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1963

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Industry Division

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GOLD MINING INDUSTRY
1963

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EXPLANATORY NOTES

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. Beginning with the 1961 Census, the establishment is defined as follows:

The smallest unit which is a separate operating entity capable of reporting all the following:

- Materials and supplies used,
- Goods purchased for resale as such,
- Fuel and power consumed,
- Number of employees and their pay,
- Inventories,
- Shipments or sales.

The establishment is to be distinguished from smaller subdivisions or departments which do not have records which permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in operations which were classifiable to different industries. Beginning with 1961, separate reports for such operations will be required only in cases where accounting records can provide all the elements of principal statistics enumerated above. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously

affected the statistics for particular industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.

A mining establishment is typically a mine, mine/mill, quarry, pit or bog principally engaged in mining operations. Prior to 1961, the Census of Mines, Quarries and Oil Wells attempted to cover the mining activities of all establishments, whether or not they were principally engaged in mining operations. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in mining are no longer included as mining establishments in the basic industry statistics. Again adjustments to the industry statistics were made to reflect the removal of such reporting units for the period 1957-1960. These reporting units are now listed as establishments in other Bureau industry surveys, such as Wholesale Trade, Construction, etc. In order, however, to maintain complete coverage of certain commodity items produced mainly in mining establishments, many non-mining establishments are now surveyed for commodity information only and the latter are included in the appropriate tables of industry reports.

SYMBOLS

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

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- P preliminary figures.
- * revised figures.

GOLD MINING INDUSTRY

1963

This report includes statistics for industries:

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

of the Standard Industrial Classification Manual (Catalogue No. 12-501).

Definition of the Industry - Gold mining in Canada is divided into three principal industries: (a) the recovery of gold from the gravels and sands of stream channels or beaches, described as "Placer Gold Mines"; (b) the recovery of lode gold, which is designated "Gold Quartz Mines", and in which industry gold is usually the most important economic constituent of the ores mined and quartz the predominant gangue mineral; (c) gold is often found in various other mineral deposits, more particularly in those of copper, and for this reason, the review of Canada's "Copper-Gold-Silver Mines" is included here to complete a comprehensive survey of Canadian gold production.

During 1963 the production of gold amounted to 4,003,127 troy ounces valued at \$151,118,045 compared with 4,178,396 ounces valued at \$156,313,794 in 1962. The record production was in 1941 when 5,345,179 ounces were produced at a valuation of \$205,789,392.

Ontario continued to be the leading producer of gold with 58 per cent of the total. Quebec, in second position, produced 23 per cent and Northwest Territories accounted for 10 per cent of the total. The other provinces ranked in the following order: British Columbia, Saskatchewan, Yukon, Manitoba, Newfoundland, New Brunswick and Alberta.

The price of gold in Canadian funds averaged \$37.75 per troy ounce. It ranged from \$37.69 per troy ounce in April 1963 to \$37.90 per troy ounce in August. The fluctuations were due to foreign exchange rates. The Royal Canadian Mint purchased gold on the basis of \$(U.S.) 35.00 per troy ounce. The United States dollar rose above par value in June 1961. It had been discounted since March, 1952. In May 1962 the price of the Canadian dollar on foreign exchange was pegged.

TABLE 1. Production of Gold, Fifty Years, 1914-63

Year	Troy ounces	Value	Year	Troy ounces	Value
		\$			\$
1914	773,178	15,983,007	1939	5,094,379	184,115,951
1915	918,056	18,977,901	1940	5,311,145	204,479,083
1916	930,492	19,234,976	1941	5,345,179	205,789,392
1917	738,831	15,272,992	1942	4,841,306	186,390,281
1918	699,681	14,463,689	1943	3,651,301	140,575,088
1919	766,764	15,850,423	1944	2,922,911	112,532,073
1920	765,007	15,814,098	1945	2,696,727	103,823,990
1921	926,329	19,148,920	1946	2,832,554	104,096,359
1922	1,263,364	26,116,050	1947	3,070,221	107,457,735
1923	1,233,341	25,495,421	1948	3,529,608	123,536,280
1924	1,525,382	31,532,443	1949	4,123,518	148,446,648
1925	1,735,735	35,880,826	1950	4,441,227	168,988,687
1926	1,754,228	36,263,110	1951	4,392,751	161,872,873
1927	1,852,785	38,300,464	1952	4,471,725	153,246,016
1928	1,890,592	39,082,005	1953	4,055,723	139,597,985
1929	1,928,308	39,861,663	1954	4,366,440	148,764,611
1930	2,102,068	43,453,601	1955	4,541,962	156,788,528
1931	2,693,892	58,093,396	1956	4,383,863	151,024,080
1932	3,044,387	71,479,373	1957	4,433,894	148,757,143
1933	2,949,309	84,350,237	1958	4,571,347	155,334,370
1934	2,972,074	102,536,553	1959	4,483,416	150,508,275
1935	3,284,890	115,595,279	1960	4,628,911	157,151,527
1936	3,748,028	131,293,421	1961	4,473,699	158,637,366
1937	4,096,213	143,326,493	1962	4,178,396	156,313,794
1938	4,725,117	166,205,990	1963	4,093,127	151,118,048

TABLE 2. Total (Cumulative) Recorded Production of Specified Metals to December 31, 1963

		Since	Quantity	Value
				\$
Gold	troy ounce	1858	165,798,467	5,263,538,499
Silver	"	1887	1,297,306,791	888,390,931
Copper	ton	1886	10,467,126	4,243,693,441
Nickel	"	1889	5,057,830	4,411,708,660
Lead	"	1887	7,611,338	1,216,659,749
Zinc	"	1898	"	1,955,937,494
Cobalt	ton	1904	35,212	108,001,607

TABLE 3. Production of Gold from Auriferous Quartz and Base Metal Mines, by Months, 1961-63

	Gold production from base metal mines			Gold production from auriferous quartz mines and placer deposits			Gold production from all types of mines		
	1961	1962	1963	1961	1962	1963	1961	1962	1963
	troy ounces								
January	51,847	50,494	54,652	330,818	309,416	285,217	382,665	359,910	339,869
February	52,033	47,896	46,916	313,001	279,000	266,096	365,034	326,896	315,012
March	55,191	55,513	52,367	342,948	312,493	279,302	398,139	368,006	331,669
April	53,926	49,177	49,195	326,162	307,791	288,484	380,088	356,968	337,679
May	56,102	50,179	53,502	333,876	303,939	300,549	389,978	354,118	354,051
June	52,451	53,164	51,066	318,889	284,808	280,077	371,340	337,972	331,143
July	50,678	52,747	47,413	311,169	288,055	264,463	361,847	340,802	311,876
August	48,376	51,955	53,613	313,639	292,942	288,713	362,015	344,897	342,326
September	46,986	56,410	54,157	302,336	286,217	280,690	349,322	342,627	334,847
October	48,271	54,051	52,709	318,318	305,325	299,205	366,589	359,376	351,914
November	57,474	56,388	52,031	316,049	292,324	284,834	373,523	348,712	336,865
December	56,602	54,453	50,643	316,557	283,659	265,233	373,159	338,112	315,876
Totals	629,937	632,427	618,264	3,843,762	3,545,969	3,384,863	4,473,699	4,178,396	4,003,127

TABLE 4. Production of Gold,¹ by Provinces, 1954-63

Year	Newfoundland		Nova Scotia		Quebec		Ontario		Manitoba	
	Troy ounces	Value	Troy ounces	Value	Troy ounces	Value	Troy ounces	Value	Troy ounces	Value
		\$		\$		\$		\$		\$
1954	6,528	222,409	3,754	127,899	1,098,570	37,428,280	2,361,385	80,452,387	134,944	4,597,542
1955	6,337	218,753	3,880	133,938	1,154,522	39,854,099	2,523,040	87,095,340	123,888	4,276,614
1956	8,213	282,938	1,279	44,061	1,036,059	35,692,233	2,513,912	86,604,268	120,232	4,141,992
1957	9,755	327,280	45	1,510	1,006,895	33,781,327	2,578,206	86,498,811	120,008	4,026,268
1958	13,381	454,686	131	4,451	1,044,846	35,503,867	2,716,514	92,307,146	87,356	2,968,357
1959	13,411	450,207	—	—	999,388	33,549,455	2,683,449	90,083,383	51,186	1,718,314
1960	13,515	458,834	3	102	1,035,914	35,169,280	2,732,673	92,774,248	52,762	1,791,270
1961	14,429	511,652	—	—	1,054,029	37,375,868	2,637,720	93,533,551	57,747	2,047,709
1962	13,966	522,468	—	—	993,560	37,169,080	2,421,249	90,578,924	68,259	2,553,569
1963	12,318	465,004	—	—	917,229	34,625,395	2,338,854	88,291,739	53,084	2,003,921
	Saskatchewan		Alberta		British Columbia		Yukon		Northwest Territories	
		\$		\$		\$		\$		\$
1954	101,785	3,467,815	195	6,644	268,508	9,148,068	82,208	2,800,826	308,563	10,512,741
1955	83,580	2,885,182	214	7,387	252,979	8,732,835	72,201	2,492,379	321,321	11,092,001
1956	82,687	2,848,567	119	4,100	196,692	6,776,040	72,001	2,480,434	352,669	12,149,447
1957	75,236	2,524,168	416	13,957	229,113	7,686,741	73,962	2,481,425	340,018	11,407,604
1958	86,590	2,942,328	282	9,582	210,612	7,156,596	67,745	2,301,975	343,838	11,683,615
1959	78,588	2,638,199	200	6,714	184,312	6,187,354	66,960	2,247,847	405,922	13,626,802
1960	84,775	2,878,111	191	6,484	212,659	7,226,563	78,115	2,652,004	418,104	14,194,631
1961	70,784	2,510,000	171	6,064	164,467	5,832,000	66,878	2,371,494	407,474	14,449,028
1962	66,034	2,470,332	186	6,958	159,492	5,966,596	54,805	2,050,255	400,292	14,974,924
1963	64,813	2,446,691	132	4,983	159,473	6,020,106	55,211	2,084,215	400,885	15,133,409

¹ From all sources.

Note: New Brunswick gold in 1957, 240 ounces; in 1958, 52 ounces; in 1962, 553 ounces; in 1963, 1,128 ounces.

TABLE 5. Production of Gold, by Provinces, according to Nature of Ores, 1962 and 1963

Year and province	Placer gold	Auriferous quartz ores	Copper-gold-silver ores	Nickel-copper ores	Silver-lead and other ores	Total
	troy ounces					
1962						
Newfoundland	—	—	4,672	—	9,294	13,966
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	144	—	409	553
Quebec	117	580,631	401,065	—	11,747	993,560
Ontario	—	2,349,813	14,085	55,922	1,429	2,421,249
Manitoba	—	37,194	29,905	1,160	—	68,259
Saskatchewan	—	—	66,034	—	—	66,034
Alberta	186	—	—	—	—	186
British Columbia	2,652	120,279	29,115	—	7,446	159,492
Yukon	54,805	—	—	—	—	54,805
Northwest Territories	—	400,292	—	—	—	400,292
Canada	57,760	3,488,209	545,020	57,082	30,325	4,178,396

TABLE 5. Production of Gold, by Provinces, according to Nature of Ores, 1962 and 1963 - Concluded

Year and province	Placer gold	Auriferous quartz ores	Copper-gold-silver ores	Nickel-copper ores	Silver-lead and other ores	Total
	troy ounces					
1963						
Newfoundland	-	-	4,605	-	7,713	12,318
Nova Scotia	-	-	-	-	-	-
New Brunswick	-	-	654	-	474	1,128
Quebec	-	517,371	387,311	-	12,547	917,229
Ontario	-	2,278,892	9,106	48,862	1,994	2,338,854
Manitoba	-	24,017	24,178	4,889	-	53,084
Saskatchewan	-	-	64,813	-	-	64,813
Alberta	132	-	-	-	-	132
British Columbia	3,589	105,793	44,586	-	5,505	159,473
Yukon	54,184	-	-	-	1,027	55,211
Northwest Territories	-	400,885	-	-	-	400,885
Canada	57,805	3,326,958	535,253	53,751	29,260	4,003,127

TABLE 6. Gold Production by Provinces and Principal Areas, 1961-63

Province and area	1961		1962		1963	
	Troy ounces	Value	Troy ounces	Value	Troy ounces	Value
		\$		\$		\$
Newfoundland	14,429	511,652	13,966	522,468	12,318	465,004
Nova Scotia	-	-	-	-	-	-
New Brunswick	-	-	553	20,688	1,128	42,582
Quebec:						
Gold mines	832,237	22,419,124	580,748	21,725,783	517,366	19,530,567
Base metal mines	421,792	14,956,744	412,812	15,443,297	399,863	15,094,828
Totals	1,054,029	37,375,868	993,560	37,169,080	917,229	34,625,395
Ontario:						
Gold mines:						
Porcupine	1,075,181	38,125,209	1,006,700	37,660,647	992,790	37,477,823
Kirkland Lake	301,806	10,702,041	249,852	9,346,963	259,952	9,813,188
Larder Lake	502,868	18,469,979	422,263	15,796,859	333,896	12,604,574
Matachewan	111	3,936	10	374	104	3,926
Sudbury	37,934	1,345,140	35,735	1,336,846	34,627	1,307,169
Thunder Bay	110,081	3,903,472	132,728	4,965,354	150,052	5,664,463
Patricia	523,465	18,562,069	507,791	18,996,461	507,470	19,156,993
Other mines	68,294	2,421,705	66,170	2,475,420	59,963	2,263,603
Totals	2,637,720	93,553,551	2,421,249	90,578,924	2,338,854	88,291,739
Manitoba:						
Gold mines	31,025	1,100,147	37,194	1,391,427	24,017	906,642
Other mines	26,722	947,562	31,065	1,162,142	29,067	1,097,279
Totals	57,747	2,047,709	68,259	2,553,569	53,084	2,003,921
Saskatchewan:						
Base metal mines	70,784	2,510,000	66,034	2,470,332	64,813	2,446,691
Alberta (placer)	171	6,064	186	6,958	132	4,963
British Columbia:						
Gold mines (lode)	134,816	4,780,575	120,279	4,499,638	105,677	3,989,307
Gold mines (placer)	2,464	88,083	2,652	99,211	3,589	135,485
Other mines	27,167	963,342	36,561	1,367,747	50,207	1,895,314
Totals	164,467	5,832,000	159,492	5,966,596	159,473	6,020,106
Yukon (chiefly placer)	66,878	2,371,494	54,805	2,050,255	55,211	2,084,215
Northwest Territories:						
Gold mines	407,474	14,449,028	400,292	14,974,924	400,885	15,133,409
Totals, Canada	4,473,699	158,637,699	4,178,396	156,313,794	4,003,127	151,118,045

TABLE 7. Gold Production of the World,¹ 1959-63

Country	1959	1960	1961	1962	1963
	fine ounces				
North America:					
United States	1,635,000	1,679,800	1,566,800	1,556,000	1,468,750
Canada	4,483,416	4,628,911	4,473,699	4,158,133	3,971,932
Mexico	313,655	300,249	268,678	236,753	237,948
Totals, North America	6,432,071	6,608,960	6,309,177	5,950,886	5,678,630
Central America and West Indies	224,702	214,149	227,935	227,124	210,304
South America:					
Bolivia	35,246	45,457	80,184	35,052	153,033
Brazil ²	112,332	118,891	118,634	130,000	136,000
British Guiana	3,448	2,364	1,702	1,903	2,848
Chile	72,177	54,350	56,488	62,500	52,400
Colombia	397,928	433,947	401,064	396,825	324,514
Ecuador	18,177	15,061	15,210	20,591	21,041
French Guiana	16,100	18,936	7,944	5,273	6,993
Peru	150,299	141,001	137,418	122,985	101,019
Surinam	5,819	4,932	4,019	2,604	3,537
Venezuela	53,740	46,867	30,071	28,774	26,946
Totals, South America, as reported	865,266	881,806	852,734	806,507	828,331
Europe	500,000	600,000	700,000	700,000	700,000
Australia:					
New South Wales	13,275	13,628	12,034	11,234	11,395
Queensland	91,687	78,267	64,786	67,729	68,586
Victoria	34,662	28,566	26,229	28,262	24,668
Western Australia	860,969	869,966	870,658	860,039	802,860
Tasmania	21,353	23,994	26,885	32,115	36,422
Other Australia	63,158	72,288	75,700	69,458	80,039
Totals, Australia (Commonwealth)	1,085,104	1,086,709	1,076,292	1,068,837	1,023,970
Oceania, other:					
Fiji	72,566	72,203	83,417	87,354	107,262
New Guinea	46,820	45,151	41,820	39,052	43,599
New Zealand	37,662	33,326	28,294	21,742	14,206
Totals, Oceania other	157,048	150,680	153,531	148,148	165,067
Asia:					
India	165,380	160,589	156,538	163,290	138,280
Japan	328,186	336,003	378,913	420,957	432,572
Korea, Republic of	65,688	65,810	84,013	107,866	90,086
Malaya	26,739	20,745	12,486	6,924	9,116
Philippines Republic	402,615	410,618	423,983	423,394	376,006
Saudi Arabia .....	...	...	...	...	...
Taiwan (Formosa)	13,497	17,207	17,490	24,029	31,710
Totals, Asia, as reported	1,002,105	1,010,972	1,073,423	1,146,460	1,077,770
Africa:					
Bechuanaland	198	203	261	288	142
Cameroons	971	415	538	775	1,874
Congo, Republic of	3,665	2,628	3,376	3,718	2,951
Congo, Republic of the	351,078	316,195	233,666	203,707	213,995
Ethiopia	41,439	40,915	41,500	25,700	25,000
Gabon, Republic of	16,172	17,696	15,304	16,300	35,719
Ghana	902,595	893,113	852,619	888,038	921,255
Kenya	9,145	8,522	12,100	9,327	9,070
Liberia	1,355	1,119	2,088	2,184	1,960
Madagascar	193	273	347	325	900
Nigeria	950	994	676	384	316
Republic of South Africa	20,066,753	21,386,114	22,946,294	25,491,993	27,431,573
Southern Rhodesia	566,882	562,703	570,095	554,647	566,277
Tanganyika (export)	95,794	107,009	99,574	101,972	102,917
Uganda	384	780	470	412	16
Totals, Africa, as reported	22,037,574	23,338,679	24,778,908	27,299,770	29,313,965
U.S.S.R. ³	10,000,000	11,000,000	11,800,000	12,200,000	12,500,000
World totals as reported	42,323,870	44,891,955	46,972,000	49,547,732	51,498,037
Estimated world totals⁴	42,600,000	45,100,000	47,200,000	49,800,000	51,700,000

¹ In compiling this table, free use has been made of the reports of the Director of the Mint, the U.S. Bureau of Mines and other publications.² Mined gold only; production of alluvial gold unknown.³ Conjectural.⁴ This estimate includes the following countries which also produce gold: Angola, Argentina, Austria, Bulgaria, Burma, Cambodia, China, Czechoslovakia, East Germany, Egypt, Eritrea, Hungary, Indonesia, Mozambique, North Korea, Northern Rhodesia, Papua, Rumania, Sarawak, Sudan and Thailand, from whom definitive figures are not available.

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

TABLE 8. Gold Production according to Method of Computation and Recovery, 1954 - 63

Year	In alluvial gold	In crude gold bullion produced at mines ¹	In base bullion produced at lead smelters	In blister and anode copper produced ²	In ores, matte, slags, etc., exported	Total gold produced ³
			per cent			fine ounces
1954	2.05	83.14	0.34	11.18	3.29	4,366,440
1955	1.73	83.10	0.16	12.15	2.86	4,541,962
1956	1.71	83.68	0.17	12.88	1.58	4,383,863
1957	1.72	83.98	0.32	12.40	1.58	4,433,894
1958	1.57	84.06	0.20	12.84	1.53	4,571,347
1959	1.63	84.47	0.21	12.52	1.17	4,483,416
1960	1.75	83.18	0.26	12.82	1.99	4,628,911
1961	1.55	83.08	0.22	13.25	1.90	4,473,699
1962	1.38	82.73	0.21	13.72	1.96	4,178,396
1983	1.45	82.89	0.28	13.24	2.16	4,003,127

¹ Includes a small quantity of gold contained in shipments of gold ores, slags, etc., to Canadian smelters.

² Contains a small quantity of gold recovered from auriferous quartz ores.

TABLE 9. Estimated Average Monthly Value of an Ounce of Fine Gold, Expressed in Canadian Funds, 1947-63

Month	1947-48	1949 ¹	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
	dollars															
January	35.00	35.00	38.50	36.81	35.19	33.97	34.05	33.81	34.95	33.62	34.46	33.84	33.36	34.76	36.58	37.70
February	35.00	35.00	38.50	36.73	35.03	34.20	33.83	34.19	34.97	33.54	34.34	34.12	33.31	34.62	36.71	37.71
March	35.00	35.00	38.50	36.65	34.85	34.44	33.98	34.45	34.95	33.46	34.21	33.93	33.28	34.56	36.73	37.73
April	35.00	35.00	38.50	37.07	34.34	34.43	34.39	34.52	34.89	33.59	33.97	33.73	33.70	34.61	36.76	37.69
May	35.00	35.00	38.50	37.25	34.43	34.79	34.45	34.51	34.71	33.45	33.84	33.70	34.24	34.56	37.87	37.70
June	35.00	35.00	38.50	37.42	34.26	34.80	34.34	34.45	34.48	33.36	33.67	33.56	34.39	35.19	38.06	37.74
July	35.00	35.00	38.50	37.12	33.93	34.72	34.10	34.46	34.37	33.29	33.60	33.51	34.24	36.19	37.76	37.79
August	35.00	35.00	38.50	36.96	33.65	34.59	33.96	34.48	34.34	33.18	33.76	33.41	33.95	36.10	37.72	37.90
September	35.00	36.52	38.50	36.94	33.59	34.45	33.94	34.57	34.22	33.56	34.19	33.31	34.03	36.08	37.69	37.80
October	35.00	38.50	36.86	36.78	33.75	34.39	33.94	34.84	34.07	33.77	33.98	33.17	34.24	36.07	37.66	37.73
November	35.00	38.50	36.43	36.53	34.17	34.22	33.93	34.98	33.75	33.67	33.89	33.26	34.19	36.26	37.69	37.72
December	35.00	38.50	36.83	35.89	33.97	34.06	33.88	34.98	33.62	34.22	33.76	33.29	34.43	36.49	37.66	37.78
Yearly averages	35.00	36.00	38.05	36.85	34.27	34.42	34.07	34.52	34.45	33.55	33.98	33.57	33.95	35.46	37.41	37.75

¹ United States dollar equivalent to \$1.10 Canadian funds from September 18, 1949 to October 1, 1950.

TABLE 10. Precious Metals Consumed by the Jewellery and Silverware Industry, 1959 - 63

Material	Cost at works				
	1959	1960	1961	1962	1963
	dollars				
Fine gold	5,324,330	6,728,468	6,317,636	6,175,687	6,198,965
Gold alloys	1,662,361	1,417,360	1,396,311	1,610,321	1,928,328
Fine silver	3,258,106	3,045,885	3,133,995	4,178,785	4,688,295
Silver alloys and sterling	2,496,816	2,004,301	1,895,944	2,867,282	2,852,891
Platinum	2,549,125	759,035	668,224	715,275	2,563,520
Palladium	1,287,587	494,006	475,425	702,918	965,212
Old gold, jewellers' findings, waste and scrap refining	972,129	1,453,611	1,347,544	1,770,939	1,806,522
Gold-filled wire and stock	124,531	150,597	312,219	270,028	172,125
Precious and semi-precious stone	3,630,460	4,241,040	3,691,790	3,474,102	3,816,075

EMERGENCY GOLD MINING ASSISTANCE ACT

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

Summary of Operations for Year 1963

The *Emergency Gold Mining Assistance Act* was amended by Chapter 25 of the statutes of 1963. The amending act, which received Royal Assent on December 12, 1963, extended the application of the Act for four years to the end of 1967 without change in the formula for computing the amount of assistance payable.

The amending legislation provides a restriction on the payment of assistance to new lode gold mines commencing production after June 30, 1965. A lode gold mine brought into operation after that date will be eligible for assistance only if the mine provides direct support to an existing gold mining community. A gold mine will be deemed to provide such support if the majority of the persons employed at the mine reside in one or more of a number of gold mining communities which are specified in the Act.

The purpose of the restriction is to prevent the establishment of new gold mining communities which would be dependent upon government assistance from the outset, and which would add to existing social problems.

The restriction will not affect those gold mines which are now in operation with respect to eligibility for assistance payments now or in the future. The restriction will not apply to placer mines.

The date on which the restriction will become effective was set at July 1, 1965 in order that new lode gold mines which are currently under development will have a reasonable opportunity to qualify for assistance.

The amounts paid to operators of gold mines to March 31, 1964, for the years 1948 to 1963 inclusive totalled \$185,895,964.98 on a production of 46,418,762.106 fine ounces of gold produced and sold under the provisions of the Act.

The total assistance which will be payable for gold produced and sold under the Act in 1963 is now estimated to be \$14,970,000. For the year 1963, the actual assistance paid up to March 31, 1964 was \$11,289,004.04. This sum is 90 per cent of the assistance payable on the applications received to that date. The remaining ten per cent is payable when an audit of the books of account of applicants has been completed by the Audit Services Branch of the Office of the Comptroller of the Treasury.

Assistance payments totalling \$14,259,682.88 have been made on gold produced in 1962. Payments of holdbacks will bring the total to approximately \$14.7 million.

The amount of assistance payable to the operator of a gold mine is computed under the current formula by adding 25 per cent to the product of the rate of assistance and the number of assistance ounces. The number of assistance ounces is two thirds of the total number of ounces produced in the calendar year. The rate-of-assistance factor is two thirds of the amount by which the average cost of production per ounce of gold for the calendar year exceeds \$26.50. The amount of assistance per ounce increases as the average cost of production per ounce increases from \$26.50 to \$45. A maximum rate of assistance of \$12.33 per ounce specified in the Act has the effect of precluding an increase in the amount of assistance as the average cost of production rises above \$45 per ounce.

For purposes of the Act the cost of production of gold from a mine is the cost properly attributable to the gold produced from the mine during the year and includes mining, milling, smelting, refining, transportation, and administration costs and amounts for depreciation, preproduction expenses and expenditures on exploration and development as determined in accordance with the Regulations.

Applications for assistance have been received from 41 lode gold mines for the calendar year 1963. In addition, applications from operators of placer gold mines in British Columbia and the Yukon Territory for the year 1963 are expected by June 30, 1964. Twenty-three placer operators applied for assistance for 1962.

Two lode gold mines ceased operations in 1960. One resumed operations after a shaft-deepening program was completed. One became eligible for assistance because the average cost of production rose above \$26.50 per ounce. Two adjoining mines merged to become one operation for purposes of the Act.

Eight lode gold mines operated in 1963 with an average cost of production less than \$26.50 per ounce and consequently were not eligible for assistance.

The annual average of the weekly buying prices in Canadian funds by the Royal Canadian Mint in 1963 was \$37.75 per fine ounce of gold compared with \$37.41 in 1962 and \$35.46 in 1961. The price of gold in Canadian funds is governed by the fixed buying price of \$35 per fine ounce in United States funds by the United States Treasury and the exchange rate between the Canadian and United States dollars. Since May 2, 1962 the value of the Canadian dollar has been set at \$0.925 United States funds. At parity the Mint buying price for gold is \$37.84 per ounce in Canadian funds. The market value of the Canadian dollar may be permitted to fluctuate by one per cent either side of parity. Thus, the Mint buying price in Canadian funds may vary between \$37.46 and \$38.22 per ounce.

Conditions Governing Eligibility for Assistance

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

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

The operator must also conform to the following requirements to be eligible for assistance payments.

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

The Gold Export Act and Disposal of Canadian Gold

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

Administration

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

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

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

Act and Amendments

1. The Act received Royal Assent on May 14, 1948, and came into force by proclamation on June 15, 1948.

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

Regulations and Amendments

1. The Regulations made by the Governor in Council under the Authority of Section 6 of the Act were approved by Order in Council, P.C. 2644, June 11, 1948.
2. Order in Council, P.C. 1753, April 12, 1950.
3. Order in Council, P.C. 3925, July 31, 1951.
4. Order in Council, P.C. 1954-379, March 19, 1954.
5. Order in Council, P.C. 1954-863, June 10, 1954.
6. Order in Council, P.C. 1956-11, January 5, 1956.
7. Order in Council, P.C. 1960-1162, August 24, 1960.

TABLE 11. Emergency Gold Mining Assistance Act - Estimated Assistance Payable

Province	1956	1957	1958	1959	1960	1961	1962	1963
	dollars							
Nova Scotia	—	—	1,085	—	—	—	—	—
Quebec	2,554,961	2,802,638	3,111,036	3,027,080	3,025,354	2,917,683	3,454,353	3,198,240
Ontario	4,569,086	5,430,897	6,565,596	7,814,793	8,713,404	9,105,418	10,139,650	10,169,164
Manitoba	722,087	712,029	463,210	217,106	209,027	250,232	234,700	246,771
British Columbia	605,950	397,774	658,035	718,641	360,557	319,395	346,859	580,763
Northwest Territories	14,013	284,030	435,520	37,656	—	—	169,528	273,543
Yukon	201,138	52,385	185,982	186,477	54,176	73,931	261,909	297,214
Canada	8,667,235	9,679,753	11,420,464	12,001,753	12,362,518	12,666,659	14,606,999	14,765,695

PLACER GOLD MINES

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

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

In 1963 a total of 57,905 troy ounces of fine gold were recovered from crude gold obtained from Canadian alluvial deposits. This represented a slight increase from the preceding year. Reviewing the past twenty five years, it is noted that the peak of production of placer gold occurred in 1939, and that the lowest annual output was in 1944.

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

Saskatchewan and Alberta—The small amount of gold, considered as being placer in origin, received at the Royal Canadian Mint, Ottawa, is assumed to have come from along the

North Saskatchewan River. There has been activity in this district, in the vicinity of Edmonton, dating from about 1860.

British Columbia—It has been found impractical to obtain complete reports for each individual placer mining operation in British Columbia inasmuch as a considerable quantity of the crude placer gold is recovered annually by prospectors of no fixed abode who, in many instances, market their recoveries through local merchants and banks. Recoveries in 1963 were made chiefly from deposits located in the Atlin and Cariboo districts. Output was estimated at 3,589 troy ounces.

Yukon—Over 93 per cent of the placer gold recovered in Canada during 1963 was found in the creeks of the Yukon. Production in 1963 totalled 54,184 troy ounces.

Employees in the industry numbered 210 persons to whom \$1,221,942 were paid in wages and salaries. Fuel and electricity cost \$71,513. Electricity generated for own use was 18,665,883 kwh, and the electricity for sale was 7,131,717 kwh. Process supplies were valued at \$121,064. Freight and express on shipments amounted to \$27,792 and \$31,269 were paid for treatment and marketing.

TABLE 12. Principal Statistics for Placer Gold Mines, Significant Years, 1921-59

Basis: Standard Industrial Classification prior to 1960

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Process supplies and containers	Gross value of products	Net value of production ¹
	number				dollars		
1921	197	428	671,783	..	..	1,576,222	..
1929	68	488	586,193	2,969	..	836,006	..
1931	109	337	682,935	41,745	..	1,226,541	..
1933	74	454	704,151	35,165	..	1,218,250	..
1937	109	1,069	1,689,911	99,072	77,488	3,243,196	3,066,636
1939	104	830	1,439,765	119,692	90,610	4,523,587	4,204,974
1941	110	797	1,954,278	155,518	68,489	4,132,503	3,800,142
1944	47	211	598,556	43,591	13,703	1,281,125	1,197,021
1946	39	340	1,112,984	84,206	46,870	1,849,511	1,693,568
1949	56	398	1,509,423	88,614	455,371	3,499,823	2,920,290
1951	47	362	1,553,103	44,678	507,830	3,572,516	2,951,342
1954	62	351	1,619,460	146,300	253,128	3,051,665	2,575,038
1957	57	243	1,180,225	55,472	353,186	2,573,853	2,116,716
1958	112	236	1,253,362	63,007	461,375	3,049,743	2,484,524
1959	112	239	1,194,713	74,536	355,837	2,462,727	1,989,431

¹ Gross value less fuel, electricity, process supplies, freight and treatment charges.

TABLE 12A. Principal Statistics for Placer Gold Mines, 1959-63

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Process supplies and containers	Gross value of products	Net value of production ¹
	number				dollars		
1959	112	239	1,194,713	74,536	355,837	2,462,727	1,989,431
1960	32	213	1,224,907	77,498	344,379	2,758,284	2,285,126
1961	47	243	1,326,147	108,452	47,822	2,465,811	2,254,746
1962	39	231	1,340,953	101,676	13,817	2,160,801	1,989,696
1963	30	210	1,221,942	71,513	121,064	2,201,967	1,950,329

¹ Gross value less fuel, electricity, process supplies, freight and treatment charges.TABLE 13. Alluvial Gold Recovered and Quantity of Material Handled,¹ 1954-63

Year	British Columbia				Yukon				Canada
	Material handled ²	Gold recovered ³	Ounces per cu. yd.	Value per cu. yd.	Material handled ²	Gold recovered ³	Ounces per cu. yd.	Value per cu. yd.	Gold recovered ³
	cu. yd.	fine ounces		\$	cu. yd.	fine ounces		\$	ounces
1954	233,114	7,105	0.0305	1.0390	6,889,820	82,208	0.0119	0.4065	89,571
1955	110,594	6,206	0.0561	1.9365	6,379,755	72,201	0.0113	0.3907	78,621
1956	2,962	..	..	5,716,389	71,736	0.0125	0.4306	74,919
1957	2,105	..	..	7,559,882	73,709	0.0097	0.3271	76,303
1958	3,928	..	..	6,808,991	67,745	0.0099	0.3380	71,955
1959	5,814	..	..	6,824,062	66,960	0.0098	0.3294	72,974
1960	2,498	..	..	5,519,729	78,115	0.0141	0.4787	80,804
1961	2,484	..	..	4,672,554	66,107	0.0141	0.5018	69,240
1962	2,652	..	..	5,163,113	54,805	0.0112	0.4182	57,760
1963	3,589	..	..	5,190,524	54,184	0.1055	0.4013	57,905

¹ In addition, relatively small amounts of alluvial gold have been recovered in Quebec, Saskatchewan and Alberta but complete data are not available; also, data relating to material handled, particularly those pertaining to small operations, are not complete and necessitate estimates in order to obtain totals.² Data partly conjectural and includes some overburden and barren material.³ Fine gold received at Royal Canadian Mint (Vancouver Assay Office).

TABLE 14. Employees and their Earnings in the Placer Gold Mines, 1958-63

Year	Employees ¹					Man-hours worked	Earnings		
	Administration		Workmen		Total		Admin- istration	Workmen	Total
	Male	Female	Male	Female					
	number						dollars		
1959	20	5	211	3	239	821,299	114,224	1,080,489	1,194,713
1960	9	5	196	3	213	567,383	93,773	1,131,134	1,224,907
1961	18	6	214	5	243	646,618	156,352	1,169,795	1,326,147
1962	17	5	204	5	231	608,943	148,485	1,192,468	1,340,953
1963	18	4	185	3	210	541,117	167,133	1,054,809	1,221,942

¹ Several placer deposits are operated by partnerships which have no employees.

TABLE 15. Fuel and Electricity Used by the Placer Gold Mines, 1963

Kind	Quantity	Cost at plant
		\$
Bituminous coal (a) From Canadian mines	short ton 22	856
(b) Imported	—	—
Sub-bituminous coal (from Alberta Mines only)	—	—
Anthracite coal	—	—
Lignite coal	—	—
Coke (for fuel only)	—	—
Gasoline, (Includes gasoline used in cars and trucks)	Imp. gal. 5,398	2,425
Kerosene or coal oil	" 4,842	2,166
Fuel oil	" 105,430	38,189
Wood (cords of 128 cubic feet piled wood)	cord 501	11,777
Gas (a) Liquefied petroleum gases (propane, etc.)	Imp. gal. 29,968	16,100
(b) Other manufactured gas	—	—
(c) Natural gas	—	—
Other fuel	—	—
Electricity purchased for power and lighting	—	—
Electricity purchased for other purposes	—	—
Total .....	...	71,513
Electricity generated (a) For own use	kwh. 18,665,883	...
(b) For sale	" 7,131,717	48,266

GOLD QUARTZ MINES

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

The gold quartz mining industry shipped, during 1963 minerals valued at \$126,902,669 compared with \$129,495,909 in the preceding year. The total valuation included gold, silver, copper and other recoverable metals found in the gold ores.

The average number of employees was 15,120 whose earnings amounted to \$63,095,590. Fuel cost \$1,180,941 and 791,566,582 kwh. of electricity were purchased for \$5,552,979. Process supplies, which included explosives, chemicals, drill steel, etc., cost \$19,147,272. Electricity generated for own use was 35,279,826 kwh. and generated for sale was 1,000,000 kwh.

The greater part of Canada's gold comes from the Canadian Shield, an immense area of precambrian rocks, extending from the Labrador Coast westward almost to the mouth of the Mackenzie River. The area of the Shield is roughly 1,825,000 square miles, almost half of Canada. The deposits of the Shield are of two main types, namely, quartz veins, from which most of the gold, up to the present time, has been won, and sulphide deposits which produce a smaller but very considerable proportion. The second great source of gold in Canada has been the Western or Cordilleran section, comprising British Columbia and the Yukon Territory, the gold production from this section including relatively large quantities obtained from alluvial deposits. In Nova Scotia gold was mined as early as 1862 but in late years the production in this province has dwindled to insignificance.

TABLE 16. Principal Statistics for the Gold Quartz Mines, Significant Years, 1921-59

Basis: Standard Industrial Classification prior to 1960

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies	Gross value of products	Net value added by processing ¹
	number				dollars		
1921	59	3,889	6,072,318	1,154,606	..	16,689,784	..
1929	85	8,660	14,258,733	2,579,481	..	37,275,986	..
1931	69	9,636	16,467,165	2,700,326	..	49,144,578	..
1933	216	12,823	20,536,012	3,330,137	..	69,151,535	..
1937	689	29,140	48,219,318	7,345,401	16,230,722	122,676,103	97,961,278
1939	474	30,622	53,206,225	7,952,580	19,484,870	160,014,172	129,633,245
1941	357	32,551	62,150,810	8,462,618	21,066,900	179,103,182	145,978,833
1944	262	17,226	37,023,505	5,895,117	11,174,746	94,263,416	75,234,384
1946	686	21,973	47,211,062	6,259,876	14,401,904	88,422,683	66,342,152
1949	247	22,358	61,293,334	7,307,153	23,251,874	129,550,461	96,580,304
1951	211	22,126	68,739,531	7,791,566	26,677,361	136,703,452	100,059,503
1954	157	18,479	63,578,156	6,987,528	23,639,788	127,644,959	95,627,104
1957	147	16,911	63,708,608	6,771,886	22,705,425	127,055,902	95,991,241
1958	127	16,811	64,208,042	7,134,399	18,013,121	133,998,004	107,140,993
1959	139	16,777	65,519,112	7,161,054	20,901,136	130,097,538	100,519,397

¹ Gross value less fuel, electricity, process supplies, freight and treatment charges.

TABLE 16A. Principal Statistics for the Gold Quartz Mines, 1959-63

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies	Gross value of products	Net value added by processing ¹
	number				dollars		
1959	139	16,777	65,519,112	7,161,054	20,901,136	130,097,538	100,519,397
1960	146	16,542	66,552,906	7,216,027	22,686,326	135,349,183	103,748,507
1961	140	15,876	65,465,515	7,360,085	19,396,214	135,033,500	106,879,129
1962	133	15,220	64,578,944	6,981,932	18,495,257	129,495,909	102,318,039
1963	122	15,120	63,095,590	8,733,920	19,147,272	126,392,581	98,749,130

¹ Gross value less fuel, electricity, process supplies, freight and treatment charges.

TABLE 17. Principal Statistics for the Gold Quartz Mines, 1962 and 1963

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year and province	Estab- lish- ments ¹	Em- ployees	Salaries and wages	Cost of fuel and purchased electricity	Cost of process supplies used ²	Amount of freight etc., paid on ship- ments of ore, slag, etc.	Smelter and refinery treatment costs	Gross value of bullion, ore, concen- trates or residues shipped from mines ^{3,4}	Net value of bullion, ore, concentrates or residues shipped from mines ⁵
	number								
1962									
Quebec and Nova Scotia	62	2,974	11,718,206	1,373,290	3,510,431	97,712	783,704	19,881,459	14,116,322
Ontario	51	10,819	45,154,453	4,631,990	13,423,726	100,000	560,645	88,598,386	69,882,025
Manitoba and Saskatchewan	4	229	868,254	130,124	178,471	—	5,385	1,402,442	1,088,462
British Columbia	8	455	2,289,009	196,151	382,599	19,387	30,293	4,526,216	3,897,786
Northwest Territories	7	735	4,490,356	650,377	1,000,030	35,000	68,561	15,087,406	13,333,438
Totals	133	15,220	64,578,944	6,981,932	18,495,257	252,099	1,448,588	129,495,909	102,318,033
1963									
Quebec and Nova Scotia	63	2,675	10,985,318	1,255,127	2,975,549	20,705	774,258	19,622,530	14,596,891
Ontario	42	11,013	44,735,186	4,424,173	13,113,085	94,923	693,309	87,094,563	68,769,073
Manitoba and Saskatchewan	2	175	662,791	99,545	138,188	1,209	5,764	912,189	667,483
British Columbia	7	481	2,461,872	189,269	608,275	13,768	25,047	4,015,271	3,178,912
Northwest Territories	8	776	4,250,423	765,806	2,312,175	48,390	84,886	15,258,116	12,046,859
Totals	122	15,120	63,095,590	6,733,920	19,147,272	178,993	1,583,264	126,902,669	99,259,218

¹ Producing mines; in 1962, 61, in 1963, 58.² Explosives, chemicals, etc.³ In 1962; value of bullion shipped, plus value of ore, concentrates, etc. shipped.⁴ In 1963; value of bullion shipped plus value of ore, concentrates, etc. shipped.⁵ Gross value less cost of supplies, fuel and electricity, treatment costs and freight.

TABLE 18. Ores Mined and Treated by the Gold Quartz Mines, 1954-63

Year	Ore hoisted	Ore milled ¹	Crude ore shipped to smelters ²	Low-grade sorted out	Tailings re-treated	Gold recovered as bullion	Gold in crude ore shipped	Gold in concentrates, slag, etc. shipped
			tons			troy ounces		
1954	16,178,273	15,560,138	285,697	271,642	—	3,610,496	44,336	74,808
1955	16,404,660	15,660,528	333,783	221,077	634	3,764,817	50,516	58,343
1956	14,589,230	14,070,420	276,130	195,257	2,176	3,635,709	45,561	23,725
1957	14,354,879	13,894,311	253,607	215,397	1,212	3,695,666	43,601	26,712
1958	14,751,991	14,223,343	273,204	175,069	465	3,629,460	40,516	51,499
1959	14,246,860	13,732,277	347,203	188,996	329	3,763,954	46,812	40,391
1960	14,726,094	14,167,243	281,077	262,990	276	3,837,743	49,105	50,364
1961	14,353,022	13,835,364	268,690	270,098	332	3,692,596	40,145	33,627
1962	13,659,916	13,217,174	230,946	204,809	30	3,436,481	27,693	25,793
1963	12,618,059	12,130,935	668,627	253,256	400	3,203,783	87,539	21,267

¹ + ² = Total crude ore treated.

TABLE 19. Ores Mined and Milled, Crude Bullion Recovered and Crude Bullion and Concentrates Shipped, 1963

	Quebec, Nova Scotia	Ontario	Manitoba	British Columbia	Northwest Territories	Canada
Number of producing mines	14	32	2	5	5	58
Ore mined	ton	3,657,222	7,968,274	140,179	187,352	12,618,059
Material discarded (sorted)	"	39,499	159,652	12,604	68	253,256
Ore milled (ground, etc.)	"	3,260,653	7,917,111	127,575	187,415	12,130,935
Tailings re-treated	"	—	400	—	—	400
Gold content of ores, slags, residues and con- centrates shipped:						
To foreign smelters	troy ounce	—	—	—	300	9,183
To Canadian smelters or mills	"	87,959	11,323	—	341	99,623
Bullion bars produced:						
Gold content	"	428,145	2,253,915	24,017	105,024	3,203,763
Silver content	"	89,895	335,328	4,019	20,001	528,066
Content of bullion bars shipped:						
Gold	"	427,644	2,267,922	24,017	105,024	3,216,610
Silver	"	89,390	325,617	4,019	20,001	517,711
Gold value	\$	16,147,710	85,666,077	906,643	3,964,375	121,493,589
Silver value	\$	123,183	449,099	5,546	27,674	722,362
Value of ores, concentrates, slags and resi- dues sold (shipped)	\$	3,351,637	979,387	—	23,222	4,686,718
Gross value of shipments, etc.	\$	19,622,530	87,094,563	912,189	4,015,271	126,902,669
Value of fuel, electricity and process supplies used, also freight on shipments, marketing, smelter and refinery charges	\$	5,025,639	18,325,490	244,706	836,359	27,643,451
Net value added by processing	\$	14,596,891	68,769,073	667,483	3,178,912	99,259,218

TABLE 20. Ores, Concentrates, Slags, etc., Shipped to Smelters and Mills from Canadian Gold Mines, 1954-63

Year	Ores		Concentrates		Slags, residues, precipitates	
	Tons	Gold content-troy ounces	Tons	Gold content-troy ounces	Tons	Gold content-troy ounces
To Canadian plants						
1954.....	282,331	44,276	—	—	404	8,647
1955.....	333,783	50,516	—	—	237	4,816
1956.....	276,130	45,561	28	379	294	8,566
1957.....	253,602	43,589	10	129	187	6,791
1958.....	267,309	40,516	2,583	18,883	290	9,109
1959.....	347,203	46,812	1,398	10,215	232	8,993
1960.....	280,005	42,913	1,353	9,572	176	8,561
1961.....	268,690	40,145	55	180	348	11,309
1962.....	230,946	27,893	100	4,356	409	11,912
1963.....	668,627	87,539	5,210	2,336	140,878	9,748
To foreign plants						
1954.....	2	60	2,938	14,931	22	51,230
1955.....	—	—	2,807	14,876	17	38,651
1956.....	—	—	2,388	14,655	12	125
1957.....	5	12	2,636	19,792	—	—
1958.....	—	—	3,009	23,305	13	202
1959.....	—	—	2,668	21,183	—	—
1960.....	1,072	6,192	3,409	27,662	62	3,835
1961.....	—	—	2,359	16,220	106	5,918
1962.....	—	—	—	—	56	9,525
1963.....	—	—	9	300	53	8,883

TABLE 21. Shipments from Gold Quartz Mines, 1962 and 1963

	Quantity	Total gross metal content			
		Gold	Silver	Copper	Other ¹
	tons	ounces		pounds	
1962					
To Canadian smelters and mills:					
Gold ore	230,946	27,893	221	—	309
Gold concentrates	100	4,356	1,812	1,799	—
Slags, precipitates, residues	409	11,912	11,669	2,516	377
To foreign smelters:					
Gold ore	—	—	—	—	—
Gold concentrates	—	—	—	—	—
Slags, precipitates, residues	56	9,525	2,215	—	—
Totals	231,511	53,686	15,917	4,315	686
1963					
To Canadian smelters and mills:					
Gold ore	668,627	87,539	7,899	—	129
Gold concentrates	5,210	2,336	13,884	1,915,022	—
Slags, precipitates, residues	140,878	9,748	20,195	5,249	—
To foreign smelters:					
Gold ore	—	—	—	—	—
Gold concentrates	9	300	—	—	—
Slags, precipitates, residues	53	8,883	2,457	—	—
Totals	814,777	108,806	44,435	1,920,271	129

¹ Zinc.

TABLE 22. Gold and Silver Content, of Bullion Produced, of Ores, Concentrates, etc., Shipped, with Average Grade of Ore Shipped and Ore Milled at Gold Quartz Mines and the Average Price of Gold and Silver in Canadian Funds, 1954-63

Year	Tonnage treated ^{1,2}	Gold content ³	Silver content ³	Ounces of fine gold per ton	Ounces of fine silver per ton	Average price of gold	Average price of silver
		fine ounces				\$ per oz.	
1954	15,842,471	3,729,640	660,259	.24	.04	34.07	0.832
1955	15,997,372	3,873,676	652,589	.24	.04	34.52	0.882
1956	14,349,272	3,704,995	623,995	.26	.04	34.45	0.897
1957	14,147,918	3,766,124	643,146	.27	.05	33.55	0.874
1958	14,490,652	3,921,475	707,794	.27	.05	33.98	0.888
1959	14,079,480	3,851,157	629,465	.27	.04	33.57	0.878
1960	14,448,320	3,937,212	887,697	.27	.06	33.95	0.889
1961	14,104,054	3,766,368	643,931	.27	.05	35.46	0.943
1962	13,448,120	3,490,167	597,778	.26	.04	37.41	1.165
1963	12,799,562	3,312,569	572,501	.26	.04	37.75	1.384

¹ Does not include tailings re-treated, but includes ore milled plus crude ore shipped to smelters.

² Material discarded by sorting not included.

³ Relatively small quantities of gold and silver contained in concentrates, slags, etc., shipped and in cyanide solution in circuit may have originated in ores treated during the previous year: represents metal content of total bullion produced plus metal in ores or concentrates shipped to smelters.

TABLE 23. Milling Capacity of Operating Canadian Gold Mines, 1954-63

Year	Nova Scotia	Quebec	Ontario	Manitoba	British Columbia	Northwest Territories	Canada
	tons of 2,000 pounds per 24 hours						
1954	—	12,650	29,168	2,550	1,700	1,375	47,443
1955	—	12,650	29,423	2,550	1,525	1,375	47,533
1956	48	12,000	27,778	2,550	1,200	1,500	45,076
1957	—	9,530	27,358	2,550	1,204	1,500	42,142
1958	—	10,500	27,292	2,550	1,264	1,500	43,106
1959	—	10,100	28,057	550	1,275	1,650	41,632
1960	—	9,650	28,035	550	1,229	1,661	41,125
1961	—	10,150	27,602	550	850	1,681	40,833
1962	—	10,150	27,386	550	850	1,691	40,627
1963	—	10,530	25,870	550	850	1,750	39,550

TABLE 24. Employees and Earnings in the Gold Quartz Mines, 1959-63

Year	Employees					Man-hours worked (all employees)	Earnings		
	Administrative and office		Workmen		Total		Administrative and office	Workmen	Total
	Male	Female	Male	Female					
	number						dollars		
1959	1,658	152	14,884	83	16,777	36,320,320	9,608,239	55,710,873	65,519,112
1960	1,653	153	14,677	59	16,542	36,157,872	9,929,000	56,623,906	66,552,906
1961	1,702	141	13,966	67	15,876	34,342,805	10,548,850	54,916,665	65,465,515
1962	1,707	143	13,310	60	15,220	33,287,992	10,412,397	54,166,547	64,578,944
1963	1,940	155	12,935	90	15,120	32,535,555	11,523,317	51,572,273	63,095,590

TABLE 25. Number of Workmen, by Months in the Gold Mines, 1962 and 1963

Month	1962	1963					
	Total	Mine			Mill		Total
		Surface		Underground	Male	Female	
		Male	Female	Male			
January	13,392	3,194	75	8,883	1,195	15	13,362
February	13,353	3,177	74	8,832	1,200	15	13,298
March	13,300	3,156	74	8,798	1,198	14	13,240
April	13,161	3,172	74	8,716	1,198	14	13,174
May	13,340	3,205	74	8,629	1,231	14	13,153
June	13,621	3,321	78	8,587	1,265	14	13,265
July	13,617	3,291	81	7,926	1,238	15	12,551
August	13,537	3,311	80	8,396	1,256	15	13,058
September	13,311	3,136	76	8,258	1,198	14	12,682
October	13,273	3,183	77	8,405	1,190	14	12,869
November	13,348	3,126	77	8,433	1,193	14	12,843
December	13,084	3,060	77	8,470	1,193	14	12,814
Averages	13,370	3,194	76	8,528	1,213	14	13,025
Man-hours worked	29,466,390						28,471,602

TABLE 26. Fuel and Electricity Used in the Gold Quartz Mines, 1963

Kind	Quantity	Cost at plant
		\$
Bituminous coal (a) From Canadian mines short ton	2,490	47,964
(b) Imported "	4,041	104,215
Sub-bituminous coal (from Alberta mines only)	—	—
Anthracite coal short ton	410	7,730
Lignite coal	—	—
Coke (for fuel only)	—	7
Gasoline, (includes gasoline used in cars and trucks) Imp. gal.	332,562	145,465
Kerosene or coal oil "	4,443	1,592
Fuel oil and diesel fuel "	3,134,870	618,669
Wood (cords of 128 cubic feet of piled wood) cord	3,258	45,381
Gas (a) Liquefied petroleum gases (propane, etc.) Imp. gal.	14,800	2,708
(b) Other manufactured gas "	—	—
(c) Natural gas M cu. ft.	166,507	145,534
Other fuel (shavings, sawdust etc.) .....	...	61,676
Electricity purchased for power and lighting kwh.	749,829,536	5,416,822
Electricity purchased for other purposes "	41,737,046	136,157
Total (cost only) .....	...	6,733,920
Electricity generated (a) For own use kwh.	35,279,826	...
(b) For sale "	1,000,000	12,018

TABLE 27. Cost of Prospecting Conducted by Canadian Gold Quartz Mining Companies, 1962 and 1963

Province in which prospecting was conducted ¹	By Nova Scotia and Quebec companies ²	By Ontario companies ²	By Manitoba and Saskatchewan companies ²	By British Columbia companies ²	By Yukon and Northwest Territories companies	Total
	dollars					
1962						
Newfoundland	619	12,381	—	—	—	13,000
Nova Scotia	698	3,681	—	—	—	4,379
New Brunswick	6,711	27,414	—	—	—	34,125
Quebec	1,394,596	760,879	—	3,224	—	2,158,699
Ontario	487,042	1,298,926	8,053	6,054	—	1,800,075
Manitoba	42,068	42,681	34,736	—	—	119,485
Saskatchewan	98,477	57,818	—	—	—	156,295
Alberta	340	127	—	—	—	467
British Columbia	90,037	173,179	—	113,800	—	377,016
Yukon	30,131	34,689	—	—	106,925	171,745
Northwest Territories	35,189	33,075	—	—	91,715	159,979
Totals	2,185,908	2,444,850	42,789	123,078	198,640	4,995,265
1963						
Newfoundland	25,662	58,963	—	—	—	84,625
Nova Scotia	746	11,455	—	—	—	12,201
New Brunswick	3,039	18,230	—	—	—	21,269
Quebec	2,239,317	540,768	—	7,093	—	2,787,178
Ontario	64,222	984,147	—	1,082	12,768	1,062,219
Manitoba	—	1,063	—	—	—	1,063
Saskatchewan	—	2,222	—	11,601	—	13,823
Alberta	—	18,850	—	—	—	18,850
British Columbia	343	199,096	—	85,784	—	285,223
Yukon	147	99,957	—	—	22,582	122,686
Northwest Territories	4,119	56,072	—	10,399	245,727	316,317
Totals	2,337,595	1,990,823	—	115,959	281,077	4,725,454

¹ Prospecting includes the search for new mineral deposits on the surface, and preliminary exploration.² Province in which the companies' principal operations are conducted.

TABLE 28. Drilling Completed on Gold Quartz Deposits, 1961-63

	Footage drilled ¹		
	1961	1962	1963
Diamond drilling for exploration (testing):			
By companies with their own equipment and personnel	552, 128	127, 348	397, 772
By contractors	1, 380, 785	2, 796, 117	1, 232, 784
Other drilling:			
Diamond drilling for breaking rock or ore:			
By companies with their own equipment and personnel	6, 161	27, 614	49, 348
By contractors	13, 619	9, 186	58, 806
Drilling by percussion and other machines ²	36, 632, 556	35, 157, 376	34, 561, 591

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

Note: The value of diamond in all forms (bits, etc.) purchased by gold mining companies in 1961 totalled \$259,838 and in 1962 \$220,715.

TABLE 29. Specified Taxes Paid by Active Gold Quartz Mines, 1962 and 1963 by Provinces¹

Nature of tax	Nova Scotia and Quebec	Ontario	Manitoba and Saskatchewan	British Columbia	Northwest Territories	Canada
	dollars					
1962						
Dominion income tax, including tax on non-operating revenue	315, 019	2, 505, 247	—	—	83, 000	2, 903, 266
Provincial tax	318, 380	1, 888, 091	20	812	136, 830	2, 344, 133
Municipal tax	267, 812	408, 675	—	15, 788	149, 696	841, 971
Totals	901, 211	4, 802, 013	20	16, 600	369, 526	6, 089, 370
1963						
Dominion income tax, including tax on non-operating revenue	405, 012	2, 886, 932	—	—	—	3, 291, 944
Provincial tax	345, 648	1, 818, 025	—	69, 894	163, 282	2, 396, 849
Municipal tax	299, 345	404, 492	—	15, 239	158, 645	877, 721
Totals	1, 050, 005	5, 109, 449	—	85, 133	321, 927	6, 566, 514

¹ Does not include complete data relating to taxes that may have been paid by dormant firms.

TABLE 30. Certain Specified Expenditures Made by Gold Quartz Mining Companies, 1963

	1963
	\$
(a) Workmen's compensation	2, 402, 418
(b) Silicosis assessment	1, 600, 882
(c) Unemployment insurance	588, 715
(d) Aggregate cost of structures, roads, machinery, equipment, etc., built by or purchased from outside contractors or suppliers and chargeable to Fixed Assets Account	3, 022, 797
(e) Book value of fixed assets (new structures, roads, machinery, equipment, etc., including major repairs and alteration) produced by own employees and chargeable to Fixed Assets Account	339, 144
(f) Other capital expenditures not reported in (d) and (e)	497, 679
(g) Cost of materials and supplies used in the production of machinery and equipment and in the construction of roads and new structures (including major repairs and alterations by own employees and chargeable to Fixed Assets Account)	183, 747
(h) Cost of all other goods, materials and supplies (including office, medical, laboratory, cafeteria and store supplies) purchased and not chargeable to Fixed Assets Account	30, 164, 070

COPPER-GOLD-SILVER MINES

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

During 1963 the gross value of crude ore, concentrates, etc., shipped from the mines and mills in this industry to smelters was estimated at \$229,873,310. Fuel cost \$2,106,226 and 731,780,397 kwh. of electricity was purchased for \$4,903,478. Process supplies, freight and treatment charges amounted to \$72,670,428. Employees numbered 11,524 to whom \$58,514,522 were distributed as salaries and wages. There were 37 producers or shippers in 1963.

During the year "copper-gold-silver" mines operated in Newfoundland, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and British Columbia. It is to be noted that, in

addition to the copper recovered from ores of this type, there is a very large quantity of the metal obtained in the smelting and refining of the copper-nickel ores mined in the Sudbury area of Ontario; important quantities of gold and silver are also being extracted from these copper-nickel ores. The lead-zinc-copper ores of Newfoundland also contribute to the production of copper, gold and silver. General statistics relating to labor, etc., in the nickel-copper or the silver-lead-zinc industry are not included in this report.

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

TABLE 31. Principal Statistics of the Copper-Gold-Silver Mines, Significant Years, 1921-59

Basis: Standard Industrial Classification prior to 1960

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Process supplies and containers	Gross value of products ¹	Net value added ²
	number				dollars		
1921	18	1,222	1,573,221	177,052	..	2,589,314	..
1929	152	5,243	8,498,755	1,035,133	..	21,859,907	..
1931	56	3,351	4,958,317	726,502	..	15,951,103	..
1933	29	2,841	3,938,778	404,625	..	7,707,270	..
1937	38	5,164	8,240,614	901,088	4,851,845	40,735,801	24,902,851
1939	30	6,083	9,920,591	1,223,523	5,585,616	51,161,468	26,182,577
1941	22	5,866	10,695,023	1,264,567	5,505,955	64,829,073	30,220,331
1944	26	5,175	10,710,071	1,402,243	5,170,581	62,389,615	38,198,039
1946	43	4,958	10,243,487	1,152,925	4,022,508	54,304,549	37,433,982
1949	33	7,395	21,776,150	1,630,715	7,499,445	105,994,498	74,591,660
1951	82	6,223	21,545,660	2,085,608	8,257,819	123,162,228	92,331,995
1954	116	7,837	29,791,332	3,148,808	10,232,701	105,893,976	70,814,052
1957	261	10,359	45,622,452	4,942,600	15,297,346	119,013,141	68,694,057
1958	244	8,875	39,745,243	4,428,653	15,968,361	133,778,148	77,993,264
1959	310	9,682	43,460,641	4,961,920	12,948,618	147,752,990	90,660,009

¹ Value of ores and concentrates shipped from mines to smelters operated by the same companies are often of a nominal or conjectural nature.

² Gross value less fuel, electricity, process supplies, freight and treatment charges.

TABLE 31 A. Principal Statistics of the Copper-Gold-Silver Mines, 1958-63

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity	Process supplies and containers	Gross value of products ¹	Net value added ²
	number				dollars		
1959	310	9,682	43,460,641	4,961,920	12,948,618	147,752,990	90,660,009
1960	277	10,549	48,940,982	6,546,557	17,989,123	172,254,034	103,754,616
1961	276	10,901	51,459,158	5,932,106	14,709,403	175,463,232	109,047,866
1962	191	11,046	53,489,185	6,873,189	16,233,410	218,036,064	142,916,627
1963	176	11,536	58,514,522	7,009,704	19,881,714	229,873,310	150,193,178

¹ Value of ores and concentrates shipped from mines to smelters operated by the same companies are often of a nominal or conjectural nature.

² Gross value less fuel, electricity, process supplies, freight and treatment charges.

TABLE 32. Shipments from Copper-Gold-Silver Mines, 1962 and 1963

	Quantity	Value	Total metal content as determined by settlement assay ¹				
			Gold	Silver	Copper	Sulphur	Zinc
		tons	\$	fine ounces		lb.	tons	lb.
1962							
To Canadian plants:							
Ores	652,460	8,793,568	78,927	170,508	20,466,821	—	245,866
Copper concentrates	1,199,574	130,283,821	365,434	5,664,306	457,168,151	—	24,396,667
Zinc concentrates	162,269	12,136,972	8,981	269,328	2,813,611	—	164,548,765
Iron pyrite concentrates	177,828	746,528	—	—	—	86,645	—
Slags and tailings	40,177	30,904	—	—	—	—	—
Residues, bullion and gold precipitates	6	1,358,781	30,572	107,821	658	—	—
Lead concentrates	4,554	709,735	3,377	160,917	351,696	4,549,789 ²	215,075
To foreign plants:							
Ores	1,100	134,750	—	2,750	440,000	—	—
Copper concentrates	229,442	37,412,742	28,724	188,737	123,249,069	604,790	1,728,217
Zinc concentrates	186,186	23,989,010	503	5,199	—	—	198,714,748
Iron pyrite concentrates	339,480	1,159,828	—	—	—	170,569	—
Precipitates	481	100,256	—	—	377,212	—	—
Lead concentrates	7,497	1,179,169	7,457	413,685	305,881	7,666,693 ²	—
Totals	3,001,054	218,036,064	523,975	6,983,251	605,173,099	1,207,264	389,849,338
Value of process supplies, etc. ³ .....	...	75,119,437	...	...	...	...	...
Net value added .....	...	142,916,627	...	...	...	...	...
1963							
To Canadian plants:							
Ores	828,184	10,024,209	85,040	190,353	21,671,522	—	765,631
Copper concentrates	1,156,377	139,722,174	364,602	5,714,938	453,426,234	—	25,123,539
Zinc concentrates	198,372	18,990,230	7,454	252,456	3,045,962	—	201,546,808
Iron pyrite concentrates	132,897	526,581	—	—	—	64,602	—
Slags and tailings	33,962	25,696	—	—	—	—	—
Residues, bullion and gold precipitates	6	1,308,509	30,281	71,089	—	—	—
Lead concentrates	6,701	1,057,637	5,485	309,289	161,417	—	463,615
To foreign plants:							
Copper concentrates	248,672	40,224,090	42,895	351,850	137,094,402	—	2,834,489
Zinc concentrates	120,235	15,655,788	829	4,728	—	—	130,031,552
Iron pyrite concentrates	343,541	1,145,404	—	—	—	170,808	—
Precipitates	549	135,015	—	—	433,742	—	—
Lead concentrates	8,282	950,618	—	166,716	230,574	—	—
Tailings and other	2,731	107,359	—	—	—	—	—
Total shipments	3,080,509	229,873,310	536,586	7,061,419	616,063,853	235,410	360,765,634
Value of process supplies, etc. ³ .....	...	79,680,132	...	...	...	...	...
Net value added .....	...	150,193,178	...	...	...	...	...

¹ In addition, cadmium, bismuth, tellurium and selenium are recovered from these ores.² Lead content.³ Includes freight on ore shipments, smelter charges, purchased electricity and fuel.

TABLE 33. Ores Mined, Milled, and Concentrates Produced, by the Copper-Gold-Silver Mines, 1954-63

Year	Ore mined	Ore milled	Copper concentrates produced ¹	Zinc concentrates produced	Iron pyrite concentrates produced	Lead concentrates produced
tons						
1954	8,501,569	7,982,320	806,157	234,364	505,504	—
1955	9,911,751	9,375,687	909,466	230,236	653,918	—
1956	10,422,648	10,442,164	931,328	230,220	578,923	—
1957	10,570,801	10,009,694	1,135,664	229,514	528,388	—
1958	11,484,960	11,274,297	1,106,733	229,962	782,828	—
1959	12,436,105	11,577,414	1,135,190	231,959	674,450	—
1960	13,973,786	13,316,340	1,266,757	270,705	573,340	2,040
1961	15,008,993	14,411,758	1,259,871	299,806	508,854	6,762
1962	17,744,713	16,980,625	1,433,264	343,922	322,636	12,438
1963	19,640,423	18,745,756	1,389,336	317,973	476,899	16,535

¹ Exclusive of copper precipitate.

TABLE 34. Employees and their Earnings in the Copper-Gold-Silver Mines, 1958-63

Year	Employees					Man-hours worked (all employees)	Earnings		
	Administration		Workmen		Total		Administration	Workmen	Total
	Male	Female	Male	Female					
	number						dollars		
1958	1,327	184	7,329	35	8,875	18,958,827	7,723,473	32,021,770	39,745,243
1959	1,339	187	8,116	40	9,682	20,429,780	7,867,882	35,592,759	43,460,641
1960	1,313	219	8,969	48	10,549	22,541,084	8,512,429	40,428,553	48,940,982
1961	1,482	209	9,160	50	10,901	22,564,843	9,143,395	42,315,763	51,459,158
1962	1,550	206	9,239	51	11,046	22,849,287	9,798,255	43,690,930	53,489,185
1963	1,789	223	9,453	59	11,524	23,874,213	12,369,536	48,144,986	58,514,522

TABLE 35. Number of Workmen, by Months, 1962 and 1963

Year	1962	1963					
	Total	Mine			Mill		Total
		Surface		Underground	Male	Female	
		Male	Female	Male			
January.....	8,797	3,117	62	4,895	1,271	5	9,287
February.....	8,800	3,085	64	4,908	1,266	6	9,263
March.....	8,743	3,110	62	4,803	1,177	5	9,094
April.....	8,974	3,110	62	4,808	1,169	5	9,091
May.....	9,362	3,272	64	4,854	1,238	6	9,368
June.....	9,539	3,402	67	4,897	1,286	7	9,591
July.....	9,764	3,549	73	5,002	1,345	7	9,900
August.....	9,812	3,480	70	5,037	1,345	7	9,866
September.....	9,494	3,333	69	4,971	1,304	6	9,612
October.....	9,410	3,255	65	5,019	1,292	5	9,570
November.....	9,383	3,167	65	5,076	1,289	5	9,536
December.....	9,221	3,143	65	4,898	1,269	5	9,314
Averages.....	9,290	3,252	66	4,930	1,271	5	9,524
Man-hours worked.....	19,247,764						19,504,221

TABLE 36. Fuel and Electricity Used in the Copper-Gold-Silver Mines, 1962-63

Kind		1962		1963	
		Quantity	Cost at plant	Quantity	Cost at plant
			\$		\$
Bituminous coal (a) From Canadian mines	short ton	974	15,215	271	4,877
(b) Imported	"	812	15,452	880	15,187
Sub-bituminous coal (from Alberta mines only)	"	48	687	—	—
Anthracite coal		—	—	34	497
Lignite coal		—	—	—	—
Coke for fuel only	short ton	44	1,058	337	8,283
Gasoline, (includes gasoline used in cars and trucks)	Imp. gal.	622,773	246,637	592,632	229,763
Kerosene or coal oil	"	6,469	2,069	4,431	1,523
Fuel oil	"	7,268,337	1,354,770	8,701,617	1,734,217
Wood (cords of 128 cubic feet of piled wood)	cord	2	16	2,034	16,198
Gas (a) Liquefied petroleum gases (propane, etc.)	Imp. gal.	89,524	23,501	90,441	43,194
(b) Other manufactured gas		—	—	—	—
(c) Natural gas	M. cu. ft.	55,442	22,613	39,601	16,166
Other fuel .....		...	51,330	—	36,321
Electricity purchased for motors and lighting	kwh.	741,862,495	5,088,266	731,780,397	4,903,478
Electricity purchased for other purposes		—	—	—	—
Steam purchased	pound	63,475,350	51,575	—	—
Totals .....		...	6,873,189	—	7,009,704
Electricity generated (a) For own use	kwh.	90,588,610	...	117,140,653	...
(b) For sale	"	798,400	88,516	—	—

TABLE 37. Specified Expenditures by the Copper-Gold-Silver Mines, 1963

	1963
(a) Workmen's compensation	1,485,298
(b) Silicosis assessment	178,018
(c) Unemployment insurance	506,764
(d) Aggregate cost of structures, roads, machinery, equipment, etc., built by or purchased from outside contractors or suppliers and chargeable to Fixed Assets Account	10,036,222
(e) Book value of fixed assets (new structures, roads, machinery, equipment, etc., including major repairs and alterations) produced by own employees and chargeable to Fixed Assets Account	6,388,952
(f) Other capital expenditures not reported in (d) and (e)	1,067,006
(g) Cost of materials and supplies used in the production of machinery and equipment and in the construction of roads and new structures (including major repairs and alterations by own employees and chargeable to Fixed Assets Account)	2,569,833
(h) Cost of all other goods, materials and supplies (including office, medical, laboratory, cafeteria and store supplies) purchased and not chargeable to Fixed Assets Account	27,403,818

TABLE 38. Taxes Paid by the Copper-Gold-Silver Mines, 1961-63

	1961	1962	1963
	dollars		
Dominion income tax, including tax on non-operating revenue	11,313,497	8,285,599	11,142,431
Provincial tax	6,896,685	4,963,540	6,898,333
Municipal tax	1,876,876	1,973,590	2,282,185
Grand total taxes paid	20,087,058	15,222,729	20,322,949

TABLE 39. Cost of Prospecting¹ Conducted by the Copper-Gold-Silver Mines, by Provinces, 1962 and 1963

Conducted in	1962	1963	Conducted in	1962	1963
	dollars			dollars	
Newfoundland	499,436	88,601	Saskatchewan	209,081	665,983
Nova Scotia	77,152	117,184	Alberta	—	55,892
New Brunswick	361,098	328,520	British Columbia	2,957,805	4,442,302
Quebec	5,055,025	7,925,089	Yukon	482,685	506,705
Ontario	1,694,626	1,747,319	Northwest Territories	330,956	198,092
Manitoba	1,685,544	1,502,709	Totals	13,353,408	17,578,396

¹ Includes some development work.

TABLE 40. Drilling Completed on Copper-Gold-Silver Deposits, 1962 and 1963

	Footage drilled	
	1962	1963
Diamond drilling for exploration (testing only):		
By mining companies with their own personnel and equipment	81,950	114,027
By diamond drilling contractors	1,556,929	1,100,688
Other diamond drilling:		
Blast hold diamond drilling:		
By mining companies with their own personnel and equipment	798,797	676,368
By diamond drilling contractors	185,076	5,874
Drilling by percussion or other machines ¹	24,234,785	25,017,465

¹ Not complete as these data are not recorded by some operators.

Note: Value of diamonds in all form (stones, bits, etc.) purchased during the year, \$98,790.

TABLE 41. Copper Production (Recoverable) according to Nature of Ore, and by Provinces, 1961-63

Province	From copper-gold-silver ores	From nickel-copper ores	From other ores	Total
1961				
Newfoundland	12,585	—	3,167	15,752
Nova Scotia	—	—	—	—
New Brunswick	—	—	—	—
Quebec	145,583	—	3,424	149,007
Ontario	34,269	172,506	4,872	211,647
Manitoba	5,981	6,473	—	12,454
Saskatchewan	33,479	—	—	33,479
British Columbia	13,485	737	1,624	15,846
Yukon	440	—	—	440
Northwest Territories	—	463	—	463
Canada	245,822	180,179	13,087	439,088

TABLE 41. Copper Production (Recoverable) according to Nature of Ore, and by Province, 1961-63 - Concluded

Province	From copper-gold-silver ores	From nickel-copper ores	From other ores	Total
tons				
1962				
Newfoundland	14,331	—	2,977	17,308
Nova Scotia	—	—	204	204
New Brunswick	3,674	—	—	3,674
Quebec	144,568	87	2,776	147,431
Ontario	42,270	139,629	7,096	188,995
Manitoba	5,033	7,705	—	12,738
Saskatchewan	32,017	—	—	32,017
British Columbia	53,342	768	380	54,490
Yukon	214	—	—	214
Northwest Territories	—	314	—	314
Canada	295,449	148,503	13,433	457,385
1963				
Newfoundland	11,004	—	3,008	14,012
Nova Scotia	—	—	237	237
New Brunswick	8,964	—	—	8,964
Quebec	137,915	129	3,356	141,400
Ontario	44,973	123,483	10,504	178,960
Manitoba	7,530	9,450	—	16,980
Saskatchewan	29,772	—	—	29,772
British Columbia	61,103	871	244	62,218
Yukon	—	—	—	—
Northwest Territories	16	—	—	16
Canada	301,277	133,933	17,349	452,559

TABLE 42. Production of Refined Copper,¹ 1954-63

Year	Short tons	Year	Short tons
1954	253,365	1959	365,366
1955	288,997	1960	417,029
1956	328,458	1961	406,359
1957	323,540	1962	362,868
1958	329,239	1963	380,075

¹ In all forms and from all sources, including scrap.

TABLE 43. Silver Production (Recoverable) according to Nature of Ore, by Provinces. 1963

Province	Crude placer gold	Auriferous quartz ores	Copper-gold-silver ores	Nickel-copper ores	Silver-lead-zinc ores	Silver-cobalt and other ores	Total
troy ounces							
Newfoundland	—	—	—	—	981,005	—	981,005
Nova Scotia	—	—	—	—	423,189	—	423,189
New Brunswick	—	—	73,560	—	258,912	—	332,472
Quebec	—	112,720	2,785,226	—	1,543,698	—	4,441,644
Ontario	—	344,867	2,466,603	1,320,777	415,840	5,053,534	9,601,621
Manitoba	—	4,019	685,798	77,159	—	—	766,976
Saskatchewan	—	—	746,683	—	—	—	746,683
Alberta	12	—	—	—	—	—	12
British Columbia	651	20,078	313,582	—	6,116,847	—	6,451,158
Yukon	10,936	—	—	—	6,095,101	—	6,106,037
Northwest Territories	—	81,141	—	—	—	65	81,206
Canada	11,599	562,825	7,071,452	1,397,936	15,834,592	5,053,599	29,932,003

TABLE 44. Selenium and Tellurium Recoverable from Canadian Ores, 1954-63

Year	From copper-gold-silver ores		From nickel-copper ores		Total	
	Selenium	Tellurium	Selenium	Tellurium	Selenium	Tellurium
	pounds					
1954	228,703	976	94,826	7,195	323,529	8,171
1955	332,644	2,559	94,465	6,455	427,109	9,014
1956	221,233	1,562	109,156	6,305	330,389	7,867
1957	234,933	24,609	86,459	6,915	321,392	31,524
1958	216,695	31,558	90,295	6,692	306,990	38,250
1959	266,707	6,123	101,400	6,900	368,107	13,023
1960	377,138	37,232	144,500	7,450	521,638	44,682
1961	265,812	69,559	164,800	8,050	430,612	77,609
1962	344,151	51,714	142,915	7,011	487,066	58,725
1963	373,672	69,137	95,100	7,705	468,772	76,842

TABLE 45. Zinc Production (Recoverable) according to Nature of Ore, and by Provinces, 1962 and 1963

Year and province	Recoverable from copper-gold-silver ores	Recoverable from silver-lead-zinc and other ores	Total
	tons (2,000 pounds)		
1962			
Newfoundland	—	32,541	32,541
Nova Scotia	—	757	757
New Brunswick	2,498	—	2,498
Quebec	26,514	44,223	70,737
Ontario	45,039	18,093	63,132
Manitoba	49,920	—	49,920
Saskatchewan	30,900	—	30,900
British Columbia	3,291	203,425	206,716
Yukon	—	5,944	5,944
Totals	158,162	304,983	463,145
1963			
Newfoundland	—	34,465	34,465
Nova Scotia	—	—	—
New Brunswick	10,614	—	10,614
Quebec	32,566	42,518	75,084
Ontario	55,198	11,272	66,470
Manitoba	46,392	—	46,392
Saskatchewan	33,320	—	33,320
British Columbia	3,807	197,625	201,432
Yukon	—	5,925	5,925
Totals	181,897	291,825	473,722

TABLE 46. Refined Zinc Produced, from all Sources, 1954-63

Year	Short tons	Year	Short tons
1954	253,365	1959	255,306
1955	256,542	1960	260,968
1956	255,564	1961	268,007
1957	247,318	1962	280,159
1958	252,093	1963	284,020

TABLE 47. Cadmium Production (Recoverable) from Canadian Ores, 1954-63

Year	From copper-gold-silver ores	From silver-lead-zinc ores	Total	Year	From copper-gold-silver ores	From silver-lead-zinc ores	Total
	pounds				pounds		
1954	154,596	932,184	1,086,780	1959	334,029	1,826,334	2,160,363
1955	191,691	1,727,390	1,919,081	1960	466,200	1,891,297	2,357,497
1956	208,327	2,131,094	2,339,421	1961	307,757	1,914,193	2,221,950
1957	286,044	2,082,086	2,368,130	1962	405,317	2,199,656	2,604,973
1958	355,602	1,400,448	1,756,050	1963	389,185	2,086,300	2,475,485

TABLE 48. Average Annual Metal Prices in Canadian Dollars, 1954-63

Year	Gold	Silver	Copper	Lead	Zinc
	Per troy ounce	Per troy ounce	Per pound	Per pound	Per pound
	dollars				
1954	34.07	0.8326	0.2916	0.1333	0.1198
1955	34.52	0.8818	0.3687	0.1438	0.1365
1956	34.45	0.8968	0.4141	0.1551	0.1484
1957	33.55	0.8737	0.2895	0.1396	0.1209
1958	33.98	0.8681	0.2542	0.1136	0.1088
1959	33.57	0.8778	0.2961	0.1061	0.1224
1960	33.95	0.8891	0.3029	0.1068	0.1335
1961	35.46	0.9426	0.2919	0.1021	0.1259
1962	37.41	1.165	0.3100	0.0992	0.1210
1963	37.75	1.384	0.3150	0.1100	0.1278

TABLE 49. World Copper Production by Countries of Origin of Ore¹

Country	1959	1960	1961	1962	1963
	tons (2,000 pounds)				
United States	840,000	1,092,500	1,159,556	1,223,978	1,208,197
Mexico	63,133	66,502	54,359	51,945	61,576
Canada	395,269	439,262	439,088	465,446	461,823
Cuba	9,942	13,058	5,500	6,100	6,600
Haiti	—	1,000	3,832	6,738	6,553
Nicaragua	1,001	5,398	6,919	8,016	8,028
Bolivia ²	2,460	2,503	2,292	2,646	3,300
Brazil	1,200	1,200	1,900	1,800	1,700
Chile	600,571	586,643	603,424	646,064	662,126
Peru	55,871	200,311	218,313	183,853	195,608
Totals, America	1,969,447	2,408,377	2,495,183	2,596,586	2,615,511
Austria	2,726	2,188	2,105	2,186	2,078
Finland	33,132	31,580	35,745	37,657	36,777
France	672	772	551	441	441
Germany, Federal Republic	2,256	2,454	2,389	2,202	2,515
Italy	665	561	691	973	1,100
Norway	15,828	16,965	15,379	17,124	15,724
Portugal	2,500	3,767	3,351	3,742	3,800
Spain ³	12,137	8,786	20,029	20,580	26,275
Sweden	18,838	18,396	18,629	21,034	21,000
Yugoslavia	38,141	36,681	41,787	57,008	68,446
Totals, Europe	126,895	122,150	140,656	162,947	178,156
Japan	93,969	98,036	106,272	114,198	118,185
India	8,459	9,822	9,190	10,914	11,034
Israel	4,723	6,143	6,969	5,768	6,087
Korea, Republic of	529	649	584	473	542
Turkey	27,385	28,928	20,525	28,127	32,189
Philippines	54,587	48,512	57,182	60,327	70,201
Cyprus ³	39,978	39,096	31,585	27,735	29,000
Totals, Asia	229,630	229,186	232,307	247,542	267,238
Congo, Republic of the	310,952	332,900	325,440	322,974	297,537
Rhodesia	12,016	15,128	14,979	15,148	18,489
South West Africa	31,695	21,692	23,377	25,873	30,709
Uganda	13,362	16,265	14,720	17,173	18,875
South Africa, Republic of	53,575	52,041	55,464	50,398	59,421
Zambia	598,834	635,326	633,534	619,856	648,238
Totals, Africa	1,020,434	1,073,332	1,067,514	1,051,418	1,072,269
Australia	101,102	117,741	96,823	118,646	119,470
U.S.S.R. ⁴	485,000	507,000	523,600	550,000	600,000
Bulgaria ⁴	11,000	12,100	13,200	14,200	18,000
Germany, East ⁴	20,800	27,500	27,500	27,500	30,000
Poland ⁴	9,900	11,600	12,900	15,100	14,600
China ⁴	44,000	44,000	50,000	50,000	60,000
Totals, Soviet Sphere	570,700	602,200	627,200	656,600	722,600
World totals, as reported⁴	4,018,208	4,553,006	4,659,683	4,833,739	4,975,244

¹ Includes copper contents or recoverable contents of ores or concentrates smelted in country of origin and/or shipped to other countries for smelting.

² Exports.

³ Excludes copper content of iron pyrites which may or may not have been recovered.

⁴ Conjectural.

⁵ In addition there is production in Ecuador, Burma, Taiwan, Algeria, Angola, Kenya and Morocco; the total of all these countries is estimated to be about 6,000 tons in 1963.

Source: "American Bureau of Metal Statistics' Year Book".

TRANSACTIONS IN GOLD BULLION AT THE ROYAL CANADIAN MINT

(From the Annual Report of the Royal Canadian Mint)

Five thousand four hundred and twenty-one deposits of gold bullion were received during the year from Canadian Mining Companies and Sundry Persons. The composition of the deposits was as follows:

Fine Gold—

256 deposits weighing 256,727.564 ounces with a mean fineness of 997.187

Crude Bullion—

3,684 deposits weighing 2,978,889.969 ounces with an average fineness of 802.945 gold, 126.545 silver, and containing 7.051% base metal

Scrap (Jewellery and Dental)

188 deposits, 11,393.830 ounces of an average fineness of 464.560 gold and 89.749 silver

Gold for Storage—

1,293 deposits weighing 1,084,241.010 ounces with an average fineness of 751.849 gold and 135.881 silver

The net value paid to depositors was \$100,054,664.80. In addition the amount of fine gold issued to depositors was 815,032.270 ounces.

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

	Ounces fine
6,621 Trade bars transferred to Exchange Fund	
Account of Minister of Finance	2,644,703.576
Depositors—granulated and bars	815,032.270
Sales of fine gold	19.264
Trial Plate for assay purposes	6.170
Medals, etc.	15.442
Sweep	7,777.437
	3,467,554.159

This total shows a decrease of 52,851.439 ounces fine issued as compared with the year 1962.

Comparative Statement Showing Details of Gold Deposits Received for 1962 and 1963

	Number of deposits received				Gross ounces			
	1962	1963	Increase	Decrease	1962	1963	Increase	Decrease
Sale to Her Majesty	3,525	3,940	415	—	2,875,031	3,224,340	349,309	—
For storage	1,708	1,293	—	415	1,477,010	1,084,241	—	392,769
Jewellery and miscellaneous	209	188	—	21	11,931	11,394	—	537
Total received	5,442	5,421	—	21	4,363,972	4,319,975	—	43,997
	Fine gold ounces				Fine silver ounces			
	1962	1963	Increase	Decrease	1962	1963	Increase	Decrease
Sale to Her Majesty	2,338,971	2,647,890	308,919	—	541,433	525,314	—	16,119
For storage	1,144,396	803,909	—	340,487	—	—	—	—
Jewellery and miscellaneous	5,607	5,293	—	314	—	—	—	—
Total received	3,488,974	3,457,092	—	31,882	541,433	525,314	—	16,119

Details of origin of the bullion deposited for sale to Her Majesty and for storing during the year 1963 are shown in the following table:

From Canadian mines and refineries	Sale to Her Majesty		Gold storage		Total		Total fine silver
	Gross weight	Fine gold	Gross weight	Fine gold	Gross weight	Fine gold	
	ounces						
Ontario	2,264,735.530	1,876,520.300	502,141.090	431,775.175	2,766,876.620	2,308,295.475	262,907.24
Quebec	663,076.160	523,079.415	60,578.390	13,847.728	723,654.550	536,927.143	143,701.01
British Columbia	138,852.760	112,404.913	10,035.150	9,535.666	148,887.910	121,940.579	21,037.68
Manitoba	33,821.350	24,250.886	—	—	33,821.350	24,250.886	4,054.57
Yukon Territory	68,057.980	54,878.656	—	—	68,057.980	54,878.656	11,104.24
North West Territories	55,639.000	45,346.995	511,486.380	360,027.213	567,125.380	405,374.208	81,474.59
Alberta	157.740	131.571	—	—	157.740	131.571	11.99
Total from Canadian mines and refineries	3,224,340.520	2,636,612.736	1,084,241.010	815,185.782	4,308,581.530	3,451,798.518	524,291.32
From jewellery and miscellaneous	11,393.830	5,293.121	—	—	11,393.830	5,293.121	1,022.59
Totals	3,235,734.350	2,641,905.857	1,084,241.010	815,185.782	4,319,975.360	3,457,091.639	525,313.91
Fine gold released by mines from gold storage for sale to Her Majesty	—	11,277.013	—	11,277.013	—	—	—
Totals	3,235,734.350	2,653,182.870	1,084,241.010	803,908.769	4,319,975.360	3,457,091.639	525,313.91

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

Produced	Number	Gross weight	Fine weight	Average assay
		ounces		
Fine Gold Bars.....	6,698	2,681,915.400	2,675,482.969	997.6
Granulated Gold.....	—	1,959.190	1,958.945	999.9
Fine Silver Bars.....	468	513,355.75	513,247.62	999.8
Granulated Silver.....	—	4,902.65	4,901.57	999.8
Gold Trial Plate.....	—	—	6.170	—
Finishing and Plating Medals.....	—	—	.272	—
Storage—Gold Bars.....	1,733	693,545.378	691,836.678	997.5
Granulated Gold.....	—	75,247.110	75,239.145	999.9
Special Bars—Gold.....	3	—	15.679	—
Special Bars—Silver.....	4	—	133.70	—
Sweeps Sold—Gold.....	—	—	7,777.437	—
Sweeps Sold—Silver.....	—	—	44,514.98	—

Special processes	Number	Gross weight
		ounces
Remelts.....	160	88,095.730
Toughenings.....	6	2,104.560
		Pounds Avoirdupois
Chloride reduction.....	—	75,700.0
Sweeps.....	—	86,485.0

GOLD STORAGE

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

The fine gold content of the bullion deposited under this heading during 1963 amounted to 803,908.769 ounces. Fine bullion amounting to 811,774.023 ounces was issued on behalf of the mines for export and to various processors for domestic use.

Summary of Transactions in Gold Bullion of the Ottawa Branch of the Royal Mint from its Opening on January 2, 1908, to its Disestablishment on November 30, 1931, and of the Royal Canadian Mint from December 1, 1931, to December 31, 1963

Year	Gold received		Gold issued	
	Gross weight	Fine gold	Coin	Bullion
	ounces		ounces fine	
1908 to 1953.....	136,498,602.205	110,017,596.568	383,319.096	109,430,839.886
1954.....	4,768,451.365	3,829,430.609	—	3,998,835.566
1955.....	4,878,918.379	3,947,636.509	—	3,952,764.485
1956.....	4,693,484.529	3,801,788.815	—	3,774,599.457
1957.....	4,798,296.343	3,896,083.563	—	3,776,710.677
1958.....	4,868,066.405	3,958,458.747	—	4,088,706.348
1959.....	4,805,493.520	3,908,640.185	—	3,836,679.842
1960.....	4,970,726.079	4,024,625.964	—	4,014,771.105
1961.....	4,745,639.352	3,800,137.419	—	3,812,054.286
1962.....	4,363,972.339	3,488,974.332	—	3,520,405.598
1963.....	4,319,975.360	3,457,091.639	—	3,467,554.159
	183,711,625.876	148,130,464.350	383,319.096	147,673,921.409

CURRENCY, MINT AND EXCHANGE FUND ACT

Gold Bullion Regulations, 1959

AT THE GOVERNMENT HOUSE AT OTTAWA

P.C. 1959-100

Thursday, the 29th day of January, 1959.

Present:

His Excellency the Governor General in Council

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

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

Short Title

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

Interpretation

2. In these Regulations,

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

Deposits

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

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

(2) The Master shall not accept

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

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

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

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

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

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

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

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

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

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

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

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

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

² SOR/58-117, CANADA GAZETTE PART II, Vol. 90, No. 7, April 11, 1956.

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

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

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

Mint Charges

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

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

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

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

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

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

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

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

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

Release of Gold

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

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

Sale of Gold

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

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

General

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

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

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

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

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

List of Operators of Gold Mines, 1963

Name	Head or executive office address	Location
(a) Placer Gold Mines		
Quebec:		
Archmond Mineral Exploration Partnership	7880 Des Vendéens Ave., Montreal	Moe River
Beauce Placer Mining Co. Ltd.	908-330 Bay St., Toronto, Ontario	Beauceville
British Columbia:		
Canford Explorations Ltd. ¹	204-569 Howe St., Vancouver	Cottonwood River
Coulter, M.E. ¹	525 Delestre Ave., New Westminster	Williams Lake
Cresswell, R. ¹	Box 231, Quesnel	Cariboo
Edell, Wm. & Arnold, Harry V. ¹	Vernon	Osoyoos
Feinleber, Joseph ¹	Revelstoke	Revelstoke
Ferguson, Don S.	McBride	
Feyer, J.H. ¹	Box 2018, Quesnel	Cariboo
Fisher, William (Swift River Placer Mines ¹)	Quesnel	Sovereign Creek
Gunn, J.J. ¹	Wells	Cariboo
Harris, H.	Box 335, Vernon	Vernon Mining District
Heap, M.O. ¹	Princeton	Tulameen River
Hixon Placers Inc.	2032 Third Ave., Seattle, Wash., U.S.A.	Cariboo
Jack, Gene	Prince George	Cariboo
Jefferson, Jesse ¹	Big Lake Ranch	Quesnel River
Johnson, Fred W.	Quesnel	
Johnson, V.	Quesnel	
Kidd Russell	Williams Lake	Lillooet
McGannon, G.J. ¹	R.R. 1, Rosedale	Choate
McJana Placers	Quesnel	Cariboo
Moen, Arling ¹	Wells	Perkins Creek
Nelson A.J.	Quesnel	Quesnel River
Ogden, Charles	Williams Lake	
Olynk, Theodore ¹	Box 927, Kimberley	Fort Steele
Osion, Edward	Prince George	
Pederson, Arthur	Box 74, Wells	Wells
Piccolo, Bros & Schroeder	Atlin	Atlin
Polischuk, Paul	Atlin	Atlin
Schulz, Louis	Atlin	Atlin
Sheppard, R.	Quesnel	Cariboo
Smith, B.	Quesnel	Cariboo
Smith, David	Quesnel	Cariboo
Spruce Creek Placers	Atlin	Atlin
Veezay Minerals Exploration ¹	1143-17th Ave. S.W., Calgary, Alberta	Fort Steele
Wesco, Mining Co. Ltd. ¹	850 W. Hastings St., Vancouver	Atlin
Whittle, Raymond ¹	Garden Bay	Garden Bay
Williams, Rex	Quesnel	Cariboo
Williams, S.N.	Quesnel	Cariboo
Yukon:		
Ballarat Mines Ltd. ¹	Dawson	Dawson
Bardusan Placers Ltd. ¹	Mayo	Mayo
Bleiler Placers ¹	Whitehorse	Mayo
Boutillier, H.C. & D.F. ¹	Dawson	Bonanza Creek
Bratsberg, B.	Dawson	Bonanza Creek
Bremmer, John	Dawson	Last Chance Creek
Bremmer, Mrs. M.	Dawson	Cariboo Creek
Burgelman, Mrs. Nellie ¹	Dawson	Cariboo Creek
Burwash Mining Co. ¹	Whitehorse	Burwash Creek
Christenson, R.	Dawson	Dawson
Dominion Placers (Mr. Ole Lunde) ¹	Box 4, Dawson	Quartz Creek
Duncan Creek Placers	Mayo	Mayo
Eureka Placers (Yukon) Ltd.	Dawson	Eureka Creek
Fry, A.T. ¹	Box 19, Dawson	Bonanza Creek
Gould, John	Dawson	Dawson
Heitmann-Janus	Dawson	Clear Creek
K & S Placers	Dawson	Gold Creek
Kinakin, Max	Dawson	Dublin Gulch
Komienksy, S.	Dawson	Stewart River
Lamontagne, J.A. ¹	Dawson	Bedrock Creek
Le Saux & Perret ¹	Dawson	Henderson Creek
Lentick & Berg	Mayo	Sourdough Hill
Malicky, Walter	Mayo	Mayo
Medby, Ole	Dawson	Dawson
Moen, O.	Dawson	Dawson
Netzel & Heitman Mining	Box 66 Dawson	Clear Creek
Northern Yukon Services Ltd. ¹	Dawson	Eureka Creek
Ross, L.M. (Kirkman Creek Placers) ¹	Dawson	Dawson
Schink, E.	Dawson	Dawson
Strandberg, K.E.	Whitehorse	
Taylor, Fred W. ¹	Mayo	Mayo
Yukon Consolidated Gold Corp. Ltd. ¹	Dawson	Dawson
Alberta:		
Fester, Homer	12230-101st St., Edmonton	North Saskatchewan River

See footnote at end of list.

List of Operators of Gold Mines, 1963 - Continued

Name	Head or executive office address	Location
(b) Gold Quartz Mines		
Nova Scotia:		
East Hants Gold Mines Ltd.	Hants	Hants
Fundy Bay Copper Mines Ltd. ²	302-215 St. James St. W., Montreal, Quebec	Woodstock
MacMillan, MacKay	Isaac's Harbour	Guysborough
Quebec:		
Akasaba Gold Mines Ltd. ²	112 King St. W., Toronto, Ontario	Louvicourt Twp.
Amerel Mining Company Ltd. ²	608-80 Richmond St. W., Toronto, Ontario	Dubuisson Twp.
American Chibougamau Mines Ltd. ²	1255 University St., Montreal	Hartwell Twp.
Anacon Lead Mines Ltd.	330 Bay St., Toronto, Ontario	Rohault Twp.
Augustus Exploration Ltd.	1600-100 Adelaide St. W., Toronto, Ontario	Duncan Lake
Ava Gold Mining Co. Ltd.	320 Bay St., Toronto, Ontario	Duparquet Twp.
Bankfield Consolidated Mines Ltd. ²	27 Carlton St., Toronto 2, Ontario	Cadillac Twp.
Bargold Mines Ltd. ²	100 Adelaide St. W., Toronto, Ontario	Barraute Twp.
Barnat Mines Ltd. ²	112 King St. W., Toronto, Ontario	Malartic
Belleterre Quebec Mines, Ltd.	25 King St. W., Toronto 1, Ontario	Belleterre
Bevcon Mines, Ltd. ²	112 King St. W., Toronto, Ontario	Louvicourt
Blackhawk Mining Ltd.	400 St. James St. W., Montreal	St. Magloire
Bourbeau Lake Mines, Ltd.	Noranda	McKenzie Twp.
Cam Mines Ltd. ²	607-80 Richmond St. W., Toronto, Ontario	Duffresnoy Twp.
Camador Mining & Exploration Co. Ltd. ²	Malartic	Malartic Lake and Cadillac
Canadian Australian Exploration Ltd. (formerly Eldrich Mines Ltd.)	44 King St. W., Toronto, Ontario	Duprat Twp.
Canadian Malartic Gold Mines Ltd. ²	7 King St. E., Toronto 1, Ontario	Malartic
Chatelet Mines Limited ²	McWatters	Joannes Twp.
Cheskirk Mines Ltd. ²	85 Richmond St. W., Toronto, Ontario	Rouyn Twp.
Chimo Gold Mines Ltd. ²	25 Adelaide St. W., Toronto, Ontario	Vauquelin and Malartic Twps.
Courvan Mining Co. Ltd.	1403-507 Place d'Armes, Montreal	Louvicourt Twp.
D'Aragon Mines Ltd.	702-220 Bay St., Toronto, Ontario	Bourlamaque Twp.
D'Eldona Gold Mines Ltd.	62 Richmond St. W., Toronto, Ontario	Duprat Twp.
Dome Exploration Co. (Quebec) Ltd. ²	Bourlamaque	Pascalais Twp.
Donalda Mines Limited ²	714-62 Richmond St. W., Toronto, Ontario	Noranda Rouyn
Dubuisson Goldfields Ltd.	302-355 St. James St. W., Montreal	Dubuisson Twp.
East Bay Gold Ltd. ²	14C Avenue, Noranda	Duparquet and Duprat Twps.
Eastville Gold Mines Co. Ltd. ²	132 St. Jacques Ouest, Montreal	Courville
East Malartic Mines Ltd. ²	112 King St. W., Toronto, Ontario	Fourniere Twp.
Elk Lake Mines Ltd.	121 Richmond St. W., Toronto, Ontario	Destor Twp.
Elmac Malartic Mines Limited ²	1002-80 Richmond St. W., Toronto, Ontario	Dubuisson Twp.
Elvue Mines Ltd.	121 Richmond St. W., Toronto, Ontario	Duprat Twp.
En-ola Explorations Ltd. ²	491 Victoria Square, Montreal	Abtibi
Eplett, G.S.E. Mining & Dev. Co. Ltd. ²	New Liskeard, Ontario	Beauchastel Twp.
Fermont Mines Ltd. ²	2001-80 King St. W., Toronto, Ontario	Vassan Twp.
Francoeur Mines Ltd. ²	405-25 Adelaide St. W., Toronto, Ontario	Beauchastel Twp.
Garnet Mines Ltd.	14-486 rue St. Jean, Montreal	Duparquet Twp.
Glacier Explorers Ltd. ²	55 Richmond St. W., Toronto, Ontario	Dubuisson Twp.
Greek Canadian Mines Ltd.	607-1284 Danforth Rd., Toronto, Ontario	Pascalais Twp.
Horne Fault Mines Ltd.	7 King St., Toronto, Ontario	Beauchastel Twp.
Kerr Addison Gold Mines Ltd.	44 King St. W., Toronto, Ontario	Daniel Twp.
Kiena Gold Mines Ltd. ²	7 King St. E., Toronto, Ontario	Dubuisson Twp.
Lamaque Exploration Co. Ltd.	1000-11 Adelaide St. W., Toronto, Ontario	Druissac Twp.
Lamaque Mining Co. Ltd. ²	1000-11 Adelaide St. W., Toronto, Ontario	Bourlamaque
Leitch Gold Mines Ltd.	12 Richmond St. E., Toronto, Ontario	Wawagosic
Lencourt Gold Mines Ltd. ²	62 Richmond St. W., Toronto, Ontario	Dubuisson Twp.
Lenmac Mines Ltd.	85 Richmond St. W., Toronto, Ontario	Grand Twp.
Little Long Lac Gold Mines Ltd. ²	112 King St. W., Toronto, Ontario	Malartic
Louvicourt Goldfields Corporation	100 Adelaide St. W., Toronto, Ontario	Bourlamaque
Malartic Hygrade Gold Mines Ltd. ²	608-80 Richmond St. W., Toronto, Ontario	Abtibi East
Malartic Goldfields Ltd. ²	Halet	Fourniere and Dubuisson Twps.
Marban Gold Mines Ltd. ²	112 King St. W., Toronto, Ontario	Dubuisson Twp.
Marcoland Mines Ltd.	201-21ème Avenue, Quebec	Landrienne Co.
McIntyre Porcupine Mines Ltd.	Schumacher	Ungava
McWatters Gold Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Blondeau Twp.
Mines Bern-Or Ltée. (Les) ²	Corleton-Sur-Mer	Fauvel Canton
Montclair Mining Corp. Ltd.	252 rue Murdoch, Noranda	Laverlocher
Nealon Mines Ltd.	206-365 Bay St., Toronto, Ontario	Malartic and Vassan Twps.
Nemrod Mining Co. Ltd. ²	132 St. James St. W., Montreal	Louvicourt
New Alger Mines Limited ²	1002-80 Richmond St. W., Toronto, Ontario	Cadillac Twp.
Newbanks Gold & Copper Mines Ltd. ²	776 41ème ave, Val d'Or	Vaughelin Canton
New Hosco Mines Ltd. ²	906-357 Bay St., Toronto, Ontario	Joannes Twp.
New Pascalais Mines Ltd. ²	7 King St. E., Toronto, Ontario	Pascalais
Newrich Explorations Ltd. ²	403-62 Richmond St. W., Toronto, Ontario	Beauchastel
New Senator Rouyn Ltd. ²	2014-44 King St. W., Toronto, Ontario	Noranda
Nickel Offsets Ltd. ²	80 Richmond St. W., Toronto, Ontario	Duprat Twp.
Norbeau Mines Ltd. ²	112 King St. W., Toronto, Ontario	McKenzie Twp.
Norlatic Mines Ltd. ²	112 King St. W., Toronto, Ontario	Malartic and Vassan Twps.
Norlex Mines Ltd. ²	25 Adelaide St. W., Toronto, Ontario	Bousquet Twp.
North Boudlac Mines Ltd. ²	702-357 Bay St., Toronto, Ontario	Dasserat Twp.
Northeast Exploration Co.	574-1st St., Chibougamau	Bourbeau Lake
Northern Exploration Ltd.	265 Craig St. W., Montreal	Landrienne Twp.
Northern Quebec Explorers Ltd.	13 ave Gouin, Amos	Fiedmont
O'Brien Gold Mines, Ltd. ²	36 Dussault St., Hull	Cadillac Twp.
Odyno Exploration & Development Ltd.	Noranda	Beauchastel

See footnote at end of list.

List of Operators of Gold Mines, 1963 — Continued

Name	Head or executive office address	Location
(b) Gold Quartz Mines — Continued		
Quebec — Concluded:		
Opeimisca Explorers Ltd. ¹	1155 Dorchester Blvd. W., Montreal	L'Esperance
Orenada Mines Ltd. ¹	330 Bay St., Toronto, Ontario	Bourlamaque
Paramaque Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Bourlamaque
Peel-Elder Ltd. ¹	44 King St. W., Toronto, Ontario	Noranda
Perron Gold Mines Ltd. ¹	112 King St. W., Toronto, Ontario	Abitibi
Pitchvein Mines Ltd. ¹	82 Government Road, Kirkland Lake	Dassarat
Porcupine Prime Mines Ltd.	85 Richmond St. W., Toronto, Ontario	Fournière Twp.
Portland Yellow Knife Gold Mines Ltd. ¹	506-100 Adelaide St. W., Toronto, Ontario	Fournière Twp.
Powell Rouyn Gold Mines Ltd. ¹	112 King St. W., Toronto, Ontario	Rouyn Twp.
Quebec North Shore Mines Ltd.	2144 McKay St., Montreal	Lacoste Twp.
Rand Malartic Mines Ltd.	2014-44 King St. W., Toronto, Ontario	Malartic
Rocdor Mines Ltd.	Val D'Or	Dubuisson Twp.
Roycam Copper Mines Ltd. ²	250 University Ave., Toronto, Ontario	Malartic
Salem Exploration Limited ²	85 Richmond St. W., Toronto, Ontario	Malartic
Sigma Mines (Quebec) Ltd. ²	360 Bay St., Toronto, Ontario	Bourlamaque
Standard Gold Mines Ltd. ²	1403-507 Place d'Armes, Montreal	Bourlamaque
Sturgeon River Mines Ltd. ¹	903-330 Bay St., Toronto, Ontario	Leseur Twp.
Sullivan Consolidated Mines Ltd. ¹	507 Place d'Armes, Montreal	Dubuisson Twp.
Teck Exploration Company Limited	Bourlamaque	Bourlamaque
Thompson Bousquet Gold Mines Ltd. ¹	407 St. Peter St., Montreal	Abitibi
Transterre Explorations Ltd. ¹	1015 Beaver Hall Hill, Montreal	Senneterre Twp.
Tribag Mining Co. Ltd.	44 King St. W., Toronto, Ontario	Rouyn
Twentieth Century Mining Company Limited ¹	80 Richmond St. W., Toronto, Ontario	Pershing and Malartic Twps
Tyndall Explorations Ltd.	85 Richmond St. W., Toronto, Ontario	Beauchastel Twp.
Ultra Shawkey Mines Ltd.	80 King St. W., Toronto, Ontario	Godfrey Twp.
Union Mining Corp.	1374 Sherbrooke St. W., Montreal	Bourlamaque Twp.
Urban Quebec Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Urban Twp.
Valco Mines Co.	115, rue St. Pierre, Quebec	Malartic
Villemaque Goldmines Ltd.	11 Adelaide St. W., Toronto, Ontario	Bourlamaque Twp.
Wasamac Mines Ltd.	199 Bay St., Toronto, Ontario	Beauchastel Twp.
Western Quebec Mines Co. Ltd. ¹	1374 Sherbrooke St. W., Montreal	Dorval Siscoe Island
Wettering Gold Mines Ltd. ²	Duparquet	Abitibi
Zolapa Mining Corporation Ltd.	1004-85 Richmond St. W., Toronto, Ontario	Dorval Twp.
Ontario:		
Porcupine District		
Aunor Gold Mines Ltd. ¹	44 King St. W., Toronto	Timmins
Brouhan Reef Mines Ltd.	Room 1702, 80 Richmond St. W., Toronto	Whitney Twp.
Delnite Mines Ltd. ¹	Box 590, Timmins	Deloro Twp.
Dome Mines Ltd. ¹	South Porcupine	Tisdale Twp.
Hallnor Mines Ltd. ¹	44 King St. W., Toronto	Whitney Twp.
Hollinger Consolidated Gold Mines Ltd. ¹	Timmins	Hislop and Tisdale Twps.
Hugh-Pam Porcupine Mines Ltd. ¹	80 Richmond St. W., Toronto	Whitney Twp.
Kenilworth Mines Ltd. ¹	Box 945, Timmins	Ogden Twp.
McIntyre Porcupine Mines Ltd. ¹	Schumacher	Schumacher
Northern Canada Mines Ltd. ¹	903-330 Box St. Toronto	Broadback River
Pamour Porcupine Mines Ltd.	44 King St. W., Toronto	Whitney Twp.
Paymaster Ltd. ²	Box 100, South Porcupine	Deloro and Tisdale Twps.
Preston Mines Ltd. ²	335 Bay St., Toronto	South Porcupine
Kirkland Lake District		
Kelkirk Mines Ltd.	1112 Star Building, Toronto	Kirkland Lake
Kirkland Minerals Corp., Ltd.	360 Bay St., Toronto	Teck Twp.
Lake Shore Mines Ltd. ¹	Kirkland Lake	Kirkland Lake
Macassa Gold Mines Ltd. (Macassa Division) ¹	112 King St. W., Toronto	Kirkland Lake
Northgate Exploration Ltd.	25 Melinda St., Toronto	Kirkland Lake
Queenston Gold Mines Ltd. ¹	250 University Ave., Toronto	Gauthier Twp.
Teck-Hughes Gold Mine Ltd., The ¹	11 Adelaide St., Toronto	Kirkland Lake
Upper Canada Mines Ltd. ¹	250 University St., Toronto	Gauthier Twp.
Wright-Hargreaves Mines Ltd.	112 King St. W., Toronto	Kirkland Lake
Larder Lake District		
Candore Explorations Ltd. ¹	25 Adelaide St. W., Toronto	Larder Lake
Kerr-Addison Gold Mines Ltd. ¹	44 King St. W., Toronto	McGarry Twp.
Valhalla Mines Ltd.	906-357 Bay St., Toronto	Harker Twp.
Sudbury District		
Renable Mines Ltd. ²	112 King St. W., Toronto	Sudbury
Tionaga Gold Mines	Kukatash	Horwood Lake
Algoma District		
Pick Mines Ltd.	100 Adelaide St. W., Toronto	Algoma

See footnotes at end of list.

List of Operators of Gold Mines, 1963 - Continued

Name	Head or executive office address	Location
(b) Gold Quartz Mines - Continued		
Ontario - Concluded:		
Thunder Bay District		
Consolidated Mosher Mines Ltd. ¹	112 King St. W., Toronto	Long Lac
Golsll Mines Ltd. ¹	1212-55 York St., Toronto	Red Lake
Lake Osu Mines Ltd. ²	418-25 Adelaide St. W., Toronto	Fort Hope
Leitch Gold Mines Ltd. ²	12 Richmond St. E., Toronto	Beardmore
Little Long Lac Gold Mines Ltd. ¹	400-112 King St. W., Toronto	Errington Twp.
MacLeod-Cockshutt Gold Mines Ltd. ²	112 King St. W., Toronto	Geraldton
Northern Canada Mines Ltd.	330 Bay St., Toronto	Savant Lake
Kenora District		
Cone, R.C. ¹	Mine Centre	Shoal Lake
Consolidated Golden Arrow Mines Ltd. ¹	25 Adelaide St. W., Toronto	Dogpaw Lake
Lindsay Explorations Ltd.	4 Richmond St. E., Toronto	Sapawe
Patricia District		
Campbell Red Lake Mines Ltd. ¹	360 Bay St., Toronto	Balmer Twp.
Cochennour Willans Gold Mines Ltd. ¹	2200 Yonge St., Toronto	Dome Twp.
Consolidated Red Poplar Minerals Ltd. ¹	55 Yonge St., Toronto	Red Lake
Dickenson Mines Ltd. ¹	25 Adelaide St. W., Toronto	Balmer Twp.
Howey Consolidated Mines Ltd. ²	1000-11 Adelaide St. W., Toronto	Dome and Heyson Twps
Jorsco Exploration Ltd.	85 Richmond St. W., Toronto	Red Lake
Lun Echo Gold Mines Ltd.	199 Bay St., Toronto	Kirkland Lake
McFinley Red Lake Gold Mines Ltd.	199 Bay St., Toronto	McKenzie Island
McKenzie Red Lake Gold Mines Ltd. ¹	112 King St., Toronto	McKenzie Island
Madsen Red Lake Gold Mines Ltd. ¹	55 Yonge St., Toronto	Heyson Twp.
Pickle Crow Gold Mines, Ltd. ¹	11 Adelaide St. W., Toronto	Connell Twp.
Young, H.G., Mines Ltd. ¹	105 Adelaide St. W., Toronto	Balmer Twp.
Winnar Mines Ltd.	150 Eglinton Ave. E., Toronto	Dome
Matachewan District		
Curverly, G. ²	Kirkland Lake	Powell Twp.
Stairs Exploration & Mining Company Ltd.	55 Yonge St., Toronto	Midlothian Twp.
Manitoba:		
Explorers Alliance Ltd.	100 Adelaide St. W., Toronto, Ontario	Herb Lake
Forty-Four Mines Ltd. ¹	Bissett	Rice Lake
San Antonio Gold Mines Ltd. ¹	Bissett	Bissett
Triple Strike Mines Ltd.	500 Western Savings Bldg., Winnipeg	Rice Lake
Saskatchewan:		
Contact Gold Mines Ltd.	1168 Albert St., Regina	La Ronge
Studer Mines Ltd.	201 Canada Bldg., Prince Albert	Sulphide Lake
British Columbia:		
Allied Mining Services Ltd. (Tofino Mines Ltd.) ¹	425 Howe St., Vancouver	Tofino
Ancana Gold Mines Ltd.	Box 124 Postal Station A, Vancouver	Greenwood
Bermah Mines Ltd.	850 W. Hastings St., Vancouver	Stewart
Bralorne Pioneer Mines Ltd. ¹	355 Burrard St., Vancouver	Bralorne
Cariboo Gold Quartz Mining Co. Ltd. ¹	675 W. Hastings St., Vancouver	Cariboo
Consolidated Mining & Smelting Co. Ltd.	Trail	Skeena
Conway Mines, c/o G.R. McKay ¹	R.R. 2, Oliver	Osoyoos
Fairview Mining Co. Ltd.	Wallace, Idaho, U.S.A.	Osoyoos
French Mines Ltd.	675 W. Hastings St., Vancouver	Osoyoos
Graham, W.B.	Box 63, Hedley	Osoyoos
Hanna Gold Mines Ltd. ¹	Cassiar	Cassiar
Hedley Mining Ltd.	4804-20th St., Vernon	Hedley
Hurley River Mines Ltd.	Lillooet	Lillooet
Kelowna Mines Hedley Ltd.	Hedley	Osoyoos & Slocan
Kootenay Belle Mining Co.	Shoreacres	Sheep Creek
McKinney Gold Mines Ltd. ¹	540 Burrard St., Vancouver	Greenwood
Rayrock Mines Ltd.	25 Adelaide St. W., Toronto, Ontario	Bridge River
White Lease, (Venango Mine) ¹	Nelson	Blewett
Northwest Territories:		
Akaicho Yellowknife Gold Mines Ltd.	7 King St. W., Toronto, Ontario	Yellowknife
Consolidated Discovery Yellowknife Mines Ltd. ¹	25 Adelaide St. W., Toronto, Ontario	Discovery
Consolidated Mining & S. Co. of Canada Ltd. ¹	Trail, British Columbia	Yellowknife
Consolidated Northland Mines Ltd. ¹	2200 Yonge St., Toronto, Ontario	Fox Lake
Giant Yellowknife Gold Mines Ltd. ¹	7 King St. W., Toronto, Ontario	Yellowknife
North Goldcrest Mines Ltd. ¹	1011-2200 Yonge St., Toronto, Ontario	Fox Lake
Ormsby Mines Ltd.	25 Adelaide St. W., Toronto, Ontario	Yellowknife
Taurcanis Mines Ltd.	25 Adelaide St. W., Toronto, Ontario	Matthews Lake
Tundra Gold Mines Ltd. ¹	2200 Yonge St., Toronto, Ontario	Matthews Lake
Yukon:		
Camlaren Mines Limited	2200 Yonge St., Toronto, Ontario	Gordon Lake
Klondike Lode Gold Mines Ltd.	837 W. Hastings St., Vancouver, British Columbia	Klondike

See footnote at end of list.

List of Operators of Gold Mines, 1963 - Continued

Name	Head or executive office address	Location
(c) Copper-Gold-Silver Mines		
Newfoundland:		
Atlantic Coast Copper Corp. Ltd. ³	140 Wellington St., Ottawa 4, Ontario	Springdale
British Newfoundland Exploration Ltd. ³	1980 Sherbrooke St. W., Montreal, Quebec	Labrador
Consolidated Rambler Mines Ltd. ³	908-330 Bay St., Toronto 1, Ontario	Baie Verte
Maritimes Mining Corp., Ltd. ³	330 Bay St., Toronto, Ontario	Tilt Cove
New Brunswick:		
Captain Mines Ltd. ³	908-330 Bay St., Toronto, Ontario	Bathurst
Chesterville Mines Ltd.	25 Adelaide St. W., Toronto, Ontario	Northumberland
Clearwater Mines Ltd.	Box 520, Bathurst	Bathurst
Consolidated Mining & Smelting Co. Ltd. ³	Trail, British Columbia	Wedge Mine
Heath Steele Mines Ltd.	Box 280, Newcastle	Northumberland
Kennco Exploration (Canada) Ltd.	25 King St. W., Toronto, Ontario	Newcastle
Lucky Lake Mines Limited	302-215 St. James St. W., Montreal 1, Quebec	Bathurst
Mogul Mining Corp. Ltd.	25 Adelaide St. W., Toronto, Ontario	Gloucester
New Alger Mines Ltd.	80 Richmond St. W., Toronto, Ontario	Northumberland
Quebec Smelting & Refining Ltd.	215 St. James St. W., Montreal, Quebec	Gloucester
Roche Long Lac Gold Mines Ltd.	372 Bay St., Toronto, Ontario	Bathurst
Quebec:		
Alcourt Mines Ltd. ³	1024-85 Richmond St. W., Toronto, Ontario	Joannes Twp.
Alsab Mines Ltd.	215 St. James St. W., Montreal	Denain Twp.
Amalgamated Larder Mines Ltd.	1615-44 King St. W., Toronto, Ontario	Garthby Twp.
American Chibougamau Ltd.	11 Cornwall Ave., Town of Mount Royal	Abitibi
Anacon Lead Mines Ltd.	908-330 Bay St., Toronto, Ontario	McGarry Twp.
Anaconda American Brass (Ltd.) ³ (Eastern Exploration Division)	43 Algic Ave., Toronto, Ontario	Noranda
Area Mines Limited ³	44 King St. W., Toronto, Ontario	Obamska River
Asarco Exploration of Canada Ltd. ³	120 Broadway, New York, N.Y., U.S.A.	Chibougamau
Astrabrun Mines Ltd. ³	906-357 Bay St., Toronto, Ontario	Poirier Twp.
Augustus Exploration Ltd. ³	1600-100 Adelaide St. W., Toronto, Ontario	Joutel Twp.
Barry Copper Mines Ltd. ³	550 Sherbrooke St. W., Montreal	Montbray Twp.
Barry Explorations Ltd. ³	550 Sherbrooke St. W., Montreal	Montbray Twp.
Bateman Bay Mining Company ³	215 St. James St. W., Montreal	Chibougamau
Beattie Duquesne Mines Ltd. ³	Duparquet	Duparquet
Bidcop Mines Ltd. ³	906-357 Bay St., Toronto, Ontario	Daniel Twp.
Big Town Copper Mines Ltd. ³	132 St. James St. W., Montréal, Quebec	Abitibi Territory
Black Bay Uranium Ltd. ³	503-62 Richmond St. W., Toronto, Ontario	Dufresnoy and Joannes Twp.
Black River Mining Ltd. ³	102-400 St. James St. W., Montreal 1	Duvernoy Twp.
Bornite Copper Corporation Limited ³	62 Richmond St. W., Toronto 1, Ontario	Cleveland Twp.
Bourbeau Lake Mines Ltd. ³	110 Tremoy Rd., Noranda	Noranda
Bracemac Mines Ltd. ³	906-357 Bay St., Toronto, Ontario	Poirier Twp.
Bruneau Mines Ltd. ³	620 Cathcart St., Montreal	McKenzie Twp.
Campbell Chibougamau Mines Ltd. ³	Box 134, Chibougamau	Obalski Twp.
Canadian Dyno Mines Ltd. ³	405-25 Adelaide St. W., Toronto, Ontario	Fort MacKenzie
Canadian Shield Mining Corporation	700 Royal Bank Bldg., Place Ville-Marie, Montreal	Preissac Twp.
Canex Minerals Ltd. ³	8167 Birnam St., Montreal 15	Scott Twp.
Chesterville Mines Ltd. ³	405-25 Adelaide St. W., Toronto, Ontario	Joutel Twp.
Chib-Kayrand Copper Mines Ltd. ³	215 St. James St. W., Montreal 1	McKenzie
Chiboug Copper Corp. Ltd. ³	302-215 St. James St. W., Montréal	Levy Twp.
Chibougamau Mining & Smelting Co. Inc. ³	Box 134, Chibougamau	Waconichi Lake
Chibtown Copper Corporation ³	215 St. James St. W., Montreal	McKenzie Twp.
Chicobi Lake Mines Ltd. ³	7 King St. E., Toronto, Ontario	Guyenne Twp.
Combined Metal Mines Ltd. ³	908-330 Bay St., Toronto, Ontario	Duncan Lake
Compagnie Minière Gaspésie Ltée. ³	Magog	Daniel Twp.
Conagami Mines Ltd.	85 Richmond St. W., Toronto, Ontario	Gallinee
Coniska Copper Mines Ltd.	85 Richmond St. W., Toronto, Ontario	Daubree
Consolidated Mogador Mines Ltd. ³	700 Royal Bank Bldg. Place Ville-Marie, Montreal	Piedmont Twp.
Consolidated Mogul Mines Ltd. ³	405-25 Adelaide St. W., Toronto, Ontario	Broughton Twp.
Consolidated Red Poplar Minerals Ltd. ³	55 Yonge St., Toronto, Ontario	Poirier Twp.
Consolidated Zinc Corporation of Canada Ltd. ³	335 Bay St., Toronto, Ontario	Chibougamau Twp.
Continental Copper Mines Ltd. ³	220 Bay St., Toronto, Ontario	Dufresnoy Twp.
Continental Dyno Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Long Lake
Conwest Exploration Company Ltd. ³	1001-85 Richmond St. W., Toronto, Ontario	Gaspé
Copper Rand Mines Division Patino Mining Corp. ³	7 King St. E., Toronto, Ontario	McKenzie Twp.
Copper Stream Mines Ltd.	266 Notre Dame St. W., Montreal	Figueri Twp.
Copper Valley Mines Ltd. ³	403-3600 Ridgewood Ave., Montreal	Bolton Twp.
Corval Corporation Ltd.	302-215 St. James St. W., Montreal	Dunphy Lake
Croinor Pershing Mines Ltd. ³	80 King St. W., Toronto, Ontario	Pershing Twp.
Cupra Mines Ltd. ³	1403-507 Place d'Armes, Montreal	Stratford Twp.
Cuvier Mines Ltd. ³	215 St. James St. W., Montreal 1	Cuvier Twp.
Daering Explorers Corp. Ltd. ³	714-62 Richmond St. W., Toronto, Ontario	Dufresnoy Twp.
D'Aragon Mines Ltd. ³	220 Bay St., Toronto, Ontario	Vassan Twp.
Delhi Pacific Mines Ltd. ³	405 Adelaide St. W., Toronto, Ontario	Fort MacKenzie
Dunrairie Mines Ltd. ³	7 King St. E., Toronto, Ontario	Bourlamaque and Louvicourt Twp.
East Sullivan Mines Ltd.	507 Place d'Armes, Montreal, Québec	Val d'Or
East Ventures Ltd. ³	Box 520, Bathurst, New Brunswick	St. Armand East
Fab Metal Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Urban Twp.
Fundy Bay Copper Mines Ltd. ³	215 St. James St. W., Montreal	Frotet Lake
Garney Mines Ltd. ³	486, rue St. Jean, Montreal	Duparquet
Gaspé Copper Mines Ltd.	44 King St. W., Toronto, Ontario	Murdochville
Genex Mines Ltd.	906-357 Bay St., Toronto, Ontario	Dufresnoy Twp.
Giant Bachelor Mines Ltd. ³	550 Sherbrooke St. W., Montreal	Montbray Twp.
Grandroy Mines Ltd. ³	908-330 Bay St., Toronto, Ontario	Vassan Twp.

See footnote at end of list.

List of Operators of Gold Mines, 1963 - Continued

Name	Head or executive office address	Location
(c) Copper-Gold-Silver Mines - Continued		
Quebec - Continued:		
Greek Canadian Mines Ltd. ³	1284 Danforth Rd., Scarborough, Ontario	Pascal's Twp.
Gulf Lead Mines Ltd. ³	405-25 Adelaide St. W., Toronto, Ontario	Blondeau Twp.
Hastings Mining & Development Co. Ltd.	507 Place d'Ames, Montreal	Stratford Twp.
Horne Fault Mines Ltd. ³	7 King St. E., Toronto, Ontario	Beauchastel Twp.
Hydra Explorations Ltd. ³	100 Adelaide St. W., Toronto, Ontario	Bousquet Twp.
Icon Syndicate ³	11 Adelaide St. W., Toronto, Ontario	Rasles Twp.
Iso Mines Ltd. ³	366 Bay St., Toronto, Ontario	Galinee, Twp.
Jacobus Mining Corporation Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Frotet Lake
Janlee Explorations Ltd. ³	121 Richmond St. W., Toronto, Ontario	Tibemont Twp.
Joutel Copper Mines Ltd.	1600-44 King St. W., Toronto, Ontario	Joutel Twp.
Kelly-Desmond Mining Corp. Ltd. ³	62 Main ouest, Magog	Poirier and Faber Twps.
Kennco Explorations (Canada) Ltd. ³	25 King St. W., Toronto, Ontario	Ville Bon Twp.
Kopan Developments Ltd. ³	355 Burrard St., Vancouver, British Columbia	Poirier Twp.
Lake Dufault Mines Ltd. ³	205-1026 St. Jean St., Quebec	Dufresnoy Twp.
Lake McIvor Mines Ltd. ³	220 Bay St., Toronto, Ontario	Daniel Twp.
Lake Osu Mines Ltd.	418-25 Adelaide St. W., Toronto, Ontario	Dufresnoy
Lamaque Exploration Company Limited ³	1000-11 Adelaide St. W., Toronto, Ontario	Ungava and Bourlamaque
Larimac Explorations Inc. ³	440-1010 St. Catherine St. W., Montreal	Abitibi
Larum Mines Ltd. ³	357 Bay St., Toronto, Ontario	Galinee Twp.
Leitch Gold Mines Ltd. ³	12 Richmond St. E., Toronto, Ontario	Bourlamaque
Lenmac Mines Ltd. ³	85 Richmond St. W., Toronto, Ontario	Frotet Lake
Lucky Lakes Mines Ltd.	302-215 St. James St. W., Toronto, Ontario	New Quebec
Luillwitz-Kaeppli Minera Explorations Partnership	2055 St. Marc St., Montreal	De Salles Twp.
Lyndhurst Mining Company Ltd.	Royal Bank Bldg., Place Ville-Marie, Montreal	Destor Twp.
Magoma Mines Ltd. ³	67 Yonge St., Toronto, Ontario	Dufresnoy Twp.
McWatters Gold Mines Ltd. ³	405-25 Adelaide St. W., Toronto, Ontario	Broadback River
Merrill Island Mining Corp. ³	302-215 St. James St. W., Montreal	Chibougamau Twp.
Mespi Mines Ltd.	1702-80 Richmond St. W., Toronto, Ontario	Dufresnoy Twp.
Meta Uranium Mines Ltd.	301-200 Bay St., Toronto, Ontario	East Main River
Mid Chibougamau Mines Ltd. ³	215 St. James St. W., Montreal	Chibougamau Twp.
Milado Mines (1957) Ltd.	302-215 St. James St. W., Montreal	Twp. 4953
Mile 18 Mines Ltd.	121 Richmond St. W., Toronto, Ontario	Berthiaume Twp.
Mines Dumagami Ltée (Les) ³	Malartic	Abitibi and Rouyn-Noranda
Mining Corporation of Canada Ltd.	1715-44 King St. W., Toronto, Ontario	Chibougamau
Moneta Porcupine Mines Ltd. ³	1502-320 Bay St., Toronto, Ontario	Villebon
Muschocho Explorations Ltd. ³	Box 264, Chibougamau	Muschocho Lake
New Athona Mines Ltd.	2200 Yonge St., Toronto 12, Ontario	Landrienne Twp.
New Bidlamaque Gold Mines Ltd.	710-60 Yonge St., Toronto, Ontario	Bourlamaque Twp.
Newconex Ltd.	8 King St. E., Toronto, Ontario	Preissac Twp.
New Hosco Mines Ltd. ³	906-357 Bay St., Toronto, Ontario	Daniel Twp.
New Insko Mines Ltd. ³	128 Elmslie St., Ville LaSalle	Dufresnoy Twp.
New Jason Mines Ltd. ³	505-80 Richmond St. W., Toronto, Ontario	Galinee Twp.
New Jersey Zinc Explorations Company (Canada) Ltd. ³	116 Albert St., Ottawa, Ontario	Barry Mountain
New Lorie Mines Ltd. ³	1002-80 Richmond St. W., Toronto, Ontario	Dufresnoy Twp.
Newlund Mines Ltd. ³	44 King St. W., Toronto, Ontario	Subercase Twp.
Newrich Explorations Ltd. ³	62 Richmond St. W., Toronto, Ontario	Beauchastel Twp.
Newmont Mining Corp. of Canada Ltd.	906-211 Portage Ave., Winnipeg, Man.	Mattagami Area
New West Amulet Mines Ltd. ³	82 Richmond St. W., Toronto, Ont.	Duprat Twp.
Nicupt Mines Ltd.	83W-1st Ave., Amos	Montauban
Nipiron Mines Ltd.	302 Bay St., Toronto, Ontario	Subercase Twp.
Nolet, R. & Associates ³	Theftord Mines	Megantic
Noranda Mines Ltd. ³	44 King St. W., Toronto, Ontario	Noranda
Normetal Mining Corp. Ltd. ³	1715-44 King St. W., Toronto, Ontario	Desmeulles Twp.
Norque Copper Mines Ltd. ³	1705-80 Richmond St. W., Toronto, Ontario	Duprat Twp.
North Mattagami Mines Ltd.	56-1610 Sherbrooke St. W., Montreal	Isle-Dieu Twp.
North Tech Exploration Ltd.	80 King St. W., Toronto, Ontario	Galinee Twp.
Northcal Oils Ltd.	206-365 Bay St., Toronto, Ontario	Obamska River
Northern Canada Mines Ltd. ³	903-330 Bay St., Toronto, Ontario	Broadback River
Northern Exploration Ltd. ³	62 Main St. N., Magog	Poirier
Northern Quebec Explorers Ltd. ³	Amos	Lac Mattagami
Norvalle Mines Ltd.	505-80 Richmond St. W., Toronto, Ontario	Isle-Dieu Twp.
Odyno Exp. & Div. Ltée	115-7th St., Noranda	Montbeillard
Olympia Mining Exploration Ltd.	2075 Mansfield St., Montreal	Levy
O'Leary Malartic Mines Ltd.	Box 54, Noranda	Malartic
Opemiska Copper Mines Ltd. ³	7 King St. E., Toronto, Ontario	Levy Twp.
Osisko Lake Mines Ltd. ³	1002-7 King St. W., Toronto, Ontario	Rouyn Twp.
Phelps Dodge Corp. of Can. Ltd. ³	55 Yonge St., Toronto, Ontario	Opemiska Twp.
Portage Island (Chibougamau) Mines Ltd.	1107-55 Yonge St., Toronto, Ontario	Roy Twp.
Prospectors Airways Company Ltd. ³	1600-44 King St. W., Toronto, Ontario	Abitibi
Proteus Minerals Ltd. ³	403-62 Richmond St. W., Toronto, Ontario	Vassan and Malartic Twps.
Purdex Minerals Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Levy Twp.
Quebec Chibougamau Goldfields Ltd. ³	1155 Dorchester Blvd., Montreal	McKenzie Twp.
Quebec Mattagami Minerals Ltd. ³	1002-80 Richmond St. W., Toronto, Ontario	Mattagami
Quebec Smelting & Refining Ltd. ³	302-215 St. James St. W., Montreal	Lesperance Twp.
Quemont Mining Corp. Ltd. ³	1715-44 King St. W., Toronto, Ont.	Rouyn-Noranda
Radiore Uranium Mines Ltd.	1011-2200 Yonge St., Toronto, Ontario	Mattagami
Regional Securities Corp. Ltd.	121 Richmond St. W., Toronto, Ontario	Morris Twp.
Rock City Explorations Ltd. ³	80 Richmond St. W., Toronto, Ontario	Guereville Twp.
Rosario Exploration Ltd. ³	620 Cathcart St., Montreal	Roy Twp.
Rouanda Mining Company	360 St. James St. W., Montreal	Ligneris Twp.
Roxford Mining Corp.	4920 Western Ave., Westmount	Roxton Twp.
Rusty Lake Mining Corp.	132 St. James St. W., Montreal	La Pause Twp.
Selco Exploration Company Ltd. ³	600-77 York St., Toronto, Ontario	St. Helene Twp.

See footnote at end of list.

List of Operators of Gold Mines, 1963 - Continued

Name	Head or executive office address	Location
(c) Copper-Gold-Silver Mines - Continued		
Quebec - Continued		
Senneterre Metals Gas & Oil Ltd. ¹	1030 St. Alexandre, Montreal	Senneterre
Showdon Mining & Explorations Ltd. ¹	348 Kensington Ave., Westmount	Malartic
Solbec Copper Mines Ltd. ¹	1403-507 Place d'Armes, Montreal	Stratford Twp.
Sogemines Development Co. Ltd. ¹	1980 Sherbrooke St. W., Montreal	Ungava
South Dufault Mines Ltd. ¹	427-12 Richmond St. E., Toronto, Ontario	Rouyn Twp.
Southern Union Oils Ltd.	365 Bay St., Toronto, Ontario	La Gauchetière Twp.
Southwest Potash Corporation ¹	25 Adelaide St. W., Toronto, Ontario	Joutel and Poirier Twps.
Springpole Mines Ltd.	1003-67 Yonge St., Toronto, Ontario	Duprat Twp.
Strathcona Mines Ltd.	62 Richmond St. W., Toronto, Ontario	Franquet Twp.
Sullco Mines Ltd. ¹	1403-507 Place d'Armes, Montreal	Gaspé
Sunburst Exploration Ltd. ¹	320 Bay St., Toronto, Ontario	Duprat Twp.
Tache Lake Mines Ltd. ¹	302-215 St. James St. W., Montreal	McKenzie Twp.
Tazin Mines Ltd. ¹	215 St. James St., Montreal	Chibougamau
Terra Nova Explorations Ltd. ¹	65 St. Anne St., Quebec	Barraute Twp.
Terra Nova Properties Ltd.	Grand Falls, Newfoundland	Tiblenmont Twp.
Tetagouche Exploration Co. Ltd. ¹	360 Bay St., Toronto, Ontario	Gaspé
Three Brothers Mining Exploration Ltd.	360 Bay St., Toronto, Ontario	Compoite Twp.
Trade-Horn Limited	500-180 Bay St., Toronto, Ontario	Doyon Lake
Tribag Mining Co. Ltd.	2014-44 King St. W., Toronto, Ontario	Rouyn
Tri-Cor Mining Company Ltd.	608-80 Richmond St. W., Toronto, Ontario	Barraute Twp.
Triform Explorations Ltd.	100 Adelaide St. W., Toronto, Ontario	Barraute Twp.
Trinity Chibougamau Mines Ltd. ¹	403-62 Richmond St. W., Toronto, Ontario	Daniel Twp.
Unisphere Explorers Ltd. ¹	206-365 Bay St., Toronto, Ontario	Dufresnoy Twp.
United Buffadison Mines Ltd.	85 Richmond St. W., Toronto, Ontario	Duncan Lake
United New Fortune Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Fort MacKenzie
United Obalski Mining Co. Ltd. ¹	1155 Dorchester Blvd. W., Montreal	Clericy Twp.
Uranium Ridge Mines Ltd. ¹	418-25 Adelaide St. W., Toronto, Ontario	Dufresnoy Twp.
Utopia Gold Mines Ltd. ¹	305-100 Adelaide St. W., Toronto, Ontario	Godfrey Twp.
Valray Explorations Ltd. ¹	305-100 Adelaide St. W., Toronto, Ontario	Beauchastel Twp.
Vanguard Explorations Ltd.	725-132 St. James St. W., Montreal	Noranda
Vauze Mines Ltd. ¹	1606-4 King St. W., Toronto, Ontario	Noranda
Ventures Claims Ltd.	7 King St. E., Toronto, Ontario	Noranda
Virginia Mining Corp.	405-1410 Stanley St., Montreal	Mattagami
Waite Amulet Mines Ltd.	1100 Bank of Nova Scotia Bldg., Toronto, Ontario	Duprat Twp.
Waite Lake Mines Ltd. ¹	335 Bay St., Toronto, Ontario	Duprat Twp.
Watson Lake Mines Ltd. ¹	225-12 Richmond St. E., Toronto, Ontario	Watson Lake
Weedon Mining Corporation	302-215 St. James St. W., Montreal	Fontainebleau
Westfields Minerals Ltd.	3100-25 King St. W., Toronto, Ontario	Montbray Twp.
West Wasa Mines Ltd.	7 Adelaide St. E., Toronto, Ontario	Beauchastel Twp.
Ontario:		
Accra Explorations Ltd.	305-100 Adelaide St. W., Toronto	Robb Twp.
Aldage Mines Ltd. ¹	73 Adelaide St. W., Toronto	Cassells Twp.
Aumacho River Mines Ltd.	405-25 Adelaide St. W., Toronto	Cardiff Twp.
Big Nama Creek Mines Ltd. ¹	330 Bay St., Toronto	Manitouawadge
Chipman Lake Mines Ltd.	25 King St. W., Toronto	Kenora
Consolidated Golden Arrow Mines Ltd. ¹	25 Adelaide St. W., Toronto	Kenora
Coppercorp, Limited	405-25 Adelaide St. W., Toronto	Algoma
Ethel Copper Mines Ltd.	80 Richmond St. W., Toronto	Tudhope Twp.
Geco Mines Ltd. ¹	1715-44 King St. W., Toronto	Manitouawadge
Kam Kotia Porcupine Mines Ltd. ¹	25 Adelaide St. W., Toronto	Robb Twp.
Kenlew Mines Ltd. ¹	906-357 Bay St., Toronto	Pickle Crow
Kennco Explorations (Canada) Ltd. ¹	25 King St., Toronto	Manitouawadge
Kiro Explorations Ltd.	160 Bay St., Toronto	Robb Twp.
Kordol Explorations Ltd.	19 Melinda St., Toronto	Boston Creek
Lake Beaverhouse Mines Ltd.	1600-100 Adelaide St. W., Toronto	Larder Lake
Maple Bay Copper Mines Ltd. ¹	357 Bay St., Toronto	Godfrey Twp.
Maralgo Mines Ltd.	906-11 Adelaide St. W., Toronto	Strathy Twp.
Maybrun Mines Ltd.	305-100 Adelaide St. W., Toronto	Kenora
Mining Corp. of Canada, Ltd. ¹	44 King St. W., Toronto	Rainy River
Misema Lake Mining Corp. Ltd.	1112 Star Building, Toronto	Larder Lake
North Coldstream Copper Mines Ltd. ¹	44 King St. W., Toronto	Kashabowie
Pax International Mines Ltd.	607-80 Richmond St. W., Toronto	Matachewan
Poly Ores Mining Company Ltd.	62 Richmond St. W., Toronto	Spanish
Rio Algom Mines Ltd. (Pater Mine) ¹	335 Bay St., Toronto	Matachewan
St. Lucie Exploration Co. Ltd.	443 University Ave., Toronto	Tudhope Twp.
Shunsby Mines Ltd.	906-357 Bay St., Toronto	Cunniffham Twp.
Temagami Mining Company Ltd. ¹	1000-11 Adelaide St. W., Toronto	Temagami
Tribag Mining Co. Ltd. ¹	2014-44 King St. W., Toronto	Batchawana
Voyager Explorations Ltd. ¹	159 Bay St., Toronto	Temagami
Welsh, G.S.	62 Richmond St. W., Toronto	Matachewan
Manitoba:		
Canorama Explorations Ltd.	104-85 Richmond St. W., Toronto, Ontario	The Pas
Hudson Bay Exploration and Development Company Limited ¹	333 Broadway, Winnipeg	Various
Hudson Bay Mining & Smelting Company Ltd. ¹	4th Floor, 333 Broadway Ave., Winnipeg	Flin Flon, Schist Lake
Stall Lake Mines Ltd. ¹	2-193 Bannatyne Ave., Winnipeg	Stall Lake
Saskatchewan:		
Hudson Bay Mining & Smelting Co. Ltd. ¹	4th Floor, 333 Broadway Ave., Winnipeg, Manitoba	Flin Flon, Phil Lake

See footnote at end of list.

List of Operators of Gold Mines, 1963 - Concluded

Name	Head or executive office address	Location
(c) Copper-Gold-Silver Mines - Concluded		
British Columbia:		
Albeta Mines Ltd. ¹	Lake Cowichan	Lake Cowichan
Anaconda Company (Canada) Ltd. (The)	8th Ave., New Toronto, Ontario	Britannia Beach
Bayonne Mines Ltd. ¹	404-409 Granville St., Vancouver	Henderson Lake
Belle Tahsis Mines Ltd.	1161 Melville St., Vancouver	Tahsis
Bennett, R. (Copper Road Mine) ³	Heriot Bay, Quadra Island	Quadra Island
Bethlehem Copper Corp. Ltd. ³	355 Burrard St., Vancouver	Highland Valley
Cadamet Mines Ltd.	600-250 University Ave., Toronto, Ontario	Kamloops
Canam Copper Company Ltd. ³	405-25 Adelaide St. W., Toronto, Ontario	Hope
Coast Copper Company Limited	Trail	Port McNeill
Colonial Mines Ltd.	Box 4183 Vancouver	Pender Harbour
Consolidated Mining & Smelting Co. of Canada Ltd. ³	Trail, B.C.	Hope & Nanaimo
Consolidated Woodgreen Mines Ltd.	204-569 Howe St., Vancouver	Greenwood
Continental Consolidated Mines Ltd.	535 Howe St., Vancouver	Greenwood
Copper Mountain Mines Ltd.	1500 Marine Bldg., Vancouver	Deep Gulch
Copper Town Mines Ltd.	828-510 West Hastings St., Vancouver	Alberni
Cowichan Copper Co. Ltd. ³	620 Howe St., Vancouver	Lake Cowichan
Craigmont Mines Ltd. ³	700 Burrard Bldg., Vancouver	Merritt
Farwest Mining Ltd.	1075 Melville St., Vancouver	Kamloops
Fort Reliance Minerals Ltd.	3100-25 King St. W., Toronto, Ontario	Lamb Mountain
Friday Creek Development Co. Ltd. ³	1030 West Georgia St., Vancouver	Keremeos
Gabbro Copper Mines Ltd.	2256 W. 12th Ave., Vancouver	Jordan River
General Resources Ltd.	213-678 Howe St., Vancouver	Merritt
Granby Mining Company Ltd. (The)	1111 West Georgia St., Vancouver	Allenby
Granduc Mines Ltd. ³	744 W. Hastings St., Vancouver	Leduc Glacier
Geminder, Wilbur W.	Keremeos	Keremeos
H. & G. Mining Co.	Princeton	Princeton
Hanna Gold Mines Ltd.	401-470 Granville St., Vancouver	Cassiar
Holberg Mines Ltd.	103-709 Dunsmuir St., Vancouver	Holberg
Hurley River Mines Ltd. ³	535 Howe St., Vancouver	Nicola
Kennco Exploration (Western) Ltd. ³	1030 W. Georgia St., Vancouver	Stikine
Kennco Explorations (Western) Ltd.	1033 Georgia St. W., Vancouver	Skeena
Kie Mine Co. Ltd.	2412 Columbia St., Vancouver	Merritt
Johnsby Mines Ltd. ³	2200 Yonge St., Toronto, Ontario	Silverton
Kamloops Copper Co. Ltd.	105 Seymour St., Kamloops	Kamloops and Cariboo
Lytton Minerals Ltd. ³	624 Howe St., Vancouver	Kamloops
Mid-West Copper & Uranium Mines Ltd. ³	535 Howe St., Vancouver	Hope
Mining Corporation of Canada Ltd. (The) ³	44 King St. W., Toronto, Ontario	Fitzsimmons
Mixed Development Ltd. ³	850 W. Hastings St., Vancouver	Kamloops
Newconex Canadian Exploration Ltd. ³	525 Seymour St., Vancouver	Skeena
Newmont Mining Corp. of Can. Ltd. ³	211 Portage Ave., Winnipeg, Man.	Skeena
Noranda Exploration Co. Ltd.	2256 West 12th Ave., Vancouver	Vancouver Island
Northwest Ventures Ltd. ³	355 Burrard St., Vancouver	Various
Peel Resources Ltd. ³	230 W. Broadway, Vancouver	Merritt
Phelps Dodge Corp. of Canada Ltd. ³	55 Yonge St., Toronto, Ontario	Taseko Lake
Phoenix Copper Company Ltd. ³	1111 W. Georgia St., Vancouver	Grand Forks
Rio Tinto Canadian Exploration Ltd. ³	736 Bonville St., Vancouver	Kamloops
South Seas Mining Ltd. ³	1818-355 Burrard St., Vancouver	Kamloops
Stikine Copper Limited ³	1030 W. Georgia St., Vancouver	Galore Creek
Texada Mines Ltd.	Box 35, Nanaimo	Nanaimo
Texas Gulf Sulphur Co.	230 Park Ave., New York 17, N.Y., U.S.A.	Skeena
Toront Mines Ltd.	405-25 Adelaide St. W., Toronto, Ontario	Nicola Mining District
Torwest Resources Ltd.	400-837 W. Hastings St., Vancouver	Merritt
Utica Mines Ltd. ³	1030 W. Georgia St., Vancouver	Rossland
Velvet Leasers	Rossland	Trail
Western Mines Ltd. ³	801-850 W. Hastings St., Vancouver	Buttle Lake
Northwest Territories:		
Redstone Mines Ltd.	3100-25 King St. W., Toronto, Ontario	Redstone
Yukon:		
Dominion Explorers Ltd.	607-80 Richmond St. W., Toronto, Ontario	Kathleen Lake

¹ Establishment classified to the Placer Gold Mines Industry.² Establishment classified to the Gold Quartz Mines Industry.³ Establishment classified to the Copper-Gold-Silver Mines Industry.

Note: List includes some dormant properties.



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