

British Columbia
Mineral Output
Statistical Summary
1980–1993



Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
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Mineral Output

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B.C. MINERAL OUTPUT STATISTICAL SUMMARY 1980 - 1993

This publication is intended to update a series of provincial statistics on British Columbia's mineral industry. Its focus is primarily historical and summarises annual statistics for the years 1980 through 1993. While the most recent annual tables available are based upon the *1992 Annual Census of Mines*, estimates for 1993 have been included in some tables to make these data as timely as possible.

NOTES ON STATISTICS

Statistics on the British Columbia mineral industry are collected, compiled and tabulated for publication in this report by the Mineral Statistics Section, Land Management and Policy Branch of the Ministry of Energy, Mines and Petroleum Resources. Data are obtained from a direct census of the industry, which is undertaken as a cooperative effort between the Ministry and two federal agencies: Energy, Mines and Resources and Statistics Canada. Production statistics are aggregated into sector and industry totals for public release. Individual producer data on employment and gross mine output at each major mine are, however, also available in this publication.

NOTES ON METHODOLOGY

Statistics are gathered in accordance with an established methodology which attempts to maintain comparability with previous data. In some cases, annual totals released by this Ministry may vary from comparable data published by federal agencies. This is due to agreed-upon differences in methodology in attributing production to the location of origin, in methods of determining valuation and in the definition of mineral commodities and their use. Peat, classified as a fuel by Statistics Canada, is not included in B.C. summaries, since it is considered neither a fuel nor a mineral. Coal, classified as a fuel by Statistics Canada, is included provincially as part of solid minerals value. Sulphur recovered from smelters and gas plants is included as a mineral product both by B.C. and Statistics Canada.

Values for metals are based upon revenues reported by operators, or estimated by the Ministry in cases where information is not available. All commodity summaries reflect a valuation of output determined to best represent the activity of B.C.'s mineral producers. Statistics are aggregated from information supplied by operators as per their accounting records. While companies can report on a production, sales or shipments basis, all information is summarised and recorded as production for annual statistical purposes. In the case of pre-production or bulk sampling for metal mines, production is recorded when the ore is sold or concentrated and brought into revenue by the operator.

The value of production of industrial minerals and structural materials are approximately the dollar amounts received at the point of origin. Coal is valued at the mine-head for all coal of B.C. origin. Coal production represents preparation plant output of clean coal net of inventory adjustments. Clean coal sold and used is coal of B.C. origin only.

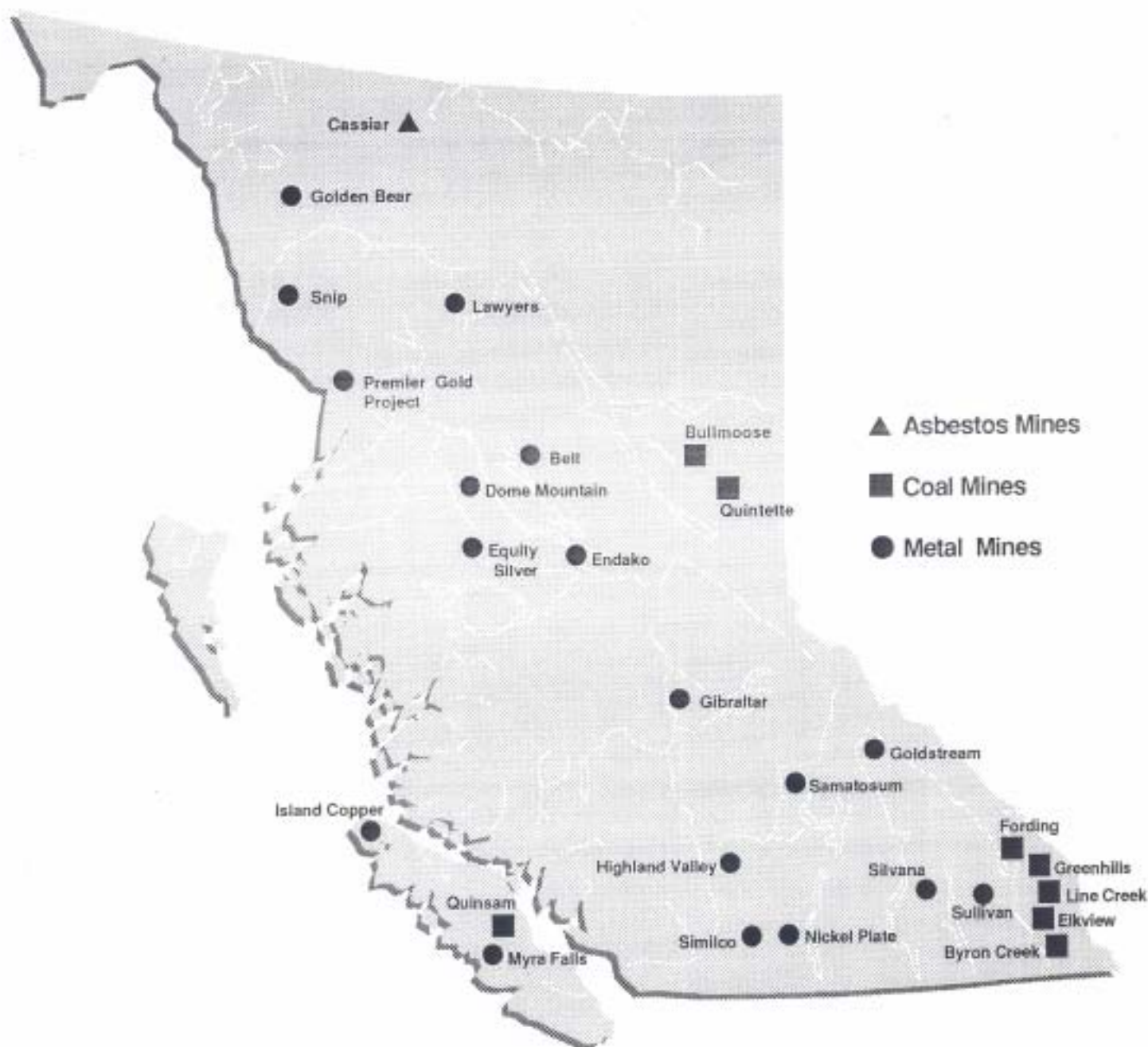
All information is current to the end of 1993. All dollar values are in nominal Canadian funds. Metric weights are used throughout. Metric conversion factors are:

Short tons (st or tons) x 0.90718474 = metric tonnes (t)

Pounds (lb.) x 0.45359237 = kilograms (kg)

Ounces (oz.) x 31.1034768 = grams (g)

MAJOR OPERATING MINES IN BRITISH COLUMBIA 1992 AND 1993



Mines operating during 1992 or 1993 are shown above.
Names are as of the year reported

MAJOR B.C. METAL MINES 1992 and 1993

Mine Name	Location	Operator	Operating Status
Bell	Babine Lake	Noranda Minerals Ltd.	Closed end of June 1992
Dome Mountain	Smithers	Habsburg Resources Ltd.	Opened January 1992; shut down April 1993
Endako	Endako	Placer Dome Inc.	Active
Equity Silver	Houston	Equity Silver Mines Ltd.	Active
Gibraltar	McLeese Lake	Gibraltar Mines Ltd.	Active
Golden Bear	Bearskin Lake	North American Metals Corp.	Active
Goldstream	Revelstoke	Bethlehem Resources Corp.	Active
Highland Valley Copper	Highland Valley	Highland Valley Copper	Active
Island Copper	Rupert Inlet	BHP - Utah Mines Ltd.	Active
Lawyers	Toodoggone	Cheni Gold Mines Inc.	Shut down early August 1992
Myra Falls Operations	Buttle Lake	Westmin Resources Ltd.	Active; locked out April - December 1993
Nickel Plate	Penticton	Homestake Canada Inc.	Active
Premier Gold Project	Stewart	Westmin Resources Ltd.	Active
Silvana	New Denver	Treminto Resources Ltd.	Shut down early April 1993
Similco	Princeton	Princeton Mining Corp.	Shut down late November 1993
Snip	Bronson Creek	Cominco Ltd.	Active
Sullivan	Kimberley	Cominco Ltd.	Active
Cassiar	Cassiar	Princeton Mining Corp.	Closed end of January 1992

Information is current to end of 1993.

B.C. COAL MINES

1992 and 1993

Mine Name	Location	Operator	Operating Status
Elkview (ex-Balmer)	Sparwood	Elkview Coal Corp.	Active ; Re-opened May 1993
Byron Creek	Sparwood	Corbin Creek Resources Ltd.	Active
Bullmoose	Tumbler Ridge	Bullmoose Operating Corp.	Active
Fording	Elkford	Fording Coal Ltd.	Active; Re-started December 1992
Greenhills	Elkford	Fording Coal Ltd.	Active; Re-opened March 1993
Line Creek	Sparwood	Line Creek Resources Ltd.	Active
Quinsam	Campbell River	Brinco Coal Corp.	Active
Quintette	Tumbler Ridge	Quintette Operating Corp.	Active

Information is current to end of 1993.

HIGHLIGHTS - B.C. METAL AND COAL PRODUCERS 1992 and 1993

The highlights below are included to add some perspective to changes in production volumes and values in statistical summary tables and to provide a brief chronology of the main events which affected output of metals and coal at B.C. mines in 1992 and 1993.

1992 - METAL MINES

- Timmins Nickel Ltd. began official production at its Dome Mountain gold mine near Smithers in January. During 1992, the mine processed its ore at Placer Dome Inc.'s Equity mill with some ore processed at the Premier mill of Westmin Resources Ltd.
- Noranda Minerals Inc.'s Bell copper mine near Babine Lake depleted its ore reserves and closed in June 1992, after operating continuously since 1985.
- Cheni Gold Mines Inc. ceased operations at its Lawyers gold-silver mine in the Toadoggone area in August, having depleted its economic ore reserves. The company did, however, process some additional high-grade ore from the Phoenix zone in November and December.
- Westmin Resources Ltd. reduced its workforce in June and subsequently ceased open pit operations due to a lack of economic reserves at the Premier Gold Project in August. The mine continued to process stockpiled ore and mine underground for the remainder of the year.
- Placer Dome Inc.'s Equity Silver mine near Houston ceased open pit mining in September and reduced its workforce. Underground mining began in July 1992.
- Minnova Inc.'s Samatsum mine, a producer of silver, lead, zinc, copper and gold, closed in September due to a lack of economic reserves after three years of production. While mining ceased in July, milling operations continued into September. The mine had been the province's second largest producer of silver, accounting for over a quarter of the province's silver output.

1992 - COAL MINES

- Fording Coal Ltd.'s Fording River coal mine was shut down as a result of a labour dispute in May. Operations did not resume until late in December after successful resolution of labour contract issues. Four months of production and some additional sales from port during the shut down are reported in the tables for 1992.

- Westar Mining Ltd., operator of both the Greenhills and Balmer coal mines in southeast B.C., was forced into bankruptcy in August. The Balmer mine had been closed since May by a lockout, while the Greenhills mine remained in production through until the end of October. Late in the year, the Balmer mine was taken over by the Teck Corporation, and the Greenhills mine was purchased by Fording Coal Ltd.

1993 - METAL MINES

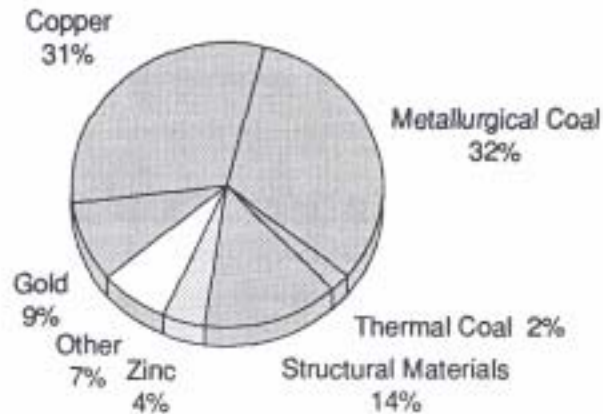
- Fairfield Minerals Ltd. received revenues from a 1992 bulk sampling program at its Elk property (Siwash North vein) near Merritt in 1993. Over 270 000 grams of gold were recovered from 1 840 tonnes of custom-milled concentrate. The company plans to recover a further 780 000 grams in 1994 from the property.
- Candorado Mines Ltd. operated its gold heap leaching operation near Hedley for two months in 1993, recovering 90 000 grams of gold from tailings.
- Cominco Ltd. shut down their Trail smelter in April and during August citing a glut of zinc on world markets.
- Treminco Resources Ltd. shut down the Silvana mine near New Denver at the beginning of April citing low lead, zinc and silver prices and a depletion of ore reserves.
- Employees at Westmin Resources Ltd.'s Myra Falls Operations at Buttle Lake near Campbell River were locked out over a contract dispute on April 24. Management personnel resumed limited mining operations at the end of October, milling a few days a month at about 15 per cent of the normal rate .
- The Dome Mountain gold mine shut down in April to comply with safety regulations and due to continuing legal negotiations between joint venture partners Habsburg Resources Ltd. and Timmins Nickel Inc. An agreement was reached in August with Habsburg gaining an 80 per cent interest in the mine as the new operator. The company intends to develop a new mine plan to re-start operations.
- Bethlehem Resources Corp. suspended mining for the month of May at its Goldstream copper mine near Revelstoke in order to revise mining plans to reduce costs in light of lower copper prices. Milling from stockpiled ore continued during the month.

- Bethlehem Resources Corp., in a joint venture with Columbia Gold Mines Ltd., processed ore on a custom milling basis for the Tillicum project (Heino-Money zone) near Nakusp. The company estimated 5 400 tonnes of ore would be milled, with gold recovered blended into Goldstream's concentrate.
- Cominco Ltd.'s Sullivan lead/zinc mine at Kimberley was shut down for summer maintenance for eleven weeks from June through mid-August.
- North American Metals Corp. recommenced underground mining at the Golden Bear gold mine near Telegraph Creek in northwest B.C. in July. The underground operation had been suspended since February, while milling continued from stockpiled ore.
- Gibraltar Mines Ltd. ceased operations at its copper-molybdenum mine near McLeese Lake in August to allow for a development program on the Gibraltar East pit and for general mine maintenance. The molybdenum circuit closed in December of 1992 and did not operate in 1993. Gibraltar later made a decision to shut down mining and milling operations at the beginning of December due to low copper prices, but continued operation of its solvent extraction electrowinning plant which produces copper cathode. Gibraltar also announced it is planning a major expansion to raise copper production by almost 50 per cent by 1996. The plan would increase mill capacity to 51 700 tonnes per day from the present capacity of 34 500 tonnes per day and lower cash costs by an estimated 7 to 8 U.S. cents per pound of copper.
- International Skyline Gold Corp. reopened the Johnny Mountain gold mine north of Stewart at the beginning of August on a limited production basis. Mining ceased for the season in November, while the mill operated from early September through most of November.
- Princeton Mining Corporation's Similco copper mine near Princeton originally gave notice the mine would close in September, but delayed the closure until the end of November. The company gave as reasons the recent drop in copper prices and the uncertainty of future prices.

1993 - COAL MINES

- Fording Coal Ltd.'s Greenhills coal operation re-started production in May. Fording, which took over as operator from Westar Mining Ltd., developed a new mine plan based on larger scale equipment. The mine produced 2.7 million tonnes of clean coal in 1992 and 1.8 million tonnes in 1993.
- Teck Corporation's Elkview mine re-commenced mining in May while the plant began processing coal 4 days a week in late May. The first shipment to Roberts Bank was at the beginning of June. The company has regained markets for metallurgical coal in Japan and is continuing to seek new markets. Elkview produced 1.9 million tonnes of clean coal in 1992 and 1.7 million tonnes in 1993.
- Fording Coal Ltd.'s Fording River mine operated continuously throughout 1993, producing nearly 6.7 million tonnes of clean coal. Output in 1992 was substantially lower - only 2.5 million tonnes - due to an eight month labour dispute from May through December of that year.

B.C. MINERAL COMMODITIES IN 1993
PER CENT OF ALL SOLID MINERALS BY VALUE



	Million \$	% of Total
Metals		
Gold	211.68	9.27%
Silver	30.28	1.33%
Copper	700.96	30.71%
Lead	22.42	0.98%
Zinc	101.82	4.46%
Molybdenum	58.00	2.54%
Others	5.39	0.24%
Total Metals	1 130.56	49.53%
Coal		
Metallurgical	730.60	32.01%
Thermal	52.58	2.30%
Total Coal	783.18	34.31%
Structural Materials		
Cement	133.42	5.85%
Clay products	8.31	0.36%
Sand and gravel	127.13	5.57%
Stone	32.13	1.41%
Others	19.37	0.85%
Total	320.36	14.04%
Industrial Minerals		
Sulphur	36.43	1.60%
Others	11.87	0.52%
Total	48.29	2.12%
Total Solid Minerals	2 282.39	100.00%

B.C. MINERAL PRODUCTION 1992 - 1993

		1992		1993 (E)	
	Units	Quantity	Value \$	Quantity	Value \$
Metals					
Gold	g	16 410 000	219 136 000	14 178 000	211 682 000
Silver	g	338 817 000	53 316 000	170 133 000	30 284 000
Copper	kg	315 831 000	892 075 000	284 943 000	700 960 000
Lead	kg	64 505 000	42 108 000	43 117 000	22 421 000
Zinc	kg	111 202 000	171 020 000	80 586 000	101 824 000
Molybdenum	kg	8 776 000	54 891 000	10 013 000	58 004 000
Others		-	4 980 000	-	5 385 000
Total Metals		-	1 437 526 000	-	1 130 560 000
Coal					
Metallurgical	t	15 618 000	672 953 000	17 008 000	730 598 000
Thermal	t	2 386 000	73 661 000	2 256 000	52 578 000
Total Coal		18 004 000	746 614 000	19 264 000	783 176 000
Structural Materials					
Cement	t	1 336 000	119 313 000	1 461 000	133 418 000
Clay products		-	7 958 000	-	8 306 000
Sand and gravel	t	39 923 000	128 624 000	39 431 000	127 134 000
Stone	t	3 910 000	30 113 000	4 247 000	32 134 000
Others		-	19 233 000	-	19 368 000
Total		-	305 241 000	-	320 360 000
Industrial Minerals					
Asbestos	t	6 000	2 939 000	-	-
Sulphur	t	601 000	29 640 000	724 000	36 428 000
Others		-	12 265 000	-	11 865 000
Total		-	44 844 000	-	48 293 000
Total Solid Minerals		-	2 534 225 000	-	2 282 389 000

(E)=Estimate

VALUE OF B.C. SOLID MINERALS 1980 - 1993

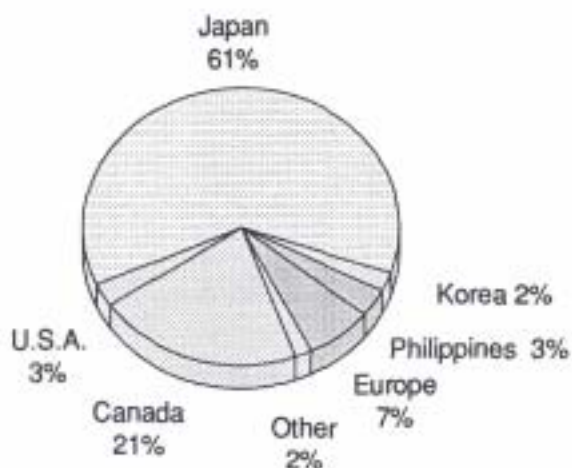
Year	Metals \$	Industrial Minerals \$	Structural Materials \$	Coal \$	Total \$
1980	1 429 002 180	115 926 007	242 325 657	461 492 857	2 248 746 701
1981	1 246 682 535	122 464 842	200 786 479	554 271 292	2 124 205 148
1982	1 057 488 380	95 644 218	164 156 644	566 878 240	1 884 167 482
1983	1 106 015 862	89 496 434	208 401 528	555 789 196	1 959 703 020
1984	1 036 900 793	114 669 521	192 253 455	1 007 519 670	2 351 343 439
1985	1 005 450 954	111 016 020	232 824 792	1 028 317 201	2 377 608 967
1986	1 156 666 691	134 394 026	214 663 686	934 414 249	2 440 138 652
1987	1 491 593 601	125 228 798	258 546 377	892 521 959	2 767 890 735
1988	1 875 773 744	111 462 265	258 156 703	978 811 603	3 224 204 315
1989	1 757 415 706	124 754 302	296 750 034	1 000 597 678	3 179 517 720
1990	1 558 862 279	119 446 089	312 747 438	979 857 019	2 970 912 825
1991	1 418 766 000	86 378 000	311 823 000	937 836 000	2 754 803 000
1992	1 437 526 000	44 844 000	305 241 000	746 614 000	2 534 225 000
1993(E)	1 130 560 000	48 293 000	320 360 000	783 176 000	2 282 389 000

(E) = Estimate

OPERATING STATISTICS - MAJOR B.C. METAL MINES 1992

Metal Mines	Tonnes Mined	Tonnes Milled	Reported Rated Capacity Tonnes Per Day	Days Operating U/G Mine	Days Operating O/P Mine	Days Operating Mill
Bell	931 192	1 099 336	14 500	-	77	84
Endako	9 680 000	9 702 000	27 500	363	-	360
Equity Silver	1 473 000	2 607 500	9 000	180	270	345
Gibraltar	13 256 434	12 672 025	36 000	-	365	365
Golden Bear	168 129	132 961	376	94	273	365
Goldstream	431 151	431 151	1 200	365	-	356
Highland Valley Copper	44 016 882	44 064 369	133 000	-	365	365
Island Copper	21 554 000	19 614 169	50 000	-	359	364
Lawyers	30 838	108 853	500	-	10	212
Myra Falls Operations	1 156 489	1 171 629	4 000	363	-	363
Nickel Plate	1 559 010	1 234 051	3 000	-	365	365
Premier Gold Project	358 608	391 073	2 000	365	185	310
Samatsum	71 950	129 374	422	162	91	274
Silvana	16 500	16 500	115	241	-	228
Similco	6 124 132	7 377 408	22 700	-	363	365
Snip	156 559	164 700	500	365	-	366
Sullivan	1 760 788	1 760 788	7 300	234	-	239
Total Metal Mines	102 745 662	102 677 887	312 113	2 732	2 723	5 326
Average Metal Mines	6 043 862	6 039 876	18 360	161	160	313

MARKETS FOR MAJOR B.C. METALS 1992



	Million \$	% of Total
CANADA*	301.65	21.06%
U.S.A.	37.89	2.65%
ASIA	973.85	67.98%
Includes:		
Japan	878.93	61.35%
Korea	31.92	2.23%
Philippines	46.65	3.26%
China	16.35	1.14%
EUROPE	95.74	6.68%
Includes:		
Belgium	7.93	0.55%
Germany	0.13	0.01%
Spain	68.12	4.76%
Sweden	5.80	0.40%
Other	13.75	0.96%
OTHER	23.41	1.63%
Includes:		
Australia	0.23	0.02%
Chile	1.54	0.11%
Mexico	19.13	1.34%
Other	4.77	0.33%
Adjustments	-2.26	-0.16%
TOTAL	1 432.54	100.00%

* Includes placer and gold recovered from custom ores.

DESTINATION OF MAJOR METALS IN B.C. ORES AND CONCENTRATES 1992

(By Volume)

	Gold Grams	Silver Grams	Copper Kilograms	Lead Kilograms	Zinc Kilograms	Molybdenum Kilograms
CANADA*	6 916 000	58 943 000	6 380 000	63 985 000	85 175 000	1 966 000
U.S.A.	1 412 000	38 384 000	4 145 000	520 000	-	175 000
ASIA	8 350 000	230 664 000	266 453 000	-	26 027 000	4 060 000
Includes:						
Japan	8 282 000	220 631 000	235 046 000	-	23 988 000	4 060 000
Korea	28 000	3 374 000	9 924 000	-	2 039 000	-
Philippines	40 000	5 785 000	16 176 000	-	-	-
China	-	874 000	5 307 000	-	-	-
EUROPE	28 000	9 610 000	29 647 000	-	-	1 872 000
Includes:	-	-	-	-	-	1 373 000
Belgium	-	-	-	-	-	47 000
Germany	18 000	7 558 000	23 862 000	-	-	-
Spain	-	715 000	2 033 000	-	-	2 000
Sweden	10 000	1 337 000	3 752 000	-	-	450 000
Other	-	-	-	-	-	-
OTHER	(296 000)	1 216 000	9 206 000	-	-	703 000
Includes:						14 000
Australia	-	-	-	-	-	369 000
Chile	-	-	-	-	-	-
Mexico	2 000	2 115 000	6 715 000	-	-	-
Other	-	-	-	-	-	796 000
Adjustments	(298 000)	(899 000)	2 491 000	-	-	(476 000)
TOTAL	16 410 000	338 817 000	315 831 000	64 505 000	111 202 000	8 776 000

* Includes placer and gold recovered from custom ores.

DESTINATION OF MAJOR METALS IN B.C. ORES AND CONCENTRATES 1992

(By Value)

	Gold \$	Silver \$	Copper \$	Lead \$	Zinc \$	Molybdenum \$
CANADA*	91 823 000	8 663 000	18 032 000	41 745 000	128 538 000	12 851 000
U.S.A.	18 591 000	5 832 000	10 673 000	363 000	-	2 433 000
ASIA	112 319 000	37 234 000	757 085 000	-	42 482 000	24 732 000
Includes:						
Japan	111 337 000	35 728 000	668 102 000	-	39 027 000	24 732 000
Korea	452 000	512 000	27 505 000	-	3 455 000	-
Philippines	530 000	861 000	45 257 000	-	-	-
China	-	133 000	16 221 000	-	-	-
EUROPE	362 000	1 428 000	82 946 000	-	-	11 001 000
Includes:						
Belgium	-	-	-	-	-	7 934 000
Germany	-	-	-	-	-	133 000
Spain	233 000	1 125 000	66 760 000	-	-	-
Sweden	-	106 000	5 688 000	-	-	5 000
Other	129 000	197 000	10 498 000	-	-	2 929 000
OTHER	(3 959 000)	159 000	23 339 000	-	-	3 874 000
Includes:						
Australia	-	-	-	-	-	234 000
Chile	-	-	-	-	-	1 536 000
Mexico	31 000	313 000	18 788 000	-	-	-
Other	-	-	-	-	-	4 774 000
Adjustments	(3 990 000)	(154 000)	4 551 000	-	-	(2 670 000)
TOTAL	219 136 000	53 316 000	892 075 000	42 108 000	171 020 000	54 891 000

* Includes placer and gold recovered from custom ores.

B.C. METAL PRODUCERS - 1992

Gross Metal Content of Major Metals*

	Products Shipped	Gold grams	Silver grams	Copper kg	Lead kg	Zinc kg	Molybdenum kg
Alberni Mining Division							
Myra Falls Operations	Copper concentrates 68 352 t; Zinc concentrates 58 720 t	988 054	20 271 000	18 427 907	1 963 466	32 840 938	-
Atlin Mining Division							
Golden Bear	Doré	1 816 912	380 181	-	-	-	-
Cariboo Mining Division							
Gibraltar	Copper concentrates 107 342 t; Copper cathode 3 125 t; Molybdenite concentrates 171 t	-	4 576 970	32 806 051	-	-	238 555
Skinner (Ottarasko Mines Ltd.)	Custom ore	4 323	1 431	-	-	-	-
Fort Steele Mining Division							
Sullivan	Lead concentrates 73 697 t; Zinc concentrates 189 214 t	-	37 297 216	-	64 814 527	92 966 842	-
Kamloops Mining Division							
Highland Valley Copper	Copper concentrates 422 340 t; Molybdenite concentrates 3 333 t	429 570	65 176 403	176 742 074	-	-	1 808 010
Liard Mining Division							
Snip	Gold concentrates 7 881 t; Doré	4 648 261	1 624 000	-	-	-	-

* Own ores only

B.C. METAL PRODUCERS - 1992

Gross Metal Content of Major Metals*

	Products Shipped	Gold grams	Silver grams	Copper kg	Lead kg	Zinc kg	Molybdenum kg
Nanaimo Mining Division							
Island Copper	Copper concentrates 189 076 t; Molybdenite concentrates 922 t	1 588 619	14 591 490	47 064 275	-	-	417 175
Omineca Mining Division							
Bell	Copper concentrates 21 452 t	248 206	881 784	6 089 137	-	-	-
Endako Mines Division	Molybdenite concentrates 408 t; Molybdic oxide 10 731 t; Ferro-molybdenum 425 t; Molybdenum sulphide 1 t	-	-	-	-	-	6 436 401
Equity Silver	Copper/silver concentrate 38 823 t Doré	1 165 404	87 994 946	3 798 007	-	-	-
Lawyers	Doré	1 006 788	23 629 467	-	-	-	-
Osoyoos Mining Division							
Nickel Plate	Doré	2 633 624	751 584	-	-	-	-
Revelstoke Mining Division							
Goldstream	Copper concentrates 69 130 t; Zinc concentrates 2 941 t	16 049	5 470 200	16 322 607	-	-	-

* Own ores only

B.C. METAL PRODUCERS - 1992

Gross Metal Content of Major Metals*

Products Shipped		Gold grams	Silver grams	Copper kg	Lead kg	Zinc kg	Molybdenum kg
Revelstoke Mining Division							
(Continued)							
Samatsum	Copper concentrates 2 498 t; Lead concentrates 1 948 t; Zinc concentrates 3 337 t	100 977	66 346 000	594 597	571 995	1 624 135	-
Skeena Mining Division							
Premier Gold Project	Doré	1 163 457	8 820 579	-	-	-	-
Similkameen Mining Division							
Similco	Copper concentrates 93 641 t	498 869	9 781 740	25 757 591	-	-	-
Slocan Mining Division							
Silvana	Lead concentrate 1 881 t; Zinc concentrate 1 870 t	-	9 527 100	-	1 265 400	1 543 400	-
Dome Mountain	Custom ore	313 051	1 628 168	-	-	-	-

* Own ores only

PRODUCTION OF GOLD AND SILVER 1980 - 1993

Year	Gold		Silver	
	Quantity \$	Value \$	Quantity \$	Value \$
1980	7 197 000	163 930 000	203 802 000	156 548 000
1981	7 469 000	131 542 000	403 755 000	152 421 000
1982	7 512 000	115 802 000	499 566 000	158 260 000
1983	7 694 000	126 555 000	402 325 000	180 372 000
1984	6 814 000	111 731 000	363 378 000	121 364 000
1985	6 382 000	89 094 000	378 173 000	100 951 000
1986	9 225 000	152 301 000	395 850 000	94 615 000
1987	11 644 000	230 310 000	371 600 000	122 562 000
1988	11 964 000	214 724 000	423 441 000	112 539 000
1989	14 420 000	220 974 000	493 844 000	105 443 000
1990	15 375 000	231 785 000	631 084 000	115 127 000
1991	17 385 000	237 957 000	505 011 000	74 184 000
1992	16 410 000	219 136 000	338 817 000	53 316 000
1993(E)	14 178 000	211 682 000	170 133 000	30 284 000

(E) = Estimate

PRODUCTION OF COPPER AND MOLYBDENUM 1980 - 1993

Year	Copper		Molybdenum	
	Quantity \$	Value \$	Quantity \$	Value \$
1980	264 675 000	670 624 000	11 180 000	288 934 000
1981	290 088 000	611 282 000	12 933 000	198 240 000
1982	279 874 000	495 010 000	14 748 000	154 991 000
1983	282 865 000	561 112 000	10 779 000	87 585 000
1984	280 070 000	517 765 000	12 165 000	113 803 000
1985	301 649 000	579 674 000	6 624 000	63 218 000
1986	332 215 000	629 479 000	11 574 000	92 781 000
1987	355 898 000	842 341 000	14 139 000	121 688 000
1988	353 482 000	1 117 031 000	12 924 000	116 005 000
1989	303 200 000	1 002 529 000	13 618 000	112 274 000
1990	325 320 000	985 015 000	12 285 000	88 326 000
1991	330 834 000	846 514 000	11 041 000	67 430 000
1992	315 831 000	892 075 000	8 776 000	54 891 000
1993(E)	284 943 000	700 960 000	10 013 000	58 004 000

(E) = Estimate

B.C. PRODUCTION OF LEAD AND ZINC 1980-1993

Year	Lead		Zinc	
	Quantity kg	Value \$	Quantity kg	Value \$
1980	76 709 000	66 096 000	67 481 000	49 363 000
1981	84 854 000	61 529 000	79 215 000	67 027 000
1982	83 747 000	43 036 000	75 183 000	63 572 000
1983	112 942 000	48 778 000	95 287 000	79 634 000
1984	85 147 000	37 899 000	95 335 000	115 226 000
1985	116 811 000	42 338 000	108 073 000	112 726 000
1986	91 784 000	38 183 000	137 583 000	138 023 000
1987	69 911 000	49 828 000	100 719 000	109 369 000
1988	105 296 000	74 349 000	139 377 000	212 300 000
1989	68 369 000	46 267 000	120 497 000	241 011 000
1990	19 556 000	15 955 000	57 436 000	103 424 000
1991	52 536 000	33 071 000	104 585 000	152 240 000
1992	64 505 000	42 108 000	111 202 000	171 020 000
1993(E)	43 117 000	22 421 000	80 586 000	101 824 000

(E) = Estimate

MAJOR B.C. METALS
AVERAGE B.C. PRODUCER PRICE
1980- 1993

Year	Gold Fine \$/g	Silver Fine \$/g	Copper \$/kg	Lead \$/kg	Zinc \$/kg	Molyb- denum \$/kg
1980	\$ 22.78	\$ 0.77	\$ 2.53	\$ 0.86	\$ 0.73	\$ 25.85
1981	\$ 17.61	\$ 0.38	\$ 2.11	\$ 0.73	\$ 0.85	\$ 15.33
1982	\$ 15.42	\$ 0.32	\$ 1.77	\$ 0.51	\$ 0.85	\$ 10.51
1983	\$ 16.45	\$ 0.45	\$ 1.98	\$ 0.43	\$ 0.84	\$ 8.13
1984	\$ 16.40	\$ 0.33	\$ 1.85	\$ 0.45	\$ 1.21	\$ 9.36
1985	\$ 13.96	\$ 0.27	\$ 1.92	\$ 0.36	\$ 1.04	\$ 9.54
1986	\$ 16.51	\$ 0.24	\$ 1.89	\$ 0.42	\$ 1.00	\$ 8.02
1987	\$ 19.76	\$ 0.33	\$ 2.37	\$ 0.71	\$ 1.09	\$ 8.61
1988	\$ 17.95	\$ 0.27	\$ 3.16	\$ 0.71	\$ 1.52	\$ 8.98
1989	\$ 15.32	\$ 0.21	\$ 3.31	\$ 0.68	\$ 2.00	\$ 8.24
1990	\$ 15.08	\$ 0.18	\$ 3.03	\$ 0.82	\$ 1.80	\$ 7.19
1991	\$ 13.69	\$ 0.15	\$ 2.56	\$ 0.63	\$ 1.46	\$ 6.11
1992	\$ 13.35	\$ 0.16	\$ 2.82	\$ 0.65	\$ 1.54	\$ 6.25
1993(E)	\$ 14.93	\$ 0.18	\$ 2.46	\$ 0.52	\$ 1.26	\$ 5.79

(E) = Estimate

B.C. CLEAN COAL SOLD & USED

AVERAGE PRICE PER TONNE

Year	Metallurgical Price per tonne \$	Thermal Price per tonne \$	Total Coal Price per tonne \$
1980	\$43.83	\$32.81	\$42.64
1981	\$47.95	\$38.09	\$47.16
1982	\$57.98	\$35.56	\$53.25
1983	\$52.80	\$29.51	\$48.41
1984	\$54.91	\$25.32	\$48.58
1985	\$50.65	\$26.50	\$45.47
1986	\$49.64	\$25.53	\$44.84
1987	\$44.50	\$19.83	\$39.52
1988	\$41.94	\$22.19	\$39.45
1989	\$41.38	\$29.03	\$39.81
1990	\$41.98	\$27.74	\$40.21
1991	\$39.26	\$27.01	\$37.74
1992	\$43.09	\$30.87	\$41.47
1993(E)	\$42.96	\$23.31	\$40.65

(E) = Estimate

B.C. RAW AND CLEAN COAL PRODUCED 1980 - 1993

Year	Raw Coal Produced			Clean Coal Produced		
	Metallurgical '000 t	Thermal '000 t	Total '000 t	Metallurgical '000 t	Thermal '000 t	Total '000 t
1980	12 902	1 262	14 164	9 098	1 058	10 156
1981	14 548	942	15 490	10 898	845	11 743
1982	13 815	3 329	17 144	9 393	2 286	11 679
1983	13 623	3 804	17 427	9 519	2 448	11 967
1984	24 880	6 102	30 982	16 236	4 446	20 681
1985	-	-	35 110	19 440	3 697	23 137
1986	-	-	33 164	16 784	2 304	19 088
1987	-	-	34 431	18 553	4 228	22 781
1988	-	-	39 155	22 347	2 844	25 191
1989	-	-	37 463	21 538	2 959	24 497
1990	-	-	39 681	22 343	2 837	25 180
1991	-	-	38 253	21 920	3 461	25 381
1992	-	-	26 150	14 562	2 480	17 042
1993(E)	-	-	30 624	18 333	1 922	20 255

(E) = Estimate

B.C. CLEAN COAL SOLD AND USED 1980 - 1993

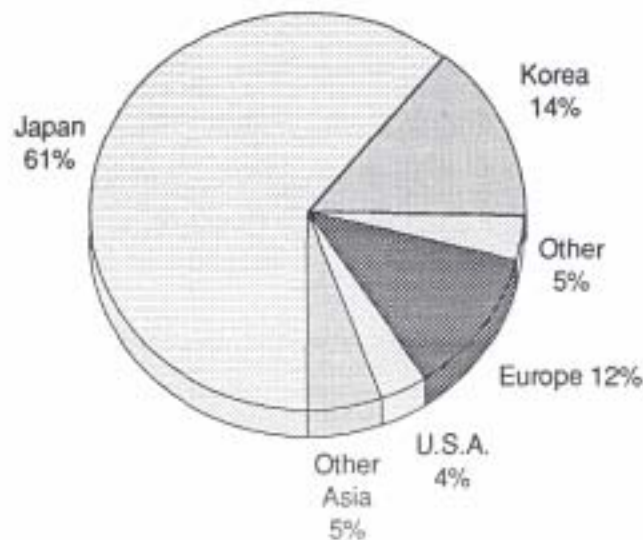
Year	Metallurgical		Thermal		Total	
	Quantity t	Value \$	Quantity t	Value \$	Quantity t	Value \$
1980	9 654 000	423 128 000	1 169 000	38 365 000	10 824 000	461 493 000
1981	10 812 000	518 428 000	941 000	35 844 000	11 753 000	554 271 000
1982	8 400 000	487 005 000	2 246 000	79 874 000	10 646 000	566 878 000
1983	9 317 000	491 950 000	2 163 000	63 839 000	11 480 000	555 789 000
1984	16 302 000	895 175 000	4 437 000	112 344 000	20 740 000	1 007 520 000
1985	17 767 000	899 930 000	4 845 000	128 387 000	22 613 000	1 028 317 000
1986	16 690 000	828 539 000	4 147 000	105 875 000	20 837 000	934 414 000
1987	18 020 000	801 967 000	4 567 000	90 555 000	22 587 000	892 522 000
1988	21 685 000	909 405 000	3 128 000	69 407 000	24 813 000	978 812 000
1989	21 945 000	908 009 000	3 190 000	92 589 000	25 134 000	1 000 598 000
1990	21 346 000	896 051 000	3 021 000	83 806 000	24 366 000	979 857 000
1991	21 773 000	854 784 000	3 075 000	83 052 000	24 848 000	937 836 000
1992	15 618 000	672 953 000	2 476 000	76 542 000	18 094 000	749 495 000
1993(E)	17 008 000	730 598 000	2 256 000	52 578 000	19 264 000	783 176 000

(E) = Estimate

B.C. COAL PRODUCTION BY MINE - 1992

	Raw Coal Produced '000 t	Raw Coal Processed '000 t	*(S) or (U)	Clean Coal Produced '000 t	Coal Used (Plant Use) '000 t
<i><u>Fort Steele Mining Division</u></i>					
Byron Creek	1 301	1 294	S		
Metallurgical	-	-		-	-
Thermal	-	-		927	-
Line Creek	3 584	3 552	S		
Metallurgical	-	-		2 215	-
Thermal	-	-		315	-
Fording	3 551	3 551	S		
Metallurgical	-	-		2 527	-
Thermal	-	-		27	27
Elkview	2 757	2 841	S		
Metallurgical	-	-		1 665	-
Thermal	-	-		238	-
Greenhills	3 665	3 580	S		
Metallurgical	-	-		2 240	-
Thermal	-	-		504	-
<i>Total - Fort Steele</i>	<i>14 858</i>	<i>14 818</i>		<i>10 658</i>	<i>27</i>
<i><u>Liard Mining Division</u></i>					
Bullmoose	2 129	2 087	S		
Metallurgical	-	-		1 593	-
Thermal	-	-		-	-
Quintette	8 404	8 418	S		
Metallurgical	-	-		4 322	-
Thermal	-	-		-	-
<i>Total - Liard</i>	<i>10 533</i>	<i>10 505</i>		<i>5 915</i>	<i>-</i>
<i><u>Nanaimo Mining Division</u></i>					
Quinsam Coal Ltd.	613	637	U		
Metallurgical	-	-		-	-
Thermal	-	-		469	-
TOTAL	26 004	25 960			
Metallurgical	-	-		14 562	-
Per Cent of 1992 totals	-	-		85%	-
Thermal	-	-		2 480	27
Per Cent of 1992 totals	-	-		15%	100%
TOTAL - ALL COAL - 1992				17 042	27
*(S) = Surface; (U) = Underground					

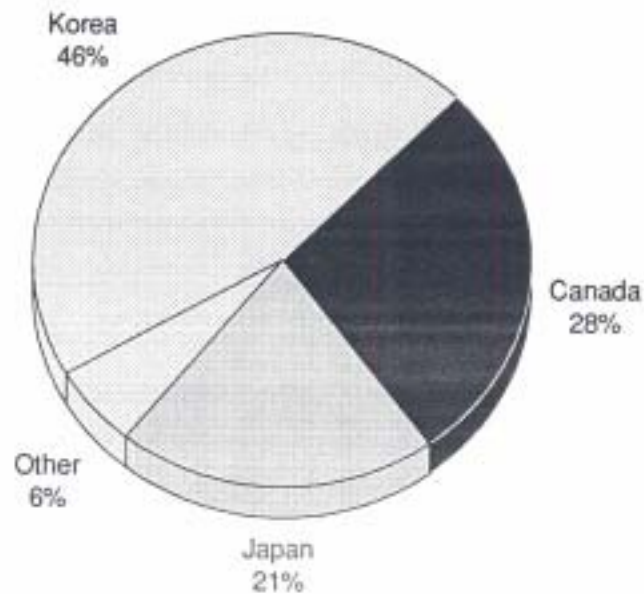
MARKETS FOR METALLURGICAL COAL **1992**



B.C. Metallurgical Coal Sales **By Destination**

	Thousand Tonnes	% of Total Sales		Thousand Tonnes	% of Total Sales
Japan	9 376	61.1%	Turkey	68	0.4%
Korea	2 185	14.2%	Belgium	54	0.4%
Taiwan	660	4.3%	Egypt	46	0.3%
U.K.	641	4.2%	Canada	47	0.3%
U.S.A.	560	3.6%	Pakistan	44	0.3%
Portugal	154	1.0%			
Brazil	350	2.3%	Total Sales	15 353	100.0%
France	276	1.8%			
Netherlands	274	1.8%	To Other B.C. Producers	255	
Spain	267	1.7%	Adjustments/Purchases	(43)	
Chile	95	0.6%	Total Net Sales	15 565	
Iran	95	0.6%			
Italy	89	0.6%	Used at mines	53	
Denmark	72	0.5%	Total Sold & Used	15 618	

MARKETS FOR B.C. THERMAL COAL 1992



B.C. Thermal Coal Sales By Destination

	Thousand Tonnes	% of Total Sales
Korea	1 176	45.6%
Canada	721	28.0%
Japan	536	20.8%
Denmark	57	2.2%
France	49	1.9%
Mexico	39	1.5%
Total Sales	2 578	100.0%
To Other B.C. Producers	493	
Adjustments/Purchases	(715)	
Total Net Sales	2 356	
Used at mines	30	
Total Sold & Used	2 386	

B.C. EMPLOYMENT AT MAJOR METAL AND COAL MINES

Year	Metal Mine Under- ground	Metal Mine Surface	Metal Plant	Metal Mines Total	Coal Under- ground	Coal Surface	Coal Total
1980	1 012	4 173	2 463	7 648	354	3 258	3 612
1981	1 280	5 292	2 986	9 558	343	3 277	3 620
1982	1 318	4 722	2 366	8 406	347	4 305	4 652
1983	1 176	3 788	1 846	6 810	258	3 991	4 249
1984	851	3 335	1 662	5 848	218	5 563	5 781
1985	807	2 743	1 454	5 004	76	5 745	5 821
1986	828	2 919	1 681	5 428	8	5 202	5 210
1987	722	3 170	1 654	5 546	-	5 144	5 144
1988	913	3 463	1 553	5 929	35	5 474	5 509
1989	990	3 688	1 672	6 350	-	5 641	5 641
1990	711	3 168	1 594	5 473	20	5 634	5 654
1991	777	2 778	1 617	5 172	24	5 368	5 392
1992	690	2 534	1 474	4 698	43	3 496	3 539
1993(E)	475	2 244	1 208	3 927	70	3 580	3 650

EMPLOYMENT IN B.C. SOLID MINERALS

Year	Metal Mines	Metal Smelters	Coal Mines	Non- Metal	Other(E)	Total
1980	7 648	4 800	3 612	2 141	6 162	24 363
1981	9 558	4 843	3 620	1 371	7 499	26 891
1982	8 406	4 177	4 652	1 127	7 088	25 450
1983	6 810	3 606	4 249	1 065	4 168	19 898
1984	5 848	3 360	5 781	929	5 116	21 034
1985	5 004	3 098	5 821	1 317	4 623	19 863
1986	5 428	2 284	5 210	1 402	3 650	17 974
1987	5 546	2 834	5 144	1 480	6 320	21 324
1988	5 929	3 146	5 509	1 485	4 499	20 568
1989	6 350	3 330	5 641	1 543	4 003	20 867
1990	5 473	3 250	5 654	1 495	4 000	19 872
1991	5 172	2 860	5 392	1 450	3 000	17 874
1992	4 698	2 200	3 539	1 250	2 500	14 187
1993(E)	3 927	2 100	3 650	1 250	2 500	13 427

(E) = Estimate

Employment includes direct employment as reported on the Annual Census of Mines at B.C. locations for major metal, coal and industrial mineral mining operations. It also contains estimates for sand and gravel pits and quarries, as well as other employment, including exploration, drilling, and trucking directly involved in the mining industry. It does not include estimates for indirect or secondary employment attributable to mining.

EMPLOYMENT AT MAJOR B.C. METAL MINES 1992

Metal Mines	Adminis- trative	Mine Surface	Mine Under- ground	Mill	Other	Total Annual Average	Peak Employ- ment
Bell	45	24	-	59	-	128	203
Endako	46	56	-	123	-	225	225
Equity Silver	15	31	4	75	-	125	125
Gibraltar	66	67	-	150	-	283	283
Golden Bear	15	30	9	30	-	84	84
Goldstream	18	39	4	46	-	107	107
Highland Valley Copper	119	573	-	343	173	1208	1208
Island Copper	118	305	-	142	-	565	565
Lawyers	7	13	13	15	-	48	58
Myra Falls Operation	101	0	266	92	-	459	459
Nickel Plate	12	121	-	61	-	194	194
Premier Gold Project	9	28	19	18	14	88	105
Samatsum	6	6	-	19	19	50	55
Silvana	1	1	10	5	-	17	17
Similco	60	130	-	96	-	286	286
Snip	40	-	39	28	18	125	125
Sullivan	173	35	330	172	-	710	710
Total Metal Mines	851	1 459	694	1 474	224	4 702	4 809
Average Metal Mines	50	86	41	87	13	277	283

Peak Employment is calculated by totalling the number of people employed at the end of each month divided by the number of months the mine was in operation. This number gives the best measure of the normal operational workforce in a given year. Total Annual Average is the total number of people employed divided by 12 months. This figure is comparable to previously published annual statistics of direct employment, and is used to calculate the total employment figure for each industry. Employment can include head office personnel at other locations in B.C.

EMPLOYMENT AT B.C. COAL MINES 1992

Coal Mines	Adminis- trative	Mine Surface	Mine Under- ground	Pre- paration Plant	Other	Total Annual Average	Peak Employ- ment
Elkview (Balmer)*	74	241	-	53	-	368	1 105
Bullmoose	42	234	-	52	-	328	328
Byron Creek	25	61	-	25	4	115	115
Fording**	42	342	-	46	31	461	1 106
Greenhills***	114	385	-	59	-	558	669
Line Creek	95	306	-	75	-	476	476
Quintette	129	846	-	153	-	1 128	1 128
Quinsam	10	28	43	18	6	105	105
Total Coal Mines	531	2 443	43	481	41	3 539	5 032
Average Coal Mines	66	305	5	60	5	442	629

* Balmer mine operated January through April 1992

** Fording mine on strike May through December 1992

*** Greenhills mine operated January through October 1992

Peak Employment is calculated by totalling the number of people employed at the end of each month divided by the number of months the mine was in operation. This number gives the best measure of the normal operational workforce in a given year. Total Annual Average is the total number of people employed divided by 12 months. This figure is comparable to previously published annual statistics of direct employment, and is used to calculate the total annual average employment figure of each industry.