Base and Other Metals



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This group includes two copper mines, Highland Valley and Quebrada Blanca; a copper, zinc mine, Louvicourt; a zinc mine, Polaris; and a niobium mine, Niobec.

Combined mine operating profit before depreciation was \$60 million in 1998, compared with \$90 million the previous year. The reduction was almost entirely due to lower copper prices, with both Niobec and Polaris reporting similar results to the previous year.

Despite the lower realized copper price of US\$0.80 per pound in 1998, compared with US\$1.03 in 1997, copper contributed \$40 million to cash operating profits, or 20%, compared with \$70 million or 35% in 1997.

The major new event in 1998 was the acquisition of a 25% interest in the Antamina copper, zinc project in Peru. Antamina is scheduled to reach full production in 2002, and will be a core asset for Teck into the next millennium.

Drilling on the San Nicolas deposit in Mexico, discovered in late 1997, established a major copper, zinc resource which is expected to become a significant new mine for Teck.

Highland Valley Copper Mine

The Highland Valley Copper mine is located in south central British Columbia, near Kamloops. Teck has a 14% direct interest, as well as a 17% indirect interest through Cominco. Rio Algom holds a 33.6% interest in the operation.

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Highland Valley Copper Mine

100%	1994	1995	1996	1997	1998
Tonnes mined (000's)	90,420	95,112	90,382	92,138	98,421
Tonnes milled (000's)	43,484	45,521	42,620	44,966	48,964
Tonnes per day	119,134	124,715	116,448	123,193	134,147
Grade (% copper)	0.419	0.394	0.396	0.394	0.393
Mill recovery (%)	91.3	91.0	91.2	91.6	89.6
Copper production (million lbs)	355	348	328	346	368
Operating cost (\$/tonne milled)	5.03	5.12	5.72	5.51	5.04
Operating profit (Teck's share, \$mill	ions) 21	37	21	19	14
Reserves (million tonnes)	540	504	538	497	417
Grade (% copper)	0.425	0.420	0.422	0.420	0.420





Operating Profit Base and Other Metals \$ Millions





Quebrada Blanca Heap Leach Copper Mine in northern Chile.

Quebrada Blanca Mine

The Quebrada Blanca heap leach copper operation is located in northern Chile. Teck owns 29.25% and is in partnership with Cominco Ltd. at 47.25% and Chilean interests that own the remaining 23.5%. Teck's net interest, including its equity in Cominco, is 45.7%.

Teck's share of operating profits in 1998 was \$15 million, compared with \$27 million in 1997. The decrease was entirely attributable to lower copper prices during the year.

Cathode copper production was at a record level of 157 million pounds in 1998, some 6% higher than the previous year. This increase resulted mainly from higher ore crushing and agglomeration capacity due to modifications initiated late in 1997.

Quebrada Blanca Mine

On a throughput basis, the Highland

Valley mill is one of the world's

largest copper operations, and in

1998 milled a record 49 million

tonnes or 134,000 tonnes per day.

The record throughput is the main

reason for lower operating costs and

increased production of 368 million

Despite this performance, Teck's

\$14 million from \$19 million in

1997, as a result of lower copper

As the price of copper continued to

announced its intention to suspend

deteriorate, Highland Valley

operations in May 1999.

share of cash operating profit fell to

pounds.

prices.

100%	1995	1996	1997	1998
Waste mined (000's tonnes)	24,089	27,877	21,487	20,514
Low grade & oxides stockpiled (000's tonnes)	2,161	1,191	1,485	3,408
Ore to leach pad (000's tonnes)	5,667	5,822	5,803	6,543
Strip ratio	4.6	4.9	4.0	3.7
Grade (% copper)	1.71	1.66	1.64	1.47
Recoverable copper (million lbs)	171.0	175.0	176.5	168.9
Copper production (million lbs)	102.2	149.3	147.3	156.7
Operating cost (US\$/lb.)		0.54	0.57	0.56
Operating profit (Teck's share, \$millions)	25	28	27	15
Reserves (000's tonnes)	99,500	92,200	86,300	74,900
Grade (% copper)	1.20	1.20	1.20	1.27

Several improvements were also made to the leaching process, the most significant of which was an increase in forced aeration of the leach pads that resulted in the highest copper in solution obtained to date at the mine.

Cathode production is forecast to be 165 million pounds (75,000 tonnes) in 1999.

Louvicourt Mine

The Louvicourt copper, zinc mine near Val d'Or, Quebec is owned jointly by Teck (25%), Aur Resources Inc. (30%) and Novicourt Inc. (45%).

Teck's share of operating profit for 1998 was \$11 million compared with \$21 million in 1997. The decrease was due to lower realized metal prices, particularly for copper which averaged US\$0.75 per pound compared with US\$1.00 per pound in 1997.

Plant performance was excellent in 1998. Copper production, zinc production, tonnes milled and copper and zinc recoveries all exceeded forecast.

Forecast production for 1999 is 134 million pounds of copper and 49 million pounds of zinc, up from 1998 due to a higher grade of ore scheduled.

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Highland Valley Copper Mine

TECK-AR, 1999

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Highland Valley Copper Mine

Base Metals & Ni bium

The Highland Valley Copper mine located near Kamloops, British Columbia is one of the largest openpit copper operations in the world. It is owned by Teck (14%), Cominco ((50%) and Rio Algom (33.6%). Teck's net interest including its equity in Cominco is 36%.

Teck's direct share of operating profit decreased to \$9 million in 1999 compared with \$14 million in 1998. Production was 37% lower at 234 million pounds because of a fourmonth suspension of operations in mid-year while new power and labour arrangements were being negotiated.

Mine operations resumed in early September following completion of a new collective agreement with the United Steelworkers of America, an agreement with BC Hydro which ties power rates to copper prices, and after an improvment in copper prices. The collective agreement provides for wage reductions as prices decrease below US\$0.67 per pound and for corresponding increases above US\$0.79 per pound. The agreement expires in September 2003.

Highland Valley continues to achieve excellent operating results and is planning to increase copper production to 395 million pounds in 2000. Operating costs should decrease slightly. Capital expenditures are forecast to be \$19.5 million, compared with \$1 million in 1999, with \$14 million for pit equipment, including \$9 million for haulage units, and the balance in the plant.

The mineable reserves of 387 million tonnes averaging 0.42% copper are sufficient for nine more years at full production.

Highland Valley Copper Mine

100%	1995	1996	1997	1998	1999
Tonnes mined (000's)	95,112	90,382	92,138	98,421	57,303
Tonnes milled (000's)	45,521	42,620	44,966	48,964	30,165
Tonnes per day	124,715	116,448	123,193	134,147	131,716
Grade (% copper)	0.394	0.396	0.394	0.393	0.405
Mill recovery (%)	91.0	91.2	91.6	89.6	89.8
Copper production (million lbs)	348	328	346	368	234
Operating cost (\$/tonne milled)	5.12	5.72	5.51	5.04	5.65
Operating profit (Teck's share, \$million	is) 37	21	19	14	9
Reserves (million tonnes)	504	538	497	417	387
Grade (% copper)	0.420	0.422	0.420	0.420	0.420

(1) Per operating day

Base Metals & Nobium

Niobium

Ferroniobium, which is produced at the Niobec mine in Quebec, is sold primarily to the steel industry. Worldwide 1999 consumption was slightly lower than in 1998 due to lower steel production for the niobium-intensive gas transmission and automotive steel sectors. Even so, the Niobec mine was successful in reducing inventory levels at the mine in addition to selling all of its production.

The 1999 sale prices of about US\$6.50 a pound were 5% lower than 1998 primarily because of increased use of vanadium in direct competition to niobium. The outlook for a recovery in the worldwide steel industry and the resulting demand for niobium are encouraging. However short-term prices may continue to suffer from substitution of lower-priced vanadium and the threat of new projects coming on stream, which would increase worldwide supply.

Operations

Louvicourt Mine

The Louvicourt underground copper, zinc mine located near Val d'Or, Quebec is owned jointly by Teck (25%), Aur Resources Inc. (30%) and Novicourt Inc. (45%).



The mine contributed \$18 million to Teck's operating profit in 1999 compared with \$11 million in 1998. The increase was due mainly to record high copper production which totalled 143.4 million pounds, 16% more than the previous year because of a favourable variance in grade, and record mill throughput of 4,417 tonnes per day.

Operating costs were \$35.65 per tonne milled, a slight decrease from the previous year. Martin Maranda operating a remote-controlled scooptram at the Louvicourt Mine.

Copper and zinc production for 2000 is forecast to be 119 million and 49 million pounds respectively. Operating costs should decline slightly. Capital expenditures are forecast to be \$2.5 million with most of this for underground development work, essentially the same as in 1999.

Mineable reserves are sufficient for another five years of production. An exhaustive exploration program has been conducted over a number of years and the potential to add reserves is limited.

Louvicourt Mine

1995	1996	1997	1998	1999
1,283	1,600	1,575	1,601	1,612
3,666	4,372	4,314	4,387	4,417
3.69	3.36	3.69	3.60	4.16
2.09	1.46	1.41	1.44	1.35
96.3	96.0	96.7	96.9	96.9
78.3	75.8	76.6	80.4	77.9
100.7	114.4	123.9	123.2	143.4
46.4	39.3	37.6	41.0	37.3
48.50	36.08	37.08	36.36	35.65
22	20	21	11	18
13.6	12.5	10.7	8.5	7.5
3.70	3.64	3.48	3.56	3.32
1.50	1.52	1.59	1.69	1.77
	1,283 3,666 3.69 2.09 96.3 78.3 100.7 46.4 48.50 22 13.6 3.70	1,283 1,600 3,666 4,372 3.69 3.36 2.09 1.46 96.3 96.0 78.3 75.8 100.7 114.4 46.4 39.3 48.50 36.08 22 20 13.6 12.5 3.70 3.64	1,283 1,600 1,575 3,666 4,372 4,314 3.69 3.36 3.69 2.09 1.46 1.41 96.3 96.0 96.7 78.3 75.8 76.6 100.7 114.4 123.9 46.4 39.3 37.6 48.50 36.08 37.08 22 20 21 13.6 12.5 10.7 3.70 3.64 3.48	1,283 1,600 1,575 1,601 3,666 4,372 4,314 4,387 3.69 3.36 3.69 3.60 2.09 1.46 1.41 1.44 96.3 96.0 96.7 96.9 78.3 75.8 76.6 80.4 100.7 114.4 123.9 123.2 46.4 39.3 37.6 41.0 48.50 36.08 37.08 36.36 22 20 21 11 13.6 12.5 10.7 8.5 3.70 3.64 3.48 3.56