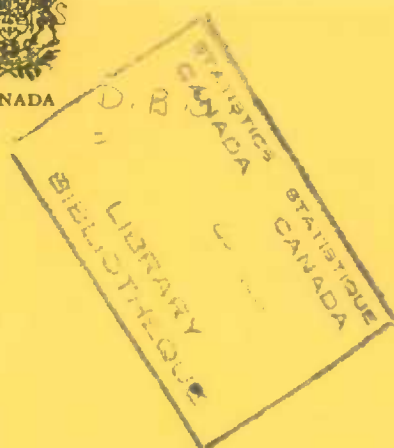


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# THE GOLD MINING INDUSTRY

## 1954

DOMINION BUREAU OF STATISTICS  
Industry and Merchandising Division  
Mineral Statistics Section

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DOMINION BUREAU OF STATISTICS

Industry and Merchandising Division

Mineral Statistics Section

# THE GOLD MINING INDUSTRY

1954



*Published by Authority of*

The Right Honourable C. D. Howe, Minister of Trade and Commerce

## NOTICE

The annual reports prepared by the Industry and Merchandising Division of the Bureau of Statistics are divided into 3 volumes, as follows: **Volume I** - The Primary Industries, including mining, forestry and fisheries; **Volume II** - Manufacturing; **Volume III** - Merchandising and Services. The volumes are made up of parts, and the parts in turn are subdivided according to the industries which they comprise.

Volume I consists of the following parts:

Part I - Mineral Statistics

Part II - Forestry Statistics - Operations in the Woods

Part III - Fisheries Statistics

Part I includes the following reports which constitute the complete series on Mineral Statistics of Canada. Individual reports are issued as the information becomes available; they are arranged in a form suitable for binding.

- A - General Review of the Mining Industry, 50¢
- B - The Gold Mining Industry, 50¢
- C - The Silver-Lead-Zinc Mining Industry, 25¢
- D - The Nickel-Copper Mining, Smelting and Refining Industry, 25¢
- E - The Miscellaneous Metal Mining Industry, 25¢
- F - The Smelting and Refining Industry, 25¢
- G - The Coal Mining Industry, \$1.00
- H - The Crude Petroleum and Natural Gas Industry, 25¢
- I - The Asbestos Mining Industry, 25¢
- J - The Feldspar and Quartz Mining Industry, 25¢
- K - The Gypsum Industry, 25¢
- L - The Peat Industry, 25¢
- M - The Salt Industry, 25¢
- N - The Talc and Soapstone Industry, 25¢
- O - The Miscellaneous Non-metal Mining Industry, 25¢
- P - The Cement Manufacturing Industry, 25¢
- Q - The Clay and Clay Products Industry, 25¢
- R - The Lime Industry, 25¢
- S - The Sand and Gravel Industry, 25¢
- T - The Stone Industry, 25¢
- U - Contract Drilling in the Mining Industry, 25¢

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# THE GOLD MINING INDUSTRY

1954

Including: (a) The Alluvial Gold Mining Industry  
(b) The Auriferous Quartz Mining Industry  
(c) The Copper-Gold-Silver Mining Industry

**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 "The Alluvial Gold Mining Industry"; (b) the recovery of lode gold, which is designated "The Auriferous Quartz Mining Industry", 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 Mining Industry" is included here to complete a comprehensive survey of Canadian gold production.

During 1954 the production of gold amounted to 4,366,440 troy ounces valued at \$148,764,611 compared with 4,055,723 ounces valued at \$139,597,985 in 1953. 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 54 per cent of the total. Quebec, in second position, produced 25 per cent and Northwest Territories accounted for 7 per cent of the total. The other provinces ranked in the following order: British Columbia, Manitoba, Saskatchewan, Yukon, Newfoundland, Nova Scotia and Alberta.

The price of gold in Canadian funds averaged \$34.07 per troy ounce. It ranged from \$34.49 per troy ounce in May, 1954, to \$33.85 per troy ounce at the end of the year. 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 was quoted at a discount throughout the year.

Many of the labour strikes in the Ontario gold mines and Quebec base metal mines were settled toward the end of 1953, but some continued into 1954. As the mines were operating over a longer period of time in 1954 than in the preceding year, the quantity of gold produced was greater.

The assistance, which was payable to the gold mines through the Emergency Gold Mining Assistance Act, was approximately \$15,582,000 in 1954 compared with \$14,648,615 in 1953.



## MINERAL STATISTICS

TABLE 1. Production of Gold, Fifty Years, 1905-1954

Year	Fine ounces	\$	Year	Fine ounces	\$
1905.....	684,951	14,159,195	1930.....	2,102,068	43,453,901
1906.....	556,415	11,502,120	1931.....	2,693,892	58,093,396
1907.....	405,517	8,382,780	1932.....	3,044,387	71,479,373
1908.....	476,112	9,842,105	1933.....	2,949,309	84,350,237
1909.....	453,865	9,382,230	1934.....	2,972,074	102,536,553
1910.....	493,707	10,205,835	1935.....	3,284,890	115,595,279
1911.....	473,159	9,781,077	1936.....	3,748,028	131,293,421
1912.....	611,885	12,548,794	1937.....	4,096,213	143,326,493
1913.....	802,973	16,598,923	1938.....	4,725,117	166,205,990
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.....	699,661	14,463,689	1943.....	3,651,301	140,575,088
1919.....	756,764	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	39,851,663	1954.....	4,366,440	148,764,611

TABLE 2. Total (Cumulative) Recorded Production of Specified Metals to December 31, 1954

	Since		Quantity	Value
				\$
Gold.....	1858	troy ounces	130,278,248	4,034,219,165
Silver.....	1887	"	1,083,649,194	656,707,091
Copper.....	1886	tons	7,360,871	2,292,139,191
Nickel.....	1889	"	3,495,788	2,256,215,007
Lead.....	1887	"	6,027,611	833,823,699
Zinc.....	1898	—	...	1,088,238,644
Cobalt.....	1904	tons	22,017	53,688,049

TABLE 3. Production of Gold from Auriferous Quartz and Base Metal Mines, by Months, 1932-34

	Gold production from base metal mines			Gold production from auriferous quartz mines and placer deposits			Gold production from all types of mines		
	1932	1933	1934	1932	1933	1934	1932	1933	1934
	Troy ounces			Troy ounces			Troy ounces		
January.....	46,268	47,907	19,330	307,305	322,225	274,670	353,573	370,132	294,000
February.....	45,587	42,660	24,940	306,339	309,151	286,713	351,926	351,811	311,653
March.....	43,692	52,238	43,042	321,281	325,799	326,307	364,973	378,037	369,350
April.....	43,785	47,492	43,903	319,590	321,117	313,936	363,375	368,609	357,839
May.....	42,000	47,740	52,086	324,169	319,710	331,470	366,169	367,450	383,556
June.....	46,055	47,737	52,890	313,757	313,460	324,384	359,812	361,197	377,274
July.....	43,086	49,346	54,933	330,951	317,859	325,952	374,037	367,205	380,885
August.....	47,407	37,566	52,433	324,419	290,114	317,001	371,826	327,680	369,434
September.....	51,617	35,210	49,383	330,560	298,377	324,427	382,177	333,587	373,810
October.....	47,950	21,315	47,766	355,582	262,633	331,121	403,532	283,948	378,887
November.....	47,373	21,705	49,263	341,173	250,684	336,087	388,546	272,389	385,350
December.....	50,315	17,775	47,944	341,464	255,903	336,458	391,779	273,678	384,402
Total.....	555,135	468,691	537,914	3,916,590	3,587,032	3,828,526	4,471,725	4,055,723	4,366,440



TABLE 4. Production of Gold<sup>1</sup>, by Provinces, 1945-1954

Year	Newfoundland		Nova Scotia		Quebec		Ontario		Manitoba	
	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$
1945			3,291	126,704	661,608	25,471,908	1,625,368	62,576,668	70,655	2,720,218
1946			4,321	158,797	618,339	22,723,958	1,813,333	66,639,988	79,402	2,918,024
1947			1,271	44,485	598,127	20,934,445	1,944,819	68,068,665	72,906	2,551,710
1948	2		188	6,580	770,625	26,971,875	2,095,377	73,338,195	106,176	3,716,160
1949	9,269	333,684	64	2,304	964,184	34,710,824	2,354,509	84,762,324	137,399	4,946,364
1950	9,254	352,115	65	2,473	1,094,645	41,651,242	2,481,110	94,406,236	191,725	7,295,136
1951	8,515	313,778	17	626	1,067,306	39,330,226	2,463,179	90,768,146	163,914	6,040,231
1952	8,595	294,551	1,433	49,109	1,113,204	38,149,501	2,513,691	86,144,910	141,947	4,864,524
1953	7,654	263,451	3,248	111,796	1,021,698	35,166,845	2,182,437	75,119,481	131,309	4,519,656
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
	Saskatchewan		Alberta		British Columbia		North west Territories		Yukon	
	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$
1945	108,568	4,179,868	7	269	186,854	7,193,879	8,655	333,218	31,721	1,221,258
1946	112,101	4,119,712	110	4,042	136,242	5,006,893	23,420	860,685	45,286	1,664,260
1947	93,747	3,281,145	78	2,730	249,011	8,715,385	62,517	2,188,095	47,745	1,671,075
1948	87,927	3,077,445	78	2,730	306,998	10,744,930	101,625	3,556,875	60,614	2,121,490
1949	94,208	3,391,488	115	4,140	304,307	10,955,052	177,493	6,389,748	81,970	2,950,920
1950	79,784	3,035,781	152	5,784	290,490	11,053,144	200,663	7,635,227	93,339	3,551,549
1951	110,216	4,061,460	97	3,574	289,992	10,685,205	212,211	7,819,975	77,504	2,856,022
1952	93,585	3,207,158	111	3,804	273,059	9,357,732	247,581	8,484,501	78,519	2,690,846
1953	88,327	3,040,215	65	2,237	264,976	9,120,474	289,929	9,979,356	66,080	2,274,474
1954	101,785	3,467,815	195	6,644	268,508	9,148,068	308,563	10,512,741	82,208	2,800,826

1. From all sources.

2. Newfoundland joined confederation in 1949.

TABLE 5. Production of Gold, by Provinces, According to Nature of Ores, 1953 and 1954

Year and province	Placer gold	Auriferous quartz ores	Copper-gold-silver ores	Nickel-copper ores	Silver-lead and other ores	Total
Troy ounces						
1953						
Newfoundland	—	—	—	—	7,654	7,654
Nova Scotia	—	17	—	—	3,231	3,248
Quebec	—	764,703	236,722	—	20,273	1,021,698
Ontario	—	2,142,463	227	39,726	21	2,182,437
Manitoba	—	108,370	22,926	13	—	131,309
Saskatchewan	—	—	88,327	—	—	88,327
Alberta	65	—	—	—	—	65
British Columbia	11,360	204,045	22,796	—	26,775	264,976
Northwest Territories	—	289,929	—	—	—	289,929
Yukon	66,080	—	—	—	—	66,080
Canada	77,505	3,509,527	370,998	39,739	57,954	4,055,723
1954						
Newfoundland	—	—	—	—	6,528	6,528
Nova Scotia	—	182	—	—	3,572	3,754
Quebec	16	792,449	284,739	—	21,366	1,098,570
Ontario	—	2,315,211	439	45,735	—	2,361,385
Manitoba	—	111,648	22,623	673	—	134,944
Saskatchewan	1	—	101,784	—	—	101,785
Alberta	195	—	—	—	—	195
British Columbia	7,105	210,948	19,980	—	30,475	268,508
Northwest Territories	46	308,517	—	—	—	308,563
Yukon	82,208	—	—	—	—	82,208
Canada	89,571	3,738,953	429,565	46,408	61,941	4,366,440

TABLE 6. Gold Production by Provinces and Principal Areas, 1932-1934

Province and area	1952		1953		1954	
	Troy ounces	\$	Troy ounces	\$	Troy ounces	\$
Newfoundland .....	8,595	294,551	7,654	263,451	6,528	222,409
Nova Scotia .....	1,433	49,109	3,248	111,796	3,754	127,899
Quebec:						
Gold mines .....	771,795	26,449,415	764,703	26,321,077	792,465	26,999,283
Base metal mines .....	341,409	11,700,086	256,995	8,845,768	306,105	10,428,997
<b>Total Quebec .....</b>	<b>1,113,204</b>	<b>38,149,501</b>	<b>1,021,698</b>	<b>35,166,845</b>	<b>1,098,570</b>	<b>37,428,280</b>
Ontario:						
Gold mines:						
Porcupine .....	1,163,344	39,867,799	876,814	30,179,938	1,038,919	35,395,970
Kirkland Lake .....	417,382	14,303,681	404,901	13,936,692	392,787	13,382,253
Larder Lake .....	366,046	12,544,396	334,247	11,504,782	363,139	12,372,146
Matachewan .....	40,144	1,375,735	31,173	1,072,975	30,671	1,044,961
Sudbury .....	40,837	1,399,484	41,265	1,420,341	42,728	1,455,743
Thunder Bay .....	120,051	4,114,148	113,713	3,914,001	96,365	3,283,156
Patricia .....	321,763	11,026,818	340,113	11,706,690	350,576	11,944,124
Other mines .....	44,124	1,512,129	40,211	1,384,062	46,200	1,574,034
<b>Total Ontario .....</b>	<b>2,513,691</b>	<b>86,144,190</b>	<b>2,182,437</b>	<b>75,119,481</b>	<b>2,361,385</b>	<b>80,452,387</b>
Manitoba:						
Gold mines .....	118,214	4,051,194	108,370	3,730,096	111,648	3,803,847
Other mines .....	23,733	813,330	22,939	789,560	23,296	793,695
<b>Total Manitoba .....</b>	<b>141,947</b>	<b>4,864,524</b>	<b>131,309</b>	<b>4,519,656</b>	<b>134,944</b>	<b>4,597,542</b>
Saskatchewan:						
Gold mines .....	2	69	—	—	1	34
Other mines .....	93,583	3,207,089	88,327	3,040,215	101,784	3,467,781
<b>Total Saskatchewan .....</b>	<b>93,585</b>	<b>3,207,158</b>	<b>88,327</b>	<b>3,040,215</b>	<b>101,785</b>	<b>3,467,815</b>
Alberta (placer) .....	111	3,804	65	2,237	195	6,644
British Columbia:						
Gold mines (lode) .....	216,652	7,424,664	204,045	7,023,229	210,948	7,186,993
Gold mines (placer) .....	14,172	485,675	11,360	391,011	7,105	242,068
Other mines .....	42,235	1,447,393	49,571	1,706,234	50,455	1,719,002
<b>Total British Columbia .....</b>	<b>273,059</b>	<b>9,357,732</b>	<b>264,976</b>	<b>9,120,474</b>	<b>268,508</b>	<b>9,148,068</b>
Northwest Territories:						
Gold mines and placer .....	247,581	8,484,601	289,929	9,979,356	308,563	10,512,741
Yukon (chiefly placer) .....	78,519	2,690,846	66,080	2,274,474	82,208	2,800,826
<b>Total Canada .....</b>	<b>4,471,725</b>	<b>153,246,016</b>	<b>4,055,723</b>	<b>139,597,985</b>	<b>4,366,440</b>	<b>148,764,611</b>

TABLE 7. Production of Gold and Silver by Principal Mines, 1954

Mine and province	Ore hoisted	Material sorted (discarded)	Ore treated	Gold produced	Silver produced	Mill capacity—24 hours	See foot-notes
	Tons			Troy ounces		Tons	
NEWFOUNDLAND:							
Base metal ores .....	—	—	—	6,528	742,120	—	—
NOVA SCOTIA:							
Base metal ores and Mint receipts .....	—	—	—	3,754	262,361	—	—
QUEBEC:							
Bellevue .....	132,321	...	132,005	34,915	3,762	350	1
Bevcourt .....	262,457	...	263,947	34,250	13,075	800	1
Barnat .....	216,893	...	216,368	54,707	3,709	600	1
Beattie-Duquesne .....	612,200	...	612,200	52,039	22,782	1,800	1
Canadian Malartic .....	472,802	...	472,802	45,755	17,031	1,300	1
Donalda .....	155,761	35,440	119,917	20,599	19,992	300	1
East Malartic .....	525,516	...	525,516	83,772	13,964	1,500	1
Elder .....	133,834	...	...	24,589	...	...	2
Lamaque .....	735,695	...	735,695	130,518	23,054	2,000	1
Malartic Goldfields .....	671,811	...	671,811	117,981	6,665	1,500	1
New Senator-Rouyn .....	108,028	...	108,028	9,451	3,445	600	1
O'Brien .....	69,347	...	69,341	26,792	1,697	200	1, 3
Powell Rouyn .....	133,230	...	...	15,746	...	...	2
Sigma .....	407,609	...	407,609	75,465	14,725	1,100	1
Stadacona .....	142,430	...	142,430	22,531	8,374	400	1
Sullivan Consolidated .....	215,824	34,862	180,962	42,294	10,201	500	1
<b>Total for principal gold mines in Quebec .....</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>791,404</b>	<b>162,476</b>	<b>—</b>	<b>—</b>
Copper-gold and other ores .....	—	—	—	307,166	4,744,828	—	—
<b>Total Quebec .....</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,098,570</b>	<b>4,807,304</b>	<b>—</b>	<b>—</b>

TABLE 7. Production of Gold and Silver by Principal Mines, 1954 - Concluded

Mine and province	Ore hoisted	Material sorted (discarded)	Ore treated	Gold produced	Silver produced	Mill capacity—24 hours	See foot-notes
		Tons		Troy ounces		Tons	
<b>ONTARIO:</b>							
<i>Porcupine District</i>							
Aunor .....	167,388	—	167,388	62,361	4,531	300	1
Bonwhit .....	61,716	—	—	20,860	—	—	4
Brouan Reef .....	90,991	—	202,829	16,684	2,951	700	1
Coniaurum .....	118,180	—	118,180	28,160	4,981	500	1
Delnite .....	144,504	—	144,431	38,052	2,864	520	1
Dome .....	697,600	—	697,600	171,399	34,604	1,950	1, 3
Hallnor .....	119,680	—	119,630	43,410	5,355	400	1
Hollinger-(Timmins) .....	1,067,954	—	1,069,689	303,638	52,103	3,900	1
Hollinger-(Ross) .....	112,751	—	112,728	20,409	41,293	300	1
Hugh-Pam .....	61,562	—	—	10,543	—	—	4
McIntyre .....	750,570	—	750,570	203,554	41,050	2,400	1
Pamour .....	637,012	—	637,012	55,565	5,054	1,745	1
Paymaster .....	30,726	—	28,136	5,705	1,130	600	1
Preston East Dome .....	211,112	—	209,510	58,186	6,754	800	1, 3
<i>Kirkland Lake District</i>							
Kirkland Lake Gold .....	117,137	--	117,137	39,572	3,489	400	1
Lake Shore .....	252,455	--	252,455	85,212	28,279	1,500	1
Macassa .....	145,286	--	145,286	50,356	6,665	400	1
Sylvanite .....	171,572	--	171,854	53,717	10,649	600	1
Teck Hughes .....	237,174	--	237,050	37,529	6,779	650	1
Upper Canada .....	196,978	--	196,978	46,987	21,436	550	1
Wright-Hargreaves .....	193,900	--	193,900	79,404	13,501	750	1
<i>Larder Lake District</i>							
Kerr Addison .....	1,658,293	—	1,659,298	355,473	20,119	4,000	1
<i>Matachewan District</i>							
Young Davidson .....	312,791	--	312,217	30,224	9,865	1,050	1
<i>Sudbury District</i>							
Renabie .....	167,257	—	166,982	42,728	13,020	450	1
<i>Thunder Bay District</i>							
Letch .....	51,632	10,700	39,205	33,607	1,082	120	1, 3
MacLeod-Cockshutt .....	556,525	—	553,400	61,397	6,624	1,500	1
<i>Patricia District</i>							
Campbell Red Lake .....	227,804	32,463	196,059	101,270	7,159	600	1, 3
Dechenour Williams .....	96,286	30,241	66,045	24,769	910	—	1
Jensen Red Lake .....	289,246	—	286,246	82,344	17,165	800	1, 3
MacKenzie Red Lake .....	84,260	11,352	72,908	17,321	8,296	240	1
Now Dickenson .....	131,422	—	131,554	63,531	4,487	360	1, 3
Pickle Crow .....	112,282	966	110,711	46,705	6,010	400	1, 3
Starratt Olson .....	98,898	—	99,375	14,636	2,379	500	1
Total for principal gold mines in Ontario .....	—	—	—	2,305,310	390,584	—	—
Nickel-copper and other mines .....	—	—	—	56,075	5,053,137	—	—
Total Ontario .....	—	—	—	2,361,385	5,443,721	—	—
<b>MANITOBA:</b>							
Forty-Four Mines Ltd. ....	18,204	—	—	3,808	—	—	6
Howe Sound .....	540,031	—	540,031	67,661	3,897	2,000	1
San Antonio .....	162,395	—	162,395	40,060	7,187	550	1, 3
Copper-gold and other ores .....	—	—	—	23,415	400,041	—	—
Total Manitoba .....	—	—	—	134,944	411,125	—	—
<b>SASKATCHEWAN:</b>							
Copper-gold and alluvial ores .....	—	—	—	101,785	1,474,370	—	—
<b>ALBERTA:</b>							
Alluvial gold .....	—	—	—	195	18	—	—
<b>BRITISH COLUMBIA:</b>							
Bralorne .....	181,494	—	181,494	65,221	14,563	500	3
Cariboo Gold Quartz .....	86,751	—	86,751	35,223	3,012	375	1
Island Mountain .....	30,584	—	30,584	12,918	1,629	150	1
Kelowna Mines Hedley (French and Nickel Plate) .....	130,995	—	130,995	50,907	4,751	350	3
Pioneer .....	97,129	11,628	85,501	46,486	9,661	325	1
Total for principal gold mines in British Columbia ..	—	—	—	210,755	33,616	—	—
Placer gold .....	—	—	—	7,105	1,250	—	—
Copper-gold and other ores .....	—	—	—	50,648	10,790,748	—	—
Total British Columbia .....	—	—	—	268,508	10,825,614	—	—
<b>NORTHWEST TERRITORIES:</b>							
Consolidated Mining and Smelting (Con Mine) .....	160,907	—	160,907	79,121	24,053	450	1, 3
Consolidated Mining and Smelting (Rycon Mine) .....	5,430	—	5,430	2,188	665	—	5
Consolidated Discovery Yellowknife .....	37,389	2,467	34,922	56,370	5,631	100	1, 3
Giant Yellowknife .....	345,974	65,174	281,209	170,838	28,681	825	1, 3
Other ores .....	—	—	—	46	7	—	—
Total Northwest Territories .....	—	—	—	308,563	59,037	—	—
<b>YUKON:</b>							
Placer and silver-lead ores .....	—	—	—	82,208	6,992,279	—	—
Total Canada .....	—	—	—	4,366,440	31,117,949	—	—

1. Cyanidation.
2. Shipped to smelter.
3. Amalgamation process.
4. Shipped to Brouan Reef mill.
5. Treated at Con mill.
6. Treated at San Antonio mill.



TABLE 8. Gold Production of the World<sup>1</sup> - 1950-1954 (Taken from the Annual Report of the American Bureau of Metal Statistics)

Country	1950	1951	1952	1953	1954
	Fine ounces				
North America:					
United States.....	2,375,130	1,996,493	1,937,818	1,990,149	1,867,296
Canada.....	4,441,227	4,392,751	4,471,725	4,055,723	4,366,506
Mexico.....	408,112	393,420	459,391	458,808	386,925
<b>Total North America.....</b>	<b>7,224,469</b>	<b>6,782,664</b>	<b>6,868,934</b>	<b>6,504,680</b>	<b>6,620,727</b>
Central America and West Indies.....	303,800	313,600	315,500	325,400	
South America:					
Brazil <sup>3</sup> .....	131,207	135,837	136,764	115,869	119,984
British Guiana.....	13,740	14,689	24,223	20,966	26,938
Chile.....	185,538	174,864	177,050	130,690	124,967
Colombia.....	379,412	430,723	422,240	436,045	377,467
Ecuador.....	91,946	12,683	24,267	29,239	16,900
French Guiana.....	12,249	12,056	8,231	2,576	
Peru.....	147,968	158,270	130,944	128,211	147,278
Surinam.....	4,546	6,494	6,134	6,482	6,780
Venezuela.....	34,462	2,861	4,797	27,304	56,074
<b>Total South America, as reported.....</b>	<b>1,001,068</b>	<b>948,477</b>	<b>934,650</b>	<b>897,382</b>	
Europe.....	400,000	300,000	300,000	300,000	
Australia:					
New South Wales.....	51,350	48,910	39,030	26,461	31,427
Queensland.....	88,249	78,580	85,756	91,887	97,338
Victoria.....	67,826	66,063	66,777	63,917	52,702
Western Australia.....	610,333	648,245	727,469	823,062	861,745
Tasmania.....	15,578	14,446	10,072	16,988	19,215
Other Australia.....	36,201	39,307	45,331	52,866	53,706
<b>Total Australia (Commonwealth).....</b>	<b>869,537</b>	<b>895,551</b>	<b>980,435</b>	<b>1,075,181</b>	<b>1,116,133</b>
New Guinea.....	80,099	94,082	127,431	120,787	86,728
New Zealand.....	76,527	75,115	59,373	38,656	41,713
Fiji.....	103,421	93,635	78,282	80,500	
<b>Total Oceania.....</b>	<b>260,047</b>	<b>262,832</b>	<b>265,086</b>	<b>239,943</b>	
Asia:					
India.....	196,848	226,233	253,264	223,013	240,712
Japan.....	135,033	177,472	201,392	256,590	253,933
Korea, Republic of.....	5,144	1,000	15,657	15,860	52,250
Philippines Republic.....	333,991	393,602	469,408	480,625	416,052
Saudi Arabia.....	66,202	73,104	69,394	81,566	128
Taiwan (Formosa).....	18,232	30,500	33,178	24,821	21,541
<b>Total Asia.....</b>	<b>755,450</b>	<b>901,911</b>	<b>1,042,293</b>	<b>1,082,475</b>	<b>984,616</b>
Africa:					
Bechuanaland.....	261	493	1,245	1,109	
Belgian Congo.....	339,408	352,302	368,749	371,011	366,175
Ethiopia.....	43,524	33,938	27,291	26,696	
French Cameroons.....	7,169	5,420	2,604	1,029	685
French Equatorial Africa.....	54,996	52,848	51,504	54,173	45,305
Gold Coast.....	689,441	698,676	691,460	730,936	787,057
Kenya.....	22,945	19,765	10,210	9,590	6,607
Liberia.....	11,025	9,806	9,949	863	1,135
Madagascar.....	1,935	1,961	1,768	1,640	1,363
Nigeria.....	2,238	1,566	1,349	861	
Sierra Leone.....	3,484	3,292	2,591	3,585	286
Southern Rhodesia.....	511,163	486,907	496,731	501,057	535,852
Tanganyika (exports).....	65,127	65,583	64,693	69,886	72,212
Uganda.....	586	223	181	572	568
Union of South Africa.....	11,663,713	11,516,450	11,818,681	11,939,593	13,227,847
<b>Total Africa, as reported.....</b>	<b>13,417,015</b>	<b>13,248,230</b>	<b>13,540,006</b>	<b>13,712,601</b>	
Russia <sup>4</sup> .....	8,000,000	9,500,000	9,500,000	9,000,000	
<b>Total World, as reported.....</b>	<b>32,231,386</b>	<b>33,153,265</b>	<b>33,746,904</b>	<b>33,137,662</b>	
<b>Estimated World Total<sup>2</sup>.....</b>	<b>32,700,000</b>	<b>33,500,000</b>	<b>34,200,000</b>	<b>33,500,000</b>	

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. This estimate includes the following countries which also produce gold: Angola, Argentina, Austria, Bolivia, Bulgaria, Burma, China, Czechoslovakia, Egypt, Sarawak, South West Africa, Sudan and Thailand, from whom definitive figures are not available.

3. Mined gold only; production of alluvial gold unknown.

4. Conjectural.

TABLE 9. Gold Production According to Method of Computation and Recovery, 1945-1954

Year	In alluvial gold	In crude gold bullion produced at mines <sup>1</sup>	In base bullion produced at lead smelters	In blister and anode copper produced <sup>2</sup>	In ores, matte, slags, etc., exported	Total gold produced
	%	%	%	%	%	Fine ounces
1945 .....	1.55	76.77	0.09	15.30	6.29	2,696,727
1946 .....	2.15	80.91	0.16	13.48	3.30	2,832,554
1947 .....	1.74	84.4	0.15	9.41	4.3	3,070,221
1948 .....	2.23	83.19	0.22	10.01	4.35	3,529,608
1949 .....	2.35	83.94	0.23	9.71	3.77	4,123,518
1950 .....	2.43	81.51	0.38	12.26	3.42	4,441,227
1951 .....	2.19	81.86	0.33	12.20	3.42	4,392,751
1952 .....	2.08	83.22	0.39	11.37	2.94	4,471,725
1953 .....	1.91	84.11	0.25	9.77	3.96	4,055,723
1954 .....	2.05	83.14	0.34	11.18	3.29	4,366,440

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 10. Estimated Average Monthly Value of an Ounce of Fine Gold, Expressed in Canadian Funds, 1939-1954

Month	1939	1940-1945	1946	1947-1948	1949 <sup>1</sup>	1950	1951	1952	1953	1954
	Dollars									
January .....	35.30	38.50	38.50	35.00	35.00	38.50	36.81	35.19	33.97	34.05
February .....	35.19	38.50	38.50	35.00	35.00	38.50	36.73	35.03	34.20	33.83
March .....	35.13	38.50	38.50	35.00	35.00	38.50	36.65	34.85	34.44	33.98
April .....	35.13	38.50	38.50	35.00	35.00	38.50	37.07	34.34	34.43	34.39
May .....	35.13	38.50	38.50	35.00	35.00	38.50	37.25	34.43	34.79	34.45
June .....	35.07	38.50	38.50	35.00	35.00	38.50	37.42	34.26	34.80	34.34
July .....	35.06	38.50	35.35	35.00	35.00	38.50	37.12	33.93	34.72	34.10
August .....	35.01	38.50	35.00	35.00	35.00	38.50	36.96	33.65	34.59	33.96
September .....	37.21	38.50	35.00	35.00	36.52	38.50	36.94	33.59	34.45	33.94
October .....	38.43	38.50	35.00	35.00	38.50	36.86	36.78	33.75	34.39	33.94
November .....	38.50	38.50	35.00	35.00	38.50	36.43	36.53	34.17	34.22	33.93
December .....	38.50	38.50	35.00	35.00	38.50	36.83	35.89	33.97	34.06	33.88
Yearly average .....	36.14	38.50	36.75	35.00	36.00	38.05	36.85	34.27	34.42	34.07

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

TABLE 11. Precious Metals Consumed by the Jewellery and Silverware Industry, 1950-1953

Material	Cost at works			
	1950	1951	1952	1953
	\$	\$	\$	\$
Fine gold .....	8,912,334	7,999,071	4,016,040	4,430,535
Gold alloys .....	1,112,829	724,585	1,117,833	1,332,022
Fine silver .....	4,403,015	4,222,994	2,986,857	3,356,649
Silver alloys and sterling .....	3,509,982	3,731,996	2,637,240	3,342,133
Platinum .....	523,275	909,699	710,611	1,142,002
Old gold, jewellers' findings, waste and scrap refining .....	2,023,129	2,475,768	1,910,567	2,303,876
Gold-filled wire and stock .....	210,835	152,601	310,413	223,856
Precious and semi-precious stones .....	2,372,374	2,155,727	2,478,179	3,065,499

## 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 the Year 1954-1955

The operation of The Emergency Gold Mining Assistance Act terminated on December 31, 1953. At that time a review of the conditions facing the gold mining industry indicated that it would be advisable to extend the Act for the year 1954.

Legislation was presented to Parliament early in 1954 to implement this decision and by Chapter 26, 2-3 Elizabeth II, 1953-54, which received Royal Assent on March 31, 1954, this Act was made applicable to the calendar year 1954. The method of calculating assistance payable for that year remained the same as the previous year; however, certain modifications to the Regulations were introduced by Order in Council P.C. 1954-379, dated March 19, 1954. The Regulations, and the amendments thereto, were consolidated and published by Order in Council P.C. 1954-863, of June 10, 1954.

Applications for assistance were received from 61 gold mines in respect of gold produced and sold during the calendar year 1954. These comprise most of the lode gold mines that will apply for assistance for 1954. Only four applications have been received from placer mines and it is estimated that an additional 25 of these mines will apply for assistance by the end of June, 1955, the expiry date for applications for 1954.

The estimated total assistance payable in respect of gold produced and sold during 1954 is \$16,500,000. The actual assistance paid in respect of the applications received to March 31, 1955, amounts to \$12,457,928.74, which is 80 per cent of the assistance payable. The remaining 20 per cent is payable when the books of the companies have been audited by the Cost Inspection and Audit Division of the Office of the Comptroller of the Treasury.

The final audit for the calendar year 1953 was completed and the holdbacks payable in respect of production in that year were paid in full. A number of the gold mines in northern Ontario remained on strike for various periods after the commencement of the year. By mid March, 1954, all mines on strike during 1953 had resumed operations. Notwithstanding the lost production from these mines, the figures indicate that the production upon which assistance payments will be based will be greater in 1954 than any of the three preceding years. This increase is attributed primarily to the fact that the five mines which sold their production on the free market during 1953 elected to sell their gold to the Royal Canadian Mint in 1954 and therefore became eligible for assistance under the Act.

During 1954 only one lode gold mine suspended operations; however, this property was purchased by an adjacent gold mining company and the two

properties consolidated. One lode mine which had voluntarily suspended operations during 1953 reopened in 1954. No new mines came into production in 1954. However, one new lode gold mine was declared to have commenced production for the purposes of this Act in January, 1955.

The industry continued to face difficult economic problems. Most of the mines continued to maintain a reasonably consistent cost of production. Where production costs have increased the mines have undertaken exploration and development programmes to insure sufficient ore reserves to continue operations. The Canadian dollar was relatively stable in relation to the United States dollar and as a result the mines received a reasonably constant price for each ounce of gold sold to the Royal Canadian Mint. The price paid by the Mint for each ounce of gold purchased was the equivalent in Canadian dollars to 35 United States dollars. Due to the differential in the exchange rate, the average price received by the operators per ounce of gold sold to the Mint during 1954 was \$34.07.

The Federal Government, as a result of a survey conducted toward the end of 1954, proposed to extend this Act for a further period of two years and legislation has been submitted to Parliament to carry out this decision. The assistance payments will continue for the calendar years 1955 and 1956, in accordance with a modified formula whereby the total assistance payable to the industry will be reduced by approximately one-third.

## Method of Calculating Assistance Payments for the Calendar Year 1954

A mine to be classified as a gold mine within the meaning of this Act and thereby become eligible for assistance must fulfil the following conditions:

- (a) The value of the gold produced must be 70 per cent or more of the total value of the output of the mine.
- (b) The mine or operation must produce at least 50 troy ounces of gold in a designated year.
- (c) 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.
- (d) In the case of new mines, they must be declared in production within the meaning of Section 83(5) of the Income Tax Act.

The basic factors affecting the amount of assistance payable are the costs of production and the number of ounces produced. For the purposes of this 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 in respect of depreciation, amortization, pre-production costs,



deferred development expenditures, and costs of exploration and development, as determined in accordance with the Regulations.

The assistance payable to a mine in respect of gold produced and sold in a designated year is the product of the "rate of assistance" and the "assistance ounces". The factor "rate of assistance" applied during the designated year 1954 was 50 per cent of the amount by which the average cost of production of an ounce of gold exceeded \$18.00, the maximum "rate of assistance" being \$13.50.

The term "assistance ounces" applied in the assistance calculations for the designated year 1954 was defined as the number of ounces by which the ounces of gold produced and sold by the mine in the year exceeded one-half of the number of ounces produced and sold in the base year.

The expression "base year" in the case of mines which came into production prior to January 1, 1950, means one of the calendar years 1948, 1949 or 1950, as the operator may elect, provided (a) the mine came into production on or before the 1st day of January in the year elected; and (b) the normal operation of the mine was not suspended for more than 6 months in the year elected. Where none of those calendar years can be so elected the base year would be the period of 12 months following the 1st day of July, 1950, in which the mine was in normal operation for more than 6 months. In the case of a mine which commenced production after the 1st day of January, 1950, the base year means the first year of production. Section 83(5) of the Income Tax Act determines the date when a new mine is deemed to have come into production and the first year of production is the period of 12 months immediately following that date.

The assistance payable to a new mine is the product of the rate of assistance and every ounce of gold produced and sold during its first year of production. When, owing to causes beyond the control of the mine operator, the number of ounces produced in a designated year, that does not include any part of the first year of production, is less than the number of ounces produced in the base year, the rate of assistance is applicable to one-half of the number of ounces produced and sold by the operator during the said designated year.

#### Sale of Gold on the Premium Market

The Mint Custom Refining and Storing Regulations, as prescribed by Order in Council P.C. 1953-1944, dated December 17, 1953, extended to the

gold mines the opportunity to sell their production on the premium market, subject to the terms of The Gold Export Act. These regulations, as applied to the calendar year 1954, stipulate that the mines may elect within thirty days of the commencement of any quarter of the year to sell their production on the premium market. However, this election could be terminated on June 30 or December 31 in that year on thirty days notice in writing to the Minister of Finance, but the election would continue in force until so terminated.

Under the terms of The Emergency Gold Mining Assistance Act, gold mines electing to sell their production in accordance with these regulations are not entitled to receive assistance during the elected period. They do become eligible again however, during those portions of the year they do not sell on the premium market.

In 1954 none of the gold mines elected to sell all or any portion of their product on the premium market. Five elected to do so in 1953 and 13 in 1952.

#### Act and Regulations

- (1) The Act received Royal Assent on May 14, 1948, and came into force by proclamation on June 15, 1948.
- (2) The Regulations made by the Governor in Council under the authority of Section 6 of the Act were approved by Order in Council, P.C. 2664, June 11, 1948.

#### Amendments to the Act

- (3) Chapter 20, 13 George VI (Second Session), received Royal Assent, December 10, 1949.
- (4) Chapter 49, 15 George VI (First Session), received Royal Assent, June 30, 1951.
- (5) Chapter 25, 1 Elizabeth II, received Royal Assent, June 18, 1951.
- (6) Chapter 32, 2 Elizabeth II, received Royal Assent, May 14, 1953.
- (7) Chapter 26, 2-3 Elizabeth II, received Royal Assent, March 31, 1954.

#### Amendments to the Regulations

- (8) Order in Council, P.C. 1753, April 12, 1950.
- (9) Order in Council, P.C. 3925, July 31, 1951.
- (10) Order in Council, P.C. 1954-379, March 19, 1954.
- (11) Order in Council, P.C. 1954-863, June 10, 1954.

TABLE 12. Emergency Gold Mining Assistance Act - Estimated Assistance Payable

Province	1948	1949	1950	1951	1952	1953	1954
Dollars							
Quebec.....	2,898,388	3,470,791	2,568,400	2,743,144	2,814,226	4,199,408	3,955,826
Ontario.....	5,004,619	5,868,450	4,048,652	5,590,635	5,579,649	7,151,040	8,558,623
Manitoba.....	159,681	784,474	597,013	469,927	379,003	454,694	584,570
British Columbia.....	1,278,883	1,109,890	844,502	736,682	782,155	1,046,076	877,924
Northwest Territories....	919,418	968,846	750,900	927,415	1,011,211	1,408,134	1,485,700
Yukon.....	285,327	366,693	181,505	258,378	252,736	389,263	119,918
<b>Canada.....</b>	<b>10,546,316</b>	<b>12,569,144</b>	<b>8,990,972</b>	<b>10,726,181</b>	<b>10,818,980</b>	<b>14,648,615</b>	<b>15,582,561</b>

## THE ALLUVIAL GOLD MINING INDUSTRY

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

In 1954 a total of 89,571 troy ounces of fine gold were recovered from crude gold obtained from Canadian alluvial deposits. This represented an increase of 15.6 per cent from the preceding year. Reviewing the past twenty 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, and 16 ounces in 1954.

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 1954 were made chiefly from deposits located in the Atlin and Cariboo districts. Output was estimated at 7,105 fine ounces.

Yukon — About 90 per cent of the placer gold recovered in Canada during 1954 was found in the creeks of the Yukon. Production in 1954 totalled 82,208 fine ounces.

The placer gold industry employed an average of 351 persons to whom \$1,619,460 were paid in wages and salaries. Fuel cost \$146,300, electricity generated for own use was 25,809,400 kwh. and the electricity for sale was 6,427,400 kwh. Process supplies were valued at \$253,128. Freight and express on shipments amounted to \$46,986 and \$30,213 were paid for treatment and marketing.

TABLE 13. Principal Statistics for Alluvial Gold Mining, Significant Years, 1921 — 1954

Year	Establishments	Employees	Earnings	Cost of fuel and electricity	Process supplies and containers	Gross value of products	Net value <sup>1</sup> of production
	No.	No.	\$	\$	\$	\$	\$
1921	197	428	671,783	N.A.	N.A.	1,576,222	N.A.
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
1950	58	411	1,598,875	112,071	371,015	4,140,531	3,146,451
1951	47	362	1,553,103	44,678	507,830	3,572,516	2,951,342
1952	39	361	1,638,672	33,298	417,153	3,181,730	2,662,952
1953	56	306	1,372,504	75,791	133,607	2,137,321	1,878,510
1954	62	351	1,619,460	146,300	253,128	3,051,665	2,575,038

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

TABLE 14. Alluvial Gold Recovered and Quantity of Material Handled<sup>1</sup>, 1945 — 1954

Year	British Columbia				Yukon				Canada
	Material handled <sup>2</sup>	Gold recovered <sup>3</sup>	Ounces per cu. yd.	Value per cu. yd.	Material handled <sup>2</sup>	Gold recovered	Ounces per cu. yd.	Value per cu. yd.	Gold recovered
	cu. yds.	Fine ounces		\$	cu. yds.	Fine ounces		\$	ounces
1945	263,527	10,071	0.0382	1.4707	2,981,599	31,721	0.0106	0.4081	41,799
1946	428,603	15,530	0.0362	1.3303	5,917,740	45,283	0.0076	0.2793	60,925
1947	478,667	5,732	0.0120	0.4191	7,054,753	47,679	0.0067	0.2365	53,519
1948	1,692,585	18,133	0.0107	0.3750	7,813,499	60,606	0.0078	0.2715	78,821
1949	1,696,363	14,497	0.0085	0.3074	9,263,700	81,970	0.0088	0.3185	96,614
1950	494,066	14,632	0.0296	1.1263	7,860,497	93,339	0.0118	0.4490	108,143
1951	335,487	18,802	0.0560	2.0636	7,266,422	77,504	0.0107	0.3942	96,441
1952	270,656	7,950	0.0294	1.0075	6,727,353	92,789	0.0138	0.4729	92,843
1953	597,073	11,360	0.0199	0.6850	5,155,826	66,080	0.0140	0.4832	77,505
1954	233,114	7,105	0.0305	1.0390	6,889,820	82,208	0.0119	0.4065	

1. In addition, relatively small amounts of alluvial gold have been recovered in 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 include some overburden and barren material.

3. Fine gold received at Royal Canadian Mint (Vancouver Assay Office).



TABLE 15. Employees and Their Earnings in the Alluvial Gold Mining Industry, 1950 - 1954

Year	Number of employees <sup>1</sup>					Number of man-hours worked	Earnings		
	Administration		Workmen		Total		Admin-istration	Workmen	Total
	Male	Female	Male	Female					
							\$	\$	\$
1950 .....	11	1	387	12	411	827, 252	60, 939	1, 537, 936	1, 598, 875
1951 .....	13	—	342	7	362	1, 546, 917	68, 170	1, 484, 933	1, 553, 103
1952 .....	11	3	333	8	361	1, 071, 381	98, 073	1, 540, 599	1, 638, 672
1953 .....	4	3	290	9	306	856, 399	46, 395	1, 326, 109	1, 372, 504
1954 .....	11	—	330	10	351	799, 744	35, 851	1, 583, 609	1, 619, 460

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

## THE AURIFEROUS QUARTZ MINING INDUSTRY IN CANADA

The gold quartz mining industry produced during 1954, minerals valued at \$127,644,959 compared with \$122,381,725 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 18,479 whose earnings amounted to \$63,578,156. Fuel cost \$1,422,920 and 942,065,048 kwh. of electricity were purchased for \$5,364,608. Process supplies, which included explosives, chemicals, dull steel, etc., cost \$23,639,788. Electricity generated for own use was 45,194,654 kwh. and generated for sale was 1,573,383 kwh.

The greater part of Canada's gold comes from the Canadian Shield, an immense area of pre-

cambrian 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 a very small percentage of Canada's output.

TABLE 16. Principal Statistics for the Auriferous Quartz Mining Industry, Significant Years, 1921 - 1954

	Establish-ments	Employees	Earnings	Cost of fuel and electricity	Cost of process supplies	Gross value of products	Net <sup>2</sup> value of production
	No.	No.	\$	\$	\$	\$	\$
1921	59	3,889	6,072,318	1,154,606	N. A.	16,689,784	N. A.
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
1948	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
1950	281	22,491	64,533,114	7,873,963	24,715,152	144,044,607	108,840,362
1951	211	22,126	68,739,531	7,791,586	26,677,361	136,703,452	100,059,503
1952	216	20,757	69,004,828	7,591,979	25,574,869	134,996,056	100,083,506
1953	173	18,751	60,920,362	6,876,895	22,670,232	122,381,725	91,408,605
1954	157	18,479	63,578,156	6,987,528	23,639,788	127,644,959	95,627,104

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

TABLE 17. Principal Statistics for the Auriferous Quartz Mining Industry, 1953 and 1954

	Number of active operators <sup>1</sup>	Number of employees	Salaries and wages	Cost of fuel and purchased electricity	Cost of process supplies used <sup>2</sup>	Amount of freight, etc., paid on shipments of ore, slag, etc.	Smelter and refinery treatment costs	Gross value of bullion, ore, concentrates or residues shipped from mines <sup>3</sup>	Net <sup>4</sup> value of bullion, ore, concentrates or residues shipped from mines
			\$	\$	\$	\$	\$	\$	\$
<b>1953</b>									
Quebec and Nova Scotia .....	89	4,325	14,099,182	1,649,724	5,066,380	124,182	327,894	26,783,991	19,615,811
Ontario .....	62	11,948	37,456,712	3,756,784	14,022,963	115,242	538,156	74,586,677	56,153,532
Manitoba .....	4	492	1,759,464	310,625	1,118,523	7,307	25,579	3,762,046	2,300,012
British Columbia .....	9	1,241	4,092,261	443,216	1,699,307	84,558	105,762	7,241,717	4,908,874
Northwest Territories .....	8	745	3,514,743	716,546	763,059	22,258	75,055	10,007,294	8,430,376
<b>Canada .....</b>	<b>172</b>	<b>18,751</b>	<b>60,920,362</b>	<b>6,876,895</b>	<b>22,670,232</b>	<b>353,547</b>	<b>1,072,446</b>	<b>122,381,725</b>	<b>91,408,605</b>
<b>1954</b>									
Quebec and Nova Scotia .....	91	4,347	14,640,004	1,720,126	5,261,621	157,156	388,098	27,239,289	19,712,288
Ontario .....	44	11,647	39,393,783	3,842,328	14,923,060	91,903	563,904	78,897,941	59,476,746
Manitoba .....	3	506	1,864,651	349,265	752,649	7,328	30,661	3,807,902	2,668,001
British Columbia .....	12	1,247	4,062,845	441,004	1,826,093	10,419	40,438	7,221,659	4,903,705
Northwest Territories .....	7	732	3,616,873	634,805	876,365	23,165	77,469	10,478,168	8,866,364
<b>Canada .....</b>	<b>157</b>	<b>18,479</b>	<b>63,578,156</b>	<b>6,987,528</b>	<b>23,639,788</b>	<b>289,969</b>	<b>1,100,570</b>	<b>127,644,959</b>	<b>95,627,104</b>

1. Producing mines: in 1951-84, in 1952-85, in 1953-71, in 1954-69.
2. Explosives, chemicals, etc.
3. Value of bullion produced, plus value of ore, concentrates, etc., shipped.
4. Gross value less cost of supplies, fuel and electricity, treatment costs and freight.

TABLE 18. Ores Mined and Treated by the Auriferous Quartz Mining Industry, 1945-1954

Year	Ore hoisted	Ore milled <sup>1</sup>	Crude ore shipped to smelters <sup>2</sup>	Low-grade sorted out	Tailings re-treated	Gold recovered as bullion	Gold in crude ore shipped	Gold in concentrates, slag, etc., shipped
			Tons			Fine ounces		
1945 .....	9,780,555	9,437,796	177,208	136,328	—	2,068,910	27,019	109,487
1946 .....	10,712,615	10,306,720	146,075	229,237	—	2,289,647	19,532	71,819
1947 .....	11,632,841	11,296,610	146,469	205,250	1,376	2,590,589	19,001	109,825
1948 .....	13,630,705	13,110,271	224,123	224,374	537	2,934,160	29,143	114,378
1949 .....	15,999,866	15,374,803	243,137	184,373	112	3,423,303	34,405	143,278
1950 .....	16,980,027	16,297,461	315,390	206,797	—	3,630,358	46,202	98,804
1951 .....	16,548,264	15,907,335	311,324	171,137	—	3,572,655	41,549	84,812
1952 .....	16,496,218	15,991,130	307,464	145,999	312	3,709,717	41,943	72,285
1953 .....	15,247,337	14,842,517	198,535	233,813	800	3,412,964	28,105	76,422
1954 .....	16,178,273	15,560,138	285,697	271,642	—	3,610,496	44,336	74,808

1 + 2 = Total crude ore treated.

TABLE 19. Ores Mined and Milled, Crude Bullion Recovered and Crude Bullion and Concentrates Shipped, in the Auriferous Quartz Mining Industry, 1954

	Quebec and Nova Scotia	Ontario	Manitoba	British Columbia	Northwest Territories	Canada
Number of producing mines .....	18	36	3	8	4	69
Ore mined .....	tons 5,000,283	9,377,299	720,630	530,361	549,700	16,178,273
Material discarded (sorted) .....	" 70,302	85,722	36,249	11,728	67,641	271,642
Ore milled (ground, etc.) .....	" 4,663,156	9,193,455	702,428	518,633	482,468	15,560,138
Tailings re-treated .....	" —	—	—	—	—	—
Gold content of ores, slags, residues and concentrates shipped:						
To foreign smelters .....	troy ounces —	—	—	66,221	—	68,221
To Canadian smelters or mills .....	" 41,079	7,903	18,204	133	—	52,923
Bullion bars shipped:						
Gold content .....	troy ounces 750,773	2,281,917	107,721	144,594	303,800	3,588,805
Silver content .....	" 161,750	391,587	11,084	24,247	58,495	647,163
Content of bullion bars produced:						
Gold .....	troy ounces 751,508	2,298,156	107,721	144,594	308,517	3,610,496
Silver .....	" 160,851	386,345	11,084	24,247	59,030	641,557
Gold value .....	\$ 25,595,898	78,306,304	3,669,021	4,909,155	10,429,859	122,910,237
Silver value .....	\$ 133,439	319,867	9,195	20,202	48,309	531,012
Value of ores, concentrates, slags and residues sold (shipped) .....	\$ 1,509,952	271,770	129,686	2,292,302	—	4,203,710
<b>Total gross value of production .....</b>	<b>\$ 27,239,289</b>	<b>78,897,941</b>	<b>3,807,902</b>	<b>7,221,659</b>	<b>10,478,168</b>	<b>127,644,959</b>
Value of fuel, electricity and process supplies used, also freight on shipments, marketing, smelter and refinery charges .....	\$ 7,343,237	19,337,738	1,139,901	2,273,412	1,611,409	31,705,697
<b>Net value of production .....</b>	<b>\$ 19,896,052</b>	<b>59,560,203</b>	<b>2,668,001</b>	<b>4,948,247</b>	<b>8,866,759</b>	<b>95,939,262</b>

TABLE 20. Ores, Concentrates, Slags, etc., Shipped to Smelters from Canadian Gold Mines, 1945-1954

Year	Ores		Concentrates		Slags, residues, precipitates	
	Tons	Gold content-fine ounces	Tons	Gold content-fine ounces	Tons	Gold content-fine ounces
<b>To CANADIAN PLANTS</b>						
1945	177,099	26,834	5,474	13,903	647	1,832
1946	146,075	19,532	5,155	10,646	314	2,359
1947	146,469	19,001	2,538	5,313	296	1,961
1948	223,834	28,997	630	2,192	248	2,860
1949	243,121	34,114	325	1,196	253	3,690
1950	294,387	45,215	—	—	153	5,220
1951	296,341	41,398	—	9	349	7,245
1952	298,207	41,908	20	241	91	4,427
1953	198,535	28,068	20	227	123	9,300
1954	282,331	44,276	—	—	404	8,647
<b>To FOREIGN PLANTS</b>						
1945	109	185	19,596	49,193	47	44,559
1946	—	—	11,969	49,164	25	9,650
1947	—	—	25,765	67,929	32	34,572
1948	289	6,400	24,446	64,531	36	44,795
1949	16	291	25,331	69,935	29	34,048
1950	51	987	20,471	53,811	15	39,773
1951	34	151	14,303	37,360	29	40,126
1952	1	35	9,125	24,085	20	43,532
1953	3	37	143	16,468	20	50,427
1954	2	60	2,938	14,931	22	51,230

TABLE 21. Shipments from Auriferous Quartz Mines, 1953 and 1954

	Quantity	Total gross metal content					
		Gold	Silver	Copper	Lead	Zinc	Other
	Tons	Ounces		Pounds			
1953							
To Canadian smelters:							
Gold ore .....	198,535	28,068	—	—	—	—	—
Gold concentrates .....	20	227	336	—	—	—	—
Slags, precipitates, residues .....	123	9,300	10,737	6,749	—	—	—
To foreign smelters:							
Gold ore .....	3	37	129	—	—	—	—
Gold concentrates .....	143	16,468	5,474	4,876	—	—	—
Slags, precipitates, etc. ....	20	50,427	5,329	—	—	—	—
<b>Total .....</b>	<b>198,744</b>	<b>104,527</b>	<b>22,005</b>	<b>11,625</b>	—	—	—
1954							
To Canadian smelters:							
Gold ore .....	282,331	44,276	82	—	—	—	—
Gold concentrates .....	—	—	—	—	—	—	—
Slags, precipitates, residues .....	404	8,647	9,129	1,467	—	—	—
To foreign smelters:							
Gold ore .....	2	60	118	—	—	—	—
Gold concentrates .....	2,938	14,931	4,530	—	—	—	—
Slags, precipitates, residues .....	22	51,230	4,643	—	—	—	—
<b>Total .....</b>	<b>285,697</b>	<b>119,144</b>	<b>18,702</b>	<b>1,467</b>	—	—	—



**TABLE 22. Certain Data Relating to the Production of Gold by the Entire Auriferous Quartz Mining Industry, 1945-1954 (Averages)**

Year	Average ounces of gold produced per wage-earner	Cost of fuel and electricity per ounce of gold produced	Cost of wages per ounce of gold produced	Cost of explosives and other process supplies used, per ounce of gold produced	Cost of freight and smelter refinery treatment on ores and bullion shipped, per ounce of gold produced	Taxes per ounce of gold produced	Total of specified costs
	Ounces	\$	\$	\$	\$	\$	\$
1945 .....	140	2.45	14.08	5.09	0.74	3.74	26.10
1946 .....	122	2.63	16.77	6.05	0.59	3.08	29.12
1947 .....	132	2.62	17.28	6.56	0.52	1.93	28.91
1948 .....	151	2.27	16.82	6.35	0.57	1.47	27.48
1949 .....	176	2.05	15.03	6.52	0.68	1.73	26.01
1950 .....	186	2.08	14.83	6.55	0.69	2.08	26.23
1951 .....	193	2.11	15.60	7.21	0.59	2.19	27.70
1952 .....	209	1.96	15.19	6.60	0.46	1.84	26.05
1953 .....	209	1.96	14.85	6.46	0.41	1.55	25.23
1954 .....	225	1.87	14.70	6.34	0.37	1.57	24.85

Note. The data contained in the foregoing table have been compiled from reports received from both producing and non-producing (exploring and developing) operators in the auriferous quartz mining industry. The trends should not be interpreted as entirely reflecting operations of producing mines only, but rather as indices of change in the industry as a whole. For data relating to producers only, see Table 23.

**TABLE 23. Certain Data (Averages) Relating to the Total Production of Gold by Producers Only, in the Auriferous Quartz Mining Industry, 1945-1954**

Year	Average ounces of gold produced per wage-earner	Cost of fuel and electricity per ounce of gold produced	Cost of wages per ounce of gold produced	Cost of explosives and other process supplies used, per ounce of gold produced	Cost of freight and smelter refinery treatment on ores and bullion shipped, per ounce of gold produced	Taxes per ounce of gold produced	Total of specified costs
	Ounces	\$	\$	\$	\$	\$	\$
1945 .....	151	2.34	13.17	4.97	0.74	3.68	24.90
1946 .....	141	2.35	14.38	5.69	0.59	2.99	26.00
1947 .....	148	2.29	15.20	6.10	0.52	1.86	25.97
1948 .....	159	2.14	16.00	6.20	0.57	1.41	26.32
1949 .....	179	2.02	14.83	6.45	0.68	1.71	25.69
1950 .....	191	2.04	14.50	6.46	0.69	2.06	25.75
1951 .....	197	2.07	15.31	7.16	0.59	2.17	27.30
1952 .....	212	1.93	14.97	6.47	0.46	1.82	25.65
1953 .....	210	1.94	14.73	6.41	0.41	1.53	25.02
1954 .....	227	1.85	14.55	6.28	0.37	1.56	24.61

**TABLE 24. Gold and Silver Content of Bullion Produced, and of Ores, Concentrates, etc., Shipped, With Average Grade of Ore Shipped and Ore Milled at Auriferous Quartz Mines, and the Average Price of Gold and Silver in Canadian Funds, 1945-1954**

Year	Tonnage treated <sup>1,3</sup>	Gold content <sup>2</sup>	Silver content <sup>2</sup>	Ounces of fine gold per ton	Ounces of fine silver per ton	Average price of gold	Average price of silver
		Fine ounces				\$ per oz.	
1945 .....	9,615,004	2,205,416	1,205,147	.23	.13	38.50	0.47
1946 .....	10,452,775	2,380,998	1,025,619	.23	.10	36.75	0.836
1947 .....	11,443,079	2,719,416	845,749	.24	.07	35.00	0.72
1948 .....	13,334,931	3,077,681	1,044,912	.23	.08	35.00	0.75
1949 .....	15,617,940	3,566,577	682,569	.23	.04	36.00	0.743
1950 .....	16,297,461	3,775,364	715,991	.23	.04	38.05	0.808
1951 .....	15,907,335	3,699,016	658,719	.22	.04	36.85	0.945
1952 .....	16,289,337	3,823,747	688,489	.23	.04	34.27	0.835
1953 .....	15,041,261	3,509,527	620,146	.23	.04	34.42	0.840
1954 .....	15,842,471	3,729,640	660,259	.24	.04	34.07	0.832

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

2. 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.

3. Material discarded by sorting not included.



TABLE 25. Specified Costs per Ton of Ore Milled at Certain of the Principal Auriferous Quartz Mines, 1954

Name of mine	Develop- ment and explora- tion <sup>1</sup>	Mining	Milling	General <sup>2</sup>	Total before deprecia- tion and taxes	Depre- ciation	Taxes	Total costs specified
Dollars								
QUEBEC:								
Barnat Mines Ltd.	0.870	3.131	1.102	0.658	5.761	1.335	0.092	7.188
Bellefleur Quebec Mines Ltd.	1.26	5.44	1.65	0.27	8.62	0.19	0.12	8.93
Beattie-Duquesne Mines Ltd.	0.033	2.101	0.990	0.326	3.450	—	0.018	3.468
Canadian Malartic Gold Mines Ltd.	0.641	1.321	0.687	0.617	3.266	0.171	0.012	3.449
East Malartic Mines Ltd.	0.201	2.912	0.815	0.580	4.508	1.041	0.116	5.665
Lamaque Mining Co. Ltd.	0.83	3.09	0.83	0.11	4.86	0.33	0.50	5.69
New Senator Rouyn Ltd.	0.11	2.37	1.07	1.23	4.78	0.44	0.06	5.28
O'Brien Gold Mines Ltd.	0.80	8.33	2.02	2.75	13.90	0.13	—	14.03
Sigma Mines (Quebec) Ltd.	1.105	2.861	0.792	0.496	5.254	0.146	0.396	5.796
Stadacona Mines (1944) Ltd.	0.83	2.09	0.90	1.00	4.82	0.37	0.02	5.21
ONTARIO:								
Porcupine District								
Aunor Gold Mines Ltd.	1.51	7.56	1.42	1.01	11.50	1.05	0.24	12.79
Bonwhit Mines Ltd.	1.14	3.26	1.27	1.33	7.00	—	—	7.00
Broulan Reef Mines Ltd.	1.67	2.68	1.28	1.49	7.12	—	—	7.12
Conlaunum Mines Ltd.	2.37	4.71	1.12	1.52	9.72	0.06	—	9.78
Halnor Mines Ltd.	—	6.14	1.54	1.24	8.92	0.09	1.52	10.53
Hollinger Consolidated (Timmins)	0.391	5.170	0.904	1.692	8.157	0.181	0.715	9.054
Hollinger Consolidated (Ross)	1.312	3.041	2.097	0.953	7.402	0.481	—	—
Hugh Pam Porcupine Mines Ltd.	0.80	2.77	1.26	1.10	5.93	—	—	—
McIntyre Porcupine Mines Ltd.	1.41	6.22	1.11	0.24	8.98	0.11	0.64	9.73
Preston East Dome Mines Ltd.	2.058	4.836	0.994	1.375	9.263	0.264	0.050	9.577
Pamour Porcupine Mines Ltd.	0.39	1.96	0.68	0.26	3.26	0.06	0.03	3.38
Kirkland Lake District								
Macassa Mines Ltd.	1.472	6.322	1.527	0.871	10.192	0.238	0.717	11.147
Tock-Hughes Gold Mines Ltd.	0.76	2.96	1.14	0.29	5.15	0.01	0.06	5.22
Lake Shore Mines Ltd.	1.102	8.169	2.283	0.475	12.029	0.215	—	12.244
Upper Canada Mines Ltd.	1.38	4.28	1.06	0.90	7.62	0.47	0.03	8.12
Wright-Hargreaves Mines Ltd.	3	7.893	1.402	1.899	11.194	0.112	0.938	12.244
Larder Lake District								
Kerr Addison Gold Mines Ltd.	1.000	1.920	0.776	0.477	4.173	0.315	1.134	5.622
Matachewan District								
Hollinger Consolidated (Young Davidson)	0.024	1.530	0.830	0.327	2.711	0.011	0.289	3.011
Thunder Bay District								
Leitch Gold Mines Ltd.	5.40	11.60	4.57	1.25	22.82	1.20	2.57	26.59
MacLeod-Cockshutt Gold Mines Ltd.	0.321	1.602	0.798	0.571	3.292	0.235	0.001	3.528
Patricia District								
Cochenour Willans Gold Mines Ltd.	5.633	4.929	2.388	1.555	14.505	1.558	—	16.063
Madsen Red Lake Gold Mines Ltd.	—	—	—	—	—	—	—	—
McKenzie Red Lake Gold Mines Ltd.	2.597	4.123	1.924	1.704	10.348	—	—	10.348
New Dickenson Mines Ltd.	2.10	4.27	2.38	1.99	10.74	2.71	0.21	13.66
Pickle Crow Gold Mines Ltd.	2.851	5.701	1.752	1.387	11.691	0.293	0.895	12.879
Starratt Olsen Gold Mines Ltd.	0.937	3.126	1.461	1.093	6.617	3.735	—	10.352
BRITISH COLUMBIA:								
Bralorne Mines Ltd.	1.34	6.05	1.24	2.45	11.08	0.41	—	11.49
Cariboo Gold Quartz Mining Co. Ltd.	2.55	9.09	2.70	0.48	14.82	1.36	—	16.18
Island Mountain Mines Co. Ltd.	1.74	8.89	3.02	0.40	14.05	—	—	14.05
Pioneer Gold Mines of B.C. Ltd.	—	—	—	—	—	—	—	—
NORTHWEST TERRITORIES:								
Consolidated Mining & Smelting Co. (Con)	1.34	5.59	3.50	1.91	12.34	—	—	—
Consolidated Mining & Smelting Co. (Rycon)	1.94	5.74	3.40	1.59	12.67	0.80 <sup>4</sup>	—	—
Consolidated Discovery Yellowknife Mines Ltd.	7.50	6.23	3.49	8.56	25.88	—	—	—
Giant Yellowknife Gold Mines Ltd.	2.53	4.78	3.52	2.43	13.26	6.84	—	20.10

1. Exclusive of outside exploration.
2. Marketing, head office, etc. (exclusive of taxes).
3. Included in mining costs.
4. Rent for facilities.

TABLE 26. Milling Capacity of Operating Canadian Gold Mines, 1945-1954

Year	Nova Scotia	Quebec	Ontario	Manitoba	British Columbia	Northwest Territories	Canada
Tons of 2,000 pounds per 24 hours							
1945 .....	187	12,600	30,457	550	2,740	417	46,951
1946 .....	172	12,035	30,370	550	3,052	417	46,596
1947 .....	50	13,010	29,430	550	3,235	467	46,742
1948 .....	—	12,395	29,990	700	2,550	1,150	46,785
1949 .....	25	13,460	33,150	2,700	2,690	1,135	53,160
1950 .....	—	12,400	33,175	2,700	2,125	785	51,185
1951 .....	—	12,825	33,998	2,695	1,950	1,105	52,573
1952 .....	—	13,600	33,099	2,550	1,650	1,380	52,279
1953 .....	—	13,200	31,268	2,550	1,675	1,210	49,903
1954 .....	—	12,650	29,168	2,550	1,700	1,375	47,443

TABLE 27. Employees and Earnings in the Entire Auriferous Quartz Mining Industry, 1950-1954

Year	Number of employees					Number of man-hours worked (all employees)	Earnings		
	Administrative and office		Workmen		Total		Administrative and office	Workmen	Total
	Male	Female	Male	Female					
							\$	\$	\$
1950 .....	2,036	190	20,144	121	22,491	N.A.	8,537,938	55,995,176	64,533,114
1951 .....	2,777	194	19,070	85	22,126	52,224,723	11,028,345	57,711,186	68,739,531
1952 .....	2,005	198	18,462	92	20,757	48,223,254	10,193,402	58,811,426	69,004,828
1953 .....	1,754	182	16,743	72	18,751	42,454,069	8,789,624	52,130,738	60,920,362
1954 .....	1,734	166	16,490	89	18,479	43,007,329	8,759,284	54,818,872	63,578,156

TABLE 28. Number of Workmen, by Months, in the Gold Mining Industry, 1953 and 1954

Month	1953	1954					
	Total	Mine			Mill		Total
		Surface		Underground	Male	Female	
		Male	Female	Male			
January .....	17,907	3,803	95	10,322	1,410	—	15,630
February .....	17,689	3,898	98	10,848	1,463	—	16,307
March .....	17,563	3,911	97	11,002	1,477	—	16,487
April .....	17,291	3,939	95	10,939	1,491	—	16,464
May .....	17,203	4,075	96	10,819	1,510	—	18,500
June.....	17,403	4,302	61	10,836	1,545	—	18,764
July .....	16,965	4,389	83	10,776	1,542	—	16,790
August.....	16,487	4,360	85	10,873	1,540	—	16,858
September .....	16,121	4,263	81	10,927	1,492	—	16,764
October .....	16,078	4,230	79	11,004	1,490	—	16,803
November .....	15,723	4,096	80	11,091	1,497	—	16,764
December .....	15,345	4,051	79	10,989	1,484	—	16,609
Average.....	16,815	4,115	89	10,875	1,500	—	16,379
Man-hours worked .....	37,880,785						38,621,455

TABLE 29. Cost of Prospecting Conducted by Canadian Auriferous Quartz Mining Companies, 1953 and 1954

Province in which prospecting was conducted <sup>1</sup>	By Nova Scotia and Quebec companies <sup>2</sup>	By Ontario companies <sup>2</sup>	By Manitoba and Saskatchewan companies <sup>2</sup>	By British Columbia companies <sup>2</sup>	By Yukon and Northwest Territories companies	Total
Dollars						
1953						
Newfoundland .....	97,524	—	—	—	—	97,524
Nova Scotia .....	1,568	26,245	—	—	—	27,813
New Brunswick .....	107,363	94,397	—	—	—	201,750
Quebec .....	555,940	104,543	—	—	—	660,483
Ontario .....	250,366	533,736	38,849	—	—	830,951
Manitoba .....	6,892	60,854	7,043	—	—	74,789
Saskatchewan .....	276,735	70,210	—	—	—	346,945
British Columbia .....	2,036	37,911	—	192,392	—	232,339
Northwest Territories .....	55,424	1,150	—	—	13,922	70,505
Yukon .....	14,340	16,021	—	—	—	30,361
<b>Total Canada .....</b>	<b>1,376,140</b>	<b>945,072</b>	<b>45,892</b>	<b>192,392</b>	<b>13,922</b>	<b>2,573,466</b>
1954						
Newfoundland .....	66,014	—	—	—	—	66,014
Nova Scotia .....	13,646	171	—	—	—	13,817
New Brunswick .....	76,991	57,282	—	—	—	134,273
Quebec .....	1,466,667	68,844	—	—	—	1,535,511
Ontario .....	646,644	560,270	16,397	—	8,914	1,232,225
Manitoba .....	15	15	24,287	—	—	24,317
Saskatchewan .....	204,103	520	—	—	—	204,623
British Columbia .....	5,128	60	4,562	103,081	—	112,841
Northwest Territories .....	28,787	—	—	—	25,572	54,359
Yukon .....	1,558	20,217	—	—	—	21,775
<b>Total Canada .....</b>	<b>2,509,538</b>	<b>707,379</b>	<b>45,246</b>	<b>103,081</b>	<b>34,486</b>	<b>3,399,755</b>

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 30. Drilling Completed on Auriferous Quartz Deposits, 1952-1954

	Footage drilled <sup>1</sup>		
	1952	1953	1954
<b>Diamond drilling for exploration (testing):</b>			
By companies with their own equipment and personnel .....	879,654	747,711	652,839
By contractors .....	1,299,238	1,259,152	1,525,621
<b>Other drilling:</b>			
Diamond drilling for breaking rock or ore:			
By companies with their own equipment and personnel .....	129,879	53,330	531,358
By contractors .....	342,951	156,335	175,400
Drilling by percussion and other machines <sup>2</sup> .....	36,425,544	30,012,597	36,318,176

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 diamonds in all forms (bits, etc.) purchased by gold mining companies in 1954 totalled \$154,585.

TABLE 31. Specified Taxes Paid by Active Canadian Auriferous Quartz Mines, 1953 and 1954, by Provinces<sup>1</sup>

Nature of tax	Nova Scotia	Quebec	Ontario	Manitoba	British Columbia	Northwest Territories	Canada
Dollars							
1953							
Dominion Income Tax, including tax on non-operating revenue .....	—	454,305	3,024,202	—	45,128	—	3,523,635
Provincial taxes .....	21	232,795	930,131	9,017	29,970	55,588	1,257,522
Municipal taxes .....	—	263,830	317,090	12,625	28,494	35,399	662,427
<b>Total .....</b>	<b>21</b>	<b>955,930</b>	<b>4,271,413</b>	<b>21,642</b>	<b>103,592</b>	<b>90,986</b>	<b>5,443,584</b>
1954							
Dominion Income Tax, including tax on non-operating revenue .....	—	599,043	3,209,541	44,000	128,930	—	3,981,514
Provincial taxes .....	20	279,661	947,393	6,262	43,003	12,110	1,193,454
Municipal taxes .....	—	271,270	313,365	13,067	46,552	51,191	695,435
<b>Total .....</b>	<b>20</b>	<b>1,149,974</b>	<b>4,370,304</b>	<b>63,329</b>	<b>223,485</b>	<b>63,291</b>	<b>5,870,403</b>

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



TABLE 32. Certain Specified Expenditures Made by Auriferous Quartz Mining Companies, 1952 - 1954

Province and year	Workmen's compensation	Silicosis assessment	Unemployment insurance	Aggregate cost of all supplies purchased	Aggregate cost of plant and equipment purchased	Cost of buildings, machinery and equipment erected or installed
	Dollars					
Nova Scotia:						
1952 .....	—	—	—	—	—	20
1953 .....	—	—	—	—	—	—
1954 .....	—	—	—	—	—	—
Quebec:						
1952 .....	467,677	954	122,470	10,143,316	1,753,248	2,173,542
1953 .....	406,470	822	115,995	9,317,680	840,348	2,390,469
1954 .....	438,533	243	113,214	8,836,723	796,099	939,586
Ontario:						
1952 .....	1,113,969	684,000	339,057	24,654,788	1,492,149	3,100,314
1953 .....	912,528	701,280	299,371	20,870,584	1,224,149	1,662,037
1954 .....	1,112,985	755,265	288,642	22,627,996	2,363,003	4,258,805
Manitoba:						
1952 .....	33,561	—	12,716	1,523,533	18,255	105,326
1953 .....	38,337	—	12,140	1,413,075	7,714	41,950
1954 .....	35,406	—	12,673	1,544,507	5,336	45,245
British Columbia:						
1952 .....	143,554	78,320	26,806	2,148,516	120,273	197,974
1953 .....	155,644	34,062	31,001	2,129,084	64,054	97,981
1954 .....	146,928	87,361	30,594	2,266,660	154,653	37,845
Northwest Territories:						
1952 .....	70,576	—	11,691	3,228,871	950,196	538,333
1953 .....	94,953	—	11,299	3,750,912	607,237	1,126,916
1954 .....	83,164	195	11,272	3,538,597	567,929	1,103,786
Total Canada:						
1952 .....	1,834,337	763,274	512,740	41,699,024	4,334,301	6,566,109
1953 .....	1,608,932	786,164	469,806	37,481,335	2,743,502	5,319,233
1954 .....	1,817,016	843,069	459,395	38,814,483	3,887,074	6,385,260

TABLE 33. Estimated Capital and Repair Expenditures, 1950-1954

Year	Capital expenditures			Repair expenditures			Capital and repair expenditures		
	Construction	Machinery	Total	Construction	Machinery	Total	Construction	Machinery	Total
	Thousands of dollars								
1950 .....	3,937	3,321	7,258	1,067	6,818	7,885	5,004	10,139	15,143
1951 .....	3,271	2,528	5,799	1,111	6,980	8,091	4,382	9,508	13,890
1952 .....	4,736	3,350	8,086	1,324	8,930	10,254	6,060	12,280	18,340
1953 .....	4,625	3,280	7,905	1,251	7,419	8,670	5,876	10,699	16,575
1954 <sup>1</sup> .....	5,772	3,970	9,742	2,198	6,399	8,597	7,970	10,369	18,339

1. Preliminary estimates.

## THE COPPER-GOLD-SILVER MINING INDUSTRY

The mining of "copper-gold-silver" ores in Canada during 1954 was confined to the provinces of 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.

Some firms which were formerly classified in the silver-lead-zinc mining industry have been included in the copper-gold-silver mining industry. The value of their copper production exceeded that of zinc.

During 1954 the gross value of crude ore, concentrates, etc., shipped from the mines and mills in this industry to smelters was estimated at \$105,893,976. Fuel cost \$1,752,588 and 361,276,499 kwh. of electricity was purchased for \$1,396,220.

Process supplies, freight and treatment charges amounted to \$31,931,116. Employees numbered 7,837 to whom \$29,791,332 were distributed as salaries and wages. There were 23 producers or shippers in 1954.

The gross value of ores shipped by firms which both mine and smelt their own ores is sometimes not reported. This necessitates considerable estimating in determining gross and net values for mine shipments. However, possible abnormal evaluations resulting from this are largely compensated for in determining the value added at the smelters and refineries. This added value is credited to the smelting and refining industry and is also included in the total net value of production of the entire Canadian mining industry. This fact should be noted in making any statistical study of the annual production values shown for shipments from copper-gold-silver mines.

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 34. Principal Statistics<sup>1</sup> of the Copper-Gold-Silver Mining Industry, Significant Years, 1921-1954

Year	Establishments	Employees	Earnings	Cost of fuel and electricity	Process supplies and containers	Gross value <sup>1</sup> of products	Net value of production
	No.	No.	\$	\$	\$	\$	\$
1921.....	18	1,222	1,573,221	177,052	N.A.	2,589,314	N.A.
1929.....	152	3,243	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	62,389,815	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
1950.....	56	7,554	23,489,366	2,204,694	9,340,643	121,853,818	83,181,924
1951.....	82	6,223	21,545,660	2,085,608	8,257,819	123,162,228	92,331,995
1952.....	98	7,210	26,711,225	2,358,920	10,917,464	115,667,391	80,668,817
1953.....	84	7,476	27,582,448	2,887,253	9,447,227	100,852,281	68,881,908
1954.....	118	7,837	29,791,332	3,148,808	10,232,701	105,895,518	70,815,594

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 35. Shipments from Copper-Gold-Silver Mines, 1953 and 1954

—	Quantity	Value	Total metal content as determined by settlement assay <sup>1</sup>				
			Gold	Silver	Copper	Sulphur	Zinc
	Tons	\$	Fine ounces	lb.	lb.	Tons	lb.
<b>1953</b>							
<b>To CANADIAN PLANTS:</b>							
Ores.....	399,374	8,044,310	71,467	189,976	19,751,181	—	1,467,678
Copper concentrates.....	558,247	53,165,737	237,724	2,330,939	163,272,780	—	27,442,097
Zinc concentrates.....	122,198	8,127,971	5,786	166,026	2,285,973	—	110,753,176
Lead concentrates.....	97	62,218	1,373	1,331	—	114,884 <sup>3</sup>	3,801
Iron pyrite concentrates.....	111,003	495,925	—	—	—	53,904	—
Slags, residues, bullion and gold precipitates.....	76	576,623	15,162	100,004	65,450	—	18,091
<b>To FOREIGN PLANTS:</b>							
Ores and tailings.....	6,975	894,854	178	19,785	2,882,541	—	—
Copper concentrates.....	114,280	17,795,926	35,889	432,071	53,610,544	—	—
Zinc concentrates.....	93,114	10,630,582	1,582	16,779	—	—	97,982,240
Iron pyrite concentrates.....	235,965	823,434	—	—	—	114,011	—
Precipitates.....	650	234,701	—	—	774,448	—	—
<b>Total.....</b>	<b>1,641,979</b>	<b>100,852,281</b>	<b>369,161</b>	<b>3,256,911</b>	<b>242,642,917</b>	<b>167,915</b>	<b>237,667,083</b>
Value of process supplies, etc. <sup>2</sup> .....	—	31,970,373	—	—	—	—	—
<b>Net value.....</b>	<b>—</b>	<b>68,881,908</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>1954</b>							
<b>To CANADIAN PLANTS:</b>							
Ores.....	476,141	7,985,929	81,453	232,539	26,310,449	—	2,752,331
Copper concentrates.....	728,693	58,250,500	292,690	2,959,891	238,429,089	—	28,994,450
Zinc concentrates.....	133,592	10,357,976	7,117	177,577	2,407,184	—	120,962,389
Iron pyrite concentrates.....	132,224	602,346	—	—	—	128,022,809	—
Slags.....	9	12,503	161	7,018	4,342	—	—
Residues, bullion and gold precipitates ..	2	520,383	14,894	18,270	1,280	—	—
<b>To FOREIGN PLANTS:</b>							
Ores and tailings.....	8,116	234,968	—	5,577	1,043,870	—	—
Copper concentrates.....	93,825	14,299,688	19,403	276,609	45,546,930	—	—
Zinc concentrates.....	101,059	11,672,913	1,464	18,164	—	—	107,645,169
Iron pyrite concentrates.....	404,996	1,742,915	—	—	—	403,121,883	—
Precipitates.....	569	213,855	—	—	716,671	—	—
<b>Total.....</b>	<b>2,089,228</b>	<b>105,893,976</b>	<b>417,182</b>	<b>3,695,645</b>	<b>314,459,815</b>	<b>260,354,339</b>	<b>531,144,432</b>
Value of process supplies, etc. <sup>2</sup> .....	...	35,079,924	...	...	...	...	...
<b>Net value.....</b>	<b>...</b>	<b>70,814,052</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>

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

TABLE 36. Ores Mined, Milled, and Concentrates Produced, by the Copper-Gold-Silver Mining Industry, 1945-1954

Year	Ore mined	Ore milled	Copper concentrates produced <sup>1</sup>	Zinc concentrates produced	Iron pyrite concentrates produced	Net value of all estimated mine and mill shipments <sup>2,3</sup>
			Tons			\$
1945.....	5,914,580	5,441,121	730,724	229,980	228,618	44,258,780
1946.....	5,009,490	4,606,503	661,554	219,985	201,873	42,609,415
1947.....	5,462,233	5,140,376	662,088	185,630	178,263	58,198,612
1948.....	6,496,499	6,061,132	724,066	232,131	184,069	91,403,196
1949.....	8,245,402	7,682,382	839,609	250,595	250,476	83,721,820
1950.....	8,758,607	8,159,756	830,438	313,161	322,117	94,727,261
1951.....	7,380,966	6,799,064	783,011	231,674	375,969	102,675,422
1952.....	7,773,341	7,128,795	701,725	233,046	460,753	93,945,201
1953.....	7,438,500	6,606,631	697,285	216,686	398,429	81,216,388
1954.....	8,501,569	7,982,320	806,157	234,364	505,504	84,197,103

1. Exclusive of copper precipitate.
2. Gross value reported by operators, less only freight and treatment costs deducted by Dominion Bureau of Statistics.
3. Includes the value of any cyanide precipitate shipped from mills to smelters.

TABLE 37. Employees and Their Earnings in the Copper-Gold-Silver Mining Industry, 1950-1954

Year	Number of employees					Number of man-hours worked (all employees)	Earnings		
	Administration		Workmen		Total		Administration	Workmen	Total
	Male	Female	Male	Female					
						\$	\$	\$	
1950	754	151	6,575	74	7,554	17,622,424	3,460,457	20,028,909	23,489,366
1951	692	147	5,341	43	6,223	15,149,388	3,407,953	18,137,707	21,545,660
1952	869	160	6,107	74	7,210	16,152,522	4,365,362	22,345,863	26,711,225
1953	968	162	6,274	72	7,476	16,367,628	5,188,215	22,394,233	27,582,448
1954	991	162	6,609	75	7,837	17,341,735	5,609,114	24,182,218	29,791,333



TABLE 38. Number of Workmen, by Months, 1953 and 1954

Month	1953	1954					
	Total	Mine			Mill		Total
		Surface		Underground	Male	Female	
		Male	Female	Male			
January .....	6,481	1,706	46	2,814	997	22	5,585
February .....	6,509	1,869	51	3,401	1,166	22	6,509
March .....	6,470	1,856	51	3,394	1,176	22	6,499
April .....	6,454	1,869	50	3,453	1,223	21	6,616
May .....	6,574	1,942	51	3,482	1,250	22	6,747
June .....	6,831	2,051	53	3,550	1,298	21	6,973
July .....	6,367	2,091	54	3,557	1,344	22	7,068
August .....	6,748	2,010	51	3,509	1,352	23	6,945
September .....	6,525	1,945	51	3,498	1,339	21	6,854
October .....	5,599	1,970	50	3,517	1,393	22	6,952
November .....	5,583	1,928	49	3,502	1,382	22	6,883
December .....	5,461	1,819	49	3,438	1,370	22	6,698
Average .....	6,346	1,926	51	3,418	1,265	—	6,684
Man-hours worked .....	13,708,157						14,586,239

TABLE 39. Specified Expenditures by the Copper-Gold-Silver Mining Industry, 1952-1954

	1952	1953	1954
	Dollars		
Workmen's compensation .....	928,403	1,036,730	946,573
Silicosis assessment .....	135,921	106,933	116,814
Unemployment insurance .....	217,979	252,968	227,753
Aggregate cost of all supplies purchased .....	25,371,497	23,155,482	25,633,211
Aggregate cost of plant and equipment purchased .....	4,039,615	3,438,552	3,785,425
Cost of buildings, machinery and equipment erected or installed during year .....	6,311,778	15,855,500	18,806,946

TABLE 40. Taxes Paid by the Copper-Gold-Silver Mining Industry, 1952-1954

	1952	1953	1954
	Dollars		
Dominion income tax, including tax on non-operating revenue .....	15,644,444	11,755,843	9,135,618
Provincial tax .....	4,668,117	3,371,481	3,104,401
Municipal tax .....	748,065	665,219	764,306
Grand total taxes paid .....	21,060,626	15,792,543	13,004,325

TABLE 41. Cost of Prospecting Conducted by the Copper-Gold-Silver Mining Industry, by Provinces, 1953 and 1954

Conducted in-	1953	1954	Conducted in-	1953	1954
	\$	\$		\$	\$
Newfoundland .....	—	—	Saskatchewan .....	46,904	100,148
Nova Scotia .....	438	78,428	Alberta .....	765	—
New Brunswick .....	828,573	457,565	British Columbia .....	207,129	277,823
Quebec .....	1,015,497	796,633	Yukon .....	81,149	161,805
Ontario .....	295,310	1,238,228	Northwest Territories .....	2,945	5,396
Manitoba .....	35,791	72,864	<b>Total .....</b>	<b>2,514,501</b>	<b>3,188,890</b>

TABLE 42. Drilling Completed on Copper-Gold-Silver Deposits, 1953 and 1954

	Footage drilled	
	1953	1954
Diamond drilling for exploration (testing only):		
By mining companies with their own personnel and equipment .....	177,645	136,302
By diamond drilling contractors .....	631,076	841,302
Other diamond drilling:		
Blast hole diamond drilling:		
By mining companies with their own personnel and equipment .....	1,438,297	590,465
By diamond drilling contractors .....	17,812	20,531
Drilling by percussion or other machines <sup>1</sup> .....	6,932,125	9,145,733

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

Value of diamonds in all forms (stones, bits, etc.) purchased during the year, \$120,869.

TABLE 43. Copper Production (Recoverable) According to Nature of Ore, and by Provinces, 1952-1954

Province	From copper-gold-silver ores	From nickel-copper ores	From gold and other ores	Total
Tons				
1952				
Newfoundland .....	—	—	2,959	2,959
Nova Scotia .....	—	—	383	383
Quebec .....	67,749	—	1,097	68,846
Ontario .....	214	125,100	29	125,343
Manitoba .....	9,374	—	—	9,374
Saskatchewan .....	30,344	—	—	30,344
British Columbia .....	19,136	—	1,648	20,786
Northwest Territories .....	—	—	3	3
<b>Canada .....</b>	<b>126,819</b>	<b>125,100</b>	<b>6,119</b>	<b>258,038</b>
1953				
Newfoundland .....	—	—	2,814	2,814
Nova Scotia .....	—	—	788	788
Quebec .....	53,663	—	1,257	54,920
Ontario .....	409	130,149	24	130,582
Manitoba .....	9,362	50	—	9,412
Saskatchewan .....	30,588	—	—	30,588
British Columbia .....	20,923	—	3,225	24,148
<b>Canada .....</b>	<b>114,945</b>	<b>130,199</b>	<b>8,108</b>	<b>253,252</b>
1954				
Newfoundland .....	—	—	3,481	3,481
Nova Scotia .....	—	—	991	991
Quebec .....	82,723	—	1,207	83,930
Ontario .....	765	139,979	32	140,776
Manitoba .....	8,802	3,472	—	12,274
Saskatchewan .....	36,192	—	—	36,192
British Columbia .....	21,303	—	3,785	25,088
<b>Canada .....</b>	<b>149,785</b>	<b>143,451</b>	<b>9,496</b>	<b>302,732</b>

TABLE 44. Production of Refined Copper<sup>1</sup>, 1945-1954

Year	Short tons	Year	Short tons
1945 .....	237,457	1950 .....	238,204
1946 .....	204,016	1951 .....	245,466
1947 .....	202,427	1952 .....	196,320
1948 .....	221,275	1953 .....	236,966
1949 .....	226,083	1954 .....	253,365

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

TABLE 45. Silver Production According to Nature of Ores, by Provinces, 1954

Province	Crude placer gold	Auriferous quartz ores	Copper-gold-silver ores	Nickel-copper ores	Silver-lead-zinc ores	Silver-cobalt and other ores	Total
Ounces							
Newfoundland .....	—	—	—	—	742,120	—	742,120
Nova Scotia .....	—	5	—	—	262,356	—	262,361
Quebec .....	—	165,401	1,807,935	—	2,933,968	—	4,907,304
Ontario .....	—	390,962	11,282	1,278,672	30,716	3,732,089	5,443,721
Manitoba .....	—	11,094	386,403	13,628	—	—	411,125
Saskatchewan .....	—	—	1,474,370	—	—	—	1,474,370
Alberta .....	18	—	—	—	—	—	18
British Columbia .....	1,250	33,581	266,695	—	10,524,088	—	10,825,614
Northwest Territories .....	7	59,030	—	—	—	—	59,037
Yukon .....	16,656	—	—	—	6,975,623	—	6,992,279
Canada .....	17,931	660,073	3,946,685	1,292,300	21,468,871	3,732,089	31,117,949

TABLE 46. Selenium and Tellurium Recoverable from Canadian Ores, 1945-1954

Year	From copper-gold-silver ores		From nickel-copper ores		Total	
	Selenium	Tellurium	Selenium	Tellurium	Selenium	Tellurium
Pounds						
1945 .....	211,187	484	168,000	—	379,187	484
1946 .....	251,261	1,648	270,606	14,200	521,867	15,848
1947 .....	354,684	3,025	146,406	6,169	501,090	9,194
1948 .....	281,905	2,686	108,989	8,739	390,894	11,425
1949 .....	231,383	2,966	86,842	8,726	318,225	11,692
1950 .....	198,264	4,065	63,709	6,010	261,973	10,075
1951 .....	300,194	2,612	82,409	6,301	382,603	8,913
1952 .....	160,452	325	81,578	5,710	242,030	6,035
1953 .....	169,648	169	92,698	4,525	262,346	4,694
1954 .....	228,703	976	94,826	7,195	323,529	8,171

TABLE 47. Zinc Production (Recoverable) According to Nature of Ore, and by Provinces, 1933 and 1934

Year and province	Recovered from copper-gold-silver ores	Recovered from silver-lead-zinc and other ores	Total
Tons of 2,000 pounds			
1933			
Newfoundland .....	—	28,002	28,002
Nova Scotia .....	—	7,349	7,349
Quebec .....	34,442	65,988	100,430
Ontario .....	—	86	86
Manitoba .....	15,766	—	15,766
Saskatchewan .....	49,965	—	49,965
British Columbia .....	7,102	184,048	191,150
Yukon .....	—	9,014	9,014
Canada .....	107,275	294,487	401,762
1934			
Newfoundland .....	—	30,002	30,002
Nova Scotia .....	—	8,493	8,493
Quebec .....	36,910	70,091	107,001
Ontario .....	—	710	710
Manitoba .....	16,253	—	16,253
Saskatchewan .....	50,670	—	50,670
British Columbia .....	8,828	142,711	151,539
Yukon .....	—	11,823	11,823
Canada .....	112,661	263,830	376,491

TABLE 48. Refined Zinc Produced, From All Sources, 1945-1934

Year	Short tons	Year	Short tons
1945 .....	182,267	1950 .....	204,361
1946 .....	185,683	1951 .....	218,578
1947 .....	178,264	1952 .....	222,300
1948 .....	196,575	1953 .....	250,981
1949 .....	206,045	1954 .....	253,125

TABLE 49. Cadmium Recovered from Canadian Ores, 1945-1934

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			
1945 .....	135,632	510,432	646,064	1950 .....	141,456	706,950	848,406
1946 .....	166,333	636,315	802,648	1951 .....	147,168	1,179,752	1,326,220
1947 .....	172,896	545,638	718,534	1952 .....	205,911	742,676	948,587
1948 .....	148,864	617,226	766,090	1953 .....	157,997	960,288	1,118,285
1949 .....	181,092	665,449	846,541	1954 .....	154,596	932,184	1,086,780

TABLE 30. Average Annual Metal Prices, in Canadian Dollars, 1945-1934

Year	Gold	Silver	Copper	Lead	Zinc
	Per troy ounce	Per troy ounce	Per pound	Per pound	Per pound
Dollars					
1945 .....	38.50	0.47	0.1255	0.05	0.0644
1946 .....	36.75	0.836	0.128	0.067	0.078
1947 .....	35.00	0.72	0.2039	0.1367	0.1123
1948 .....	35.00	0.75	0.2235	0.1804	0.1393
1949 .....	36.00	0.7425	0.1997	0.158	0.1325
1950 .....	38.05	0.8082	0.2342	0.1445	0.1565
1951 .....	36.85	0.9455	0.277	0.184	0.199
1952 .....	34.27	0.8352	0.2854	0.1619	0.1746
1953 .....	34.42	0.8401	0.299	0.1293	0.1196
1954 .....	34.07	0.8326	0.2916	0.1333	0.1198



## TRANSACTIONS IN GOLD BULLION AT THE ROYAL CANADIAN MINT

(From the Annual Report of the Royal Canadian Mint)

Five thousand six hundred and one deposits of gold bullion were received at the Mint during the year from Canadian Mining Companies, the Assay Office, Royal Canadian Mint, Vancouver, B.C. and Sundry Persons. The gross weight of the deposits amounted to 4,768,451 ounces containing by assay 3,829,431 ounces fine gold and 580,451 ounces fine silver. The receipts show an increase as compared with the year 1953 of 59 in the number of deposits, gross weight 126,041 ounces, gold content 145,357 ounces and fine silver 4,021 ounces and was composed of the following:

*Fine Gold -*

233 deposits weighing 390,499.515 oz. of a mean fineness of 996.765

*Crude Bullion -*

4,920 deposits weighing 4,168,857.233 oz. with an average fineness of 785.403 gold,

144.547 silver, and containing 77.005% base metal

*Scrap (Jewellery and Dental) -*

220 deposits weighing 15,568.775 oz. at an average fineness of 502.100 gold and 93.920 silver

*From Vancouver Assay Office -*

228 ingots, 122,505.690 oz. gross at 823.021 gold and 158.850 silver

The net value paid to depositors was \$124,496,783.55. In addition the amount of fine gold issued to depositors was 70,484 ounces.

Details of origin of the bullion deposited at Vancouver and Ottawa during the year 1954 are shown in the following table:

From Canadian Mines and Refineries	Gross Weight	Fine Gold	Fine Silver
	Ounces	Ounces	Ounces
Ontario .....	2,767,656.946	2,293,208.021	295,779.07
Quebec .....	1,038,521.500	780,118.423	170,736.26
British Columbia .....	211,094.657	168,777.366	26,019.21
Manitoba .....	168,597.885	141,746.277	12,477.57
Yukon Territory .....	102,387.040	82,207.839	16,656.96
Nova Scotia .....	214.050	182.610	5.05
North West Territories .....	398,451.175	301,672.195	57,720.01
Alberta and Saskatchewan .....	243.685	195.806	17.89
<b>Total from Canadian mines and refineries .....</b>	<b>4,687,166.938</b>	<b>3,768,108.537</b>	<b>579,412.02</b>
From jewellery and scrap .....	16,721.565	8,377.752	1,447.03
<b>Grand total .....</b>	<b>4,703,888.503</b>	<b>3,776,486.289</b>	<b>580,859.05</b>

Note. The variation between the figures in the table of origin and those above is due to shipments from the Assay Office, Vancouver, being received at the Royal Canadian Mint, Ottawa, the month following deposit and payment at Vancouver.

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

	Ounces Fine
9,767 Trade bars transferred to Exchange Fund Account of Minister of Finance and held in safe-keeping by Bank of Canada	3,908,951.755
Depositors - granulated and bars .....	70,483.519
Sales of fine gold .....	7,304.859
Proof Plate for assay purposes .....	3,929
Medals, etc. ....	12,347
Sweep .....	12,079.157
<b>Total .....</b>	<b>3,998,835.566</b>

This total shows an increase of 372,338.828 ounces fine issued as compared with the year 1953.

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, 1954

Year	Gold Received		Gold Issued	
	Gross Weight	Fine Gold	Coin	Bullion
	Ounces	Ounces	Ounces Fine	Ounces Fine
1908 to 1944 .....	97,147,554.783	78,436,177.193	383,319.096	77,963,244.938
1945 .....	3,102,991.020	2,503,416.913	—	2,499,163.674
1946 .....	3,271,246.445	2,652,244.865	—	2,665,964.763
1947 .....	3,559,496.703	2,868,469.014	—	2,859,084.218
1948 .....	4,252,389.454	3,401,991.441	—	3,405,073.335
1949 .....	4,941,749.248	3,925,617.709	—	3,865,296.377
1950 .....	5,485,956.751	4,422,968.129	—	4,347,961.898
1951 .....	5,246,758.942	4,169,479.513	—	4,167,485.874
1952 .....	4,848,048.381	3,953,158.154	—	4,031,068.071
1953 .....	4,642,410.478	3,684,073.637	—	3,626,496.738
1954 .....	4,768,451.365	3,829,430.609	—	3,998,835.566
<b>Total .....</b>	<b>141,267,053.570</b>	<b>113,847,027.177</b>	<b>383,319.096</b>	<b>113,429,675.452</b>

## CURRENCY, MINT AND EXCHANGE FUND ACT - GOLD BULLION REGULATIONS

P.C. 1954-1584-19th day of October, 1954.

1. The Regulations respecting the purchase and sale of gold at the Royal Canadian Mint, established by Order in Council P.C. 4269 of 9th October, 1952, as amended, are hereby revoked; and

2. The annexed "Regulations respecting the purchase and sale of gold at the Mint" are hereby made and established in substitution for the regulations hereby revoked.

**Regulations Respecting the Purchase and Sale of Gold at the Mint**

1. These regulations may be cited as the Gold Bullion Regulations
2. In these regulations,
  - (a) "deposit" means a parcel of bullion or other material containing gold;
  - (b) "Master" means the Master of the Mint.
3. (1) The Master may accept a deposit that is delivered to the Mint if it contains
  - (a) newly mined Canadian gold,
  - (b) old jewellery and 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 to which subsection (1) does not apply unless the Minister has authorized him to do so,
  - (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 process 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 satisfactory evidence as to the origin of the contents.
4. (1) Each parcel of bullion for which a separate assay is required shall be regarded as a separate deposit and all deposits that have been accepted by the Master shall be valued in the order in which they have been received.
  - (2) The contents of each deposit shall, as soon as may be after the deposit has been accepted by the Master, be determined and valued on the report of the Assay Division of the Mint, gold being reported to the one four-thousandth part (one-quarter millieme) and silver to the one-thousandth part (one millieme) except that, when the millesimal fineness of the bullion exceeds nine hundred and ninety, the gold shall be reported to the one-ten-thousandth part (one-tenth millieme); but the silver content of a deposit when below ten parts in one thousand shall not be reported.
  - (3) 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 deliver the deposit to the depositor at the Mint counter upon payment by the depositor of the Mint charges for melting and assaying.
  - (4) On the completion of the valuation of a deposit, the Master shall, unless the deposit is to be returned to the depositor under subsection (3), furnish the depositor with a memorandum of the out-turn of his deposit in duplicate in which shall be disclosed
    - (a) the weight of the deposit before and after melting,
    - (b) the assay report,



- (c) the fine gold and fine silver content of the deposit,
- (d) the gross value of the fine content at the Mint price applicable to the deposit in accordance with sections 5 and 6,
- (e) the Mint charges applicable to the deposit, and
- (f) the net value of the fine content of the deposit, being the gross value minus the Mint charges.

(5) Upon the memorandum being furnished to a depositor under subsection (4), the Minister shall pay to the depositor an amount equal to the net value of the fine content of the deposit as disclosed in the memorandum.

5. The price payable by the Minister for gold contained in a deposit that is accepted by the Master 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 buying rates of exchange for the currency of that country, reported to the Minister by the Bank of Canada at noon of the days Monday to Friday inclusive of the week during which the deposit is delivered to the Master, such price to be known as the "Mint buying price".

6. The price payable by the Minister for silver (except for the first one per cent of the weight of the deposit after melting) contained in a deposit is 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 buying rates of exchange for United States funds reported to the Minister by the Bank of Canada at noon on the days Monday to Friday inclusive of that week, but this section does not apply when the silver content does not exceed one per cent of the weight of the deposit.

7. The Mint charges, to be calculated on the gross weight of the deposit after melting, shall be as follows:

- (a) for melting and assaying,—one dollar for the first four hundred ounces or part thereof and twenty-five cents for each additional one hundred ounces or part thereof;
- (b) for refining,—when the deposit contains not more than five per cent base metal..... three cents per ounce,  
Over five per cent but not over ten per cent base metal..... three and one-half cents per ounce,  
Over ten per cent but not over fifteen per cent base metal ..... four and one-quarter cents per ounce,  
Over fifteen per cent but not over twenty per cent base metal..... five cents per ounce,
- (c) handling charge to cover costs of marketing outside Canada
  - (i) newly mined Canadian gold ..... twenty cents per fine ounce,
  - (ii) all other gold ..... one dollar per fine ounce,
- (d) on deposits which contain over twenty per cent base metal, or which require toughening or other special treatment in order to obtain concordant assays, a charge, not exceeding ten cents per ounce, to be determined by the cost of treatment;
- (e) the minimum charge for refining shall be two dollars for each deposit, and the charge for refining applies to all deposits containing by assay less than nine hundred and ninety-five parts fine gold in one thousand.

8. (1) The Master may, from time to time, sell fine gold from the Mint if the Minister has authorized him to do so.

(2) The price payable for each ounce of gold sold under subsection (1) shall be the Mint buying price per ounce established in accordance with section 5 for the week immediately preceding the week in which the gold is sold, plus ten cents.

(3) The Master may issue fine gold from the Mint in part payment of the net value of the fine content of a deposit.

9. (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 day to be observed as a holiday under the Civil Service Act.

(2) All deposits that are tendered to the Minister for purchase by him shall be delivered to the Master at the Mint counter, free of all charges.

(3) Where a package is received at the Mint by mail or carrier, it shall not be opened until an invoice setting out the description and weight of the contents 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.

(4) Gold sold by the Minister shall be delivered at the Mint counter at Ottawa to the purchaser or a carrier or other agent acting on behalf of the purchaser.

(5) A deposit that is to be returned to a depositor shall be delivered, at the Mint counter at the place where the deposit is when the Master decides to return it to the depositor or a carrier or other agent acting on behalf of the depositor.

#### CURRENCY, MINT AND EXCHANGE FUND ACT — MINT CUSTOM REFINING AND STORING REGULATIONS

P.C. 1954-1619-28th day of October, 1954.

1. The Mint Custom Refining and Storing Regulations, established by Order in Council P.C. 1953-1944 of 17th December, 1953, are hereby revoked; and

2. The annexed "Mint Custom Refining and Storing Regulations" are hereby made and established in substitution for the regulations hereby revoked.

#### Regulations Prescribing the Circumstances under which and the Conditions upon which Gold will be accepted at the Mint for Custom Refining and Storing

1. These regulations may be cited as the Mint Custom Refining and Storing Regulations.

2. (1) In these regulations,

- (a) "appropriate form" means the form of the instrument or document prescribed by the Minister for a particular purpose;
- (b) "designated gold" means gold produced from a mine of a producer, on or after the elected date;
- (c) "elected date" means, with respect to a producer, the first day of January, April, July or October, as the producer designates, with the approval of the Minister, in making his election in the appropriate form;
- (d) "producer" means a person or corporation engaged in producing gold from a mine who has made an election by instrument in the appropriate form delivered to the Minister;
- (e) "processor" means a person or corporation engaged in the business of processing gold in Canada who makes application and gives an undertaking in the appropriate form, and whose application has been accepted by the Minister and who has not subsequently been disqualified under section 8.

(2) The Minister shall not approve a date as the elected date in respect of a producer unless the producer has, before the expiry of thirty days from that date, delivered to the Minister an election in the appropriate form designating that date as the elected date.

3. (1) Upon application by a producer in the appropriate form the Minister may accept designated gold at the Mint for assaying, refining and storing on behalf of the producer.

(2) Where a producer, in accordance with a licence issued under the Gold Export Act,

- (a) ships designated gold from Canada to be smelted or refined and subsequently sells the refined gold outside Canada, or

- (b) sells designated gold to a smelter or refiner outside Canada, at a price that, in the opinion of the Minister, does not exceed the Mint price, the Minister may, upon being satisfied that the gold has been so sold, sell to the producer an amount of gold equivalent to the amount so sold and, subject to section 4, store it at the Mint for the producer.

4. (1) Gold accepted at the Mint for assaying, refining or storing under these regulations is so accepted subject to the condition that it shall be released, in the form of fine gold (.995 fine or better), only upon application in accordance with these regulations made by or on behalf of the producer,

- (a) for sale and delivery to a processor, in an amount that, in the opinion of the Minister, does not exceed the normal requirements of the processor and if, in the opinion of the Minister, it will be used for bona fide industrial purposes in Canada;
- (b) for export on behalf of the producer in accordance with a licence issued under the Gold Export Act; or
- (c) for sale to Her Majesty at the Mint at the official price for the purchase of gold by Her Majesty at the Mint for the week in which the sale is made;

and for no other purpose.

(2) Where gold is released from the Mint to a producer, pursuant to these regulations, it shall be delivered, at the Mint counter at Ottawa, to a consignee designated by the producer, or to a carrier or other agent acting on behalf of the consignee.

5. For the purpose of these regulations,

- (a) an application by a producer for sale and delivery of gold in accordance with paragraph (a) of subsection (1) of section 4 shall be in the appropriate form, and shall be accompanied by an offer to purchase gold in the appropriate form; and
- (b) an application by a producer for delivery of gold in accordance with paragraph (b) of subsection (1) of section 4 shall be in the appropriate form and shall be accompanied by the original or a photostatic copy of the import licence issued by the appropriate authority in the country of destination in respect of the proposed transaction, if such a licence is required.

6. The following Mint service charges are payable by a producer:

- (a) where gold is melted, assayed or refined for the producer at the Mint, an amount in respect of the melting, assaying or refining calculated at the rates then prescribed therefor by the Gold Bullion Regulations in respect of deposits of gold at the Mint, payable when billed;
- (b) one cent for every thirty days or fraction thereof (including the day on which the gold is received at the Mint but excluding the day on which it is shipped from the Mint) for each ounce of gold stored for the producer at the Mint, payable at the time of application for release of the gold or when billed, whichever is the earlier;
- (c) ten cents for each ounce of gold packed for shipment at the Mint on the direction of the producer, payable at the time of application for release of the gold; and
- (d) a handling charge of twenty cents for each ounce of gold sold to Her Majesty, payable at the time of sale.

7. The silver content of the gold bullion delivered to the Mint by a producer under these regulations may be purchased by Her Majesty at the official price for the purchase of silver by Her Majesty at the Mint for the week in which it is so purchased.

8. (1) Where a person or corporation engaged in the business of processing gold in Canada makes application and gives an undertaking in the appropriate form, the Minister may accept the application if he is satisfied that the applicant is engaged in a bona fide enterprise for the processing of gold and will carry out the undertaking in good faith.

(2) Where the Minister has reason to believe that a processor has failed to carry out any part of the undertaking given by him in the appropriate form, or that gold sold to a processor has been dealt with in a manner contrary to the undertaking, he may, by notice in writing delivered to the processor, disqualify the processor.



## 9. Notwithstanding anything in these regulations,

- (a) the Minister may designate a corporation that has adequate facilities for refining and storing gold as his agent to perform the services that would otherwise be performed at the Mint for a producer under these regulations, and may enter into such agreements as he deems necessary for the purpose; and
- (b) services may be performed by an agent designated under this section only upon such terms and conditions as the Minister prescribes and the Minister may, in his discretion, for the purposes of this section, fix such charges in lieu of those prescribed by section 6 and make such other financial arrangements as he deems advisable.

**Designated Gold**

During the year ten mines had gold bullion in Mint Storage 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 Custom Refining and Storing. At the end of 1954 the number had declined to five mines.

The fine gold content of the bullion deposited under this heading during 1954 amounted to 57,316.873 ounces. Fine bullion amounting to 65,747.470 ounces was issued on behalf of the mines for export and to various processors for domestic use.

## Directory of Firms in the Gold Mining Industry, 1954

Name	Head or executive office address	Location
(a) Alluvial Gold Mining Industry		
<b>British Columbia:</b>		
Antler Mountain Gold Ltd.	Box 30, Barkerville	Barkerville
Brown & Brady	921-17th Ave. W., Calgary, Alberta	Boulder Creek
Chase, Edwin M.	Horsefly	Horsefly
Christensen, Harold C.	Wells	Cariboo
Callishaw, R.	2627 Ottawa Ave. West, Vancouver	Williams Creek
Cassell, Barksdale & Bingham	323 Medical Bldg., Seattle, Washington, U.S.A.	Keithley Creek
Cresswell, Richard	Quesnel	Cottonwood River
Enterprise Placers	Atlin	Atlin
Feyer, J. H.	Beaver Pass via Quesnel	Quesnel
Fosberg, P. H. V.	Lumby	Vernon
Fredericks, F.	Likely	Quesnel
Gunn, J. J.	Wells	Wells
Germanson River Placers	Manson Creek	Germanson River
Haymore, Will.	Goldbridge	Lillooet
Holland, John	Wells	Cariboo
Ivanic, S., & Partners	Atlin	Spruce Creek
Johnson, Edward M.	Barkerville	Campbell Creek
Larson, Eric G.	Telegraph Creek	Boulder Creek
MacDonald, R. J.	Cottonwood	Mosquito Creek
McGregor, James	Telegraph Creek	Alice Creek
Noland Mines Ltd.	532 Burrard St., Vancouver	Atlin
Nixon Placers Inc.	2032 Third Ave., Seattle, Washington, U.S.A.	Cariboo
North & Nichols	Ladner	Beaver Pass
Old Channel Placers	Allenby	Similkameen
Piccolo Bros.	Atlin	Atlin
Strome, Rudolph	Wells	Barkerville
Suran, Wm.	Wells	Cariboo
Wader, Lloyd	Sicamous	Revelstoke
Yalakom Placers	3439 Euclid St., Vancouver	Bridge River
<b>Yukon:</b>		
Ballarat Mines Ltd.	Dawson	Ballarat Creek
Boutillier, D. F. & H. C.	Dawson	Bonanza Creek
Boutillier, H. & H.	Box 437, Dawson	Bonanza Creek
Bratsberg, B.	1682 MacGowan Ave., N. Vancouver, British Columbia	Dawson
Bradbury & Cooper	Glacier	Dawson
Bremner, John	Dawson	Last Chance Creek
Burwash Mining Co. Ltd.	Box 776, Whitehorse	Burwash Creek
Castonguay, J. P.	Dawson	Cariboo Creek
Cole Bros.	Dawson	Bunker Hill
Clear Creek Placers Ltd.	Dawson	Clear Creek
Coulombe, A. & A.	Dawson	Ballarat Creek
Feichtinger, J.	Glacier Creek	Dawson
Fry, A. T. & D.	Box 907, Dawson	Bonanza Creek
Gould, J. A. & R. S.	P.O. Box 328, Dawson	Dawson
Kluane Dredging Co. Ltd.	Box 762, Whitehorse	Gladstone Creek
Lundin, John E.	Box 923, Dawson	Quartz Creek
Northern Placers Ltd.	Box 513, Dawson	Dawson
Pamuchina, P.	Bonanza Creek	Bonanza Creek
Pontaletta, P.	Dawson	Dawson
Sestak, Joe	Dawson	Dawson
Shaw, Geo. O.	Dawson	Gold Bottom Creek
Strugar, J.	Dawson	Dawson
Taylor, Fred	Mayo	Dublin Gulch
Terra Mines Ltd.	Glacier	Little Gold Creek
Thorsen, Harry	Box 509, Whitehorse	Bullion Creek
Troberg, R. E.	Dawson	Bonanza Creek
Waddco Placers Ltd.	1331 Marine Bldg., Vancouver, British Columbia	Haggart Creek
Yukon Consolidated Gold Corporation	1919 Marine Bldg., Vancouver, British Columbia	Dawson
Yukon Gold Placers Ltd.	Dawson	Henderson Creek
Yukon Placer Mining Co.	Glacier Creek	Glacier Creek
<b>Quebec:</b>		
Winget, C. M.	75 Main St., Lennoxville	Ditton River
<b>Alberta:</b>		
Cook, Thos. E.	8334-79 Ave., Edmonton	North Saskatchewan River

## Directory of Firms in the Gold Mining Industry, 1954 - Continued

Name	Head or executive office address	Location
(b) Auriferous Quartz Mining Industry		
<b>Nova Scotia:</b>		
Smith, A. J. ....	East Chezzetcook .....	Lake Catcha
Renfrew Gold Mines Ltd. ....	Brookfield .....	Renfrew Co.
<b>Quebec:</b>		
Adnor Mines Ltd. ....	132 St. James St. W., Montreal .....	Gamache Twp.
Alta Mines Ltd. ....	141 Ave. Pagnuelo, Outremont .....	Sicatte et Lytton
Barnat Mines Ltd. ....	56 Sparks St., Ottawa, Ontario .....	Malartic, Quebec
Bagamac Mines Ltd. ....	Oak Ridge, Ontario .....	Rouyn
Bellettre Quebec Mines Ltd. ....	25 King St. W., Toronto 1, Ontario .....	Bellettre
Beattie-Duquesne Mines Ltd. ....	Duparquet .....	Duparquet
Beau Chibougamau Mines Ltd. ....	50 King St. W., Toronto, Ontario .....	Chibougamau
Belfast Mines Ltd. ....	314 Bathurst St., Toronto, Ontario .....	Duprat Twp.
Belmont Mining & Exploration Co., Ltd. ....	1121 Sherbrooke St. W., Montreal .....	McKenzie Twp.
Bevcourt Gold Mines, Ltd. ....	360 St. James St. W., Montreal, Quebec .....	Bourlamaque
Bocaboils Gold Mines Ltd. ....	330 Bay St., Toronto, Ontario .....	Destor Twp.
Bourbeau Lake Mines Ltd. ....	Noranda .....	McKenzie Twp.
Cache Bay (Chibougamau) Mines Ltd. ....	630 Dorchester St. W., Montreal .....	Obalski
Canadian Malartic Gold Mines Ltd. ....	25 King St. W., Toronto 1, Ontario .....	Malartic
Celta Development & Mining Co., Ltd. ....	465 St. John St., Montreal .....	Rouyn Twp.
Chibougamau Explorers Ltd. ....	620 Cathcart St., Montreal .....	La Dauversiere
Chimo Gold Mines Ltd. ....	25 Adelaide St. W., Toronto, Ontario .....	Vauquelin Twp.
Clavery Gold Mines Ltd. ....	682 Bloomfield Ave., Outremont .....	Duvernay Twp.
Croinard Pershing Mines Ltd. ....	200 Bay St., Toronto, Ontario .....	Pershing
Coumor Mining Co., Ltd. ....	1121 Sherbrooke St. W., Montreal .....	Louvicoeur Twp.
Centremaque Gold Mines Ltd. ....	637 Craig St. W., Montreal .....	Bourlamaque Twp.
Commonwealth Exploration Ltd. ....	355 St. James St. W., Montreal .....	Hauy Twp.
Consolidated Central Cadillac Mines Ltd. ....	507 Place d'Armes, Montreal .....	Cadillac
D'Aragon Mines Ltd. ....	11 King St. W., Toronto, Ontario .....	Bourlamaque Twp.
D'Eldona Gold Mines Ltd. ....	310 Temple Building, Toronto, Ontario .....	Rouyn Twp.
Dome Exploration Company (Quebec) Ltd. ....	Bourlamaque, Quebec .....	Bourlamaque
Dominion Gulf Company .....	P.O. Drawer 2038, Pittsburgh 30, Pa., U.S.A. ....	Beauchastel Twp.
Donalda Mines Ltd. ....	310 Temple Bldg., Toronto, Ontario .....	Noranda
East Malartic Mines Ltd. ....	355 St. James St. W., Montreal, Quebec .....	Fourniere Twp.
Elder Mines, Ltd. ....	44 King St. W., Toronto, Ontario .....	Noranda Twp.
Eldrich Mines Ltd. ....	314 Bathurst St., Toronto, Ontario .....	Duprat
Fayolle-Antoine .....	175, rue Noranda ouest, Rouyn, Quebec .....	Dasserat
Hoyle Mining Co., Ltd. ....	Box 99, Haileybury .....	Levy Twp.
Kenno Explorations, (Canada) Ltd. ....	1010 Ste. Catherine St. W., Montreal 2 .....	Guercheville Twp.
Lake Opawica Mines Ltd. ....	516 Canada Cement Bldg., Montreal .....	Parker Twp.
Lake Wasa Mining Corporation .....	Arntfield, Quebec .....	Bourlamaque
Lamaque Mining Co., Ltd. ....	Bourlamaque, Quebec .....	Bourlamaque
Lavalie Mines Ltd. ....	7 King St. W., Toronto, Ontario .....	Malartic
Latic Mines Ltd. ....	25 King St. W., Toronto, Ontario .....	McKenzie Twp.
Laurentide (Chibougamau) Mines Ltd. ....	360 Craig St. W., Montreal .....	Bourlamaque
Louvicoeur Goldfields Corporation .....	100 Adelaide St. W., Toronto, Ontario .....	Fourniere Twp.
Malartic Gold Fields Ltd. ....	355 St. James St. W., Montreal .....	Dubuisson Twp.
Marbenor Malartic Mines Ltd. ....	25 Adelaide St., Toronto, Ontario .....	Rouyn Twp.
McWatters Gold Mines .....	Haileybury, Ontario .....	Lesieur Twp.
McIntyre Porcupine Mines, Ltd. ....	25 King St. W., Toronto 1, Ontario .....	Kreighoff Twp.
Mining Corporation of Canada, The, Ltd. ....	44 King St. W., Toronto 1, Ontario .....	Gamache
Montgomery Mining Co., Ltd. ....	132 St. James St. W., Montreal .....	Louvicoeur
Nemrod Mining Co., Ltd. ....	4 East Notre Dame St., Montreal .....	Amos, Quebec
New Goldvue Mines Ltd. ....	100 Adelaide St. W., Toronto, Ontario .....	Dubuisson Twp.
New Harricana Mines Ltd. ....	330 Bay St., Toronto, Ontario .....	Joannes Twp.
New Hasco Mines Ltd. ....	357 Bay St., Toronto, Ontario .....	Malartic
New Hugh Malartic Mines Ltd. ....	22 Toronto St., Toronto, Ontario .....	Rouyn
New Marlon Gold Mines Ltd. ....	7 King St. W., Toronto, Ontario .....	Bourlamaque
New Mylamaque Explorations Ltd. ....	145 Yonge St., Toronto, Ontario .....	Noranda
New Senator-Rouyn Ltd. ....	Box 428, Noranda .....	Beauchastel Twp.
Nordis Gold Mines Ltd. ....	80 Richmond St. W., Toronto, Ontario .....	Cadillac Twp.
O'Brien Gold Mines, Ltd. ....	Kewagama, Quebec .....	Rouyn Twp.
Osisko Lake Mines Ltd. ....	25 King St. W., Toronto 1, Ontario .....	Rouyn Twp.
Osisko Rouyn Exploration Co., Ltd. ....	360 St. James St. West, Montreal .....	Abitibi
Perron Gold Mines Ltd. ....	200 Bay St., Toronto, Ontario .....	Roy Twp.
Portage Island (Chibougamau) Mines Ltd. ....	630 Dorchester St. W., Montreal .....	Noranda
Powell Rouyn Gold Mines Ltd. ....	Box 250, Noranda, Quebec .....	Labarre
Quartz Bleu du Saguenay Enrg., Le .....	B.P. 235, St-Joseph D'Alma .....	Barraute
Quebec Diversified Mining Corp., Ltd. ....	2006 Bleury St., Montreal .....	Vauquelin Twp.
Quebec Explorers .....	132 St. Jacques, Montreal .....	Bourlamaque
Sigma Mines (Quebec) Ltd. ....	Bourlamaque, Quebec .....	Siscoe Island
Siscoe Gold Mines Ltd. ....	907 Dominion Square Bldg., Montreal .....	Rouyn
Stadacona Mines (1944) Ltd. ....	P.O. Box 390, Rouyn, Quebec .....	Dubuisson Twp.
Sullivan Consolidated Mines Ltd. ....	1604-Aldred Building, Montreal .....	Fancamp Twp.
Teck Exploration Co., Ltd. ....	Bourlamaque .....	Merrill Island
Titanic Mine Holding Ltd. ....	215 St. James St. W., Montreal .....	Gamache
Wright-Hargreaves Mines, Ltd. ....	Canadian Bank of Commerce, Port Erie, Ontario .....	
<b>Ontario:</b>		
<b>Porcupine District</b>		
Aunor Gold Mines Ltd. ....	1600 Royal Bank Building, Toronto .....	Timmins
Bonwhit Mines Ltd. ....	1705 Sterling Tower Bldg., 372 Bay St., Toronto .....	Pamour
Broulan Reef Mines Ltd. ....	1705 Sterling Tower Bldg., 372 Bay St., Toronto .....	Whitney Twp.
Central Porcupine Mines Ltd. ....	25 King St. W., Toronto, Ontario .....	Tisdale Twp.
Conlaum Mines Ltd. ....	25 King St. W., Toronto, Ontario .....	Tisdale Twp.
Delnite Mines Ltd. ....	Box 590, Timmins .....	Deloro Twp.



## Directory of Firms in the Gold Mining Industry, 1954 — Continued

Name	Head or executive office address	Location
(b) Auriferous Quartz Mining Industry — Concluded		
<b>Ontario — concluded:</b>		
Porcupine District — Concluded		
Dome Mines Ltd. ....	South Porcupine .....	Tisdale Twp.
Godbeau Porcupine Mines Ltd. ....	50 King St. W., Toronto, Ontario .....	Tisdale Twp.
Hallnor Mines Ltd. ....	1700 Bank of Nova Scotia Building, Toronto .....	Whitney Twp.
Hollinger Consolidated Gold Mines Ltd. ....	Timmins .....	Hislop Twp.
Hugh-Pam Porcupine Mines Ltd. ....	50 King St. W., Toronto .....	Cochrane District
McIntyre Porcupine Mines Ltd. ....	Schumacher .....	Schumacher
Midcamp Mines Ltd. ....	1600 Royal Bank Building, Toronto .....	Tisdale Twp.
Pamour Porcupine Mines Ltd. ....	Pamour .....	Whitney Twp.
Paymaster Consolidated Mines Ltd. ....	Box 100, South Porcupine .....	Deloro and Tisdale Twps.
Preston East Dome Mines Ltd. ....	Box 545, South Porcupine .....	South Porcupine
Kirkland Lake District		
Kirkland Lake Gold Mining Co. Ltd. ....	1314 Metropolitan Building, Toronto .....	Teck Twp.
Lake Shore Mines Ltd. ....	Kirkland Lake .....	Kirkland Lake
Macassa Mines Ltd. ....	85 Richmond St. W., Toronto .....	Kirkland Lake
Queenston Gold Mines Ltd. ....	1101 Federal Bldg., Toronto .....	Dobie
Sylvanite Gold Mines Ltd. ....	Box 670, Kirkland Lake .....	Teck Twp.
Teck-Huges Gold Mines Ltd., The .....	14 Finkle St., Woodstock .....	Kirkland Lake
Upper Canada Mines Ltd. ....	1101 Federal Building, Toronto .....	Gauthier Twp.
Wright-Hargreaves Mines Ltd. ....	Port Erie .....	Kirkland Lake
Larder Lake District		
Kerr-Addison Gold Mines Ltd. ....	44 King St. W., Toronto .....	McGarry Twp.
Matachewan District		
Hollinger Consolidated Gold Mines Ltd. ....	Timmins .....	Powell Twp.
Matachewan Consolidated Mines Ltd. ....	25 King St. W., Toronto .....	Powell Twp.
Sudbury District		
Curtin Prospecting Syndicate .....	Box 626, Espanola .....	Curtin Twp.
Renable Mines Ltd. ....	85 Richmond St. W., Toronto .....	Sudbury
Thunder Bay District		
Leitch Gold Mines Ltd. ....	Deardmore .....	Summers Twp.
Little Long Lac Gold Mines Ltd. ....	200 Bay St., Toronto .....	Errington Twp.
MacLeod-Cockshutt Gold Mines Ltd. ....	357 Bay St., Toronto .....	Geraldton
Consolidated Mosher Mines Ltd. ....	25 King St. W., Toronto .....	Long Lac
Plator Gralouise Gold Mines Ltd. ....	300 Roncesvalles Ave., Toronto .....	Atekokan
Kenora District		
Cone, R. C. ....	Mine Centre .....	Shoal Lake
Patricia District		
Campbell Red Lake Mines Ltd. ....	Balmerton .....	Balmer Twp.
Cochenour Willans Gold Mines Ltd. ....	801 Dominion Bank Bldg., Toronto .....	Dome Twp.
McKenzie Red Lake Gold Mines Ltd. ....	McKenzie Island .....	McKenzie Island
Madsen Red Lake Gold Mines Ltd. ....	67 Yonge St., Toronto .....	Heyson Twp.
New Dickenson Mines Ltd. ....	145 Yonge St. W., Toronto .....	Balmer Twp.
Pickle Crow Gold Mines, Ltd. ....	Pickle Crow .....	Connell Twp.
Starratt Oisen Gold Mines Ltd. ....	25 King St. W., Toronto .....	Baird Twp.
<b>Manitoba:</b>		
Forty-Four Mines Ltd. ....	237 Curry Bldg., Winnipeg .....	Rice Lake
Howe Sound Exploration Co. Ltd. ....	Snow Lake .....	Snow Lake
San Antonio Gold Mines Ltd. ....	237 Curry Bldg., Winnipeg .....	Bissett
<b>British Columbia:</b>		
Alpine Gold Ltd. ....	Box 83, Nelson .....	Sitkum Creek
Bralorne Mines, Ltd. ....	555 Burrard St., Vancouver .....	Bralorne
Cariboo Gold Quartz Mining Co. Ltd. ....	675 W. Hastings St., Vancouver .....	Cariboo
Consolidated Mining & Smelting Co. Ltd. ....	Trail .....	Skeena
Deerhorn Mines Ltd. ....	44 King St. W., Toronto, Ontario .....	Burns Lake
Endersby, A., Sr. & Jr. ....	Box 101, Fruitvale .....	West Kootenay
Island Mountain Mines Ltd. ....	Wells .....	Cariboo
Kelowna Mines Hedley Ltd. ....	Hedley .....	Osoyoos & Slocan
Pacific Explorations Ltd. ....	2671 W. Broadway, Vancouver .....	Various
Pioneer Gold Mines of B. C., Ltd. ....	711 Yorkshire Bldg., Vancouver .....	Lillooet
Privateer Mine Ltd. ....	208 Ford Building, Vancouver .....	Zeballos
Snowdrop Mining Co. ....	Rossland .....	Kootenay
Tide Lake Mines .....	Box 58, Stewart .....	Tide Lake
<b>Northwest Territories:</b>		
Akaiicho Yellowknife Gold Mines Ltd. ....	25 King St. W., Toronto, Ontario .....	Yellowknife
Boreas Yellowknife Gold Mines Ltd. ....	525A—7th Ave. West, Calgary, Alberta .....	Gordon Lake
Consolidated Mining & S. Co. of Canada, Ltd. ....	Trail, British Columbia .....	Yellowknife
Cons. Discovery Yellowknife Mines Ltd. ....	25 Adelaide St. W., Toronto, Ontario .....	Yellowknife
Giant Yellowknife Gold Mines Ltd. ....	25 King St. W., Toronto, Ontario .....	Yellowknife
Prelude Lake Mines Ltd. ....	184 Bay St., Toronto, Ontario .....	Yellowknife

## Directory of Firms in the Gold Mining Industry, 1954 - Continued

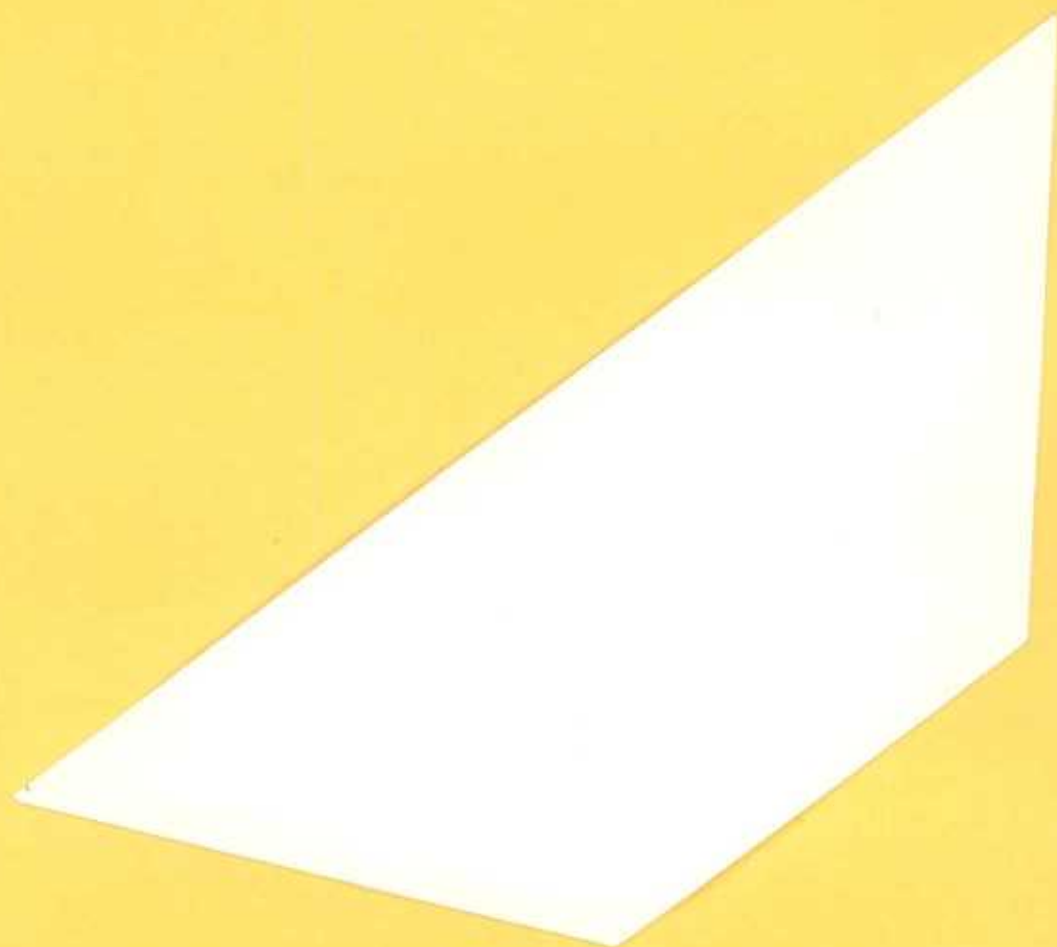
Name	Head or executive office address	Location
(c) Copper-Gold-Silver Mining Industry		
<b>Nova Scotia:</b>		
King Copper Mining Corp.	1519 Pine Ave. W., Montreal, Quebec	Oxford
<b>Quebec:</b>		
Area Mines Ltd.	44 King St. W., Toronto, Ontario	Levy Twp.
Bellren Mining Corp. Ltd.	200 St. James St. W., Montreal	Montbellard Twp.
Big Town Copper Mines Ltd.	132 St. Jacques Ouest, Montreal	Belcourt
Brompton Copper Corp. Ltd.	Sherbrooke	Brompton Twp.
Broshan Chibaugamau Mines Ltd.	360 St. James St. W., Montreal	McKenzie Twp.
Burrex Mines Ltd.	603 Temple Bldg., Toronto, Ontario	Dollier Twp.
Campbell Chibaugamau Mines Ltd.	620 Cathcart St., Montreal	Merrill Island
Cartier Exploration Co.	18 est Beaubien, Montreal	Macamic
Concor-Chibaugamau Mines Ltd.	12 Jane St., Toronto, Ontario	Ray Twp.
Conwest Exploration Co. Ltd.	Spencerville, Ontario	Villebon Twp.
Copper Cliff Consolidated Mining Corp.	44 St. Joseph Blvd., Dorval	Chibaugamau
Defor Chibaugamau Mines Ltd.	477, rue St-Francois Xavier, Montreal	Chibaugamau
Despina Gold Mines Ltd.	37 Wall St., New York, N.Y., U.S.A.	Duprat, Dufresnoy
Duvan Copper Co., Ltd.	Box 190, Rouyn	Desmeloizes Twp.
Endeavor Mining Corp. Ltd.	80 Richmond St. W., Toronto, Ontario	Levy Twp.
East Sullivan Mines Ltd.	1403 Aldred Bldg., Montreal	Bourlamaque Twp.
Gaspe Copper Mines Ltd.	44 King St. W., Toronto, Ontario	Holland Twp.
Glencona Mining Co., Ltd.	132 St. James St. W., Montreal	Le Tac Twp.
Imperial Minerals Ltd.	1255 Phillips Square, Montreal	Matapedia Twp.
Jaculet Mines Ltd.	85 Richmond St. W., Toronto, Ontario	Chibaugamau
Kayrand Mining & Development Co., Ltd.	215 St. James St. W., Montreal	Merrill Island
Kerromac Mining Co., Ltd.	132 St. James St. W., Montreal	Le Tac Twp.
Lake Dufault Mines Ltd.	25 King St. W., Toronto, Ontario	Dufresnoy Twp.
Leys, W., Mining Corp., Ltd.	486 St. John St., Montreal	Dasserrat Twp.
Lyndhurst Mining Co., Ltd.	302 Bay St., Toronto, Ontario	Destor Twp.
Mid-North Engineering Services Ltd.	145 Yonge St., Toronto, Ontario	Duprat Twp.
Miller Copper Mines Ltd.	1610 Sherbrooke St. W., Montreal	Holland Twp.
New Inco Mines Ltd.	355 St. James St. W., Montreal	Dufresnoy Twp.
New Metalore Mining Co. Ltd.	80 Richmond St. W., Toronto, Ontario	Perron Twp.
North Trinity Mining Corp.	900-3rd Ave., Val d'Or	Castagnier Lake
Noranda Mines Ltd.	1709 Bank of Nova Scotia Bldg., Toronto, Ontario	Noranda
Normetal Mining Corp., Ltd.	44 King St. W., Toronto, Ontario	Desmeloizes Twp.
Opemiska Copper Mines (Quebec) Ltd.	25 King St. W., Toronto, Ontario	Opemiska
Osisko Lake Mines Ltd.	25 King St. W., Toronto, Ontario	Rouyn Twp.
Panet Metals Corp. Ltd.	St. Magloire	Bellechasse
Parkway Mines Ltd.	200 Bay St., Toronto, Ontario	Duparquet Twp.
Quebec Copper Corp., Ltd.	1403 Aldred Bldg., Montreal	Brome
Quebec Smelting & Refining Ltd.	215 St. James St. W., Montreal	McKenzie Twp.
Quemont Mining Corp., Ltd.	44 King St. W., Toronto, Ontario	Rouyn Twp.
Rainville Mines Ltd.	25 King St. W., Toronto, Ontario	Louvicoourt Twp.
Rio Canadian Exploration Ltd.	200 Bay St., Toronto, Ontario	Gaspesia
Riverside-Chebaugama Mines Ltd.	12 Jane St., Toronto, Ontario	Hazeur Twp.
Romac Mines Ltd.	794-3rd Ave., Val d'Or	Tibletmont Twp.
Royran Gold Fields Ltd.	215 St. James W., Montreal	Chibaugamau
Senneterre Metals Mines Ltd.	Senneterre	Senneterre
South Bachelor Mining Co., Ltd.	132 St. James St. W., Montreal	Le Tac Twp.
Standard Gold Mines Ltd.	1403 Aldred Bldg., Montreal	Cuvier Twp.
Stratmat Ltd.	620 Cathcart St., Montreal	McKenzie Twp.
Ungava Copper Corp.	66 King St. W., Toronto, Ontario	Canton #6044
Walte Amulet Mines Ltd.	Noranda	Duprat Twp.
Weedon Pyrite & Copper Corp. Ltd.	507 Place D'Ames, Montreal	Fontainebleau
West Wasa Mines Ltd.	480 Brookdale Ave., Toronto, Ontario	Beauchastel Twp.
<b>Ontario:</b>		
Armour Uranium & Copper Mines Ltd.	211 Owen Bldg., Willowdale	Frechette Twp.
Buffalo Canadian Gold Mines Ltd.	44 King St. W., Toronto	Manitouwadge
Baseline Mines Ltd.	145 Yonge St., Toronto	Manitouwadge
Cam Copper	Boston Creek	Boston Creek
Cavan Mines Ltd.	357 Bay St., Toronto	Manitouwadge
Delmico Mines Ltd.	25 Adelaide St. W., Toronto	Manitouwadge
Ex-Mother Lode	Elk Lake	Elk Lake
Falgar Mining Corp. Ltd.	22 Toronto St., Toronto	Falconbridge Twp.
Geco Mines Ltd.	44 King St. W., Toronto	Manitouwadge
Glenburk Mines Ltd.	357 Bay St., Toronto	Manitouwadge
Greenlee Mines Ltd.	25 Adelaide St. W., Toronto	Manitouwadge
Headway Red Lake Gold Mines Ltd.	67 Yonge St., Toronto	Manitouwadge
Killala Lake Mines Ltd.	100 Adelaide St. W., Toronto	Manitouwadge
Kristina Copper Mines Ltd.	34 Touraine Ave., Wilson Heights	Algoma
Laco Mines Ltd.	200 Bay St., Toronto	Manitouwadge
Man-Echo Mines Ltd.	67 Yonge St., Toronto	Manitouwadge
Nama Creek Mines Ltd.	330 Bay St., Toronto	Manitouwadge
New Jason Mines Ltd.	7 King St. W., Toronto	Manitouwadge
New Kelore Mines Ltd.	67 Yonge St., Toronto	Jameson Twp.
New Ryan Lake Mines Ltd.	Matatchewan	Powell Twp.
Okioco Mines Ltd.	200 Bay St., Toronto	Manitouwadge
Oklend Gold Mines Ltd.	200 Bay St., Toronto	Manitouwadge
Parbar Mines Ltd.	100 Adelaide St. W., Toronto	Manitouwadge
Poly Ores Mining Co., Ltd.	331 Bay St., Toronto	Shedden Twp.
Sheroomac	Box 150, Fergus	Boston Twp.
Tandem Mines Ltd.	330 Bay St., Toronto	Manitouwadge
Wadge Mines Ltd.	145 Yonge St., Toronto	Manitouwadge
Willroy Mines Ltd.	244 Bay St., Toronto	Manitouwadge

## Directory of Firms in the Gold Mining Industry, 1954 - Concluded

Name	Head of executive office address	Location
(c) Copper-Gold-Silver Mining Industry - Concluded		
<b>Manitoba:</b>		
Cuprus Mines Limited .....	500 Royal Bank Bldg., Winnipeg, Manitoba .....	Flin Flon
Hudson Bay Mining & Smelting Company Ltd. ....	500 Royal Bank Bldg., Winnipeg .....	Flin Flon
Northern Metals Ltd. ....	217 St. Germaine Ave., Toronto, Ontario .....	Schist Lake
<b>Saskatchewan:</b>		
Hudson Bay Mining & Smelting Co., Limited .....	500 Royal Bank Bldg., Winnipeg, Manitoba .....	Flin Flon
<b>British Columbia:</b>		
Britannia Mining & Smelting Co. Ltd. ....	Britannia Beach .....	Britannia Beach
Consolidated Mining & Smelting Co. Ltd. ....	Trail .....	Jordan River
Canam Copper Co., Ltd. ....	571 Howe St., Vancouver .....	Hope
Cowichan Copper Co., Ltd. ....	Box 320, Lake Cowichan .....	Honeymoon Bay
Dunmore Mines Ltd. ....	7994 Granville St., Vancouver .....	Kamloops
Granby Consolidated Mining, Smelting & Power Co., Ltd.	675 West Hastings St., Vancouver .....	Similkameen
Granduc Mines Ltd. ....	1613 Royal Bank Bldg., Vancouver .....	Leduc Glacier
Nicholson Creek Mining .....	301 Insurance Bldg., Seattle, Washington, U.S.A. ....	Usk
Rico Copper Mines Ltd. ....	413 Granville St., Vancouver .....	Laidlaw
Tungsten of British Columbia Ltd. ....	717 Pender St., Vancouver .....	Usk
Vananda Mines (1948) Ltd. ....	413 Granville St., Vancouver .....	Nanaimo
Velvet Lessees .....	Rossland .....	Trail Creek







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