

British Columbia
Mineral Output
Statistical Summary
1980–1992

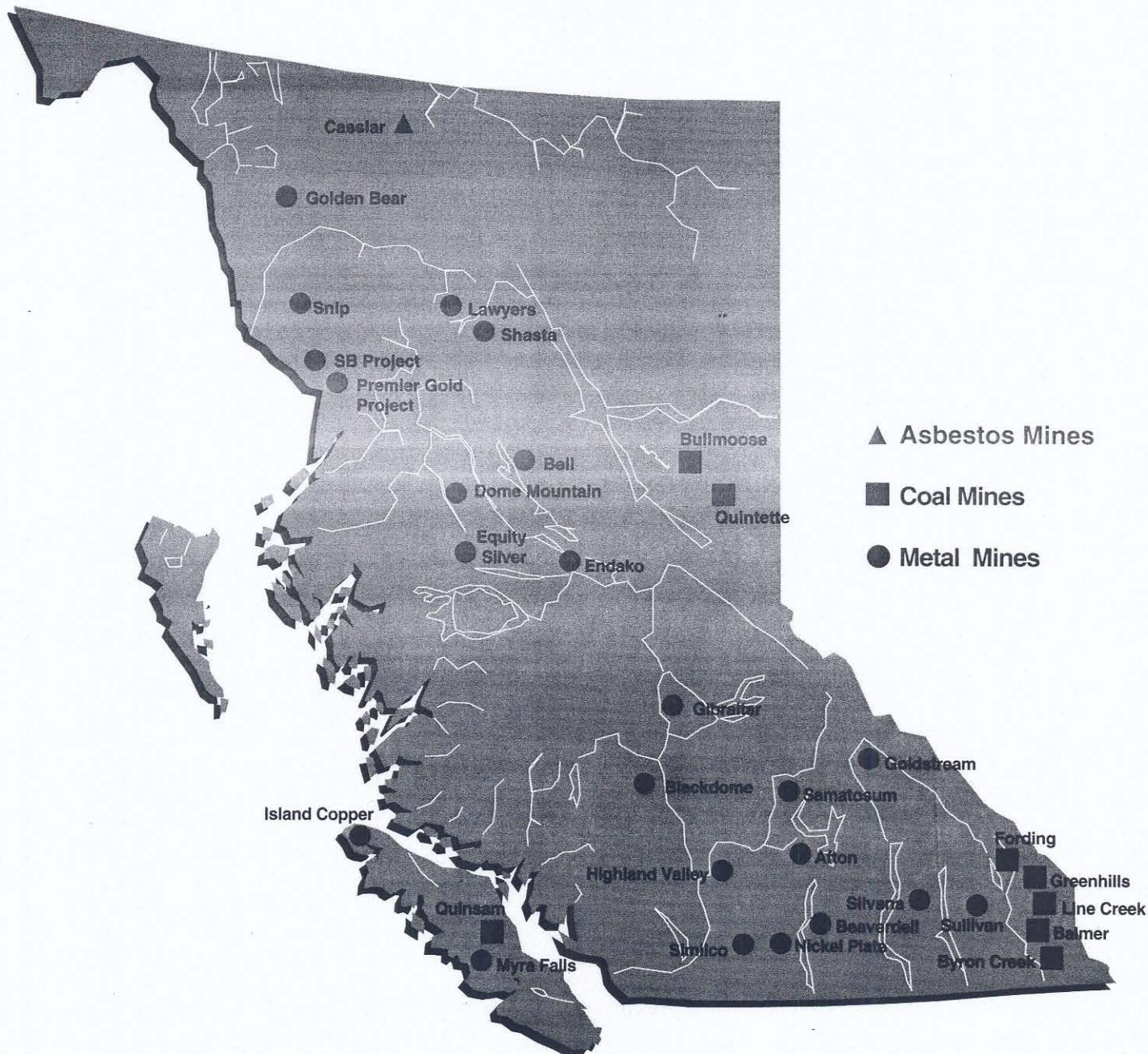


Province of British Columbia
Ministry of Energy, Mines
and Petroleum Resources
Mineral Policy Branch, Mineral Statistics Section

March 1993

British Columbia
Mineral Output
Statistical Summary
1980–1992

MAJOR OPERATING MINES IN BRITISH COLUMBIA 1991 AND 1992



Mines operating during 1991 or 1992 are shown above.
Names are as of the year reported.

B.C. MINERAL OUTPUT STATISTICAL SUMMARY 1980 - 1992

This publication is intended to update a series of provincial statistics on British Columbia's mineral industry production dating back to the 1800's. Its focus is primarily historical and summarises annual statistics for the most recent 12 year period 1980 - 1992. While the most recent annual tables available are based upon the *1991 Annual Census of Mines*, estimates for 1992 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, Mineral 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 summarized 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.

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)

TABLE OF CONTENTS

| | |
|--|----|
| Map | i |
| Notes on Statistics and Methodology | ii |
| <u>Major Active Mines</u> | |
| Major B.C. Mines 1991 - 1992..... | 1 |
| B.C. Coal Mines 1991 - 1992 | 2 |
| <u>Highlights 1991 and 1992</u> | |
| Major Mine Highlights 1991 and 1992 | 3 |
| Major Mine Highlights 1991 and 1992 (cont'd)..... | 4 |
| <u>Solid Mineral Production and Value</u> | |
| B.C. Mineral Production 1991 - 1992..... | 5 |
| Value of B.C. Solid Minerals 1980 - 1992..... | 6 |
| <u>Major Metal Production, Markets, Sales and Value</u> | |
| Operating Statistics - Major B.C. Metal Mines 1991 | 7 |
| Destination of Major Metals in B.C. Ores and Concentrates 1991 | 8 |
| Destination of Major Metals in B.C. Ores and Concentrates 1991 (cont'd)..... | 9 |
| B.C. Metal Producers - 1991..... | 10 |
| B.C. Metal Producers - 1991 (cont'd) | 11 |
| B.C. Metal Producers - 1991 (cont'd) | 12 |
| B.C. Production of Gold and Silver 1980 - 1992 | 13 |
| B.C. Production of Copper and Molybdenum 1980 - 1992..... | 14 |
| B.C. Production of Lead and Zinc 1980 - 1992 | 15 |
| <u>Metal and Coal Prices</u> | |
| Major B.C. Metals 1980 - 1992..... | 16 |
| B.C. Clean Coal Sold and Used 1980 - 1992..... | 17 |
| <u>Coal Production, Markets and Value</u> | |
| B.C. Raw and Clean Coal 1980 - 1992..... | 18 |
| B.C. Clean Coal Sold and Used 1980 - 1992..... | 19 |
| Coal Production by Mine - 1991 | 20 |
| Destination of Metallurgical Coal - 1991 | 21 |
| Destination of Thermal Coal - 1991 | 22 |
| <u>Employment</u> | |
| B.C. Employment at Major Metal and Coal Mines | 23 |
| Total B.C. Mining Employment..... | 23 |
| Employment at Major B.C. Mines..... | 24 |
| Employment at B.C. Coal Mines | 25 |

MAJOR B.C. MINES 1991 and 1992

| Mine Name | Location | Operator | Operating Status |
|---------------------------------|-----------------|---|-------------------------------|
| Afton | Kamloops | Afton Mines Ltd. | Shutdown in August 1991 |
| Beaverdell | Beaverdell | Teck Corp. | Closed end of February 1991 |
| Bell | Babine Lake | Noranda Minerals Ltd. | Active |
| Blackdome | Clinton | Blackdome Mining Corp. | Closed middle of January 1991 |
| Cassiar | Cassiar | Princeton Mining Corp. | Closed end of January 1992 |
| Dome Mountain | Smithers | Timmins Nickel Ltd. | Opened January 1992 |
| Endako | Endako | Placer Dome Inc. | Active |
| Equity Silver | Houston | Equity Silver Mines Ltd. | Active |
| Gibraltar | McLeese Lake | Gibraltar Mines Ltd. | Active |
| Goldstream | Revelstoke | Bethlehem Resources Corp. | Opened end of June 1991 |
| Highland Valley Copper | Highland Valley | Highland Valley Copper | Active |
| Island Copper | Rupert Inlet | BHP - Utah Mines Ltd. | Active |
| Lawyers | Toodoggone | Cheni Gold Mines Inc. | Active |
| Myra Falls Operations | Buttle Lake | Westmin Resources Ltd. | Active |
| Nickel Plate | Penticton | International Corona Corp. | Active |
| Premier Gold Project | Stewart | Westmin Resources Ltd. | Active |
| Samatosum | Barriere | Minnova Inc. | Active |
| SB Project | Stewart | Westmin Resources Ltd. | Open June - December 1991 |
| Shasta/ Multinational B-Zone | Toodoggone | International Shasta Res. Ltd./ Sable Resources Inc. | Closed early November 1991 |
| Silvana | New Denver | Tremenco Resources Ltd. | Active |
| Similco | Princeton | Princeton Mining Corp. | Active |
| Snip | Bronson Creek | Cominco Ltd. | Opened end of January 1991 |
| Sullivan | Kimberley | Cominco Ltd. | Active |

B.C. COAL MINES 1991 and 1992

| Mine Name | Location | Operator | Operating Status |
|-------------|---------------|-----------------------------|----------------------------|
| Balmer | Sparwood | Westar Mining Ltd.* | Shut down May - Dec. 1992 |
| Byron Creek | Sparwood | Corbin Creek Resources Ltd. | Active |
| Bullmoose | Tumbler Ridge | Bullmoose Operating Corp. | Active |
| Fording | Elkford | Fording Coal Ltd. | On strike May - Dec. 1992 |
| Greenhills | Elkford | Westar Mining Ltd.* | Shut down Nov. - Dec. 1992 |
| Line Creek | Sparwood | Line Creek Resources | Active |
| Quinsam | Campbell Lake | Brinco Coal Corp. | Active |
| Quintette | Tumbler Ridge | Quintette Coal Ltd. | Active |

**Westar Mining Ltd. went into receivership in 1992.*

HIGHLIGHTS - MAJOR MINES 1991 AND 1992

B.C. mines in general have experienced a difficult period over the past two years, due primarily to depressed international metal prices and a high Canadian dollar. Below is a brief chronology of major events at B.C. mines which affected industry output in 1991 and 1992.

1991

- The Blackdome mine near Clinton ceased mining in December 1990 but continued milling until January 20 1991. The mine closed due to a lack of economic reserves. Blackdome began producing in May 1986.
- In late January 1991, Cominco officially began production at its Snip gold mine northwest of Stewart. Snip was B.C.'s second largest gold producer in its first year, mining a total of over 2.7 million grams of gold.
- Teck Corporation's Beavertell mine closed in February, with the company citing low silver prices and a high Canadian dollar as the cause. The mine had produced over 1.0 billion grams of silver since it first began production in the early part of this century.
- The Golden Bear mine suspended underground operations from March 1991 until September 1992, but continued open pit mining. The underground was reopened because grades in the open pit were lower than anticipated.
- Westmin Resources Ltd. reduced operations at its Premier Gold Project in March 1991, laying off about 100 workers and cutting production by approximately one-third.
- Cassiar Mining Corporation's McDäme asbestos mine was shut down by a strike for two weeks from March 4th - March 18th 1991. Financial difficulties forced the company to apply to the courts for protection from creditors in October. The mine was closed in February 1992 after attempting unsuccessfully to restructure its operations.
- In an effort to reduce costs, Byron Creek Collieries Ltd. reduced its workforce at its Byron Creek coal operation in southeastern B.C. by one half in April 1991 to approximately 150 employees. Production of weak coking coal at the mine also ceased in April.
- BHP-Utah Mines Ltd.'s Island Copper mine near Campbell River was shut down by an 18 day strike from May 24th to June 12th 1991.
- The Similco copper mine near Princeton was shut down by a labour dispute for four months on June 1st. Production resumed in the last week of October 1991.
- Treminco Resources Ltd., operator of the Silvana silver/lead/zinc mine near Sandon, closed the mine on July 26, 1991. The mine re-opened July 29 on a much smaller scale with approximately half the staff.

- In August, Teck Corporation shut down the Afton copper mine due to unfavourable market conditions and the inability to settle a new labour contract. Employees continued to work into late September to provide an orderly shutdown of the mine.
- Rehabilitation of the Goldstream copper/gold/silver mine near Revelstoke (formerly operated by Noranda), began in March 1991 as a joint venture between the operator Bethlehem Resources Ltd. and Goldnev Resources Inc.
- Westmin Resources Ltd. operated the SB (Silver Butte) Project underground mine from May through November of 1991, with ore being milled at the company's nearby Premier Gold operation. The mine produced 844,000 grams of gold and 2.5 million grams of silver during the year. No further mining is planned.
- Shasta International Resources Ltd. mined out its Shasta gold/silver deposit in August 1991. Ore was being milled at the nearby Sable Resources Ltd. mill. Sable Resources Ltd. mined its Multinational B-Zone deposit until an underground mine collapse suspended operations in mid-November 1991.

1992

- Dome Mountain, which began official production in January 1992, was the only major new B.C. producer of gold to open since the Cominco Snip mine started up in January 1991. The mine processes its ore at the Equity Silver mill, and is estimated to produce 400,000 grams of gold in 1992.
- Noranda's Bell Copper mine depleted its ore reserves and closed in June 1992, after operating continuously since 1985. Bell Copper shipped nearly 24 million kilograms of copper, as well as associated gold and silver, for a value of \$76 million in 1991.
- Cheni Gold Mines Inc. ceased operations at its Lawyers gold-silver mine in August 1992, having depleted its economic ore reserves. The company did process some newly-discovered high-grade ore from the Phoenix zone in November and December.
- Westmin Resources Ltd. ceased open pit operations due to lack of economic reserves at its Premier Gold mine in August 1992. However, the company expects to continue mining underground as well as milling stockpiled ore from the open pit in 1993.
- Minnova's Samatosum silver-lead-zinc-copper-gold operations closed in September 1992, due to a lack of economic ore reserves. While mining ceased in July, milling of stockpiled ore continued to the end of September. The mine was the province's second largest producer of silver in 1991, producing over a quarter of B.C.'s silver total of 505 million grams for the year.

B.C. MINERAL PRODUCTION 1991 - 1992

| | | 1991 | | 1992(E) | |
|--|-------|-------------|----------------------|-------------|----------------------|
| | Units | Quantity | Value \$ | Quantity | Value \$ |
| Metals | | | | | |
| Antimony | kg | 383 000 | 802 000 | 189 000 | 393 000 |
| Bismuth | kg | 5 000 | 36 000 | 25 000 | 166 000 |
| Cadmium | kg | 280 000 | 1 396 000 | 323 000 | 788 000 |
| Copper | kg | 330 834 000 | 846 514 000 | 313 804 000 | 898 044 000 |
| Gold - placer | g | 345 000 | 4 605 000 | 320 000 | 4 240 000 |
| - lode fine | g | 17 040 000 | 233 352 000 | 14 959 000 | 203 758 000 |
| Iron Concentrates | t | 67 000 | 1 432 000 | 62 000 | 1 301 000 |
| Lead | kg | 52 536 000 | 33 071 000 | 64 404 000 | 43 447 000 |
| Molybdenum | kg | 11 041 000 | 67 430 000 | 8 344 000 | 52 127 000 |
| Silver | g | 505 011 000 | 74 184 000 | 320 696 000 | 49 509 000 |
| Zinc | kg | 104 585 000 | 152 240 000 | 108 710 000 | 171 353 000 |
| Others | | - | 3 704 000 | - | 2 649 000 |
| Total Metals | | - | 1 418 766 000 | - | 1 427 775 000 |
| Coal | | | | | |
| Metallurgical | t | 21 773 000 | 854 784 000 | 15 223 000 | 645 645 000 |
| Thermal | t | 3 075 000 | 83 052 000 | 2 473 000 | 75 224 000 |
| Total Coal | | - | 937 836 000 | - | 720 869 000 |
| Structural Materials | | | | | |
| Building stone | t | 8 000 | 1 203 000 | 8 000 | 1 208 000 |
| Cement | t | 1 455 000 | 142 609 000 | 1 595 000 | 153 740 000 |
| Clay products | | - | 6 070 000 | - | 5 870 000 |
| Lime/limestone | t | 2 326 000 | 14 516 000 | 2 326 000 | 14 516 000 |
| Rubble, rip-rap, crushed rock | t | 1 464 000 | 12 483 000 | 1 464 000 | 12 483 000 |
| Sand and gravel | t | 41 982 000 | 134 942 000 | 39 883 000 | 128 024 000 |
| Total | | - | 311 823 000 | - | 315 841 000 |
| Industrial Minerals | | | | | |
| Asbestos | t | 63 000 | 35 280 000 | 8 000 | 4 560 000 |
| Granules (quartz, limestone, granite) | t | 60 000 | 1 920 000 | 60 000 | 1 920 000 |
| Gypsum/gypsite | t | 375 000 | 2 233 000 | 375 000 | 2 233 000 |
| Jade | kg | 40 000 | 120 000 | 40 000 | 120 000 |
| Sulphur | t | 541 000 | 41 500 000 | 611 000 | 26 233 000 |
| Others | | - | 5 325 000 | - | 5 385 000 |
| Total | | - | 86 378 000 | - | 40 451 000 |
| Total Solid Minerals | | | | | |
| | | - | 2 754 803 000 | - | 2 504 936 000 |

(E)=Estimate

VALUE OF B.C. SOLID MINERALS 1980 - 1992

| 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(E) | 1 427 775 000 | 40 451 000 | 315 841 000 | 720 869 000 | 2 504 936 000 |

OPERATING STATISTICS - MAJOR B.C. METAL MINES 1991

| Metal Mines | Tonnes Mined | Tonnes Milled | Reported Rated Capacity Tonnes Per Day | Days Operating Mine | Days Operating Mill |
|------------------------------|--------------------|--------------------|--|---------------------------|---------------------------|
| Afton | 2 255 583 | 2 009 209 | 8500 | 235 | 235 |
| Beaverdell | - | 5 019 | - | 21 | 21 |
| Bell | 4 734 132 | 4 871 475 | 14 500 | 335 | 335 |
| Blackdome | - | 2 150 | - | - | 20 |
| Endako | 9 927 000 | 9 543 000 | 27 500 | 362 | 360 |
| Equity Silver | 2 168 600 | 3 312 800 | 9 000 | 365 | 365 |
| Gibraltar | 12 068 021 | 11 923 234 | 36 000 | 365 | 365 |
| Golden Bear | 130 192 | 111 699 | 376 | 365 | 365 |
| Goldstream | 262 874 | 249 715 | 1 200 | 214 | 214 |
| Highland Valley Copper | 46 349 872 | 46 291 933 | 133 000 | 365 | 365 |
| Island Copper | 14 518 705 | 18 611 824 | 45 000 | 349 | 350 |
| Lawyers | 186 855 | 175 165 | 500 | 365 | 365 |
| Myra Falls Operations | 1 104 436 | 1 081 400 | 4 000 | 235 | 354 |
| Nickel Plate | 1 333 956 | 1 122 730 | 3 000 | 365 | 365 |
| Premier Gold Project | 356 680 | 526 868 | 2 000 | 365 | 365 |
| Samatsum | 78 229 | 177 615 | 422 | 353 | 365 |
| SB Project* | 102 539 | 105 744 | - | 192 | - |
| Shasta /Multinational B-Zone | 51 500 | 51 500 | 182 | 304 | 334 |
| Silvana | 31 920 | 31 920 | 115 | 341 | 272 |
| Similco** | 3 938 000 | 3 859 454 | 22 700 | 227 | 228 |
| Snip | 123 100 | 122 648 | 400 | 365 | 341 |
| Sullivan | 1 688 254 | 1 688 254 | 7 300 | 238 | 178 |
| Total Metal Mines | 101 410 448 | 105 875 356 | 307 195 | 6 326 | 6 162 |
| Average Metal Mines | 4 609 566 | 4 812 516 | 13 963 | 288 | 280 |

* Ore milled at Premier Gold.

DESTINATION OF MAJOR METALS IN B.C. ORES AND CONCENTRATES 1991

| | Gold | | Silver | | Copper | |
|-------------------|------------|-------------|-------------|------------|-------------|-------------|
| | g | \$ | g | \$ | kg | \$ |
| Canada | 4 256 445 | 56 669 474 | 71 862 000 | 11 152 632 | 1 076 875 | 2 889 156 |
| Foreign | | | | | | |
| Belgium | 41 308 | 536 554 | 38 334 880 | 5 790 818 | - | - |
| Brazil | 6 656 | 88 793 | 1 357 947 | 202 062 | 3 870 957 | 9 594 386 |
| China | - | - | 347 270 | 60 371 | 2 248 911 | 4 592 980 |
| Germany | 87 681 | 1 272 848 | 3 081 048 | 583 721 | - | - |
| Japan | 9 312 236 | 123 345 995 | 314 765 699 | 49 091 540 | 262 494 276 | 681 564 155 |
| Korea | 40 993 | 731 026 | 3 127 872 | 469 444 | 7 155 251 | 13 948 648 |
| Philippines | 52 503 | 700 386 | 8 092 129 | 1 260 629 | 26 437 909 | 63 966 804 |
| Spain | 42 892 | 572 175 | 8 768 195 | 1 304 707 | 26 290 106 | 64 311 795 |
| Sweden | - | - | - | - | - | - |
| U.K. | 363 848 | 5 397 700 | 6 349 588 | 1 133 646 | - | - |
| U.S.A. | 3 180 444 | 48 642 338 | 48 924 680 | 3 134 097 | 1 260 109 | 3 271 282 |
| Total Foreign | 13 128 561 | 181 287 815 | 433 149 308 | 63 031 035 | 329 757 519 | 841 250 050 |
| Other/Adjustments | - | - | - | - | - | 2 374 602 |
| Total Shipments | 17 385 006 | 237 957 289 | 505 011 308 | 74 183 667 | 330 834 394 | 846 513 808 |

DESTINATION OF MAJOR METALS IN B.C. ORES AND CONCENTRATES 1991

| | Lead | | Zinc | | Molybdenum | |
|------------------------|-------------------|-------------------|--------------------|--------------------|-------------------|-------------------|
| | g | \$ | g | \$ | kg | \$ |
| Canada | 51 636 492 | 32 520 107 | 80 328 858 | 115 372 040 | 2 086 757 | 14 797 498 |
| Foreign | | | | | | |
| Australia | - | - | - | - | 14 249 | 214 574 |
| Belgium | 225 765 | 145 644 | - | - | 121 866 | 657 829 |
| Chile | - | - | - | - | 1 163 854 | 5 621 348 |
| Netherlands | - | - | - | - | 525 983 | 3 009 995 |
| Germany | - | - | - | - | 847 603 | 4 083 487 |
| Japan | - | - | 20 174 000 | 30 783 040 | 4 012 902 | 24 443 547 |
| Korea | - | - | 4 082 000 | 6 085 389 | - | - |
| Sweden | - | - | - | - | 1 138 154 | 5 294 614 |
| U.S.A. | 674 062 | 405 171 | - | - | 225 120 | 2 476 274 |
| Other | - | - | - | - | 1 661 429 | 11 097 321 |
| Total Foreign | 899 827 | 550 815 | 24 256 000 | 36 868 429 | 9 711 160 | 56 898 989 |
| Other/Adjustments | - | - | - | - | (757 262) | (4 266 056) |
| Total Shipments | 52 536 319 | 33 070 922 | 104 584 858 | 152 240 469 | 11 040 655 | 67 430 431 |

B.C. METAL PRODUCERS - 1991

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 65 600 t; Zinc concentrates 55 222 t | 963 114 | 19 565 000 | 17 041 682 | 1 626 605 | 31 293 015 | - |
| Atlin Mining Division | | | | | | | |
| Golden Bear | Doré | 1 859 375 | 533 414 | - | - | - | - |
| Cariboo Mining Division | | | | | | | |
| Gibraltar | Copper concentrates 101 558 t; Copper cathode 3 311 t; Molybdenite concentrates 429 t | - | 4 314 488 | 32 344 468 | - | - | 429 339 |
| Clinton Mining Division | | | | | | | |
| Blackdome | Gold concentrates 69 t; Doré | 40 714 | 381 733 | - | - | - | - |
| Fort Steele Mining Division | | | | | | | |
| Sullivan | Lead concentrates 109 806 t; Zinc concentrates 189 914 t | - | 54 944 462 | - | 78 378 000 | 101 493 000 | - |
| Greenwood Mining Division | | | | | | | |
| Beaverdell | Jig concentrates | 591 | 1 686 866 | - | - | - | - |
| Kamloops Mining Division | | | | | | | |
| Alton | Copper concentrates 36 937 t | 568 883 | 1 035 435 | 7 754 765 | - | - | - |
| Highland Valley Copper | Copper concentrates 439 930 t; Molybdenite concentrates 3 223 t | 651 120 | 73 927 739 | 177 394 055 | - | - | 1 426 548 |

B.C. METAL PRODUCERS - 1991

Gross Metal Content of Major Metals

| | Products Shipped | Gold grams | Silver grams | Copper kg | Lead kg | Zinc kg | Molybdenum kg |
|--------------------------------|---|------------|--------------|------------|---------|---------|---------------|
| Liard Mining Division | | | | | | | |
| Premier Gold | Doré | 1 142 891 | 12 226 268 | - | - | - | - |
| SB Project | Doré | 843 780 | 2 542 238 | - | - | - | - |
| Snip | Gold concentrates 5 719 t; Doré | 2 749 299 | 1 081 872 | - | - | - | - |
| Nanaimo Mining Division | | | | | | | |
| Island Copper | Copper concentrates 220 031 t; Molybdenite concentrates 4 845 t | 1 266 596 | 15 164 873 | 54 626 080 | - | - | 2 561 762 |
| Omineca Mining Division | | | | | | | |
| Bell | Copper concentrates 91 933 t | 1 021 771 | 3 616 966 | 25 557 139 | - | - | - |
| Endako Mines Division | Molybdenite concentrates 216 t; Molybdic oxide 6 218 t; Ferro-molybdenum 453 t; Molybdenum sulphide 29 t | - | - | - | - | - | 6 916 165 |
| Equity Silver | Copper/silver concentrate 44 084 Doré | 1 619 496 | 156 372 325 | 4 302 192 | - | - | - |
| Lawyers | Doré | 1 266 859 | 25 345 660 | - | - | - | - |
| Shasta/Multinational B-Zone | Doré | 310 949 | 17 482 101 | - | - | - | - |
| Osoyoos Mining Division | | | | | | | |
| Hedley Tailings | Heap leach | 74 648 | - | - | - | - | - |
| Nickel Plate | Doré | 2 842 733 | 677 682 | - | - | - | - |

B.C. METAL PRODUCERS - 1991

Gross Metal Content of Major Metals

| Products Shipped | | Gold grams | Silver grams | Copper kg | Lead kg | Zinc kg | Molybdenum kg |
|------------------------------------|---|---------------|-----------------|--------------|------------|------------|------------------|
| Revelstoke Mining Division | | | | | | | |
| Goldstream | Copper concentrates 46 007 t Includes 2 833 t of pre-production | 14 339 | 3 037 255 | 10 230 612 | - | - | - |
| Samatsum | Copper concentrates 4 763 t; Lead concentrates 2 673 t; Zinc concentrates 4 962 t | 166 160 | 142 704 089 | 1 158 895 | 1 167 141 | 2 515 683 | - |
| Similkameen Mining Division | | | | | | | |
| Similco | Copper concentrates 55 464 t | 236 915 | 5 702 947 | 14 486 107 | - | - | - |
| Slocan Mining Division | | | | | | | |
| Silvana | Lead concentrate 2 428 t; Zinc concentrate 1 996 t | - | 12 153 100 | - | 1 496 160 | 1 832 100 | - |
| Tillicum | Custom ore from stockpile | 9 207 | - | - | - | - | - |

B.C. PRODUCTION OF GOLD AND SILVER 1980 - 1992

| Year | Gold | | Silver | |
|---------|---------------|-------------|---------------|-------------|
| | Quantity g | Value \$ | Quantity g | Value \$ |
| 1980 | 7 197 312 | 163 930 073 | 203 801 811 | 156 548 306 |
| 1981 | 7 468 769 | 131 542 422 | 403 754 797 | 152 420 716 |
| 1982 | 7 511 908 | 115 802 480 | 499 565 577 | 158 260 320 |
| 1983 | 7 693 571 | 126 555 114 | 402 325 338 | 180 372 129 |
| 1984 | 6 813 576 | 111 731 223 | 363 378 002 | 121 364 145 |
| 1985 | 6 381 599 | 89 094 237 | 378 172 924 | 100 951 341 |
| 1986 | 9 225 036 | 152 300 944 | 395 850 085 | 94 615 495 |
| 1987 | 11 644 700 | 230 310 373 | 371 599 737 | 122 562 405 |
| 1988 | 11 963 987 | 214 723 536 | 423 440 789 | 112 539 299 |
| 1989 | 14 420 239 | 220 974 001 | 493 844 443 | 105 442 581 |
| 1990 | 15 374 931 | 231 785 037 | 631 083 758 | 115 126 533 |
| 1991 | 17 385 000 | 237 957 000 | 505 011 000 | 74 184 000 |
| 1992(E) | 15 279 000 | 207 998 000 | 320 696 000 | 49 509 000 |

B.C. PRODUCTION OF COPPER AND MOLYBDENUM

| Year | Copper | | Molybdenum | |
|---------|----------------|---------------|----------------|-------------|
| | Quantity kg | Value \$ | Quantity kg | Value \$ |
| 1980 | 264 674 830 | 670 623 616 | 11 179 501 | 288 934 398 |
| 1981 | 290 088 241 | 611 282 050 | 12 933 224 | 198 240 391 |
| 1982 | 279 873 599 | 495 009 799 | 14 747 888 | 154 990 970 |
| 1983 | 282 864 697 | 561 111 733 | 10 778 825 | 87 584 823 |
| 1984 | 280 070 497 | 517 765 234 | 12 164 806 | 113 803 442 |
| 1985 | 301 648 642 | 579 674 070 | 6 624 127 | 63 218 087 |
| 1986 | 332 215 028 | 629 479 111 | 11 573 619 | 92 781 106 |
| 1987 | 355 897 693 | 842 341 196 | 14 138 543 | 121 687 917 |
| 1988 | 353 481 625 | 1 117 031 341 | 12 924 198 | 116 005 450 |
| 1989 | 303 199 718 | 1 002 528 683 | 13 617 712 | 112 274 115 |
| 1990 | 325 320 434 | 985 015 266 | 12 284 589 | 88 326 296 |
| 1991 | 330 834 000 | 846 514 000 | 11 041 000 | 67 430 000 |
| 1992(E) | 313 804 000 | 898 044 000 | 8 344 000 | 52 127 000 |

B.C. PRODUCTION OF LEAD AND ZINC 1980 - 1992

| Year | Lead | | Zinc | |
|---------|----------------|-------------|----------------|-------------|
| | Quantity kg | Value \$ | Quantity kg | Value \$ |
| 1980 | 76 709 447 | 66 096 223 | 67 481 328 | 49 363 417 |
| 1981 | 84 854 093 | 61 529 276 | 79 214 552 | 67 026 535 |
| 1982 | 83 746 551 | 43 035 587 | 75 182 699 | 63 571 545 |
| 1983 | 112 941 984 | 48 778 436 | 95 286 818 | 79 634 214 |
| 1984 | 85 147 484 | 37 899 396 | 95 334 645 | 115 225 652 |
| 1985 | 116 811 328 | 42 337 760 | 108 072 664 | 112 725 885 |
| 1986 | 91 784 242 | 38 183 405 | 137 582 872 | 138 022 893 |
| 1987 | 69 911 213 | 49 828 244 | 100 718 749 | 109 368 709 |
| 1988 | 105 296 208 | 74 349 472 | 139 377 351 | 212 299 874 |
| 1989 | 68 369 344 | 46 266 966 | 120 496 624 | 241 011 125 |
| 1990 | 19 556 431 | 15 954 770 | 57 436 291 | 103 423 640 |
| 1991 | 52 536 000 | 33 071 000 | 104 585 000 | 152 240 000 |
| 1992(E) | 64 404 000 | 43 447 000 | 108 710 000 | 171 353 000 |

MAJOR B.C. METALS
AVERAGE B.C. PRODUCER PRICE
1980 - 1992

| 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(E) | \$ 13.61 | \$ 0.15 | \$ 2.86 | \$ 0.67 | \$ 1.58 | \$ 6.25 |

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(E) | \$42.41 | \$30.42 | \$40.74 |

B.C. RAW AND CLEAN COAL PRODUCED 1980 - 1992

| 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(E) | - | - | 26 010 | 14 493 | 2 406 | 16 899 |

B.C. CLEAN COAL SOLD AND USED 1980 - 1992

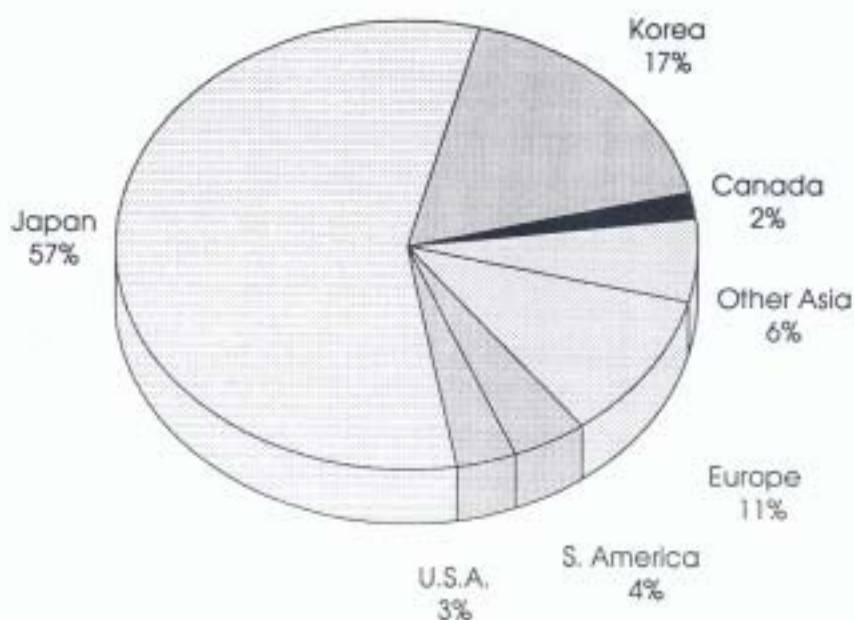
| Year | Metallurgical | | Thermal | | Total | |
|---------|---------------|-------------|---------------|-------------|---------------|---------------|
| | Quantity t | Value \$ | Quantity t | Value \$ | Quantity t | Value \$ |
| 1980 | 9 654 317 | 423 128 068 | 1 169 213 | 38 364 789 | 10 823 530 | 461 492 857 |
| 1981 | 10 811 498 | 518 427 584 | 941 123 | 35 843 708 | 11 752 621 | 554 271 292 |
| 1982 | 8 399 674 | 487 004 686 | 2 246 068 | 79 873 554 | 10 645 742 | 566 878 240 |
| 1983 | 9 317 051 | 491 949 790 | 2 163 247 | 63 839 406 | 11 480 298 | 555 789 196 |
| 1984 | 16 302 413 | 895 175 302 | 4 437 312 | 112 344 368 | 20 739 725 | 1 007 519 670 |
| 1985 | 17 767 454 | 899 930 036 | 4 845 356 | 128 387 165 | 22 612 810 | 1 028 317 201 |
| 1986 | 16 690 177 | 828 539 190 | 4 146 686 | 105 875 059 | 20 836 863 | 934 414 249 |
| 1987 | 18 019 842 | 801 967 324 | 4 567 010 | 90 554 635 | 22 586 852 | 892 521 959 |
| 1988 | 21 684 754 | 909 404 840 | 3 128 328 | 69 406 763 | 24 813 082 | 978 811 603 |
| 1989 | 21 944 673 | 908 008 730 | 3 189 525 | 92 588 948 | 25 134 198 | 1 000 597 678 |
| 1990 | 21 345 548 | 896 051 170 | 3 020 933 | 83 805 849 | 24 366 481 | 979 857 019 |
| 1991 | 21 773 000 | 854 784 000 | 3 075 000 | 83 052 000 | 24 848 000 | 937 836 000 |
| 1992(E) | 15 223 000 | 645 645 000 | 2 473 000 | 75 224 000 | 17 696 000 | 720 869 000 |

COAL PRODUCTION BY MINE - 1991

| | Raw Coal Produced '000 t | Raw Coal Processed '000 t | *(S) or (U) | Clean Coal Produced '000 t | Coal Used (Plant Use) '000 t |
|---|--------------------------------|---------------------------------|-------------------|-------------------------------------|------------------------------------|
| Fort Steele Mining Division | | | | | |
| Byron Creek Collieries Ltd. | 1 545 | 1 536 | S | | |
| Metallurgical | - | - | | 125 | - |
| Thermal | - | - | | 969 | - |
| Line Creek Resources Ltd. (Line Creek) | 3 070 | 3 049 | S | | |
| Metallurgical | - | - | | 1 856 | - |
| Thermal | - | - | | 332 | - |
| Fording Coal Ltd. | 9 587 | 9 617 | S | | |
| Metallurgical | - | - | | 6 003 | - |
| Thermal | - | - | | 656 | 61 |
| Westar Mining Ltd. (Balmer) | 8 698 | 8 868 | S | | |
| Metallurgical | - | - | | 4 704 | 38 |
| Thermal | - | - | | 695 | - |
| Westar Mining Ltd. (Greenhills) | 4 001 | 4 038 | S | | |
| Metallurgical | - | - | | 2 931 | 6 |
| Thermal | - | - | | 514 | - |
| Total - Fort Steele | 26 901 | 27 108 | | 18 785 | 105 |
| Liard Mining Division | | | | | |
| Bullmoose Operating Corp. | 2 242 | 2 179 | S | | |
| Metallurgical | - | - | | 1 620 | - |
| Thermal | - | - | | - | - |
| Quintette Coal Ltd. | 8 792 | 8 572 | S | | |
| Metallurgical | - | - | | 4 681 | 57 |
| Thermal | - | - | | - | - |
| Total - Liard | 11 034 | 10 751 | | 6 301 | 57 |
| Nanaimo Mining Division | | | | | |
| Quinsam Coal Ltd. | 318 | 276 | U | | |
| Metallurgical | - | - | | - | - |
| Thermal | - | - | | 295 | - |
| TOTAL | 38 253 | 38 135 | | | |
| Metallurgical | - | - | | 21 920 | 101 |
| Per Cent of 1991 totals | - | - | | 86% | 62% |
| Thermal | - | - | | 3 461 | 61 |
| Per Cent of 1991 totals | - | - | | 14% | 38% |
| TOTAL - ALL COAL - 1991 | | | | 25 381 | 162 |

*(S) = Surface; (U) = Underground

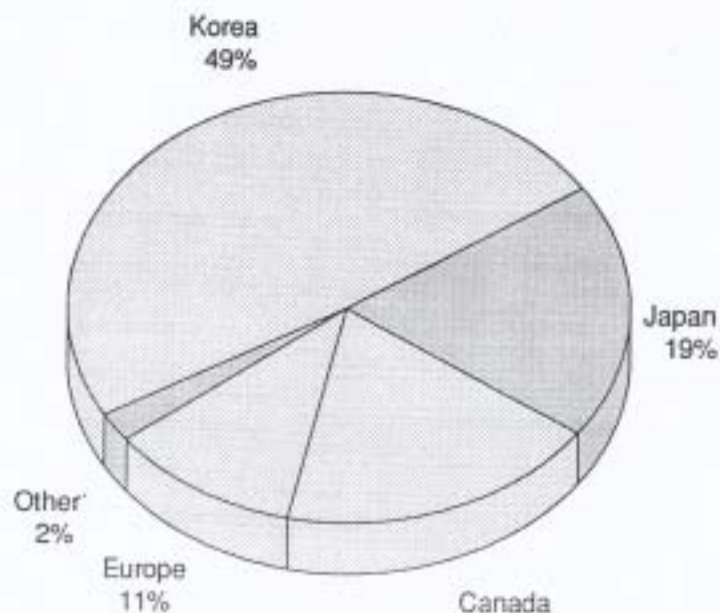
MARKETS FOR B.C. METALLURGICAL COAL 1991



DISPOSITION OF B.C. METALLURGICAL COAL 1991 - IN THOUSAND TONNES

| | | | |
|-------------|--------|------------------------------|---------------|
| Japan | 12 359 | Chile | 181 |
| Korea | 3 788 | China | 115 |
| Taiwan | 764 | Turkey | 102 |
| Brazil | 713 | Iran | 101 |
| U.S.A. | 703 | Denmark | 57 |
| Spain | 565 | Italy | 45 |
| France | 487 | Total Sales | 21 784 |
| Canada | 385 | Adjustments/Purchases | (112) |
| Egypt | 325 | Total Net Sales | 21 672 |
| Portugal | 305 | Coal used at mines | 101 |
| Netherlands | 278 | Total Sold & Used | 21 773 |
| U.K. | 257 | | |
| Belgium | 254 | | |

MARKETS FOR B.C. THERMAL COAL 1991



DISPOSITION OF BC. THERMAL COAL 1991 - IN THOUSAND TONNES

| | |
|------------------------------|--------------|
| Korea | 1 718 |
| Japan | 667 |
| Canada | 659 |
| Denmark | 289 |
| France | 70 |
| U.S.A. | 41 |
| U.K. | 32 |
| Brazil | 30 |
| Total Sales | 3 506 |
| To Other Producers | 531 |
| Purchases/Adj. | (1 023) |
| Total Net Sales | 3 014 |
| Coal used at mines | 61 |
| Total Sold & Used | 3 075 |

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(E) | 656 | 2 390 | 1 595 | 4 641 | 41 | 3 655 | 3 696 |

TOTAL B.C. MINING EMPLOYMENT

| Year | Metal Mines | Metal Smelters | Coal Mines | Non- Metal | Other | 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(E) | 4 641 | 2 200 | 3 696 | 1 220 | 2 500 | 14 257 |

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

EMPLOYMENT AT MAJOR B.C. MINES

1991

| Metal Mines | Adminis- trative | Mine Surface | Mine Under- ground | Mill | Other | Total Annual Average | Peak Employ- ment |
|-----------------------------|---------------------|-----------------|--------------------------|--------------|------------|----------------------------|-------------------------|
| Alton | 15 | 120 | - | 25 | - | 160 | 209 |
| Beaverdell | 1 | 1 | 2 | 1 | - | 5 | 33 |
| Bell | 61 | 83 | - | 125 | - | 269 | 269 |
| Blackdome | 1 | 1 | - | 1 | - | 3 | 28 |
| Endako | 41 | 55 | - | 136 | - | 232 | 232 |
| Equity Silver | 24 | 52 | - | 106 | - | 182 | 182 |
| Gibraltar | 69 | 71 | - | 173 | - | 313 | 313 |
| Golden Bear | 15 | 28 | 7 | 31 | 5 | 86 | 86 |
| Goldstream | 5 | 0 | 3 | 25 | - | 33 | 55 |
| Highland Valley Copper | 108 | 596 | - | 342 | 147 | 1193 | 1193 |
| Island Copper | 122 | 308 | - | 143 | - | 573 | 573 |
| Lawyers | 13 | 41 | 74 | 29 | - | 157 | 157 |
| Myra Falls Operation | 105 | 11 | 304 | 99 | - | 519 | 519 |
| Nickel Plate | 12 | 117 | - | 58 | - | 187 | 187 |
| Premier Gold Project | 11 | 40 | - | 25 | 29 | 105 | 105 |
| Samatsum | 12 | 6 | - | 34 | 24 | 76 | 76 |
| SB Project | 3 | - | 11 | - | - | 14 | 31 |
| Shasta/Multinational B-Zone | 2 | 8 | 8 | 10 | - | 28 | 28 |
| Silvana | 3 | 1 | 14 | 6 | - | 24 | 24 |
| Similco | 51 | 92 | - | 55 | - | 198 | 279 |
| Snip | 42 | - | 36 | 26 | 18 | 122 | 122 |
| Sullivan | 175 | 33 | 318 | 167 | - | 693 | 693 |
| Total Metal Mines | 891 | 1 664 | 777 | 1 617 | 223 | 5 172 | 5 394 |
| Average Metal Mines | 41 | 76 | 35 | 74 | 10 | 235 | 245 |
| Industrial Minerals | | | | | | | |
| Cassiar | 58 | - | 100 | 67 | 141 | 366 | 366 |

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 1991

| Coal Mines | Adminis- trative | Mine Surface | Mine Under- ground | Mill | Other | Total Annual Average | Peak Employ- ment |
|-------------------------|---------------------|-----------------|--------------------------|------------|-----------|----------------------------|-------------------------|
| Balmer | 172 | 986 | - | 175 | - | 1 333 | 1 333 |
| Bullmoose | 44 | 254 | - | 56 | - | 354 | 354 |
| Byron Creek | 47 | 54 | - | 32 | 37 | 170 | 170 |
| Fording | 125 | 704 | - | 134 | 16 | 979 | 979 |
| Greenhills | 69 | 493 | - | 80 | - | 642 | 642 |
| Line Creek | 91 | 294 | - | 73 | 4 | 462 | 462 |
| Quintette | 117 | 1 058 | - | 225 | - | 1 400 | 1 400 |
| Quinsam | 9 | 15 | 24 | 4 | - | 52 | 52 |
| Total Coal Mines | 674 | 3 858 | 24 | 779 | 57 | 5 392 | 5 392 |
| Average Coal Mines | 84 | 482 | 3 | 97 | 7 | 674 | 674 |

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. Employment can include head office personnel at other locations in B.C.