Mint's price for gold changed from being constant at under \$21/oz since 1926 to rise to \$35/oz in 1934.
- Gold was discovered in Bannockburn Township, Ontario, on what was later known as the Ashley mine.
- Manitoba, Saskatchewan and Alberta assumed responsibility for natural resources from the federal government.
- A new mill at the Howey mine at Red Lake, Ontario, commenced operations.
- The Granada mine in Quebec commenced production.

**1931**

- Equalization exchange premiums were paid by the Dominion government to gold miners.
- Exports of gold bullion without licence were prohibited by the Dominion government.
- Great Britain went off the gold standard on September 21 and was followed by many other countries.
- The Lake Shore mine in Ontario installed a 200-ton flotation unit in its mill.
- Gold was discovered in the Swayze and Three Duck Lake areas of Ontario.
- The Parkhill, Minto and Toburn (Tough-Oakes) mines in Ontario came into production.
- Gold was discovered at Island Lake, Manitoba.
- Canadian Copper Refiners Ltd. operated a new copper refinery at Montréal-Est, Quebec.
- The Nickel Plate mine at Hedley, British Columbia, closed down.

**1932**

- The Union of South Africa abandoned the gold standard.
- The Ashley and Moss mines commenced production in Ontario.
- The O'Brien, Cadillac and Bussière mines in Quebec commenced gold milling.
- The San Antonio mine in Manitoba commenced production.
- Gold was discovered at God's Lake, Manitoba.
- The first official statistics of metal production for Saskatchewan were recorded.
- The McLeod River Mining Corporation operated a gold dredge near Peers, Alberta.
- The mill at the Braylorne mine in British Columbia was brought on stream.
- The Treadwell Yukon mill in the Yukon was permanently shut down and the camp was abandoned.

**1933**

- The United States went off the gold standard.
- The amalgamation of the Toronto and Standard Mining Stock Exchanges was agreed upon.
- The Monarch mine at Field, British Columbia, resumed production.
- The Beattie Gold mine in Quebec began production of concentrates.
- The Green-Stabell gold mine in Quebec commenced milling.
- The Oro Grande mine in Manitoba commenced milling.
- The Macassa mine at Kirkland Lake, Ontario, commenced milling.
- Cariboo Gold Quartz Mining Co. commenced gold production near Barkerville, British Columbia.

**1934**

- On January 31, the President of the United States issued a proclamation reducing the weight of the U.S. dollar from 25.8 to 15 5/21 grains of 0.9 fine gold.
- The Royal Canadian Mint's price for gold was first pegged at US\$35 per fine ounce and the Mint's buying price varied because of the relationship between the Canadian and U.S. dollars.
- The Dominion tax on gold came into effect on April 19.
- The Guysboro mine began operating in Nova Scotia.
- The Perron and Sullivan mines commenced milling, and a 50-ton amalgamation mill came into production at the McWatters mine in Quebec.
- Milling commenced at the Little Long Lac, J.M. Consolidated, Northern Empire, Matachewan Consolidated, Young-Davidson, and Central Patricia mines in Ontario.
- Gold was discovered south of Beaverlodge Lake in Saskatchewan.
- The Rex and Gem mines resumed operation and the Oro Grande mine suspended production in Manitoba.
- Milling commenced at the Dentonia, Island Mountain and Kootenay Bell mines in British Columbia.

**1935**

- The Dominion government transferred gold held against Dominion notes to the Bank of Canada.
- The gold bullion tax was discontinued after May 31 and depletion allowances were revised for payments of gold mining dividends.
- The Caribou mine opened in Nova Scotia.
- The Arntfield, Canadian Malartic and Lamaque mines came into production in Quebec and the Granda mine suspended production.
- In Ontario, the Pickle Crow, Ross, and McKenzie Red Lake mines commenced milling, the Canusa mine suspended operations, and gold-bearing veins were discovered in the Sachigo River area.
- New mills came into production at the Ymir Yankee Girl, Second Relief, and Sheep Creek mines in British Columbia, while the Nickel Plate mine resumed production after years of inactivity and the Monarch mine suspended milling.
- In Manitoba, milling commenced at the God's Lake mine, and the Island Lake mine suspended production.

**1936**

- An Amendment to the *Income Tax Act* exempted new producing metal mines for three years.
- The first cyanide gold mill was erected in Nova Scotia at the Seal Harbour mine.
- A cave-in occurred at the Moose River mine in Nova Scotia.
- The Stadacona-Rouyn, Thompson Cadillac, Belleterre and Shawkey mines were brought into production in Quebec.
- A road from Amos to Val-d'Or, Quebec, was completed.
- In Ontario, the Pamour and Red Lake Gold Shore mines came into production, the Argosy mine opened a 125-ton mill, and the Ashley and Ardeen mines closed.
- The Gunnar mine commenced production and the Rex (Laguna) mine resumed operations in Manitoba.

- Gold was discovered at Sulphide Lake, Saskatchewan.
- In British Columbia, production resumed at the Surf Inlet mine and new mills began operating at the Bayonne, Hedley Mascot, Wesko and Kootenay Belle mines. The Dentonia mine ceased milling.

### 1937

- The *Gold Clauses Act* was passed.
- The Nova Scotia government re-opened the Lacey mine as a training project.
- In Quebec, the Sigma, Normetal and Powell Rouyn mines commenced milling, the Aldermac, Waite Amulet and Cournor mines resumed production, and the Tetreault mine closed.
- Mining claims staked in Quebec reached a record high to date of 18 841.
- The Quebec Legislature passed a law enacting that a company must be constituted by a Quebec charter to acquire mining rights belonging to the Crown.
- In Ontario, milling commenced at the Delnite, Raven River, Gold Eagle, Bankfield and New Golden Rose mines, the Sand River mine came into production, and the Hudson Patricia and Tashota mines closed.
- The Gurney mine came on stream and the Beresford Lake mine resumed production in Manitoba.
- Goldfield officially created a village in Saskatchewan.
- New gold mills began operating at the Polaris Taku and Durango mines in British Columbia.

### 1938

- A vocational mine school was organized by the Quebec Bureau of Mines at the Gale mine, and a Superior School of Mines, Geology and Metallurgy was established in Québec City.
- The Rouyn-Louvicourt road was completed in western Quebec.
- The C.N.R. Bonnetierre-Rouyn rail line was completed in northwestern Quebec.
- The East Malartic, Francoeur, Halliwell, Lapa Cadillac, Lake Rose, Pan Canadian, Payore and Sladen-Malartic mines opened in Quebec.
- The Hallnor, Golden Gate, Upper Canada, Kerr-Addison, Cline, Mesabi, Madsen Red Lake, Moneta, Sachigo River, McLeod-Cockshutt, Hardrock, Straw Lake Beach and Tombill mines commenced production in Ontario, and the Parkhill, Algold and Morris Kirkland mines closed.
- The Privateer Spud Valley, Cariboo Hudson and Gold Belt mines commenced production in British Columbia, and the Durango and Wesko mills ceased milling.
- The first continuous lode gold mining began in the Northwest Territories and the first gold brick was poured at the Consolidated-Rycon mine.
- Gold was discovered at Thompson, Wray and Russell lakes in the Northwest Territories.

### 1939

- Canada declared war against Germany on September 10.
- A new *Gold Clauses Act* was passed.
- An *Income Tax Act* amendment afforded tax credit to the mining industry as a whole.
- The Negus mine began production in the Northwest Territories.
- The Guysborough mine opened and the Montague mine closed in Nova Scotia.
- The Eustis mine closed and the AMM, Central Cadillac and Wood Cadillac mines came into production in Quebec.
- The Quebec government established an ore sampling plant at its mine school.
- The Chesterville, Tyranite, Preston East Dome, De Santis, Broulan, Magnet Consolidated, Uchi, Cochenour Willans, Kenricia, Ranson, Jellicoe, and Berens River mines came into production, and the Cordova and Magino (former Algoma Summit) mines re-opened in Ontario.
- The Mace, Lebel Oro, Minto, Elora and Hiawatha mines closed, and the Raven River mine ceased milling in Ontario.
- The Gurney and Laguna (Rex) mines suspended operations in Manitoba.
- The Box mine began production in Saskatchewan.
- Mills were completed at the Central Zeballos and Mount Zeballos properties in British Columbia.

### 1940

- Foreign exchange control was institutionalized in response to the war.
- The gold and foreign exchange reserves of the Bank of Canada were brought together under one central Exchange Fund controlled by the Foreign Exchange Control Board, subject to the direction of the Minister of Finance.
- Bank of Canada gold reserves were not allowed to be published, and gross import and export statistics for gold were temporarily suspended from September 1939.
- During the previous three years, the Bank of Canada increased gold and foreign exchange holdings in order to have additional resources available in case of war.

- The Canadian Minister of Finance stated "In normal times, it is essential that a central bank should maintain a substantial reserve of gold and foreign exchange, for if it does not do so, it is not well equipped to face an emergency."
- Practically all new bullion produced in the Dominion from Canadian ore was sold to the Dominion government through the Royal Canadian Mint in Ottawa or at the Dominion Assay office at Vancouver. The gold was refined into fine gold bars weighing approximately 400 oz each and disposed of in world markets wherever the most advantageous net price could be obtained.
- The Quebec Legislature passed the *Unwrought Metal Sales Act* to facilitate the suppression of illegal traffic in precious metals and repealed a 1937 law requiring companies to be incorporated under a law of the province to acquire mining rights on public land.
- In 1940, 278 mines reported production compared to 232 in 1939 and 33 in 1923. Employees in the lode gold mining industry totaled 31 405 compared with 30 622 in 1939 and 5524 in 1923.
- Dividends paid during 1940, as computed from actual returns made by the lode gold mining industry, totaled \$39 431 890.
- The Mine Apprentice Project at Chester Basin, Nova Scotia, closed after three years of operation. The war changed the need to train youths in the art of hard rock mining.
- The Victoria gold mine opened at Goldboro, Nova Scotia.
- The Amm and Mooshla mines ceased production, and the Pandora and Senator-Rouyn mines opened in Quebec.
- In Ontario, the Cordova, Addington, Kenricia, Jellicoe, and J.M. Consolidated mines closed while the former Argosy and Upper Seine gold mines re-opened, the Faymar mine opened, and the McMaramac Red Lake and Aunor mines shipped bullion for the first time.
- The first concrete headframe in Canada was erected at the Hollinger mine in Ontario.
- Beresford Lake Mines Ltd. ceased production in Manitoba.
- Saskatchewan gold production exceeded 100 000 oz for the first time and the Monarch mine re-opened.
- Slave Lake Gold Mines resumed production in the Northwest Territories.
- A hydro-electric plant was completed at Prosperous Lake in the Northwest Territories.

**1941**

- Canada's gold production reached a record level of 166.3 t (5 345 179 oz), which was not surpassed until 1991.
- Restrictions on certain materials and equipment because of war prevented extensive expansion of the industry.
- The export of gold, whether in the form of coin or bullion (including ore, etc.) from the Dominion of Canada continued to be prohibited under provisions of the *Gold Export Act of 1932*, except in cases deemed advisable by the Minister of Finance.
- Seal Harbour Gold Mines closed in Nova Scotia.
- In Ontario, Hoyle Gold Mines, Ltd., Bonetal Gold Mines, Ltd., and the Jerome mine began production while mining ceased at the New Golden Rose, St. Anthony, Golden Eagle and Howey mines.
- A general strike by mine workers towards the end of the year severely affected production in the Kirkland Lake area of Ontario.
- The Ptarmigan and Thompson-Lundmark mines opened in the Northwest Territories.

**1942**

- Canadian gold production fell for the first time since 1923, largely due to shortages of labour, equipment and supplies resulting from the increasing intensity of World War II.
- The Seal Harbour mine closed and the Guysboro mine suspended operations in Nova Scotia.
- The Mic-Mac and West Malartic mines opened and the Arntfield, Wood Cadillac, Pandora and Cournor mines ceased or suspended production in Quebec.
- In Ontario, the Golden Gate, Crescent, De Santis, Faymar, Nakhodas, Naybob, Tyranite and Rundle mines suspended operations, and the Renabie, Cline Lake, Bankfield, Tombill, Elmos, Sturgeon River, Sand River and Jason mines closed.
- Manitoba permitted the employment of women for surface work at mines.
- The Gunnar mine in Manitoba closed.
- In Saskatchewan, the Box mine closed and the Pamon mine plant was destroyed by fire.
- The Polaris-Taku, Surf Inlet, Bayonne, Buccanneer, Central Zeballos, Homeward, Mount Zeballos, Spud Valley, Ymir Yankee Girl, and Vancouver Island Drilling and Exploration mines closed in British Columbia.
- The Ptarmigan mine closed in the Northwest Territories.

**1943**

- Mining operations continued to be adversely affected by labour shortages.
- Mine shops in Ontario's Porcupine and Kirkland Lake gold camps participated in the Wartime Mine Shop Association since the beginning of the war. Mechanical superintendents of the mines cooperated in the construction of steam generators, steering engines, pumps, etc., for merchant shipping.
- The Naybob, Moneta, Yama, Young-Davidson, Wendigo, Regenery, Uchi, Magnet and Jerome mines closed, and a fire destroyed the Hoyle mine's mill in Ontario.
- The Gold Belt mine in British Columbia suspended operations.
- Operations were also suspended at the Con, Rycon and Thompson-Lundmark mines in the Northwest Territories and at the Avon mine in Nova Scotia.

**1944**

- The amount of gold deposited at the Mint continued to decrease with receipts being the lowest since 1933.
- The price of gold shares on the Toronto Stock Exchange jumped sharply with the Allied invasion of Normandy in June, similar to what had occurred with the invasion of North Africa in 1942. June's average monthly price, the highest the Exchange's index had seen since 1937, was \$127.64, which contrasted with a low during the war years of \$53.15, the month before the landing in North Africa. The Exchange listed 44 new gold companies during 1944 and the first half of 1945, mostly in the Yellowknife area.
- In Quebec, the Powell Rouyn mill was damaged by a tornado and the Francoeur and Beattie mines suspended milling to concentrate available labour on mining.
- An acute labour shortage forced the suspension of mining and milling at the McMaramac mine and the closure of Hard Rock Gold Mines' mill in Ontario.

**1945**

- Victory in Europe on May 8.
- Canadian gold production declined to its lowest level since 1931.
- The return of former miners to their pre-war occupations was not rapid and mining machinery and materials for development remained restricted.
- Hard Rock Mines resumed milling in Ontario.
- The Negus mine resumed milling in the Northwest Territories.

**1946**

- Gold production increased for the first time since the beginning of World War II. The number of producing gold mines increased as mines and mills re-opened. Employees in the lode gold mining industry increased to 21 973, compared with 18 388 in 1945.
- The Canadian dollar was placed on par with the U.S. dollar, thus lowering the price of gold from \$38.50 to \$35.00/oz. The price change adversely affected gold mining. Increased costs and limited supply of equipment retarded mine development.
- The West Malartic mine suspended milling and the Elder mine began shipping gold ore to Noranda in Quebec.
- The Hoyle and Naybob mines re-opened and the Jason, Magnet Consolidated and Macleod-Cockshutt mines resumed milling in Ontario. The Lakeshore mill also returned to the 1000 tons-per-day level.
- Production resumed at the Polaris-Taku mine and at the Zeballos and Bayonne Consolidated mills in British Columbia.

**1947**

- Canadian gold production continued to increase; however, labour shortages and rising costs continued to adversely affect production, prospecting and exploration.
- In Quebec, the Francoeur mine suspended operations, the Duquesne mine shipped ore to Consolidated Beattie, the Central Cadillac mine resumed milling, and the Louvicourt mine poured its first gold bar.
- An underground fire killed 12 men at the East Malartic mine in Quebec.
- The Jason mine suspended milling and the Kirkland Golden Gate, McMarmac and Renabie mines started milling in Ontario.
- The Dentonia mine opened and the Sheep Creek, Western Exploration, and Hedley Mascot mines resumed production in British Columbia.
- The Thompson-Lundmark mine resumed milling in the Northwest Territories.

**1948**

- The Dominion government passed the *Emergency Gold Mining Assistance Act* to assist Canadian gold mine operators in meeting the problem of greatly increasing costs of producing gold while receiving a fixed price for the gold produced.

- Gold production increased by 14% from 1947 in response to improvements in labour supply and cost-aid assistance provided under the *Emergency Gold Mining Assistance Act*.
- The Premier mine, the largest gold producer to date in the history of British Columbia, suspended operations, as did the Privateer mine.
- The Jeep and Ogama-Rockland mines began production in Manitoba.
- In Ontario, a power shortage hampered production in the Kirkland Lake, Larder Lake and Porcupine areas. The Kerr-Addison mine became the largest gold producer in Canada after increasing its mill capacity to 4100 tons per day, and the McMaramac Red Lake mine closed.
- The Donalda and Hosco mines commenced production in Quebec.
- The Giant Yellowknife mine opened and the Dominion government started an 8000-hp hydro-electric plant on Snare River to provide power to mines and residents in the Yellowknife area of the Northwest Territories.

#### 1949

- Devaluation of the Canadian dollar increased the value of gold in Canadian currency from \$35 to \$38.50 per oz. An amendment to the *Emergency Gold Mining Assistance Act* reduced the assistance paid to mines by \$3.50 for each ounce of gold to which the rate of assistance would apply in 1950.
- The supply and quality of labour improved.
- The Campbell Red Lake mine started production and the New Jason mine resumed milling in Ontario.
- The Quesabe, Anglo-Rouyn, and Consolidated Duquesne mines officially opened and the Quemont gold and base-metal mine began production in Quebec.
- The Nor-Acme mine opened in Manitoba.
- The Discovery mine began production in the Quyta-Giauque Lake area and the Thompson-Lundmark mine discontinued production in the Northwest Territories.
- Yukon Gold Placers, Limited began placer mining on Thistle and Henderson Creeks in the Yukon. Yukon Consolidated Gold Corporation continued to be the largest placer producer in the Yukon with dredges in the Dawson area.

#### 1950

- The federal government abolished official fixed rates of exchange allowing exchange rates to be determined by supply and demand for foreign currencies.
- Noland Mines Limited began placer mining at Atlin in British Columbia.
- The Jeep mine suspended production in Manitoba.
- Ontario continued to be the largest producer of gold, producing more than 50% of Canada's output.
- Quebec accounted for approximately 25% of Canada's gold production.
- Production in 1949 and 1950 was the lowest to date in the history of Nova Scotia.

#### 1951

- The federal government gave Canadian gold producers the option to sell their production on premium markets under government regulation or, for those eligible, of continuing to receive cost-aid assistance under the *Emergency Gold Mining Assistance Act*.
- Canadian gold production decreased for the first time since 1946.
- The Anglo-Rouyn and Perron mines closed due to the depletion of ore reserves and the Heva mine opened in Quebec.
- In Ontario, the Central Patricia, Hard Rock and Magnet mines closed due to ore reserve exhaustion. The Hollinger mine's output was reduced because of a 58-day strike, and production at the Renabie mine was suspended for 137 days when a fire seriously damaged the headframe.
- The Ogama-Rockland mine closed in Manitoba.
- In British Columbia, the Polaris-Taku mine closed when the mill was leased to The Consolidated Mining and Smelting Company of Canada to process gold-bearing base-metal ore from the Big Bull and Tulsequah Chief mines.
- Production in the Northwest Territories had increased steadily since the first gold mine opened in 1938. Gold prospecting in the Territories was considerably less than in 1950 because of greater interest in base metals and uranium.
- Production in the Yukon, all from placer operations, decreased when a dredge was shut down in the Dawson area.

#### 1952

- An increase in the Canadian dollar lowered the average Mint price for gold from \$36.85/oz in 1951 to \$34.27 in 1952.
- The increased demand for base metals reduced interest in prospecting for gold; most gold exploration was therefore carried out around established mines.

- The Noland underground placer mine suspended operations because of rising costs in British Columbia.
- In Ontario, the Bonwhit and Hugh-Pam mines commenced production, the Hasaga, New Jason and Chester-ville mines closed, and the Newlund mine suspended production.
- The Quesabe and Heva mines in Quebec closed after failing to find new ore.
- The Negus mine in the Northwest Territories closed.

**1953**

- Gold output decreased in every major producing area except Yellowknife because strikes suspended production at 13 mines; another 5 mines closed due to high costs or ore reserve exhaustion.
- Gold, which had been Canada's leading mineral in value for many years, fell to fourth place behind petroleum, nickel and copper.
- An amendment to the *Emergency Gold Mining Assistance Act* gave eligible miners \$1 more per production ounce than in 1952.
- The Noland underground placer mine was re-opened on a lease basis by a small crew in British Columbia.
- The Buffalo-Ankerite, Matachewan Consolidated, Toburn, Paymaster, and Little Long Lac mines closed in Ontario.

**1954**

- The strong Canadian dollar translated into a lower average Mint price for gold of \$34.11/oz, the lowest price since 1933.
- All lode gold mines received cost-aid under the *Emergency Gold Mining Assistance Act*.
- Labour disputes were settled early in the year after production from a number of mines had been suspended for about six months in 1953.
- No lode gold mines opened or closed.

**1955**

- The Nickel-Plate and French mines closed and the Noland placer mine suspended operations in British Columbia.
- Forty-four mines began production in Manitoba.
- In Ontario, a shaft accident closed the McIntyre mine for two weeks and the Young-Davidson mine closed due to ore reserve exhaustion.
- In Quebec, the new Senator-Rouyn and Powell Rouyn mines ceased production and the Donalda mill suspended milling to permit underground development.

**1956**

- Gold dropped from fourth to fifth place in value among minerals produced in Canada, being surpassed by iron ore.
- Most gold mines instituted a change from the 48-hour work week to the 44-hour work week with no reduction in weekly labour earnings.
- The Starratt-Olsen mine in Ontario closed because of ore reserve depletion.
- In Quebec, the Eldrich mine opened and the O'Brien and Sullivan Consolidated mines closed. The Beattie-Duquesne mine stopped milling gold ore and converted its mill to process copper ore from the Hunter mine.
- The Mindamar silver-lead-zinc mine at Stirling closed after producing the bulk of Nova Scotia's gold production in recent years.

**1957**

- The cost assistance paid to high-cost gold mines since the *Emergency Gold Mining Assistance Act* came into force was more than \$106 million by the end of 1957.
- The premium on the Canadian dollar continued to have an adverse effect on the Royal Canadian Mint price of gold, which was pegged at \$35 per oz in U.S. funds. Many gold mines responded by mining higher-grade ores.
- Annual gold production increased in British Columbia for the first year since 1948.

**1958**

- A more plentiful labour supply in major gold camps made it possible to increase milled tonnage.
- Ten lode gold deposits were not eligible for assistance under the *Emergency Gold Mining Assistance Act* due to low operating costs.
- Gold exploration was encouraged by an improved outlook for gold and unfavourable conditions in base-metal markets.
- Work was renewed on a number of prospects in the Red Lake area of Ontario, the Malartic area of Quebec, the Northwest Territories, and some sections of British Columbia.
- A minor renewal of interest in placer gold occurred in the Wells and Atlin areas of British Columbia and the Yukon.

- The Nor-Acme mine in Manitoba's Snow Lake area closed due to the exhaustion of ore reserves.
- Gold production in Newfoundland increased by 37% when the Tilt Cove copper mine opened.
- The Staconda mine, the only gold mine with its own mill in Noranda, ceased milling, and the Sullivan Consolidated mine re-opened in Quebec.
- Base-metal mines accounted for 36.5% of Quebec's gold output and approximately 90% of this gold was treated at the Noranda smelter.
- The Porcupine District of Ontario remained Canada's leading gold-producing area.
- Increases in by-product gold production in Ontario from new base-metal mines (the Geco, Willroy and Coldstream mines) offset a drop in production at nickel mines caused by a three-month strike at the International Nickel Company of Canada Limited.
- The Canadian Metal Mining Association began research to expand the industrial uses of gold in cooperation with the federal Department of Mines and Technical Surveys in Ottawa.

**1959**

- Higher wage rates offered by uranium mines at Elliot Lake and Bancroft in Ontario attracted miners and caused a shortage of skilled labour in the major gold camps.
- The Toronto Stock Exchange began to give quotations on the value of 1-kg gold bars.
- Gold certificates of the Bank of Nova Scotia became interchangeable at banking establishments in the United Kingdom, the Federal Republic of Germany and South Africa.

**1960**

- About half of Canada's gold production was sold on the open market and the remaining production was sold to the Royal Canadian Mint through the *Emergency Gold Mining Assistance Act*.
- Canadian gold production was 4 628 911 oz, the highest level to date since World War II.

**1961**

- The Royal Canadian Mint's price for gold reached \$36.51/oz in December, the highest since 1951.
- The International Monetary Fund (IMF) arranged for the development of a \$6000 million "standby" fund to reduce the need to keep large amounts of gold or currency in its reserves. Canada agreed to lend some of its currency to the IMF in a time of need.
- Two older gold mines in Ontario, the Carium (formerly Coniaurum) and Sylvanite mines, exhausted their known ore reserves and closed.
- Production from newly opened lode gold mines could not make up for the closing of larger lode gold mines.

**1962**

- Increased depth of mining, lower ore grades, increased exploration and development expenditures, and increased labor and material costs resulted in lower ore production and increased operating costs.
- Many gold mines were able to continue operating because of cost assistance received under the *Emergency Gold Mining Assistance Act* and a higher Mint price for gold that averaged \$37.41/oz.
- In Ontario the Kerr Addison mine, Canada's leading gold producer, reduced its mill production, resulting in a large drop in gold output.
- The closure of the French mine and the McKinney mine left only two lode gold mines (Bralorne and Cariboo Quartz) operating in British Columbia at year-end.
- High-grade gold ore zones were discovered by drilling at Contwoyto Lake in the Northwest Territories.

**1963**

- New provisions made to the *Emergency Gold Mining Assistance Act* required new lode gold mines commencing production after June 1965 to provide direct support to existing gold mining communities in order to qualify for assistance. At least one half of the persons employed at a new gold mine must reside in one or more such communities.
- Kerr-Addison Gold Mines Limited reduced its output by 24% and amalgamated with Anglo-Huronian Limited and Bouzan Mines Limited to form Kerr Addison Mines.
- Teck-Hughes Gold Mines, Limited and Lamaque Gold Mines Limited were merged with Canadian Devonian Petroleum Limited under the name Teck Corporation Limited.
- The amount of gold recovered as a by-product from base-metal mining increased 35% in British Columbia from new copper mines on Vancouver Island (Coast Copper Company Limited) and near Ashcroft (Bethlehem Copper Corporation Ltd.).
- Eldrich Mines Limited near Noranda ceased operating and the company changed its name to Canadian-Australian Exploration Limited, and Kiema Gold Mines Limited commenced sinking a 2100-ft shaft in Quebec.
- McIntyre-Porcupine Mines, Limited began production at its copper mine (800 tons per day) and H.G. Young Mines Limited ceased production in the Red Lake area.



- San Antonio Gold Mines Limited was the only lode gold producer in Manitoba.
- Thirty-five small placer producers continued to operate in the Yukon.

**1964**

- Gold production in Canada declined to its lowest level since 1948 as the number of auriferous quartz mines diminished.
- Forty-four of the 48 producing lode gold mines received cost assistance under the *Emergency Gold Mining Assistance Act*.
- The Norbeau mine began operation in the Chibougamau copper-gold district of Quebec.
- The Delnite mine, a producer since 1937, closed when ore reserves were exhausted in Ontario, and the Macleod-Cockshutt and Leitch mines operated on a salvage basis.
- By-product gold production from copper mines in British Columbia declined 24% with the closure of the Britannia copper mine and flooding at the Cowichan Copper operation.
- The Tundra Gold mine began operations in the Northwest Territories, and a fire seriously affected production at the Con and Rycon mines near Yellowknife.
- The Yukon Consolidated Gold Corporation, Limited, the largest placer operator in Canada, operated six dredges in the Dawson City area.

**1965**

- Eight lode gold mines closed, mainly due to the exhaustion of ore reserves: the Canadian Malartic, Malartic, and Bevcon mines in Quebec, and the Wright Hargreaves, Lake Shore, Broulan Reef, Hugh-Pam Porcupine, and Leitch mines in Ontario.
- The Hollinger mine, the largest producer in the Timmins-Porcupine area, operated on a salvage basis.
- Four mines opened: the Wasamac and Camflo Matagami mines in Quebec, the Stairs mine in Saskatchewan, and the Discovery mine in the Yukon.
- The Giant mine became Canada's largest gold producer when the Kerr Addison mine reduced its production.

**1966**

- Gold production in Canada declined for the sixth consecutive year as mines closed due to the exhaustion of economic ore brought about by ever-increasing costs for supplies and higher wage scales.
- Thirty-nine mines received assistance under the *Emergency Gold Mining Assistance Act*.
- Seven mines closed: the Norlartic and Peel-Elder mines in Quebec; the Porcupine Paymaster, McKenzie Red Lake, Pickle Crow, and Stairs mines in Ontario; and the LaForma mine, the only lode gold mine in the Yukon.
- Placer gold production decreased substantially. Canada's largest placer operator, The Yukon Consolidated Gold Corporation Limited, ceased production.
- The Chimo mine in Quebec was the only mine to open.

**1967**

- Ontario continued as the leading producer with over 50% of production, followed by Quebec (28%), the Northwest Territories (13%) and British Columbia (4%).
- The average price for gold paid by the Royal Canadian Mint was \$37.75/oz. The fixed value of the Canadian dollar was \$0.925 in U.S. funds.
- Three mines closed: the Chimo and Sullivan mines in Quebec and the Cariboo mine in British Columbia.
- The Bralorne Pioneer mine was the only remaining lode gold mine in British Columbia, whereas The Granby Mining Company Limited became a major by-product producer of gold from copper ores.
- The Lakeshore mine stopped the recovery of gold from retreated tailings, and the McIntyre mine continued to reduce the treatment of gold ore as the milling of copper ore increased in Ontario.

**1968**

- A two-tiered price system was established by central banks of the seven countries belonging to the Gold Pool in response to the demand for non-monetary gold, especially after the devaluation of the British pound late in 1967.
- Central banks agreed that official gold reserves would be used for transfers between banks at the established price of US\$35.00/oz; they also agreed not to purchase or sell gold in private gold markets. Consuming industries had to buy gold on the open market.
- The price of gold was allowed to fluctuate depending on supply and demand.
- The London gold market closed in March and re-opened in April following the establishment of the two-tiered system. The price of gold varied from a low of US\$36.70/oz in April to a high of US\$42.60 in May.
- Canadian miners continued to sell to the free market or, if they qualified, to receive assistance under the *Emergency Gold Mining Assistance Act* and to sell to the Royal Canadian Mint at US\$35/oz converted to Canadian dollars. Gold purchased by the Mint was sold in the free market.

- Gold production in Canada declined for the eighth consecutive year.
- Canada had produced over 186.5 million oz of gold since production was first officially recorded in 1858.
- Thirty-five gold mines were eligible for assistance under the *Emergency Gold Mining Assistance Act*.
- The gold recovered from placer mines was of minor importance because of closures during the 1960s.
- The Kiena mine closed in Quebec.
- Production was suspended at the Hollinger mine, which opened in 1910 and produced more gold than any other mine in Canada to date; the Preston mine also closed in Ontario after 29 years of operation.
- The Campbell Red Lake mine in Ontario increased production and became the largest producer in Canada.
- The San Antonio mine in Manitoba, the only producing lode gold mine in the prairie provinces, suspended operations.
- The Tundra Gold mine exhausted all ore and suspended operations in the Northwest Territories.
- The Arctic Gold and Silver and Mount Nansen mines opened in the Yukon.

#### 1969

- The IMF ratified a plan to issue a new international currency known as Special Drawing Rights (SDR) to be used to supplement gold in the settlement of international trade balances.
- South Africa increased gold sales to the open market to meet trade deficits.
- Speculators reduced their holdings of gold, producers continued to sell to the open market, and the price declined sharply in the fourth quarter.
- Market stability returned when the IMF agreed to purchase gold from South Africa when the price would drop to US\$35/oz or when South Africa needed funds to pay its international debts. In return, South Africa agreed to sell gold on the open market whenever the price was above US\$35/oz.
- Three mines closed: the Norbeau mine in Quebec, the Surluga mine in Ontario, and the Discovery mine in the Northwest Territories.

#### 1970

- The Canadian dollar was allowed to float in international exchange markets to relieve pressure from world money markets. The value of the Canadian dollar had been fixed at US\$0.925 since 1962.
- Gold production in Canada declined for the tenth consecutive year.
- Changes to the *Emergency Gold Mining Assistance Act* required participating operators to hire employees through facilities administered by the Department of Manpower and Immigration. Lode gold mines that came into production after August 7, 1970, were not eligible for assistance under the Act.
- Thirty-one mines received assistance. The Campbell Red Lake mine was the only mine that did not receive assistance.
- The Barnat mine exhausted its reserves and closed while the Kerralda mine opened in Quebec.
- In Ontario, the Renabie and MacLeod Mosher mines closed, and the Aunor and Dome mines introduced rubber-tired load-haul-dump units for stope mucking to reduce costs.
- The Venus silver-gold-zinc mine opened in the Yukon.

#### 1971

- The value of the Canadian dollar increased against the U.S. dollar since the Canadian dollar was allowed to float on international exchange markets in 1970. This resulted in lower prices paid by the Mint for gold.
- The rising deficit in the U.S. balance of payments resulted in the United States devaluing its currency by 8.57% by raising the official price of gold from US\$35 to \$38/oz.
- The increased price made it profitable for mines to sell gold to the free market and not to the Royal Canadian Mint under the *Emergency Gold Mining Assistance Act*. Only four mines operating at year-end sold all of their gold to the Mint.
- Gold in the Atlantic and prairie provinces was produced solely as a by-product of base-metal mining.
- The Wasamac, Kerralda and Barnat gold mines suspended operations or closed, along with the Quemont and Delbridge auriferous base-metal mines in Quebec.
- The Upper Canada mine in Ontario closed after the tonnage of ore mined declined 47% from 1970; the mine opened in 1938.
- Also in Ontario, the Cochenour-Willans, Annco, Wilmar and Robin Red Lake mines came on stream, and a shortage of experienced labour caused a 6% drop in production from the 1970 level at the Dome mine.
- The Bralorne mine closed in British Columbia after operating since 1932.
- The Venus silver-gold-zinc mine closed in the Yukon.

#### 1972

- A sharp rise in the free market price of gold allowed marginal mines to continue to operate; no gold mines closed.

- No mines applied for assistance under the *Emergency Gold Mining Assistance Act* because the free market price for gold was higher than the official Mint price plus the maximum payable under the Act (i.e., \$48/oz).
- Production began from the Ming orebody in Newfoundland.
- The Upper Beaver auriferous base-metal mine in Ontario closed early in the year.

#### 1973

- The Republic of South Africa produced 78% of non-communist gold output and sold most of its gold on the world market to meet its balance of payments obligations.
- Japan removed restrictions on the ownership of gold by private citizens.
- A sharp rise in the price of gold from US\$63.9/oz in January to US\$127 in June allowed marginal operations to continue mining; there were no mine closures in Canada.
- Reasons for the sharp rise in price ranged from currency uncertainties, especially in relation to the U.S. dollar, to economic problems in some countries, lack of solutions to monetary reform, political tensions, strong demand for gold as a hedge against inflationary pressures caused by rising oil prices, and strong demand for gold from commodity speculators.
- In November, seven countries (Belgium, Britain, Italy, the Netherlands, Switzerland, the United States, and West Germany) agreed to terminate the two-tiered pricing system established in 1968 for gold, thus allowing central banks to make their gold reserves available to the open market.
- In December, South Africa and the IMF agreed to terminate their 1969 agreement that allowed South Africa to sell gold to the open market under specific conditions. No mines applied for assistance under the *Emergency Gold Mines Assistance Act*, which provided a floor price guarantee of \$52.50.
- The amount of gold produced from base-metal mines increased 11.6% in Canada, largely due to the porphyry copper mines that came on stream in British Columbia in 1972.
- The Agnico-Eagle mine began production in December in Quebec.

#### 1974

- The President of the United States signed a bill that allowed private citizens to buy, sell and hold gold for the first time in 41 years.
- Trading in gold futures was established on five commodity exchanges in the United States: Commodity Exchange Inc. (COMEX) of New York; International Monetary Market (IMM) of Chicago; Chicago Board of Trade (CBT); New York Mercantile Exchange (NYME); and MidAmerica Commodity Exchange of Chicago.
- The IMF established an interim method of valuing special drawing rights (SDRs) for balance of payments. SDRs were to be valued based on a "basket" of currencies of those 16 countries that had a share in world exports of goods and services in excess of 1% on average over the period 1968-72.
- The Winnipeg Commodity Exchange opened future trading in 100-oz gold bar contracts in June to make more gold available to smaller jewellery manufacturers, dental wholesale houses and electronic supply firms. Previous trading was limited to 400-oz bar contracts.
- The Marban gold mine closed due to the exhaustion of ore reserves and the Chibex copper-pyrite mine reopened in Quebec.

#### 1975

- The price of gold fell sharply on announcements that the U.S. government would sell gold from its official reserves by auction and when the Interim Committee of the IMF announced an agreement to abolish the official price of gold and auction one sixth of the approximately 150 million oz of gold in its official reserve to assist developing countries.
- Gold in official reserves of non-communist countries totaled 1.1781 billion oz at the end of 1975.
- Canadian lode gold mine production increased for the first time since 1960. There were 21 operating lode gold mines.
- No mines had applied for assistance under the *Emergency Gold Mining Assistance Act* since 1971 because higher gold prices had made it more profitable to sell to the open market.
- The 1973 *Olympic (1976) Act* was amended to allow the circulation of a Canadian \$100 gold coin commemorating the Olympic games to be held in Montréal in 1976. These were the first official \$100 gold coins to be minted by the Canadian government.
- In Quebec, the Chibex mine closed because of poor operating results and the polymetallic Campbell Chibougamau mine closed because of depressed copper prices and labour problems.
- In Ontario, the New Joburke mine suspended production due to rising transportation costs and declining prices.
- Exploration in Ontario was adversely affected by rising inflation, government taxation policies and difficulties in raising venture capital.
- The discovery of placer gold in the Gold Range near the Alaska border sparked considerable activity in the Yukon.

**1976**

- In January, Governors of the IMF agreed to a major international monetary package that reduced the role of gold in the international monetary system by eliminating gold as the unit of value of the Special Drawing Rights (SDRs) and abolishing the official price of gold.
- In June, the IMF auctioned the first tranche of 121.3 t of gold from its reserves out of a planned total sale of 777.6 t (25 million oz) over four years. Net proceeds from the sales went into a trust fund administered by the IMF for the benefit of developing countries.
- Canadian gold producers created "The Gold Institute/L'Institut de L'Or" to promote the interests of the gold industry. The Institute shared offices with the Silver Institute in Washington, D.C. Initial members were Canadian mining companies with plans to expand to include representation from companies in other countries.
- Low-grade mines faced serious financial problems because of a sharp decline in the gold price during the first half of the year.
- The *Emergency Gold Mining Assistance Act* expired on June 30. Terms of the Act were not applicable to the current industry.
- The *Emergency Gold Mining Assistance Act* came into force in 1948 and the amount paid to gold mine operators during the life of the Act totaled \$303 104 402 on production of 1922.6 t (61 813 545 oz) of gold produced and sold in accordance with the Act.
- The number of Canadian \$100 commemorative Olympic gold coins minted in 1976 was 650 000 14-ct gold coins and 350 000 22-ct gold coins.
- The Bulora mine closed in Ontario because of increased labour and supply costs and low gold prices, and Pamour Porcupines Mines Limited reduced its work force by 30% at its four mines in the Timmins area.
- In British Columbia, the Dusty Mac mine closed due to the depletion of ore reserves, and the Northair gold mine became the first new metal mine to come into production since the Lornex and Gibraltar copper mines opened in 1972.

**1977**

- The IMF restituted 194.4 t of gold from its reserves to member countries at the price of 35 SDR per ounce in proportion to their quotas in the fund. This was the first of four such transactions to be carried out over four years.
- Canada issued 179 000 gold coins of \$100 legal tender to commemorate the 25<sup>th</sup> anniversary of Queen Elizabeth II's accession to the throne.
- The depressed Canadian dollar and higher price for gold helped offset rising production costs related to inflationary pressures.
- Virtually all gold produced in British Columbia was recovered as a by-product of base-metal ores with the exception of the Northair mine's output.

**1978**

- The weakness in the U.S. dollar in relation to other currencies and strong demand from the Far East contributed to a 40% increase in the average price of gold on the London Gold Market between 1977 and 1978.
- The U.S. Treasury sold a total of 126 t of gold reserves through monthly auctions beginning in May.
- The Government of India reportedly auctioned gold previously confiscated from smugglers in order to curb gold smuggling.
- Canada first officially recorded gold production in 1858 and had produced 6413.3 t to the end of 1978.
- An amendment to the *Currency and Exchange Act* authorized the Royal Canadian Mint to strike and issue numismatic and bullion gold coins.
- The Canadian government minted 200 000 commemorative \$100 legal tender gold coins.
- The Darius mine (formerly the O'Brien mine) opened in Quebec.

**1979**

- The U.S. Treasury sold a total of 365.48 t (11 750 000 oz) of gold through monthly public auctions during the year, with no further auctions contemplated.
- The Canadian government gave the Royal Canadian Mint authority to issue a maximum of one million 1-oz "Gold Maple Leaf" coins in 1979 and two million in each of 1980 and 1981. Only Canadian-produced gold could be used; any shortfall in the gold needed was made up by gold from Canada's official monetary gold reserve.
- The Canadian government minted 250 000 legal-tender, 22-ct gold coins to commemorate the International Year of the Child.
- In Quebec, the Charbourne, Ferderber and Thompson-Bousquet mines opened, the Barnat mine closed and re-opened on a salvage basis, and the Est-Malartic mine closed after 41 years of operation.
- The Erickson Creek mine opened in British Columbia.

**1980**

- The IMF completed a four-year plan to auction 777.6 t (25 million oz) of gold, which raised US\$1.29 billion to benefit less developed countries.
- The Canadian government sold 31.103 t (1 million oz) of gold from the official monetary reserve of 684.3 t (22 million oz).
- The Canadian government approved the minting of 300 000 legal-tender gold coins to commemorate the 1880 transfer of the Arctic Territories to Canada from Britain. Each \$100 face-value coin contained half an ounce of gold.
- The Royal Canadian Mint sold 1 215 000 one-ounce Gold Maple Leaf coins.
- Strong growth in exploration and new mine development occurred in response to a sharp rise in the price of gold.
- The cost per unit of gold produced continued to increase as higher prices allowed a lower-grade ore to be mined.
- New federal environment regulations under the *Clean Air Act* came into force and limited the emissions of arsenic at gold roasting operations.
- In Quebec, the Gwillim, Doyon and Bachelor Lake mines opened and the Ferderber mine suspended production for five months after a cave-in killed eight miners.
- The Dome mine, in production since 1910 and Canada's longest operating mine, began a 50% mill expansion to be completed in 1984.
- The Camlaren mine opened in the Northwest Territories.
- All known historical and current placer streams in the Yukon were entirely staked.
- The *Yukon Placer Mining Act of 1906* came under review.

**1981**

- Exploration remained strong despite weaker gold prices resulting from extraordinarily high interest rates and a strong U.S. dollar.
- Estimated investment in Canadian gold mines between 1979 and 1981, excluding exploration, was \$630 million with the creation of about 2500 jobs.
- The Royal Canadian Mint produced a 22-ct gold coin to commemorate the adoption of "Oh Canada" as Canada's national anthem.
- In Quebec, the Kiena mine opened, the Barnat mine closed after operating on a salvage basis since 1979, and attempts to redevelop the former O'Brien mine failed.
- The Owl Creek mine began production in Ontario and the old Hallnor mine was reactivated.
- The Cusac mine did not resume seasonal operations; however, the Carolin, Baker, Taurusand and Scottie mines opened in British Columbia.
- The Camlaren mine closed and the Cullaton Lake mine opened in the Northwest Territories.
- Output from resurgent placer mining surpassed by-product gold production from copper mines in the Yukon.
- The demand for arsenic, an unwanted by-product from gold ores, increased in industrial uses, allowing companies to earn some revenue from its sale.

**1982**

- The gold price fell to a low of US\$296/oz on June 21, but rebounded to exceed \$400/oz by the end of August.
- More producers begin to sell forward and hedge as a means of insuring future sales.
- Canada's annual gold output increased for the first time in three years.
- Quebec surpassed Ontario as the leading gold-producing province in Canada for the first time.
- There were first indications of a significant new gold camp near Hemlo, Ontario.
- The San Antonio mine re-opened in Manitoba.
- In British Columbia, the Carolin and Scottie mines suspended operations temporarily because of cyanide spills and the Brandywine mine suspended operations indefinitely in response to low prices.
- The Whitehorse Copper mine, which produced a significant quantity of by-product gold, closed in the Yukon due to ore reserve depletion. Some placer mines faced bankruptcy at prices below \$400/oz.
- The Lupin mine opened in the Northwest Territories and the Con mine spent \$13 million to complete an arsenic trioxide plant to recover arsenic from 25 years of accumulated stack scrubber and roaster waste residue.
- The Royal Canadian Mint began marketing one-quarter ounce and one-tenth ounce Gold Maple Leaf bullion coins to compete with the highly successful mini Krugerrands from South Africa and the Mexican fractional weight gold coins. The Mint also produced a 22-ct gold coin commemorating the patriation of the Constitution.

**1983**

- In Quebec, the Lac Shortt mine opened and the Chimo mine re-opened after the shaft was deepened.
- The Detour Lake mine opened in Ontario with plans to expand milling to 4400 t/d, making it one of the largest producers in Canada at the time.
- The high-grade Salmita mine opened in mid-year in the Northwest Territories.

**1984**

- Significant gold was discovered at Port aux Basques, Newfoundland.
- Two small by-product gold-producing operations, Anaconda Canada Explorations Ltd. and Heath Steele Mines Ltd., opened in New Brunswick.
- Quebec remained Canada's largest gold producer. The Lac Shortt mine opened and the Kiena Gold and Aiguebelle mines opened new mills.
- Pamour Porcupine Mines suspended operations at three of its six mines in Ontario in response to weak gold prices.
- The McBean mine poured its first gold bar and the Westfield mine opened in Ontario with an expected four-year mine life.
- The Hemlo find stimulated exploration in previously explored areas of Ontario.
- The Rio mine officially opened in Saskatchewan.

**1985**

- Demand for the Canadian Gold Maple Leaf bullion coins increased as South Africa's gold bullion Kruggerand was officially banned in many coin markets.
- The Buchans mine in Newfoundland closed.
- The Lamaque mine in Quebec closed due to the depletion of ore reserves.
- Exploration was active in the Casa Berardi area of Quebec.
- Three mines (Golden Giant, David Bell, Page-Williams) began production at Hemlo, Ontario.
- Development of the Star Lake gold mine-mill complex began near La Ronge, Saskatchewan.
- The Cullaton Lake mine in the Northwest Territories was placed on care and maintenance pending an increase in gold prices.

**1986**

- Canadian gold production increased 19.5%, largely due to the Hemlo mines completing one full year of production.
- The first gold heap leach operation in Canada began at Gordex Minerals Limited's property in New Brunswick.
- Cambior Inc. was formed to operate Societe québécoise d'exploration minière's (SOQUEM's) properties in Quebec.
- Open-pit mining at Detour Lake in Ontario ceased in September, but milling of stockpiled material continued while underground mineralization was developed.
- The Blackdome mine in British Columbia poured its first bar of gold.
- The Mt. Skukum mine, the Yukon Territories' first major hard rock gold mine, opened in July.
- The Tom mine opened near Yellowknife.

**1987**

- Placer Development Limited, Dome Mines Limited and Campbell Red Lake Mines merged to form Placer Dome Inc., the largest gold mining company in the Western World outside of South Africa.
- Hemlo Gold Mines Inc. was formed from the amalgamation of Noranda Hemlo Inc.'s, Goliath Gold Mines Ltd.'s and Golden Sceptre Resources Ltd.'s interests in the Hemlo region.
- The Hope Brook gold mine opened in Newfoundland and began heap leaching ore in August.
- The Gays River base-metal mill was reactivated to process gold ore from the nearby Forest Hill mine in Nova Scotia.
- The Joe Mann mine near Chibougamau, Quebec, re-opened after additional ore was discovered below old workings. The Beacon mine also opened in Quebec.
- The Lake Shore mine in Kirkland Lake closed after recovery of the crown pillar.
- The Bell Creek mine near Timmins and the Golden Rose mine near Sturgeon Falls opened, while Detour Lake completed the switch from open-pit to underground mining in Ontario.
- The Tartan Lake and Puffy Lake mines opened near Flin Flon, Manitoba.
- Primary gold production returned to Saskatchewan after 50 years when the Star Lake mine opened early in the year; the mine closed in 1988 when ore reserves were depleted.
- The Nickel-Plate open-pit mine began production near Hedley, British Columbia.
- The Salmita mine closed due to exhaustion of ore reserves in the Northwest Territories.

**1988**

- Employment in the gold industry peaked at a record level of 12 600 workers.
- The Johnny Mountain mine opened in British Columbia while the Erickson mine suspended operations due to ore depletion.
- The Ketz River mine came on stream in the Yukon, but the Mt. Skukum mine closed because drill indicated reserves were not borne out in the underground development stage.
- The Ptarmigan mine opened near Yellowknife.
- The Jolu mine opened in Saskatchewan.
- The Holt-McDermott, Golden Patricia, Kremzar and Magino mines opened in Ontario.
- The Francoeur mine opened in Quebec.
- Projects to recover gold from tailings began at the old Schumacher mine in Timmins, the Giant mine in Yellowknife, and the Eastmaque property in Kirkland Lake.

**1989**

- The Supreme Court of Canada ruled that the Page-Williams mine in the Hemlo region belonged to a joint venture between Corona Corporation and Teck Corporation, thus ending an eight-year legal battle between Corona and LAC Minerals Ltd. The mine was renamed the Williams mine.
- The Lawyers, Golden Bear and Premier mines opened in British Columbia.
- The Puffy Lake, Tartan Lake and McLellan mines closed in Manitoba in response to depressed gold prices and high operating costs.
- The Magnacon, St. Andrew Goldfields and Dona Lake mines opened in Ontario, while owners of the Kerr mine declared bankruptcy and the Surluga mine near Wawa suspended underground production because it was unable to achieve a commercial production rate.
- The Golden Pond East mine became the first mine to open in the Casa Berardi area of Quebec. The Beauchastel, Kierens, Pierre Beauchemin, and Lucien C. Beliveau mines also opened in Quebec, while the Bachelor Lake mine closed as production costs exceeded revenues.
- The Murray Brook mine opened in New Brunswick.
- The Tangier mine in Nova Scotia attempted to open, but commercial production was not achieved because of the coarse nature of the gold mineralization.

**1990**

- Canada's gold production increased more than five times over the decade 1980 to 1990.
- The Canadian Maple Leaf gold coin had consumed about 410 t of gold since its introduction in 1979, equivalent to 41.5% of Canada's total production over the same period.
- The Silbak and Big Missouri mines were re-opened and the Golden Bear mine came on stream in British Columbia, while the Johnny Mountain mine suspended operations and the Blackdome mine closed due to declining ore grades.
- The Colomac mine opened and tailings reprocessing was completed at the Giant mine in the Northwest Territories.
- The Ketz gold mine in the Yukon closed when oxide ores were depleted.
- The Jasper mine began production in Saskatchewan with an anticipated two-year mine life.
- The Kerr mine re-opened and the Hoyle and Cheminis mines started production in Ontario. High costs and low gold prices forced the closure of the Kremzar mine and the Magnacon mines, which had opened in 1989. The Timmins tailings operation also closed after one year of operation.
- The first heap leach operation in Quebec opened at the Duvay open-pit mine. The Bousquet No. 2, Golden Pond West and Silidor mines also opened in Quebec, while the Montauban and S-3 mines closed due to exhaustion of ore reserves and the Sleeping Giant mine closed in response to low gold prices.

**1991**

- Canada's gold production reached a record high of 175.3 t, surpassing the previous record of 166.3 t set in 1941.
- Australia surpassed Canada as the world's top user of gold for coinage.
- The Snip and SB mines opened in British Columbia.
- The Colomac mine in the Northwest Territories was placed on care and maintenance in response to lower recoveries and grades and higher operating costs.
- The Jolu mine closed and the Seabee mine opened in Saskatchewan.
- The Cheminis mine opened and the Renabie, Bell Creek, Eastmaque and Goldpost mines closed in Ontario. Renabie had been reactivated four times since it first opened in 1941.
- The Mouska, Eagle West, Norlartie and Simkar mines opened in Quebec and the Sleeping Giant mine and the Estrades polymetallic mine closed due to low metal prices.
- The Hope Brook mine in Newfoundland temporarily suspended operations to retreat contaminated effluents.

**1992**

- The Dome mine opened and the Lawyers mine closed due to ore depletion in British Columbia.
- An explosion at the Giant mine in Yellowknife killed nine workers.
- Low gold prices forced the closure of the Magino mine and the Cheminis mine temporarily closed in Ontario while the Bell Creek mine re-opened under new management.
- The Lac Shortt, Camflo, Kierans, Norlartic and Malartic mines closed in Quebec due to exhaustion of ore reserves while the Simkar mine closed in response to low gold prices and the Portage and Rand mines were placed on care and maintenance.
- Gold reserves were depleted at the Murray Brook mine in New Brunswick; the mining of copper ore continued.
- The Hope Brook mine in Newfoundland re-opened under new management in July after a one-year shut-down.

**1993**

- Canada became the fourth largest gold producer after South Africa, the United States and Australia.
- An 18-month labour dispute was settled at the Giant mine in Yellowknife.
- The Keystone open-pit mine opened in Manitoba.
- The Kerr mine re-opened after new ore was discovered in Ontario.
- The Astoria and Granada mines came on stream and the Portage, Rand and Sleeping Giant mines re-opened under new management in Quebec. The Lucienne Beliveau and Pierre Beauchemin mines closed due to the exhaustion of ore reserves.

**1994**

- Barrick Gold Corporation became the largest gold producer outside of South Africa after acquiring Lac Minerals Ltd.
- Canada lost its leadership of the world gold coin production market. The Royal Canadian Mint's gold coin program had consumed 470 t of gold since its introduction in 1979, equivalent to 31.8% of total Canadian production during that period.
- The Table Mountain and Elk/Siwash mines started pre-production in British Columbia.
- The Ptarmigan and Tom mines closed due to depleted reserves in the Northwest Territories while the Colomac mine re-opened under new management after being closed in 1991 due to high operating costs.
- The Macassa mine temporarily closed in Ontario due to a rockburst. The Dona Lake mine closed and the St. Andrew Goldfield's Stock Township mine ceased operations due to the depletion of ore reserves.
- Ore from the newly opened Eastmain mine was trucked by winter road to Chibougamau for milling. Also in Quebec, pre-production began at the Donalds and Beaufort mines while the Ferderber and Dumont mines closed due to the depletion of reserves.

**1995**

- Gold's trading range was the lowest since the termination of the Gold Standard in 1972.
- Canada's gold production increased for the first time in four years.
- Gold production in British Columbia increased 59%, largely due to the opening of the Eskay Creek mine. The QR mine also opened in British Columbia.
- The Contact Lake mine opened in Saskatchewan and the New Britannia mine came on stream in Manitoba.
- A strike caused a five-month shut-down at the Golden Giant mine in Ontario.
- The Paymaster mine re-opened adjacent to the newly opened Dome open-pit mine. The Eagle River mine also came on stream in Ontario.
- The Lithos mine opened in Quebec. The Eastmain mine opened but then closed temporarily because it could not reach production targets. Production was also temporarily suspended at the Astoria mine in Quebec.

**1996**

- Canada's Maple Leaf gold coin program had consumed 510 t of gold, or 24.3% of Canada's gold production, since being introduced in 1979.
- The Nickel Plate and Premier mines closed in British Columbia.
- The Brewery Creek heap leach mine and the Mt. Nansen mine opened in the Yukon.
- The Holloway mine opened and the three Hemlo mines accounted for 41.2% of Ontario's total production.
- The Troilus mine opened and the Chimo mine closed in Quebec.

**1997**

- Canada's Maple Leaf gold coin ranked second in world sales after the U.S. Eagle gold coin.
- Employment in primary gold mines declined to 9656 from a peak of 12 631 in 1989.
- The Nugget Pond mine opened and the Hope Brook mine closed in Newfoundland.



- The Casa Berardi, Portage, Copper Rand, Wrightbar and Silidor mines closed in Quebec.
- In Ontario the Musselwhite and Glimmer mines opened and the Golden Patricia mine closed due to depletion of ore reserves.
- The Mount Polley copper-gold mine opened and the Golden Bear heap leach mine resumed operations in British Columbia.
- The Komis mine closed in Saskatchewan.
- The Bissett mine in Manitoba opened, but closed after four months because of high operating costs and a low gold price.
- The Colomac mine closed in the Northwest Territories in response to high operating costs and a low gold price.

### 1998

- The strength of the U.S. dollar and threats of central bank sales of gold reserves continued to depress the price of gold.
- The Kemess gold-copper mine opened and the QR mine was placed on care and maintenance in British Columbia due to high operating costs.
- The Lupin mine closed in the Northwest Territories.
- Closures and lay-offs during 1997 and 1998 resulted in 900 job losses in the Northwest Territories.
- The Seabee mine became the only operating gold mine in Saskatchewan after the Contact Lake mine closed in mid-year.
- The Bissett mine re-opened after being closed in 1997.
- The Madsen mine re-opened in Ontario.
- The Nugget Pond mine became the only operating gold mine in Newfoundland.

Sources: Canadian Minerals Yearbooks, 1930-1998.

*Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 65. (2) Information in this review was current as of January 2000. (3) This and other reviews, including previous editions, are available on the Internet at [http://www.nrcan.gc.ca/mms/cmy/index\\_e.html](http://www.nrcan.gc.ca/mms/cmy/index_e.html).*

### NOTE TO READERS

**The intent of this document is to provide general information and to elicit discussion. It is not intended as a reference, guide or suggestion to be used in trading, investment, or other commercial activities. The author and Natural Resources Canada make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.**

### TARIFFS

Item No.	Description	Canada			United States	EU	Japan <sup>1</sup>
		MFN	GPT	USA	Canada	MFN	WTO
71.08	Gold (including gold plated with platinum) unwrought or in semi-manufactured forms, or in powder form						
	Non-monetary:						
7108.11.00	Powder	Free	Free	Free	Free	Free	Free
7108.12.00	Other unwrought forms	Free	Free	Free	Free	Free	Free
7108.13	Other semi-manufactured forms						
7108.13.10	Of 10 carats or more	Free	Free	Free	Free	Free	Free
7108.13.20	Of less than 10 carats	4%	Free	Free	Free	Free	Free

Sources: Customs Tariff, effective January 2000, Canada Customs and Revenue Agency; Harmonized Tariff Schedule of the United States, 2000; Worldtariff Guidebook on Customs Tariff Schedules of Import Duties for European Union (39th Annual Edition: 1999); Customs Tariff Schedules of Japan, 1999.

<sup>1</sup> WTO rate is shown; lower tariff rates may apply circumstantially.

TABLE 1. CANADA, GOLD PRODUCTION AND TRADE, 1998 AND 1999

Item No.	1998		1999 <sup>p</sup>		
	(kilograms)	(\$000)	(kilograms)	(\$000)	
<b>PRODUCTION</b>					
Newfoundland	1 381	19 388	1 400	18 916	
Prince Edward Island	—	—	—	—	
Nova Scotia	—	—	—	—	
New Brunswick	324	4 543	220	2 978	
Quebec	37 637	528 233	37 492	506 704	
Ontario	82 830	1 162 522	76 221	1 030 128	
Manitoba	8 416	118 126	8 207	110 914	
Saskatchewan	2 830	39 716	1 703	23 010	
Alberta	8	118	11	145	
British Columbia	21 552	302 483	24 933	336 968	
Yukon	5 739	80 546	4 537	61 316	
Northwest Territories	4 055	56 918	3 067	41 455	
<b>Total</b>	<b>164 773</b>	<b>2 312 593</b>	<b>157 790</b>	<b>2 132 534</b>	
Mine output	165 599	..	158 275	..	
<b>EXPORTS</b>					
2600.001	Gold in ores and concentrates	5 656	55 224	4 446	40 748
7108.11	Gold powder				
	United States	8 543	118 124	5 146	68 319
	<b>Total</b>	<b>8 543</b>	<b>118 124</b>	<b>5 146</b>	<b>68 319</b>
7108.12	Other unwrought forms				
	United States	145 491	2 058 323	143 206	1 969 036
	South Korea	2 943	41 549	3 425	45 059
	Taiwan	486	6 686	976	12 113
	Switzerland	25 487	349 150	688	8 675
	Japan	498	6 714	498	5 970
	Mexico	—	—	350	4 625
	United Kingdom	1 081	14 661	162	2 291
	Argentina	—	—	31	386
	United Arab Emirates	—	—	8	109
	Hong Kong	6 255	82 052	—	—
	Germany	983	13 887	—	—
	Saudi Arabia	998	13 636	—	—
	Australia	980	13 542	—	—
	Other countries	608	8 501	—	—
	<b>Total</b>	<b>185 810</b>	<b>2 608 701</b>	<b>149 344</b>	<b>2 048 264</b>
7108.13	Other semi-manufactured forms				
	United States	30 485	392 715	31 930	394 652
	United Kingdom	23	346	9	138
	France	77	1 143	—	—
	<b>Total</b>	<b>30 585</b>	<b>394 204</b>	<b>31 939</b>	<b>394 790</b>
	<b>Total refined gold exports</b>	<b>230 594</b>	<b>3 176 253</b>	<b>190 875</b>	<b>2 552 121</b>
<b>IMPORTS<sup>2</sup></b>					
2600.00 <sup>3</sup>	Gold in ores and concentrates	4 435	48 775	6 744	69 170
7108.11	Gold powder				
	Burkina Faso	—	—	75	527
	United States	6	72	40	368
	Ghana	—	—	50	366
	Italy	..	7	6	35
	Other countries	—	1	1	14
	<b>Total</b>	<b>6</b>	<b>80</b>	<b>172</b>	<b>1 310</b>
7108.12	Other unwrought forms				
	United States	65 049	824 807	91 417	401 670
	Guyana	14 184	186 514	13 814	175 584
	Suriname	6 273	78 463	5 474	65 490
	Venezuela	433	4 505	1 361	16 591
	Dominican Republic	3 348	7 908	2 804	9 186
	Honduras	—	—	1 148	8 743
	Cuba	1 146	8 504	1 658	5 445
	Russia	187	662	463	5 390
	Panama	7 222	21 105	622	2 789
	Costa Rica	332	4 337	177	2 142
	United Kingdom	3 021	41 792	..	..
	South Korea	1 991	26 714	—	—
	Other countries	1 196	15 623	79	967
	<b>Total</b>	<b>104 382</b>	<b>1 220 934</b>	<b>119 017</b>	<b>693 997</b>

TABLE 1 (cont'd)

Item No.	1998		1999p	
	(kilograms)	(\$000)	(kilograms)	(\$000)
7108.13				
Other semi-manufactured forms				
United States	660	9 109	799	9 381
Ecuador	227	2 391	560	4 920
Switzerland	101	1 418	108	1 521
Italy	124	929	82	602
Peru	192	1 790	22	215
Other countries	13	202	8	161
Total	1 317	15 839	1 579	16 800
Total refined gold imports	110 140	1 285 628	127 452	781 277

Sources: Natural Resources Canada; Statistics Canada.

– Nil; . . Not available; . . . Amount too small to be expressed; P Preliminary.

<sup>1</sup> Includes HS classes 2603.00.82, 2607.00.82, 2608.00.82, 2616.10.82 and 2616.90.82. <sup>2</sup> Imports from "Other countries" may include re-imports from Canada. <sup>3</sup> Includes HS classes 2603.00.00.82, 2604.00.00.82, 2607.00.00.82, 2608.00.00.82, 2616.10.00.82 and 2616.90.00.20.

Note: Numbers may not add to totals due to rounding.

TABLE 2. CANADA, GOLD PRODUCTION BY SOURCE, 1975, 1980 AND 1985-99

Year	Auriferous Quartz Mines		Placer Operations		Base-Metal Ores		Total	
	(kg)	(%)	(kg)	(%)	(kg)	(%)	(kg)	(%)
1975	37 530	73.0	335	0.6	13 569	26.4	51 433	100.0
1980	31 929	63.1	2 060	4.0	16 632	32.9	50 620	100.0
1985	67 241	76.8	3 464	4.0	16 857	19.2	87 562	100.0
1986	83 197	80.9	2 802	2.7	16 900	16.4	102 899	100.0
1987	94 723	81.8	4 009	3.5	17 086	14.8	115 818	100.0
1988	112 404	83.4	4 879	3.6	17 530	13.0	134 813	100.0
1989	138 211	86.6	5 354	3.4	15 930	10.0	159 494	100.0
1990	147 355	88.0	3 993	2.4	16 025	9.6	167 373	100.0
1991	153 859	87.8	3 834	2.2	17 589	10.0	175 282	100.0
1992	141 965	88.5	3 469	2.2	14 917	9.3	160 351	100.0
1993	137 346	89.7	3 787	2.5	11 997	7.8	153 129	100.0
1994	133 018	90.8	3 714	2.5	9 696	6.6	146 428	100.0
1995	132 834	88.0	5 303	3.5	12 730	8.4	150 867	100.0
1996	147 052	89.3	3 971	2.4	13 636	8.3	164 660	100.0
1997	155 543	90.7	3 987	2.3	11 949	7.0	171 479	100.0
1998	142 846	86.7	3 098	1.9	18 829	11.4	164 773	100.0
1999p	138 166	87.6	3 176	2.0	16 448	10.4	157 790	100.0

Source: Natural Resources Canada.

P Preliminary.

Note: Numbers may not add to totals due to rounding.

**TABLE 3. WORLD MINE PRODUCTION OF GOLD, 1990-98**

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(tonnes)								
South Africa	605.1	601.1	614.1	619.5	583.9	522.4	494.6	492.5	473.8
Canada <sup>1</sup>	167.4	175.3	160.4	153.1	146.4	150.9	164.7	171.5	164.8
United States	294.2	296.0	329.1	332.1	326.0	319.0	329.3	359.0	364.4
Other Africa									
Ghana	17.3	27.3	33.3	41.4	44.5	53.2	50.3	55.7	73.3
Zimbabwe	17.9	19.1	19.9	20.7	22.5	26.1	26.7	26.3	27.1
Other	35.3	43.5	48.1	49.4	51.2	52.4	51.3	59.2	68.2
Total, other Africa	70.5	89.9	101.3	111.5	118.2	131.7	128.3	141.3	168.6
Latin America									
Peru	14.6	15.1	18.0	27.4	39.3	57.4	64.8	74.8	89.2
Brazil	84.1	78.6	76.5	75.7	73.4	67.4	64.2	59.1	55.4
Chile	33.3	33.0	39.3	38.5	43.3	48.5	56.4	52.9	46.7
Mexico	9.6	8.5	10.4	11.1	13.9	20.3	24.5	26.0	26.1
Venezuela	14.2	13.2	11.7	11.2	13.7	17.1	19.9	19.9	14.3
Colombia	32.5	30.7	29.9	26.4	25.5	24.1	23.1	22.2	21.8
Bolivia	10.4	10.0	7.9	12.1	14.7	16.0	15.2	15.8	17.3
Guyana	2.5	2.8	3.4	10.0	11.7	8.8	11.4	14.3	14.5
Ecuador	10.0	9.2	8.6	8.1	7.6	10.6	12.2	10.5	9.7
Other	9.1	9.0	9.2	8.6	8.9	11.9	12.2	17.6	40.9
Total, Latin America	220.3	210.1	214.9	229.1	252.0	282.1	303.8	313.1	335.9
Asia									
Indonesia	17.6	24.4	45.9	52.2	55.3	74.1	92.5	101.6	139.3
Papua New Guinea	33.6	60.8	71.2	61.5	60.5	54.9	54.1	49.1	63.2
Philippines	37.2	30.5	27.2	29.8	31.0	29.4	31.8	33.8	34.9
Japan	7.3	8.3	8.9	9.4	9.6	9.2	8.6	8.4	8.6
Other	12.7	14.6	16.2	18.6	19.4	20.5	21.6	22.8	20.6
Total, Asia	108.4	138.6	169.4	171.5	175.8	188.1	208.6	215.7	266.6
Europe	35.2	32.2	25.3	25.1	26.5	29.0	30.0	32.9	33.6
Oceania									
Australia	244.2	236.2	243.5	247.3	254.9	254.9	289.5	313.2	313.0
Other	10.1	10.3	14.3	15.0	14.1	14.7	16.1	16.1	12.0
Total, Oceania	254.3	246.5	257.8	262.3	269.6	269.1	305.6	329.3	325.0
Total, Western World	1 755.4	1 789.7	1 872.3	1 904.2	1 899.0	1 892.3	1 964.9	2 055.3	2 132.7
Other countries									
C.I.S.	270.0	252.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Russia	..	..	151.7	164.5	158.1	142.1	132.8	138.0	127.3
Uzbekistan	..	..	63.0	65.4	65.0	66.6	78.3	83.1	80.6
Other C.I.S.	..	..	16.5	17.6	20.1	21.0	19.3	33.1	37.3
China	93.6	103.9	112.2	119.4	120.7	132.6	144.6	153.0	161.0
North Korea	13.0	13.0	17.0	15.0	14.0	14.0	12.2	9.0	6.7
Mongolia	1.0	0.8	1.0	1.4	2.1	4.9	5.3	8.9	9.9
Total, other countries	377.6	369.7	361.4	383.3	380.0	381.2	392.5	425.1	422.7
Total, world production	2 133.0	2 159.4	2 233.7	2 287.5	2 279.0	2 273.5	2 357.4	2 480.4	2 555.4

Source: Consolidated Gold Fields PLC, "Gold 1997."

.. Not available; n.a. Not applicable.

<sup>1</sup> Production figures for Canada were obtained from Natural Resources Canada.

**TABLE 4. CANADA, GOLD PRODUCTION, AVERAGE VALUE AND PERCENT OF TOTAL MINERAL PRODUCTION, 1975, 1980 AND 1985-99**

Year	Total Production	Total Value	Average Value <sup>1</sup>	Gold as a Percent of Total Mineral Production
	(kg)	(\$000)	(\$/g)	(%)
1975	51 433	270 830	5.27	2.0
1980	50 620	1 165 416	23.02	3.7
1985	87 562	1 219 653	13.93	2.7
1986	102 899	1 689 292	16.42	5.2
1987	115 818	2 204 472	19.03	6.1
1988	134 813	2 331 989	17.30	6.3
1989	159 494	2 315 860	14.52	5.9
1990	167 373	2 407 654	14.38	5.9
1991	175 282	2 338 614	13.34	6.7
1992	160 351	2 141 161	13.35	6.0
1993	153 129	2 284 991	14.92	6.2
1994	146 428	2 448 926	16.86	6.0
1995	150 867	2 557 502	16.95	5.9
1996	164 660	2 799 547	17.00	5.6
1997	171 479	2 527 429	14.74	5.0
1998	164 773	2 312 593	14.04	5.2
1999 <sup>P</sup>	157 790	2 132 534	13.52	4.0

Source: Natural Resources Canada.

<sup>P</sup> Preliminary.

<sup>1</sup> Value is based on average London p.m. fix price for gold.

**TABLE 5. GOLD FABRICATION IN DEVELOPED AND DEVELOPING COUNTRIES, 1990-98**

Fabricated Gold	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(tonnes)								
<b>DEVELOPED COUNTRIES</b>									
Carat jewellery	872	885	928	893	892	903	893	955	996
Electronics	136	139	127	136	145	158	160	179	165
Dentistry	48	51	55	54	55	59	59	62	57
Other uses	57	57	62	62	64	67	67	66	62
Medals and fake coins	9	10	6	4	4	3	2	3	2
Official coins	86	121	77	98	58	70	47	83	108
Subtotal	1 208	1 262	1 254	1 247	1 218	1 259	1 229	1 348	1 389
<b>DEVELOPING COUNTRIES</b>									
Carat jewellery	1 316	1 473	1 833	1 660	1 726	1 888	1 955	2 387	2 149
Electronics	80	65	47	42	44	46	49	56	58
Dentistry	13	12	11	10	9	8	8	8	7
Other uses	17	16	25	39	41	44	46	50	47
Medals and fake coins	13	18	23	21	23	32	31	40	45
Official coins	37	30	14	23	14	17	16	16	15
Subtotal	1 476	1 614	1 952	1 794	1 856	2 035	2 106	2 557	2 320
<b>TOTAL</b>									
Carat jewellery	2 188	2 358	2 761	2 553	2 618	2 791	2 848	3 342	3 145
Electronics	216	204	174	178	189	204	209	235	223
Dentistry	61	63	66	64	64	67	67	70	64
Other uses	74	73	87	101	105	111	113	116	109
Medals and fake coins	22	28	29	25	27	35	33	43	47
Official coins	123	151	91	121	72	87	63	99	123
Total	2 684	2 876	3 206	3 041	3 074	3 294	3 335	3 905	3 709

Source: Consolidated Gold Fields PLC, "Gold 1997."

Note: Numbers may not add to totals due to rounding.

**TABLE 6. AVERAGE ANNUAL GOLD PRICES, 1934-99, AND MONTHLY, 1995-99**

Year	US\$/oz	C\$/oz	Year	US\$/oz	C\$/oz
1934-67	35	. .	1984	360.63	466.99
1968	38.82	41.82	1985	317.35	433.21
1969	41.13	44.29	1986	367.58	510.73
1970	35.97	37.54	1987	446.66	592.18
1971	40.87	41.27	1988	436.45	554.76
1972	58.22	57.66	1989	381.27	451.33
1973	97.22	97.24	1990	383.72	447.79
1974	158.80	155.36	1991	362.34	415.09
1975	160.96	163.76	1992	343.86	415.23
1976	124.78	123.01	1993	360.06	464.35
1977	147.80	157.10	1994	384.15	524.60
1978	193.51	220.74	1995	384.07	526.94
1979	305.69	358.12	1996	387.69	528.62
1980	614.38	719.08	1997	328.41	454.52
1981	459.22	550.57	1998	294.11	435.77
1982	375.52	463.51	1999	278.86	414.33
1983	423.52	521.82			

Month	1995		1996		1997		1998		1999	
	(US\$/oz)	(C\$/oz)	(US\$/oz)	(C\$/oz)	(US\$/oz)	(C\$/oz)	(US\$/oz)	(C\$/oz)	(US\$/oz)	(C\$/oz)
January	378.74	535.16	398.70	545.02	355.03	479.65	289.26	416.53	287.31	436.48
February	376.75	527.45	404.92	556.77	346.43	469.41	297.74	425.77	287.50	430.47
March	381.82	537.22	396.35	540.62	318.76	437.02	295.87	420.14	286.24	434.37
April	391.34	538.88	392.87	533.91	344.71	480.53	308.56	441.24	282.62	417.83
May	385.23	523.91	391.99	536.63	344.10	474.86	298.95	430.49	276.93	404.87
June	387.62	534.14	385.25	526.25	340.83	471.71	292.22	426.64	261.40	384.02
July	386.14	525.54	383.46	525.34	323.78	445.52	292.89	436.41	256.20	381.43
August	383.50	519.64	387.51	531.66	324.00	450.03	284.23	434.87	256.94	383.43
September	382.93	517.72	383.29	524.72	322.62	447.15	288.67	438.78	264.47	390.57
October	383.20	515.79	380.91	514.23	324.85	450.24	296.48	456.58	311.56	460.27
November	385.21	521.19	377.85	505.56	306.35	432.57	294.24	453.13	293.65	430.93
December	387.44	530.02	369.34	502.67	288.78	412.09	291.34	448.66	283.74	418.03

Source: London Bullion Market Association, a.m. fix.

. . Not available.